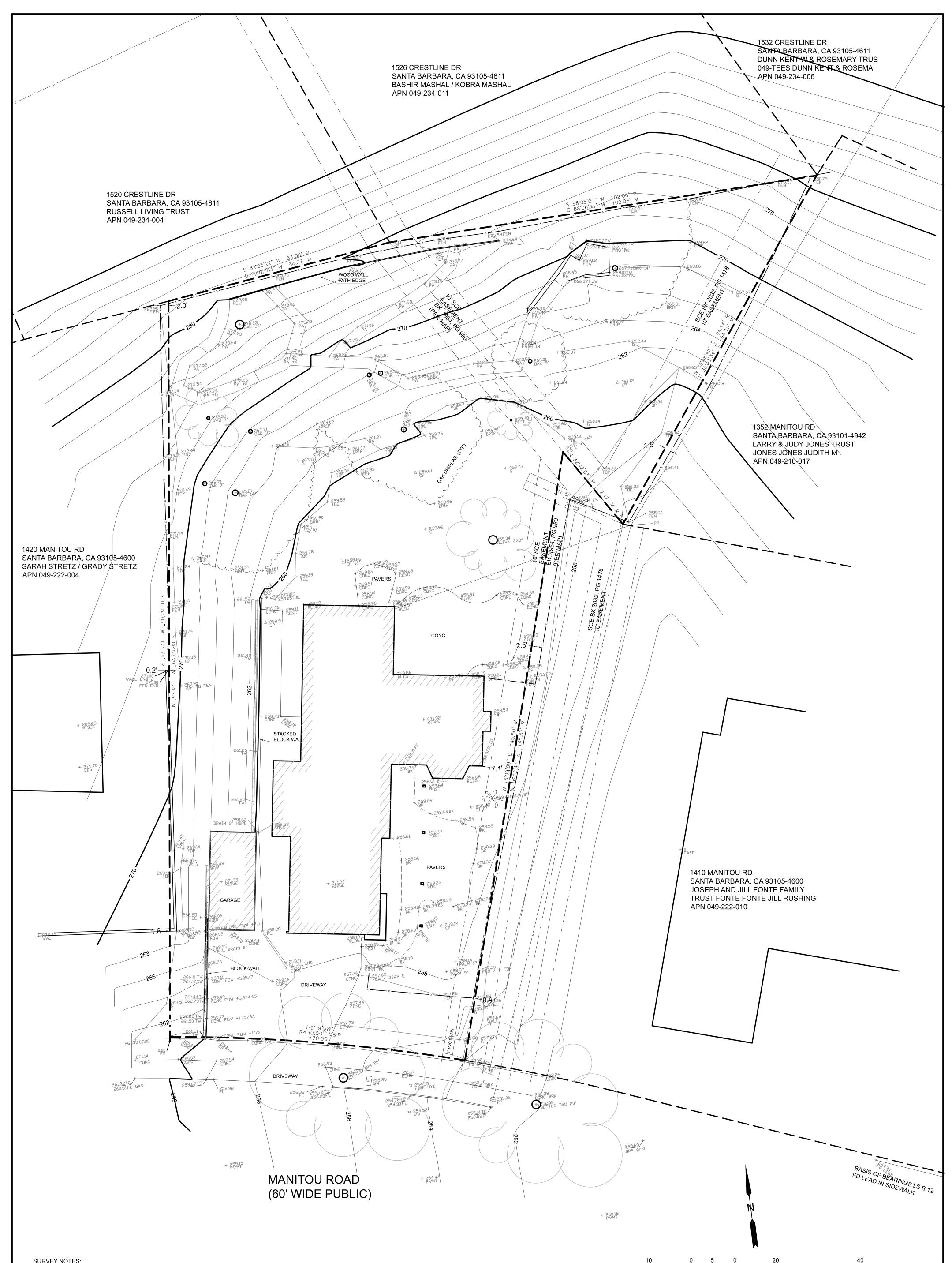


ENTER Project Address:	1416 Manitou Road
there a basement or cellar existing or proposed?	No
ENTER Proposed TOTAL Net FAR Floor Area (in sq. ft.):	3,078
ENTER Zone ONLY from drop-down list:	E-1 or RS-15
ENTER Net Lot Area (in sq. ft.):	18,472
Is the height of existing or proposed buildings 17 feet or greater?	Yes
Are existing or proposed buildings two stories or greater?	Yes
The FAR Requirements are:	GUIDELINE**
ENTER Average Slope of Lot:	32.00%
Does the height of existing or proposed buildings exceed 25 feet?	Νο
Is the site in the Hillside Design District?	Yes
Does the project include 500 or more cu. yds. of grading outside the main building footprint?	No
An FAR MOD is not required per SBI	MC §28.15 or §30.20.030
FLOOR AREA RATIO (FAR):	0.167
Lot Size Range:	15,000 - 19,999 sq. ft.
MAX FAR Calculation (in sq. ft.):	4,180 + (0.013 x lot size in sq. ft.)
100% MAX FAR:	0.239
100% MAX FAR (in sq. ft.):	4,420
85% of MAX FAR (in sq. ft.):	3,757
	3,536







### SURVEY NOTES:

BOUNDARY SHOWN PER RECORD MAP SANTA BARBARA CITY LOT SPLIT BOOK E, PAGE 085 AS FILLED IN THE OFFICE OF THE COUNTY SURVEYOR. AND TRACT MAP 059, PAGES 55 - 57, AND WFG NATIONAL TITLE INSURANCE COMPANY PRELIMINARY REPORT 18-221334 DATED OCTOBER 11, 2018, MONUMENTS FOUND IN SIDE WALK "RE 10103" ARE 1' OFFSETS TO TRUE CORNER. CERTIFICATE OF CORRECTION 2249, 1395 O.R.

BENCHMARK: LOCAL BENCHMARKS SHOWN AS "CP" BASED ON USGS OPUS OBSERVATION, DATUM NAVD88

SURROUNDING TOPOGRAPHY SUPPLEMENTED WITH CITY OF SANTA BARBARA PUBLIC WORKS TOPOGRAPHY.

	SED LAND SLA	LEGEND: EP = EDGE OF PAVEMENT FL = FLOWLINE TC = TOP OF CURB	·XXX     EGEND:       ·XXX     = FENCE        = BUILDING LINE	TOPOGRAPHIC SURVEY
Christopher Gilmour, PLS 7643		DI = DRAIN INLET CONC = CONCRETE	U U U U U = OVER HEAD UTILITIES	OF 1416 MANITOU ROAD A.P.N. 049-222-13
Gilmour Land Surveying inc. 7127 Hollister Ave. #25A—301 Goleta, CA, 93117 ph. 805.685.4500 info@gilmourlandsurveying.com	G. GILMOUR P.L.S. 7643 $\overrightarrow{P}$ EXP. $\overrightarrow{I2/31/24}$ $\overrightarrow{OF}$ CAL	$ \begin{array}{c} G, & GLM\square UR \\ (O) \\ T \\ R,L,S, & 7643 \\ \hline T \\ EXP. \end{array} \begin{array}{c} T \\ T \\ R \\ T \\ R \\ \hline T \\ R \\$	= SCHEMATIC TREE [ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	IN THE CITY OF SANTA BARBARA WESTSIDE AS SHOWN ON SBC LOT SPLIT BK. E, PG. 85 AT THE REQUEST OF UDAYA SHETTY JANUARY 2023 SCALE 1" = 10'

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PRELIMIN	ARY CONCLUSIONS AND RECOMMENDATIONS	May 23, 2023 Revised March 28, 2024
engineering	the opinion of this Laboratory the proposed construction is feasible from a soil- g perspective provided the recommendations contained in this soil engineering ncorporated into the design and implemented during construction.	RETAINING WALLS
report are in	neorporated into the design and implemented during construction.	The following retaining
floor additio	the understanding of this Laboratory the proposed additions will include a second- on and a detached studio. Based upon this understanding, we present the following recommendations:	of less than 25 degrees. If th condition, the upper footing m from the top of the footing of t
FOUNDATI	IONS	<u>Cantilevered</u> - For cantileven not form part of the structure
1.	The new loads from a second-story addition, placed over an existing one-story structure, shall be collected to point loads and supported by new column footings.	1. The cantileve pressure equ conditions an
2.	The new column footings and new continuous spread footing excavations shall extend a minimum depth of 24 inches below the exterior grade, shall penetrate old fill and porous topsoil, shall extend 12 inches below the interior crawl space grade, or shall penetrate to a depth necessary to achieve a 12-inch-deep embedment into firm undisturbed native soil. The deeper condition described above shall govern. The bottom of these footing excavations shall then be	to 27 degrees following assu degrees, cohe EFP value do condition. Th specified in th
	compacted with a handheld mechanical plate compacter, such as a BS 45Y Wacker, to attain a relative compaction of 90%, based on the ASTM D-1557 method. The bottom of these footing excavations shall be compaction tested by a representative of our firm to verify the achievement of 90% compaction.	2. Retaining wal using pseudo approach. Th Project Struct seismic earth
3.	The subgrade below the proposed concrete slab-on-grade floor shall be prepared by removing all surface vegetation and at least the top 12 inches of surface soils. If old fill or the loose natural topsoil is deeper than 12 inches, it may be required to remove the soil to a deeper elevation until firm undisturbed soil is encountered. The exposed subgrade shall then be scarified an additional 6 inches. The scarified soil shall then be moisture conditioned at or near the optimum moisture content and compacted to a minimum of 90% relative compaction based upon the ASTM D-1557 method of compaction.	a horizontal p conditions. T accordance w seismic earth be estimated act at 0.33H a 3. The bottom of 24 inches bel
4.	This Laboratory shall be requested to perform compaction tests on the subgrade and bottom of the footing when 90% relative compaction has been achieved. Approval will then be provided to place rebar and concrete.	firm, undistur assuming an slopes, the ba depth that the
5.	An allowable soil bearing value of 2,000 psf is recommended for the new footings specified in this report with a one-third increase when considering wind or seismic forces.	the daylight lin adjacent to th recommended by the CBC, F
lay 23, 2023 Revised Marc		<sup>1</sup> Marshal Lew and Nicolas Sitar,
6.	All new footings shall be doweled into the existing footings using epoxied rebar.	<u>Convention Proceedings</u> <sup>2</sup> Linda Al Atik, M. ASCE and Nic Structures", Journal of Geotechn
7.	The Geotechnical Engineer shall be requested to observe the footing excavations after the compaction tests are completed and prior to placement of the rebar reinforcing.	May 23, 2023 Revised March 28, 2024
8.	All continuous footings shall contain a minimum of two No. 4 horizontal continuous rebar; one placed near the bottom and one near the top of the footings. The Project Civil or Structural Engineer shall specify the foundation reinforcing steel if additional rebar is needed for shear walls or any other purpose.	4. A passive soil coefficient of f excavation de
9.	As a minimum, concrete slabs on grade shall be a full 4 inches thick and shall contain No. 3 rebar spaced 24 inches on center each way. The steel reinforcement shall be placed near the center of the slab. Concrete slabs on grade shall be doweled into all adjacent footings using No. 3 rebar spaced 24 inches on center. The traditional or conventional subgrade preparation below a concrete slab-on-grade floor is some variation of the following: A minimum 4-inch coarse, washed concrete sand layer is placed over the soil subgrade. A	5. The use of eq 1:1 line project to handheld ra shall be place due to the cor backfilling ope Engineer shal recommendat
	10-mil or heavier impervious membrane is placed over the sand layer. These concrete slab-on-grade and sand layer recommendations shall be modified and/or eliminated as needed by the designers for surcharge loads, wheel loads, concentrated loads, or for moisture control. The floor covering supplier or manufacturer should be contacted for their specifications for design features, which will result in a successful bond between the concrete slab and floor	<ol> <li>The finish cov adversely affe wall. To preve footing. All wa with the specie</li> </ol>
	covering. Floor flatness and shrinkage crack control must be addressed by a competent contractor experienced in the skill of concrete placement. The owners or their agents shall inform those designing, building, and installing the concrete slab on grade and flooring of the performance and aesthetics expected. It is the	7. Retaining wall fabric. The gr such as Mirafi

slab on grade and flooring of the performance and aesthetics expected. It is the

mechanical properties of the soil with respect to achieving a stable soil subgrade.

If footings are to be located on, adjacent to, or within 10 feet of the top of a slope,

slope is a minimum distance of 10 feet. The slope setback required by the CBC,

sole purpose of the recommendations contained in this report to analyze the

By stable, we refer to the settlement or heave properties of the subgrade soil.

these footings shall extend to such a depth so that the horizontal distance

11. Footings placed near the retaining side of retaining walls shall penetrate below a

12. Floor space elevations located lower than the surrounding exterior grades are

building designer for details, such as waterproofing and French drains.

1:1 line projected up from the base of the wall and penetrate all backfill soil.

recommended to be protected from moisture intrusion. Please consult the

Figure 1805.3.1, shall also apply.

between the bottom outside edge of the footing and the face of the adjacent

10.

- slope the excavation back as specified.
- 8. Cal-OSHA safety requirements.

9.

g wall recommendations assume a single wall on level ground or a slope ere is more than one retaining wall, creating a multilevel terraced nust be at a depth that passes below a 50 percent sloping line projected up he retaining wall below.

ered retaining walls, such as site walls and garden walls, which do e, we recommend the following:

red retaining wall shall be designed assuming an active soil valent to a fluid (EFP) whose weight is 35 pcf for level backfill d 52 pcf for backfill slopes, which are constructed at an angle of up These values are based on Coulomb's Equation and the umed backfill soil values: internal angle of friction equal to 34 esion equal to 0, and a total unit weight of soil equal to 125 pcf. The es not include surcharge loads and is based on a free-draining he free-draining condition must be created by placing the backfill is section of the report.

Ils having a backfill height that exceeds 6 feet may be designed static analyses based on a modified<sup>1</sup> Seed Whitman (1970) ne need to apply the lateral seismic load is to be determined by the ural Engineer or by the building code. We have estimated the force using the modified Seed Whitman (1970) method, assuming eak ground acceleration of 1.102g, and assuming drained backfill he peak horizontal ground acceleration (PGA<sub>M</sub>) was determined in vith Section 1803.5.12 of the 2022 CBC, Paragraph 2.2. The resultant force ( $\Delta P_{AE}$ ), acting on the stem of the retaining wall, may as  $\Delta P_{AE} = 33.2 H^2$ . The resultant force ( $\Delta P_{AE}$ ) may be assumed to above the base of the wall<sup>2</sup>.  $K_h = 0.738$ 

f the retaining wall footing shall extend a minimum distance of ow the lowest adjacent undisturbed natural grade or 12 inches into bed original ground (whichever is deeper) and shall be designed allowable soil bearing value of 2,000 psf. For footings placed on use of the toe or keyway placed at the toe shall extend to such a re exists 10 horizontal feet between the bottom of the footing and ne of the adjacent slope. It should be noted the key may be placed e downhill edge of the retaining wall footing in order to attain the d downhill grade footing embedment. The slope setback required igure 1808.7.1, shall also apply.

et al, "Seismic Earth Pressures on Deep Building Basements", SEAOC 2010

holas Sitar, M. ASCE, "Seismic Earth Pressures on Cantilever Retaining ical and Geoenvironmental Engineering, October 2010

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pressure equivalent to a fluid whose weight is 350 pcf and a riction against sliding of 0.35 may be assumed for the footing scribed in the recommendation above

uipment to compact soil within the wedge of backfill defined by a ted up from behind the retaining wall to the surface shall be limited Immer plate compactors, such as a Wacker BS 45Y. A string line d along the top of the wall to monitor possible rotation of the wall npaction surcharge. If the wall begins to bow or lean away from the rations, the compaction process shall stop and the Geotechnical be notified immediately such that modified compaction ions can be given at that time.

ering on the face of the wall, such as stucco or paint, may be ected by moisture intrusion from the backfill through the back of the ent this, you should consider waterproofing the back of the wall and aterproofing and application of waterproofing shall be in accordance fications of the product supplier.

backfill shall be a clean, coarse sand or gravel wrapped in a filter avel shall be separated from adjacent native soil by a filter fabric, such as Mirafi 140N<sup>™</sup>. The retaining wall shall be serviced by appropriately placed weep holes or a perforated drain. This drainage feature must include at least 2 cubic feet of gravel wrapped in filter fabric. Lower quality native backfill material may be utilized outside the triangular wedge, which extends upwards from the inside edge of the retaining wall and is a minimum width of 60% of the wall height at ground surface. The sand between the wall and native soil shall have a Sand Equivalent of 20 or greater and an Expansion Index equal to 0. To avoid excessive amounts of sand and gravel backfill, do not allow the excavation contractor to cut a vertical excavation 2 to 4 feet beyond the back of the retaining wall footing or stem. Cut only to the point needed to install the drainpipe and

It is assumed that the rough grade excavation behind the retaining wall is to be cut at a temporary slope angle of 1 horizontal to 1 vertical in order to comply with

All soil backfill shall be compacted to a minimum of 90% relative compaction. It should be noted, retaining walls designed assuming active soil conditions are anticipated to deflect seasonally. In addition, surface features which obtain their support from retaining wall backfill materials are anticipated to express differential movement with respect to the retaining wall as the wall may be resting upon a thinner depth of fill or undisturbed original ground, and the surface features may be resting upon a considerable thickness of compacted fill, which has settlement characteristics differing from that of original ground. The differential movement between the wall and slab patio may be undesirable. In order to hide or prevent such differential movement, an alternate design may be

### May 23, 2023 Revised March 28, 2024

required, such as, but not limited to, placing a planter between the wall and sla or connecting the slab to the wall, creating a retaining wall which is pinned at t top, not cantilevered.

Partially Restrained - For restrained or partially restrained retaining walls or cantilevered retaining walls which form a portion of the foundation system of the structure, we recommer the wall be designed as a braced wall utilizing at-rest pressures in accordance with the following recommendations:

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- The retaining wall shall be designed assuming an at-rest soil pressure equivale to a fluid (EFP) whose weight is 60 pcf for level backfill conditions and 73 pcf f backfill slopes, which are constructed at an angle of up to 27 degrees. These values are based on the same assumed conditions stated in Recommendation No. 1 under the Cantilevered section. The at-rest condition for a level backfill based on the following equation: EFP=K<sub>0</sub> $\gamma$  where K<sub>0</sub>=1-sin  $\phi$ ,  $\gamma$  is the total unit weight of soil, and  $\phi$  is the internal angle of friction.
- The retaining wall footing shall conform to the FOUNDATIONS recommendation 2. and may be designed assuming an allowable soil bearing value of 2,000 psf. footings placed on or adjacent to slopes, the base of the toe or keyway placed the toe shall extend to such a depth that there exists 10 horizontal feet betwee the bottom of the footing and the daylight line of the adjacent slope.
- A passive soil pressure equivalent to a fluid whose weight is 350 pcf and a coefficient of friction against sliding of 0.35 may be assumed for the footing excavation described in the recommendation above.
- The retaining wall shall be serviced by a perforated drain which is located a minimum of 12 inches below top of the adjacent interior concrete slab-on-grade floor.
- Walls, foundations, and connections between walls and foundations forming 5 interior finished rooms of the structure shall be waterproofed by the proper application of a moisture barrier. All waterproofing products should be applied strict conformance with the manufacturer's recommendations. The selection o waterproofing product and the observation of proper installation will not involve Pacific Materials Laboratory. We recognize the need for waterproofing; however it is not in our purview to know the optimum product for application to the retaining wall or to confirm proper installation.
- It is assumed that the rough grade excavation behind the retaining wall is to be cut at a temporary slope angle of 1 horizontal to 1 vertical in order to comply wi Cal-OSHA safety requirements.
- Footings located near the retaining wall stem and in the zone of the granular backfill material shall extend through the retaining wall backfill, shall be supported on the firm underlying undisturbed ground, and below a 1 horizontal

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- 1 vertical line projected upward from the base of the wall; whichever is deepe As an alternative, the footing can be designed to span across the backfill area and be supported by footings able to receive the reaction load of the spannin member. This may include tying into the retaining wall for support, if that port of the retaining wall has been designed to receive the additional load.
- Retaining wall backfill shall include 2 cubic feet per linear foot of wall of 3/8inch gravel placed around a 4-inch perforated rigid PVC drainpipe. The perforations of the pipe shall be placed down at the positions of 5 and 7 o'cloc A filter fabric shall separate the gravel from the other backfill soils.
- Retaining wall backfill above the drainpipe shall be a clean, coarse sand or gravel, creating an inverted triangular wedge. Lower quality native backfill material may be utilized outside the triangular wedge which extends upwards from the outside edge of the pipe/gravel at the base of the retaining wall and minimum width of 60% of the wall height at ground surface. Clean, coarse sa is acceptable when the Sand Equivalent is greater than 20 and the Expansion Index equals 0. To avoid excessive amounts of sand and gravel backfill, do r allow the excavation contractor to cut a vertical excavation 2 to 4 feet beyond back of the retaining wall footing or stem. Cut only to the point needed to inst the drainpipe and slope the excavation back as specified.
- 10. The use of equipment to compact soil within the wedge of backfill defined by a 1:1 line projected up from behind the retaining wall to the surface shall be lim to handheld rammer plate compactors, such as a Wacker BS 45Y. A string li shall be placed along the top of the wall to monitor possible rotation of the wal due to the compaction surcharge. If the wall begins to bow or lean away from backfilling operations, the compaction process shall stop and the Geotechnica Engineer shall be notified immediately such that modified compaction recommendations can be given at that time.
- 11. The engineer designing the retaining wall shall address the following condition
  - A. When a retaining wall is backfilled without a top restraint, such as a wo floor diaphragm, the stem of the retaining wall acts as a cantilever.
  - Depending on the rigidity of the top restraint, the wall may act as a bea spanning between the top and bottom points, reversing the tension side the stem to the front of the wall as opposed to the back as in the case of cantilever condition.
  - Structure members deflect when loaded. The users guide to the widely used computer program RetainPro recommends the deflection of the w be checked because the program does not calculate deflection. Refer Section 9 titled "Related Design Considerations" in the manual titled "Basics of Retaining Wall Design", Page 50. As an estimate, the Conci Reinforcing Steel Institute (CRSI) manual estimates concrete reinforced

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the rec to l cor	ems of cantilevered retaining walls will top of the wall equal to the height of t commend the appropriate deflection ec load, condition, and material be emplo rresponding to the lateral loads recom	he wall divided by 240. We quation and values corresponding yed to determine the deflection mended herein such that	
pla Th rat	propriate connections, tiebacks, bracin ced within the structural design to pro e total deflection may not occur during her sometime after the frame structure aining wall.	perly account for the deflection. the backfilling operation, but	
RESISTANCE TO LAT	-		
passive earth pressures may be used. The pass distribution should be u combined without reduc	by be resisted by frictional resistance as along the foundation sides. An allow sive pressures of 350 pcf of footing ma sed. The frictional resistance and the ction. The resistance may be increase	vable friction coefficient of 0.35 ay be used. A triangular passive pressure may be	
loading. ADJACENT LOADS			
Where footings a calculated using the wid	are placed at varying elevations, the ended by published Formulas for Stresses in the second stresses in the second stress and equations for bother bother second stress and equations for bother bother second stress and stress are stress at the stress and stress and stress at the stress	n Semi-infinite Elastic	
SETTLEMENT			
distortions <sup>3</sup> of approxim anticipated for foundation and estimated settleme	the recommendations contained in thi nately 1/480. A total settlement of app ons supported on the undisturbed nati nts contained in this report are prelimi lation plans are substantially complete	roximately 1 inch or less is ve soil. The soil bearing values nary and may need to be	del
			emode
	agent shall request the Project Geote cement of compacted soil, gravel back		AD Rei
May 23, 2023	-10-	Lab No: 140725-2 Revised	
Revised March 28, 2024 PLAN REVIEW		File No: 24-15928-2	
	grading and foundation plans be subr	nitted to our office for a general	ditions OU F
	ntial compliance to the recommendation		l ibl
CLOSURE			nce Ad ANIT
upon this Laboratory's project scope, location requested to modify, a for the new development	dations contained herein are for the so understanding of the project which ha , or conceptual design is subsequently s necessary, the recommendations co ent concept. If the recommendations of commend an update and review of the pratory.	s been described herein. If the altered, this Laboratory shall be ontained herein as is appropriate of this report are not implemented	Residence 416 MAN
Materials Laboratory s will be required during soil conditions encoun recommendations con correctness of the actu	dations contained herein are based up hall be requested to perform the testin the grading and foundation operations tered and the construction procedures tained herein. If this service is perform al analytical soil tests described here	g and observation services which in order to verify that the actual are consistent with the ned by others, only the technical is attested to by this Laboratory.	<b>1</b>
	ne opportunity of providing this service please do not hesitate to call.	<ul> <li>If you have any questions</li> </ul>	RS-15 (E-
	Respectfully	submitted,	N N
	PACIFIC MA	TERIALS LABORATORY, INC.	lation
	Ronald J. Pil Geotechnica	ke I Engineer, G. E. 2291	eport Recommendations
			lecc
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Preliminary	Geotechnical Invest	igation -	
Recommend		-Davio11	4/17/2
	erials Laboratory rch 28, 2024		Т-2
	- <del> </del>		

arbara. р anta S -013 (-1)

## A FIBER ROLLS

# Limitations Runoff and erosion may occur if fiber roll is not adequately trenched in.

- Fiber rolls at the toe of slopes greater than 1:5 may require the use of 500 mm (20" diameter) or installations achieving the same protection (i.e., stacked smaller diameter fiber rolls, etc.).
- Fiber rolls may be used for drainage inlet protection if they can be properly anchored.
- Difficult to move once saturated.
- Fiber rolls could be transported by high flows if not properly staked and trenched in.
- Fiber rolls have limited sediment capture zone.
- Do not use fiber rolls on slopes subject to creep, slumping, or landslide.

### Standards and Fiber Roll Materials

### Specifications Fiber rolls shall be either:

- (1) Prefabricated rolls.
- (2) Rolled tubes of crosion control blanket.
- Assembly of Field Rolled Fiber Roll
- Roll length of erosion control blanket into a tube of minimum 200 mm (8 in)
- Bind roll at each end and every 1.2 m (4 ft) along length of roll with jute-type

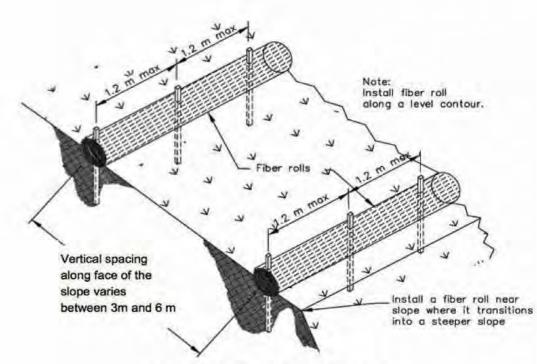
### Installation

- Slope inclination of 1:4 or flatter: fiber rolls shall be placed on slopes 6.0 m
- Slope inclination of 1:4 to 1:2: fiber rolls shall be placed on slopes 4.5 m
- Slope inclination 1:2 or greater: fiber rolls shall be placed on slopes 3.0 m
- Stake fiber rolls into a 50 to 100 mm (2 to 4 in) trench.
- Drive stakes at the end of each fiber roll and spaced 600 mm (2 ft) apart if Type 2 installation is used (refer to Page 4). Otherwise, space stakes 1.2 m (4 ft) maximum on center if installed as shown on Pages 5 and 6.
- Use wood stakes with a nominal classification of 19 by 19 mm (3/4 by 3/4 in), and minimum length of 600 mm (24 in).
- If more than one fiber roll is placed in a row, the rolls shall be overlapped; not

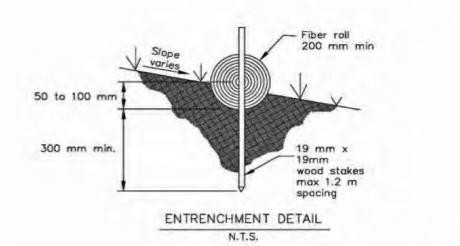
### Removal

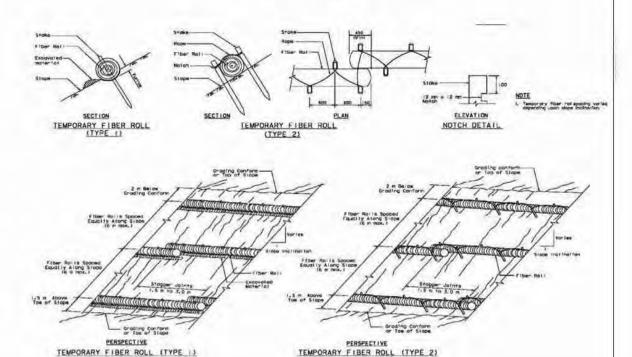
Inspection

- Fiber rolls are typically left in place.
- If fiber rolls are removed, collect and dispose of sediment accumulation, and
- fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.
- Maintenance and Repair or replace split, torn, unraveling, or slumping fiber rolls.
  - Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the RE.
  - Inspect fiber rolls following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.
  - Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.



TYPICAL FIBER ROLL INSTALLATION





TEMPORARY FIBER ROLL ITYPE IS

# **B** HYDROSEEDING Definition and Hydroseeding typically consists of applying a mixture of wood fiber, seed, Purpose fertilizer, and stabilizing emulsion with hydro-mulch equipment, which temporarily protects exposed soils from erosion by water and wind. This is one of five temporary soil stabilization alternatives to consider. Appropriate • Hydroseeding is applied on disturbed soil areas requiring temporary protection until permanent vegetation is established or disturbed soil areas that must be re-disturbed following an extended period of inactivity. Applications Limitations Hydroseeding may be used alone only when there is sufficient time in the season to ensure adequate vegetation establishment and erosion control. Otherwise, hydroseeding must be used in conjunction with a soil binder or mulching (i.e., straw mulch), refer to BMP SS-5, Table 1 for options. Steep slopes are difficult to protect with temporary seeding. Temporary seeding may not be appropriate in dry periods without supplemental irrigation Temporary vegetation may have to be removed before permanent vegetation is applied. Temporary vegetation is not appropriate for short-term inactivity. Standards and To select appropriate hydroseeding mixtures, an evaluation of site conditions shall Specifications be performed with respect to: - Soil conditions

- Site topography - Season and climate
- Vegetation types
- Selection of hydroseeding mixtures shall be approved by the District Landscape Architect and the Construction Storm Water Coordinator.
- The following steps shall be followed for implementation: Seed mix shall comply with the Standard Specifications Section 20-2.10, and
- the project's special provisions. Hydroseeding can be accomplished using a multiple-step or one-step process; refer to the special provisions for specified process. The multiple-step
- furrows trending along the contours. Rolling with a crimping or punching type roller or track walking is required on all slopes prior to hydroseeding.
- All seeds shall be in conformance with the California State Seed Law of the Department of Agriculture. Each seed bag shall be delivered to the site sealed and clearly marked as to species, purity, percent germination, dealer's ates of test movide the locumentation. The container shall be labeled to clearly reflect the amount of Pure Live Seed (PLS) contained. All legume seed shall be pellet-inoculated. Inoculant sources shall be species-specific and shall be applied at a rate of 2 kg of inoculant per 100 kg of seed (2-lb inoculant per 100-lb seed), refer to Standard Specifications Section 20-2.10.
- Commercial fertilizer shall conform to the requirements of the California Food and Agricultural Code. Fertilizer shall be pelleted or granular form.
- Follow-up applications shall be made as needed to cover weak spots, and to maintain adequate soil protection.
- Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, and existing vegetation.
- Maintenance and All seeded areas shall be inspected for failures and re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates. Any temporary revegetation efforts that do not provide adequate cover must be reapplied at a scheduled recommended by the
  - Caltrans Landscape Architect or RE.

# C HYDRAULIC MULCH

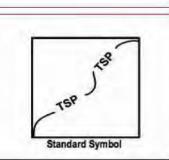
Inspection

Definition and Purpose	Hydraulic mulch consists of applying a mixture of shredded wood fiber or a hydraulic matrix and a stabilizing emulsion or tackifier with hydroseeding equipment, which temporarily protects exposed soil from erosion by raindrop impact or wind. This is one of five temporary soil stabilization alternatives to consider.
Appropriate Applications	<ul> <li>Hydraulic mulch is applied to disturbed areas requiring temporary protecti until permanent vegetation is established or disturbed areas that must re- disturbed following an extended period of inactivity.</li> </ul>
Limitations	<ul> <li>Wood fiber hydraulic mulches are generally short-lived (only last a part of growing season) and need 24 hours to dry before rainfall occurs to be effective.</li> </ul>
	<ul> <li>Paper mulches are not permitted.</li> </ul>
	<ul> <li>Avoid use in areas where the mulch would be incompatible with immediat future earthwork activities and would have to be removed.</li> </ul>
Standards and Specifications	<ul> <li>Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be under a other methods are important.</li> </ul>

- slopes to prevent erosion.

- only be used where other methods are impractical.
- Hydraulic matrices require 24 hours to dry before rainfall occurs to be effective unless approved by the Resident Engineer. Avoid mulch over-spray onto the traveled way, sidewalks, lined drainage
- channels, and existing vegetation. Selection of hydraulic mulches by the Contractor must be approved by the

- process ensures maximum direct contact of the seeds to soil. When the onestep process is used to apply the mixture of fiber, seed, etc., the seed rate shall be increased to compensate for all seeds not having direct contact with the
- Prior to application, roughen the slope, fill area, or area to be seeded with the Track walking shall only be used where other methods are impractical.
- Apply a straw mulch to keep seeds in place and to moderate soil moisture and temperature until the seeds germinate and grow, refer to Standard Specifications Sections 20-2.06 and 20-3.03.



### **BMP** Objectives Soil Stabilization o Sediment Control o Tracking Control Wind Erosion Control o Non-Storm Water Management D Materials and Waste Management

- Maintenance requirements - Sensitive adjacent areas
- Water availability

Plans for permanent vegetation

dent Engineer (RE) with su

After any rainfall event, the Contractor is responsible for maintaining all

is requiring temporary protection listurbed areas that must reactivity.

short-lived (only last a part of a efore rainfall occurs to be

e incompatible with immediate to be removed.

walking. Track walking shall

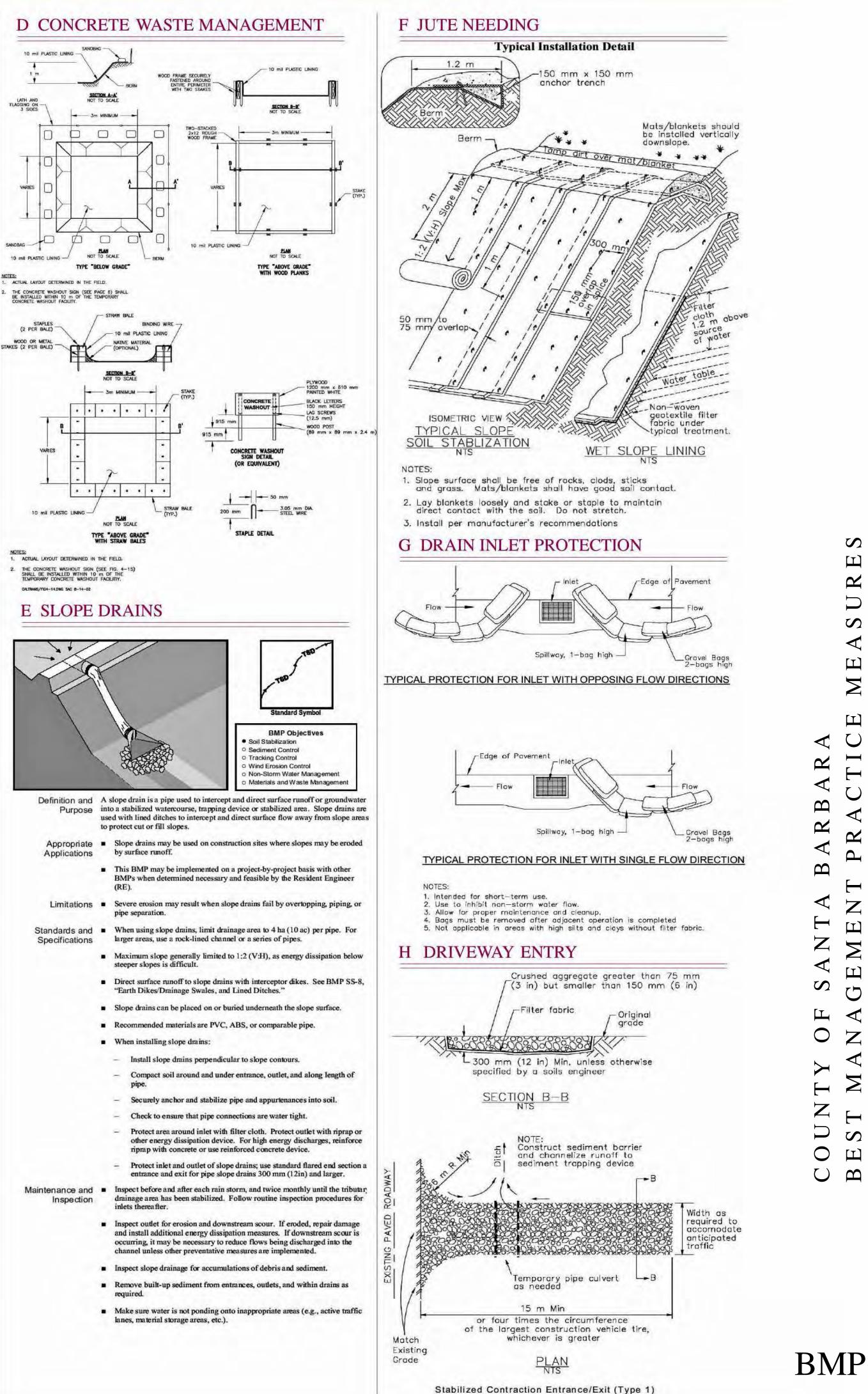
Resident Engineer (RE) or Construction Storm Water Coordinator.

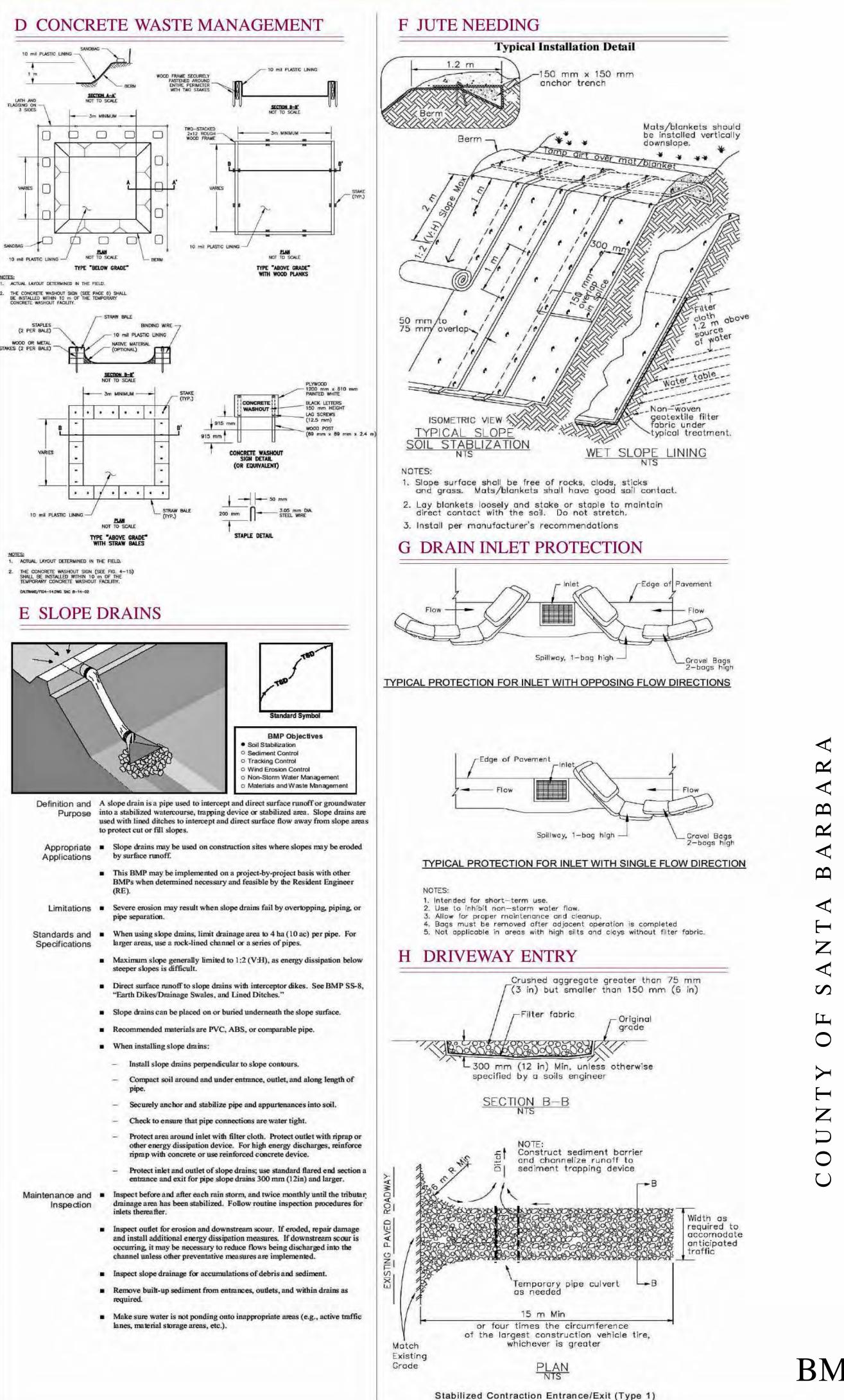
# C HYDRAULIC MULCH

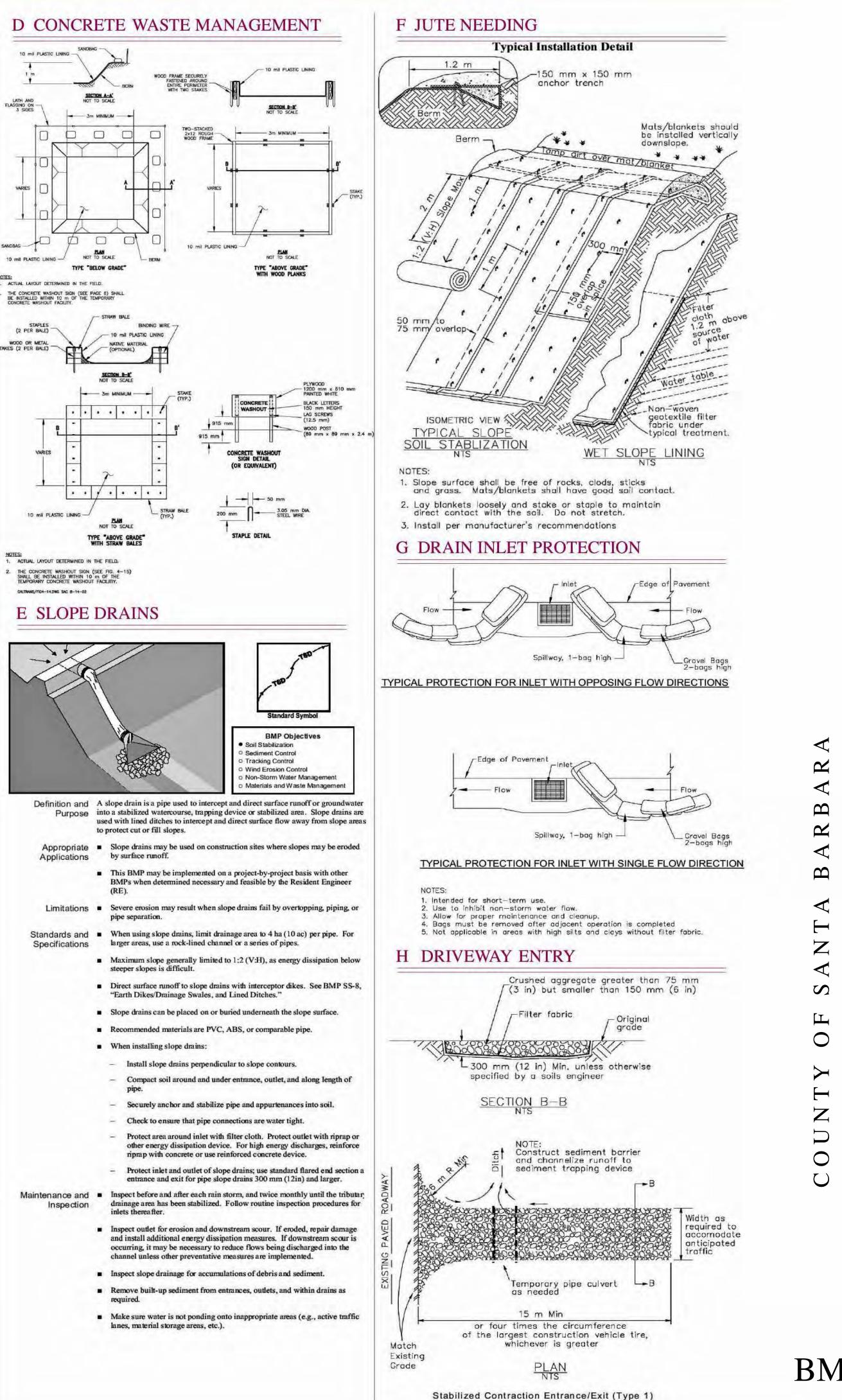
- Materials for wood fiber based hydraulic mulches and hydraulic matrices shall conform to Standard Specifications Section 20-2.07.
- Hydraulic Mulch
- Wood fiber mulch is a component of hydraulic applications. It is typically applied at the rate of 2,250 to 4,500 kilograms per hectare (kg/ha) (2,000 to 4,000 lb/ac) with 0-5% by weight of a stabilizing emulsion or tackifier (e.g., guar, psyllium, acrylic copolymer) and applied as a slurry. This type of mulch is manufactured from wood or wood waste from lumber mills or from urban sources. Specifications for wood fiber mulch can be found in Standard Specifications Sections 20-2.07 and 20-2.08.
- Hydraulic matrix is a combination of wood fiber mulch and a tackifier applied as a slurry. It is typically applied at the rate of 2,250 to 4,500 kilograms per hectare (kg/Ha) with 5-10% by weight of a stabilizing emulsion or tackifier (e.g., guar, psyllium, acrylic copolymer).
- Hydraulic Matrix
- Hydraulic matrix is a combination of wood fiber mulch and tackifier applied as a slurry. It is typically applied at the rate of 2,250 to 4,500 kg/ha with 5-10% by weight of a stabilizing emulsion or tackifier (e.g., guar, psyllium, acrylic copolymer).
- Bonded Fiber Matrix
- Bonded fiber matrix (BFM) is a hydraulically-applied system of fibers and adhesives that upon drying forms an erosion-resistant blanket that promotes vegetation, and prevents soil erosion. BFMs are typically applied at rates from 3,400 kg/ha to 4,500 kg/ha based on the manufacturer's recommendation. The biodegradable BFM is composed of materials that are 100% biodegradable. The binder in the BFM should also be biodegradable and should not dissolve or disperse upon re-wetting. Typically, biodegradable BFMs should not be applied immediately before, during or immediately after rainfall if the soil is saturated. Depending on the product, BFMs require 12 to 24 hours to dry to become effective.
- Maintenance and Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked. Inspect before Inspections expected rain storms and repair any damaged ground cover and re-mulch exposed areas of bare soil.
  - After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.

## **D** CONCRETE WASTE MANAGEMENT

- Temporary Concrete Washout Facility (Type Below Grade) Temporary concrete washout facility Type "Below Grade" shall be constructed as shown on page 6, with a recommended minimum length and minimum width of 3m (10 ft). The quantity and volume shall be sufficient to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval of the RE. Lath and flagging shall be commercial type.
- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.
- The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.
- Removal of Temporary Concrete Washout Facilities
- When temporary concrete washout facilities are no longer required for the work, as determined by the RE, the hardened concrete shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 15-3.02. Disposal of PCC slurries or liquid waste shall be disposed of outside the highway right-of-way in conformance with provisions of Standard Specifications Section 7-1-13. Materials used to construct temporary concrete washout facilities shall become the property of the Contractor, shall be removed from the site of the work, and shall be disposed of outside the highway right-of-way in conformance with the provisions of the Standard Specifications, Section 7-1.13.
- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and repaired i conformance with the provisions in Standard Specifications Section 15-1.02, "Preservation of Property."
- Maintenance and The Contractor's Water Pollution Control Manager (WPCM) shall monitor on site concrete waste storage and disposal procedures at least weekly or as Inspection directed by the RE.
  - The WPCM shall monitor concrete working tasks, such as saw cutting, coring, grinding and grooving daily to ensure proper methods are employed or as directed by the RE.
  - Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
  - Temporary washout facilities shall have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete
  - materials generated during washout procedures.
  - Perform washout of concrete mixer trucks in designated areas only. Wash concrete only from mixer truck chutes into approved concrete washout
  - facility. Washout may be collected in an impermeable bag for disposal. Pump excess concrete in concrete pump bin back into concrete mixer truck.
  - Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly
  - disposed offsite. Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of per BMP WM-5, "Solid Waste Management", and in conformance with the provisions in Standard Specifications Section 15-3.02, "Removal Methods."
  - Temporary Concrete Washout Facility Type "Above Grade"
  - Temporary concrete washout facility Type "Above Grade" shall be constructed as shown on Page 5 or 6, with a recommended minimum length and minimum width of 3 m (10 ft), but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval from the RE.
  - Straw bales, wood stakes, and sandbag materials shall conform to the provisions in BMP SC-9, "Straw Bale Barrier."
  - Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.
  - Portable delineators shall conform to the provisions in Standard Specifications Section 12-3.04, "Portable Delineators.". The delineator bases shall be cemented to the pavement in the same manner as provided for cementing pavement markers to pavement in Standard Specifications Section 85-1.06, "Placement." Portable delineators shall be applied only to a clean, dry surface.
  - Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 100 mm (4 inches) for above grade facilities and 300 mm (12 inches) for below grade facilities. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 15-3.02, "Removal Methods."
  - Existing facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.
  - Temporary concrete washout facilities shall be inspected for damage (i.e. tears in PVC liner, missing sand bags, etc.). Damaged facilities shall be repaired.









#1: RETAINING WALL AND GARAGE #2



#2: GARAGE #2, BREEZEWAY AND GARAGE #1





#4: GARAGE #1 CORNER WINDOW

#3: GARAGE #1 FRONT



#5: EAST ELEVATION (LIVING ROOM DOORS)



#6: EAST ELEVATION (LIVING ROOM CLERESTORY WINDOWS)



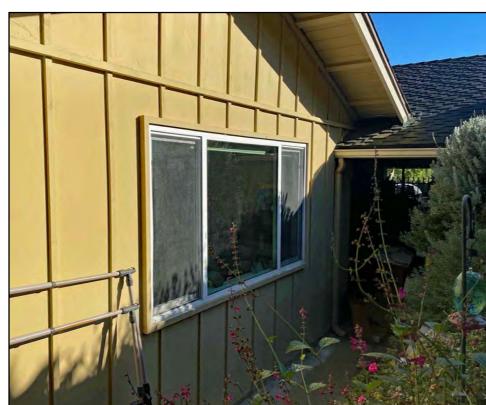
#7: NORTH ELEVATION (LIVING & BEDROOM DOORS)



#9: WEST ELEVATION (BEDROOM & BATH WINDOWS)

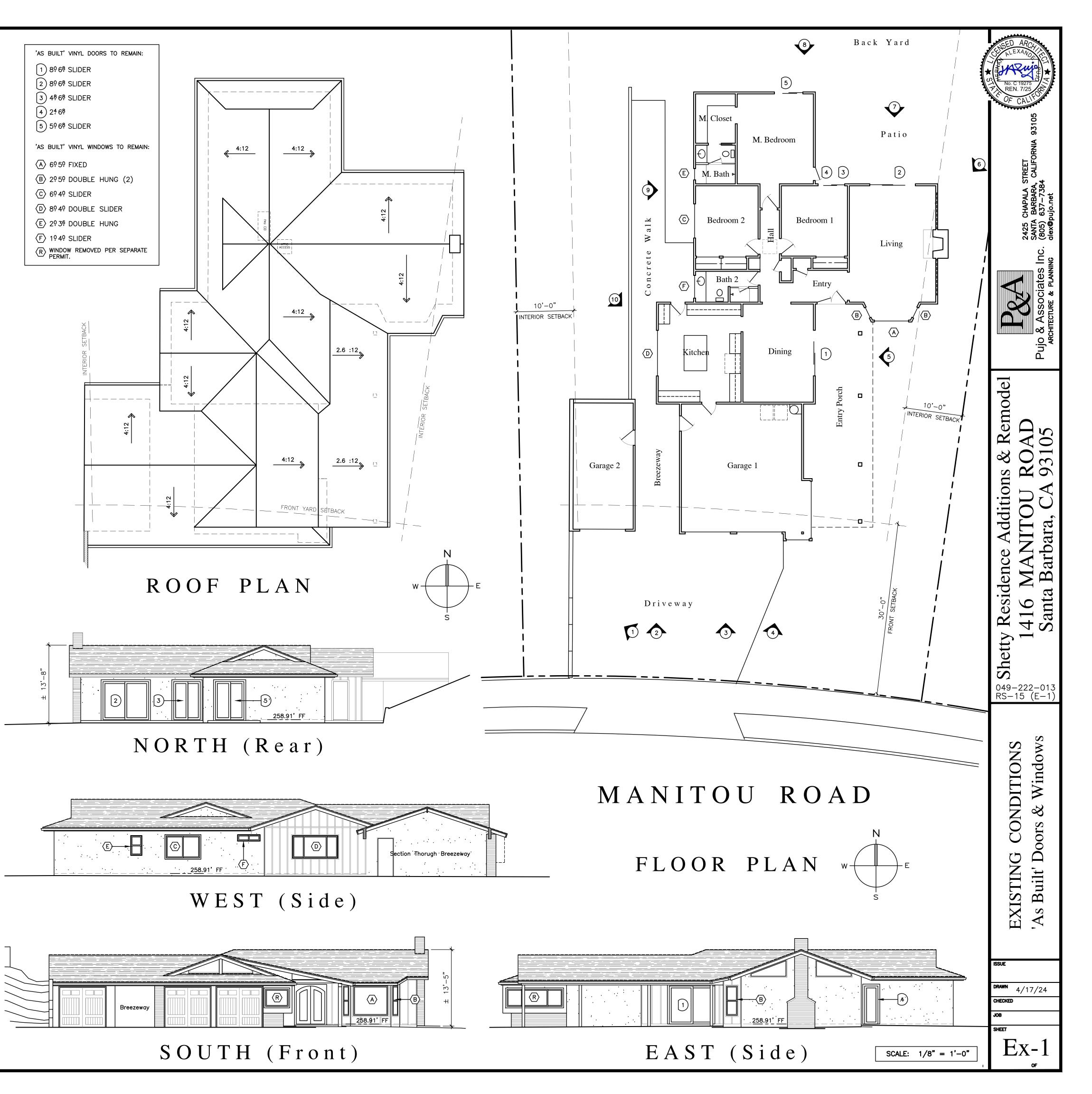


#8: NORTH ELEVATION (MASTER BEDROOM DOOR)

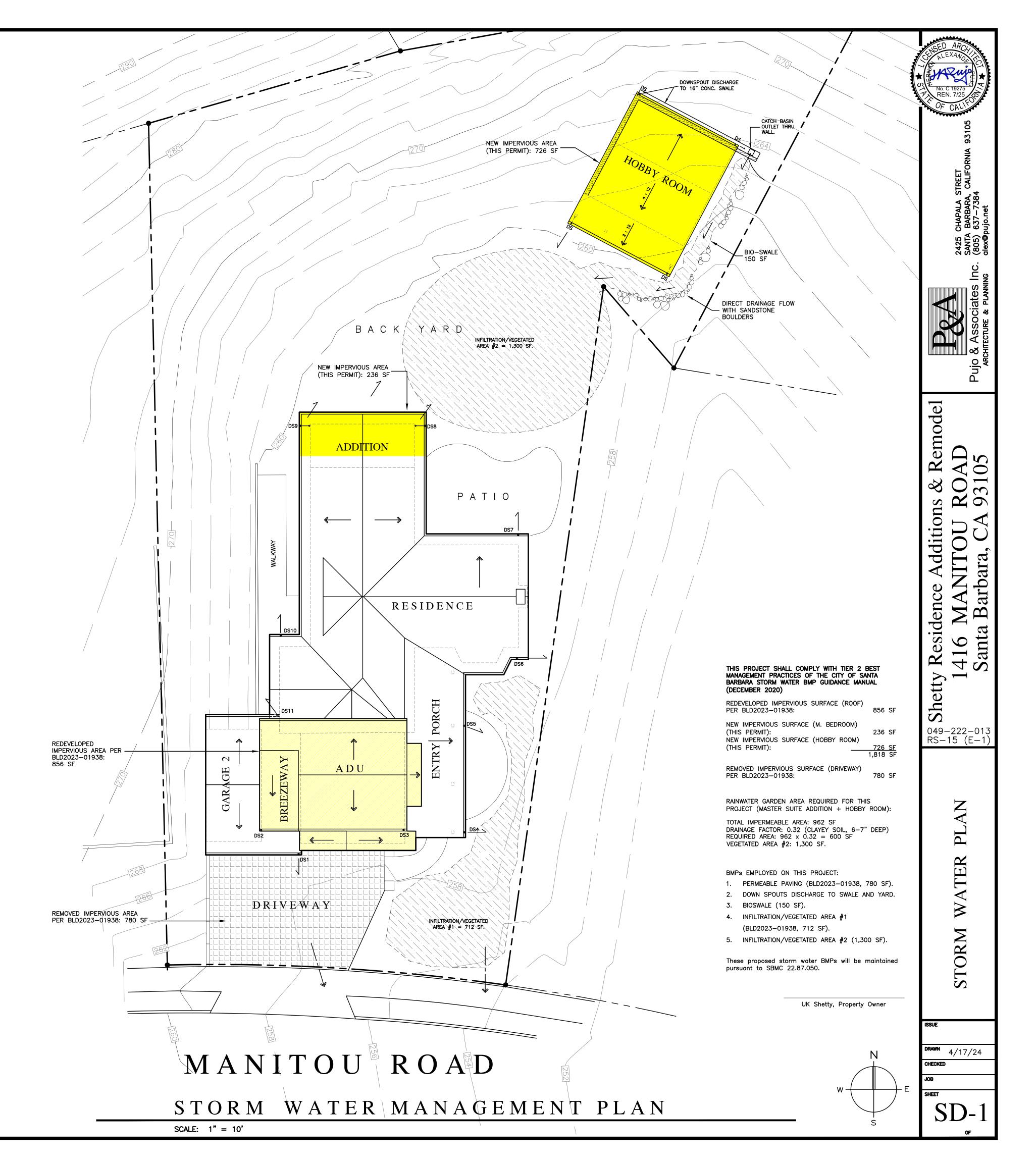


#10: WEST ELEVATION (KITCHEN WINDOW)

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### ARBORIST REPORT / TREE PROTECTION PLAN PREPARED BY: DUKE McPHERSON, CERTIFIED ARBORIST, WE-0690

201 EAST MOUNTAIN DRIVE, SANTA BARBARA, CA 93108 (805) 705-9529 treemanduke@cox.net

### Introduction and Purpose of the Report

I was asked by Alex Pujo, noted above, to meet him and the owners of the subject property to determine what affect a small structure (23'X 23' plus a 5' wide porch termed a hobby room) would have on Coast Live Oaks, Quercus agrifolia located nearby. We met on site on September 13 of this year.

### The Site and Trees

The property is relatively level except for a steep slope in the back yard. There are two Coast Live Oaks situated 14' apart on the slope. One is 9" in trunk diameter at 4.5' up from grade level (tree #1), the other is  $14^{"}$  (tree #2).

### Potential Impact from Proposed Construction

Both trees will be affected by the construction of the small structure (See Figure 1, page 2 for a site plan section). The Critical Root Zone (CRZ) of both trees was arrived at by measuring from trunk center to canopy dripline and adding 6'. Of concern is whether 20% or more of their CRZ would be encroached upon by the outline of the structure's foundation. At 20% or more, mitigation requirements would be triggered. I concluded that the CRZ of tree #1 did not approach the 20% mark. That of tree #2 will be significantly affected and will necessitate the planting of new oaks on the property.

### Mitigation Recommendations

I recommend that two 24" boxed Coast Live Oak nursery specimens be planted on the slope east of the new structure as shown in Figure 2. They are to receive their own designated drip irrigation system regulated with a remote timer for a period of two years.

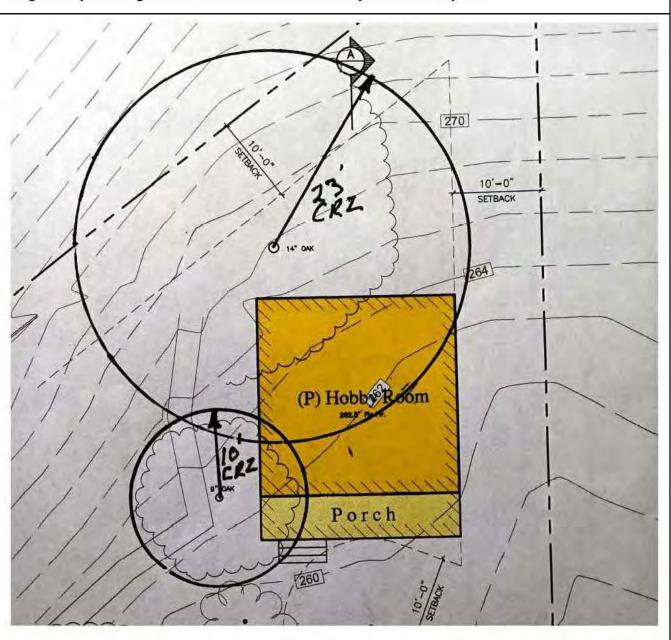
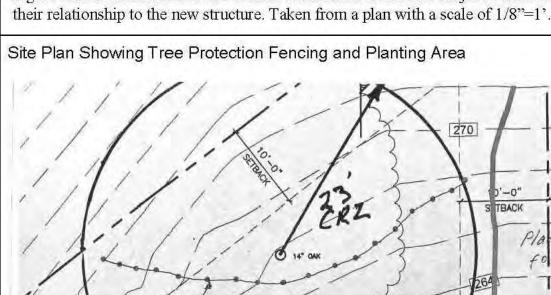
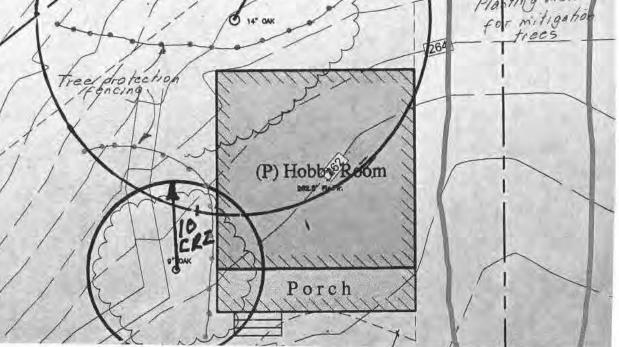


Figure 1. Plan section shows the Critical Root Zones of the two subject Coast Live Oak trees and







Planting Area

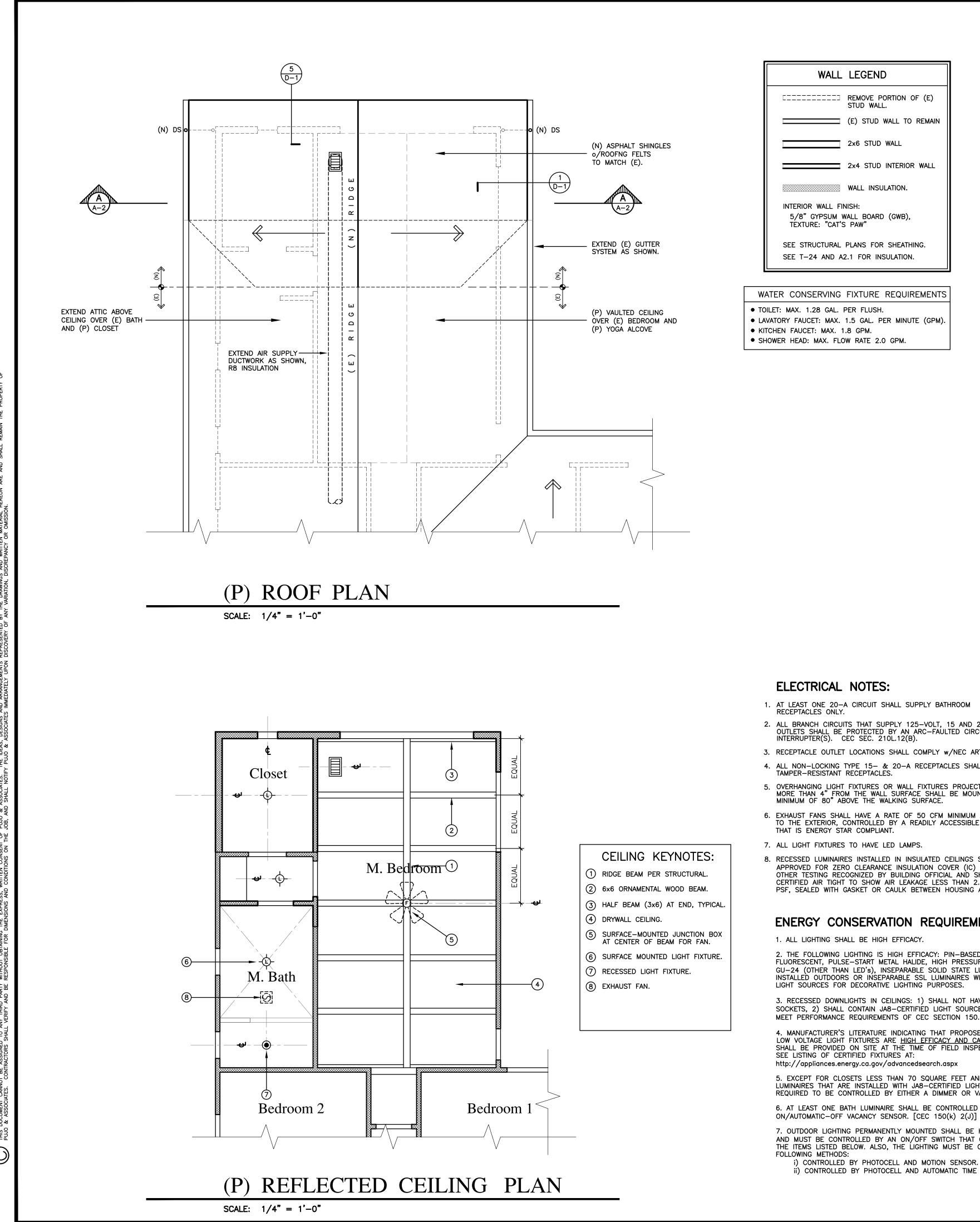
Figure 2. Tree protection fencing is shown as dotted lines. There is a good area, though a steep slope, outlined to the east of the proposed building for mitigation planting.

Tree Protection Measures to be taken during the Construction Phase 1. Tree protection fencing is to be installed in the manner shown above in figure 2. It is to remain undisturbed during the entire construction phase.

2. There is space for a portable tool washout basin on the level part of the rear property well away from the two subject trees. It is to be removed at the termination of the project.

3. All roots exposed which are 2" and larger in diameter are to be cut even to help prevent decay.

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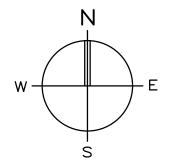
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# ETTEREST REMOVE PORTION OF (E) (E) STUD WALL TO REMAIN 2x4 STUD INTERIOR WALL

- LAVATORY FAUCET: MAX. 1.5 GAL. PER MINUTE (GPM).

PLAN KEYNOTES: (1) REMOVE DOOR. (2) RELOCATE ELECTRICAL PANEL. (3) REMOVE PORTION OF (E) STUD WALL. (4) (N) OPENING IN (E) WALL. (5) REMOVE (E) SINK. (6) REMOVE PORTION OF (E) ROOF. 7 REMOVE CEILING OVER MASTER BEDROOM – SEE STRUCTURAL. (B) (E) TILED SHOWER ENCLOSURE, FIXTURES, SAFETY GLAZING AND (E) WINDOW TO REMAIN. (9) (E) TOILET TO REMAIN. (10) (N) 2x WALL PER STRUCTURAL. (11) INSULATION PER SHEET A-2. (12) (N) CEILING BEAM PER STRUCTURAL. (13) (N) COUNTERTOP AND PLUMBING FIXTURES. (14) (N) TILE FLOORING @ BATHROOM.

- (15) (N) WOOD FLOORING @ BEDROOM AND CLOSET.
- (16) (N) LINEN CABINET, 8' H.



**\**A−2

- 1. AT LEAST ONE 20-A CIRCUIT SHALL SUPPLY BATHROOM
- 2. ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, 15 AND 20-A OUTLETS SHALL BE PROTECTED BY AN ARC-FAULTED CIRCUIT INTERRUPTER(S). CEC SEC. 210L.12(B).
- 3. RECEPTACLE OUTLET LOCATIONS SHALL COMPLY w/NEC ART. 210-52(a).
- 4. ALL NON-LOCKING TYPE 15- & 20-A RECEPTACLES SHALL BE LISTED
- OVERHANGING LIGHT FIXTURES OR WALL FIXTURES PROJECTING MORE MORE THAN 4" FROM THE WALL SURFACE SHALL BE MOUNTED AT A MINIMUM OF 80" ABOVE THE WALKING SURFACE.
- 6. EXHAUST FANS SHALL HAVE A RATE OF 50 CFM MINIMUM AND DUCTED TO THE EXTERIOR, CONTROLLED BY A READILY ACCESSIBLE HUMIDISTAT
- 7. ALL LIGHT FIXTURES TO HAVE LED LAMPS.
- 8. RECESSED LUMINAIRES INSTALLED IN INSULATED CEILINGS SHALL BE APPROVED FOR ZERO CLEARANCE INSULATION COVER (IC) BY UL OR OTHER TESTING RECOGNIZED BY BUILDING OFFICIAL AND SHALL BE CERTIFIED AIR TIGHT TO SHOW AIR LEAKAGE LESS THAN 2.0 CFM AT 1.57 PSF, SEALED WITH GASKET OR CAULK BETWEEN HOUSING AND CEILING.

### ENERGY CONSERVATION REQUIREMENTS:

1. ALL LIGHTING SHALL BE HIGH EFFICACY.

2. THE FOLLOWING LIGHTING IS HIGH EFFICACY: PIN-BASED COMPACT FLUORESCENT, PULSE-START METAL HALIDE, HIGH PRESSURE SODIUM, GU-24 (OTHER THAN LED'S), INSEPARABLE SOLID STATE LUMINAIRES (SSL'S) INSTALLED OUTDOORS OR INSEPARABLE SSL LUMINAIRES WITH COLORED LIGHT SOURCES FOR DECORATIVE LIGHTING PURPOSES.

3. RECESSED DOWNLIGHTS IN CEILINGS: 1) SHALL NOT HAVE SCREW BASED SOCKETS, 2) SHALL CONTAIN JA8-CERTIFIED LIGHT SOURCES AND 3) SHALL MEET PERFORMANCE REQUIREMENTS OF CEC SECTION 150.0(k)1C.

4. MANUFACTURER'S LITERATURE INDICATING THAT PROPOSED LED AND/OR LOW VOLTAGE LIGHT FIXTURES ARE HIGH EFFICACY AND CALIFORNIA CERTIFIED SHALL BE PROVIDED ON SITE AT THE TIME OF FIELD INSPECTION. SEE LISTING OF CERTIFIED FIXTURES AT:

5. EXCEPT FOR CLOSETS LESS THAN 70 SQUARE FEET AND HALLWAYS, ALL LUMINAIRES THAT ARE INSTALLED WITH JA8-CERTIFIED LIGHT SOURCES ARE REQUIRED TO BE CONTROLLED BY EITHER A DIMMER OR VACANCY SENSOR.

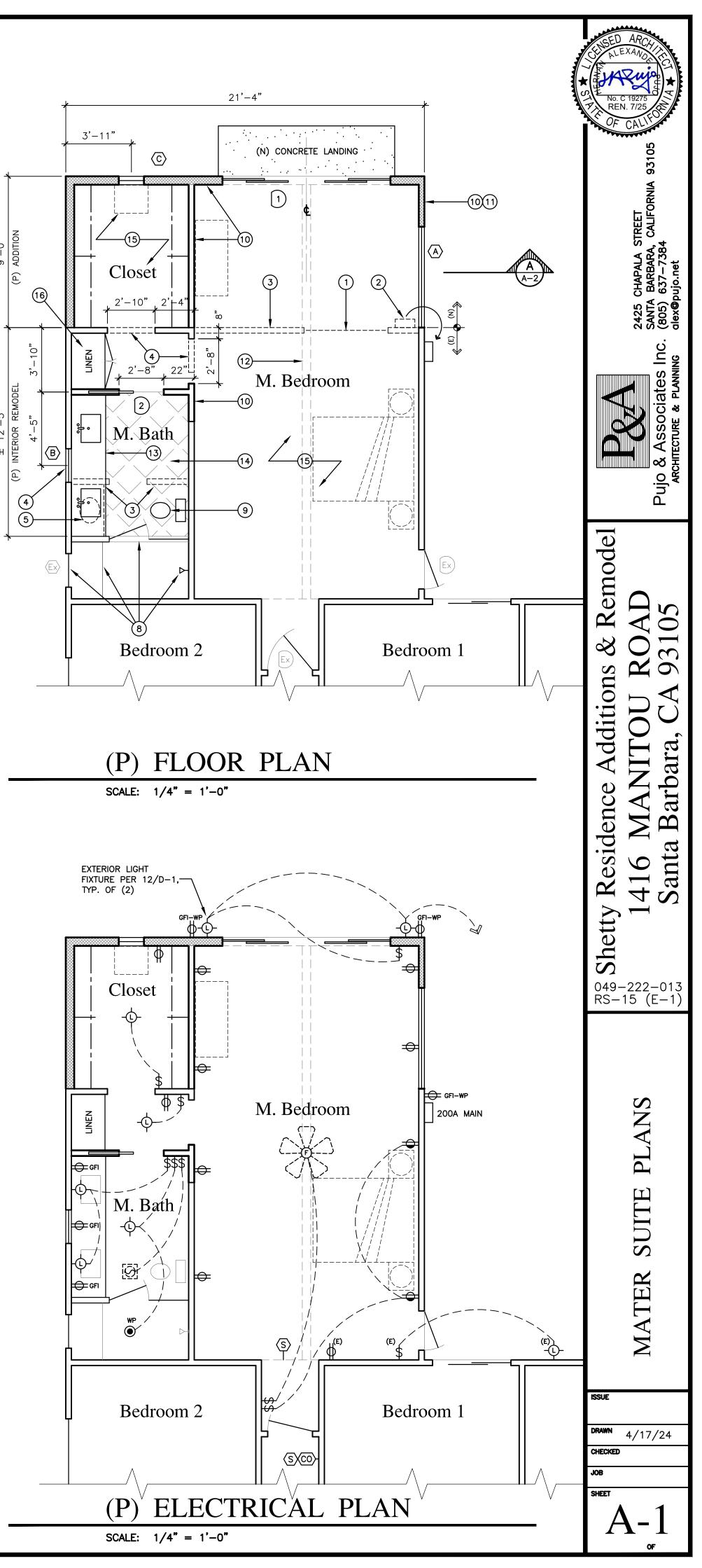
6. AT LEAST ONE BATH LUMINAIRE SHALL BE CONTROLLED BY A MANUAL ON/AUTOMATIC-OFF VACANCY SENSOR. [CEC 150(k) 2(J)]

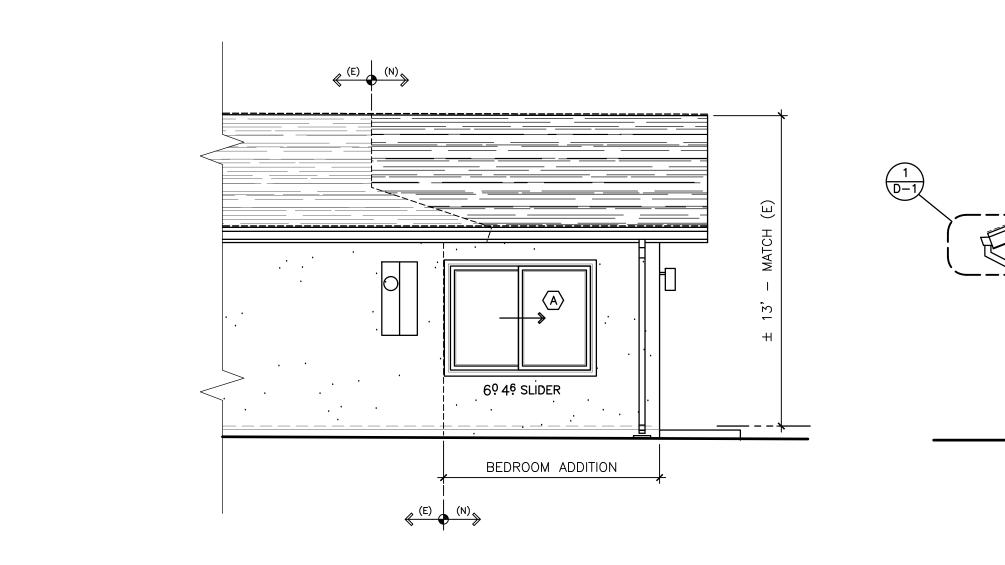
7. OUTDOOR LIGHTING PERMANENTLY MOUNTED SHALL BE HIGH EFFICACY AND MUST BE CONTROLLED BY AN ON/OFF SWITCH THAT OVERRIDES TO 'ON' THE ITEMS LISTED BELOW. ALSO, THE LIGHTING MUST BE ONE OF THE

ii) CONTROLLED BY PHOTOCELL AND AUTOMATIC TIME SWITCH CONTROL.

	ALL LAMPS TO BE LED
ф	OUTLET
<b>þ</b>	OUTLET CONNECTED TO SWITCH
Ф	FLOOR OR COUNTER MOUNTED OUTLET
GFI	GROUND FAULT INTERRUPTOR
∯ ⊮P	OUTLET w/WATERPROOF COVER
● WP	LIGHT FIXTURE SUITABLE FOR DAMP LOCATIONS SWITCH
S C	3-WAY SWITCH
₽₃ \$₀	SWITCH w/DIMMER
	·
\$occ	SWITCH w/OCCUPANT SENSOR
-¢-	LIGHT FIXTURE (SURFACE MOUNTED)
۲	LIGHT FIXTURE (RECESSED IN CEILING)
Ф	DIRECTIONAL LIGHT FIXTURE (RECESSED IN CEILING)
	STEP LIGHT FIXTURE (RECESSED IN WALL)
�	DIRECTIONAL LIGHT FIXTURE (SURFACE MOUNTED)
	=======⊐ R COUNTER STRIP w/SWITCH
ØØ	COMBINATION EXHAUST FAN/HEAT LAMP
[J]	EXHAUST FAN
	M min. intermittent or 20 CFM uous, ducted to the exterior.
s	SMOKE DETECTOR
(00)	CARBON MONOXIDE ALARM
	ELECTRICAL METER
	ELECTRICAL PANEL
μ	CABLE TV
T	TELEPHONE CEILING FAN

ELECTRICAL SYMBOLS

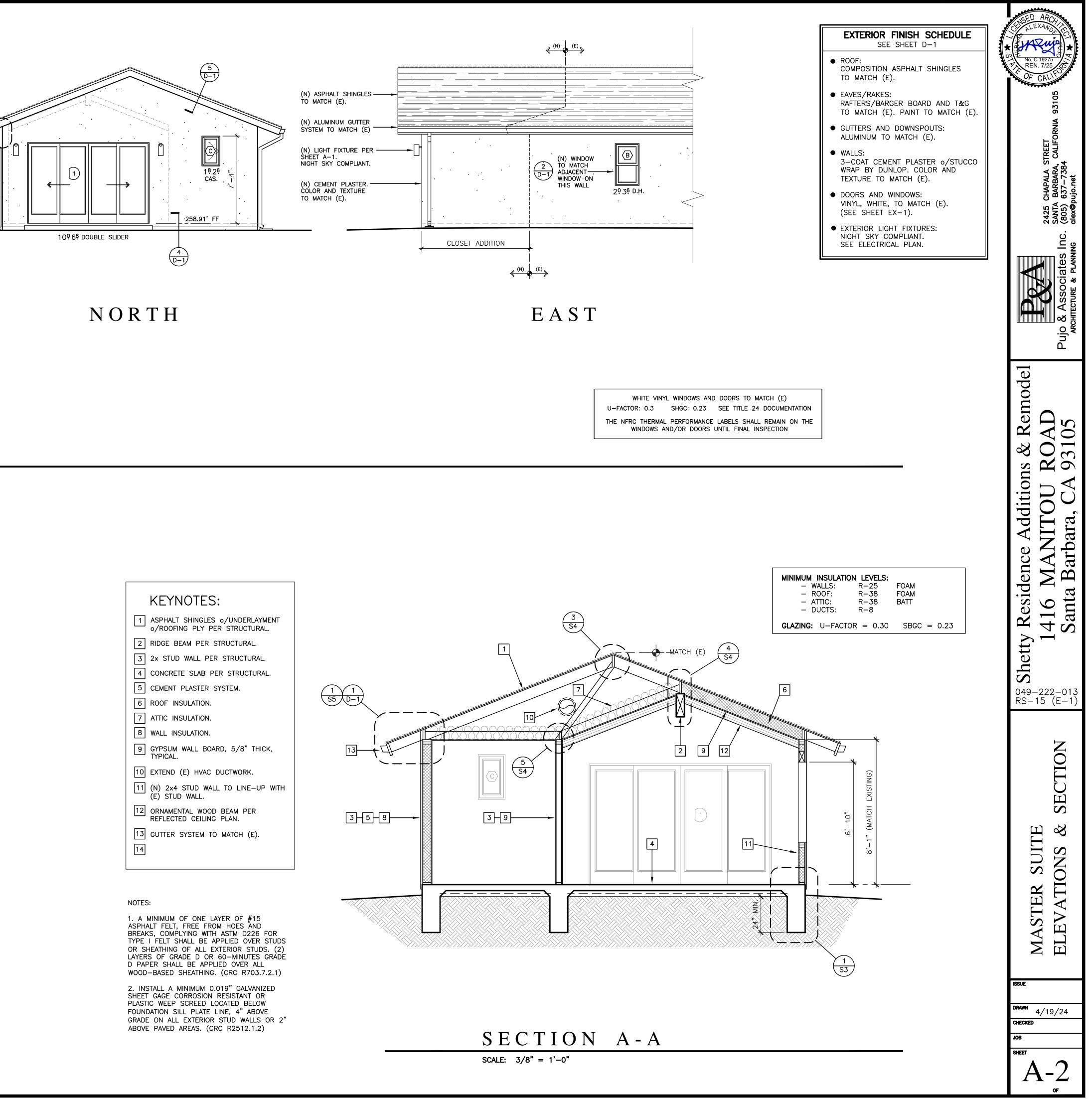




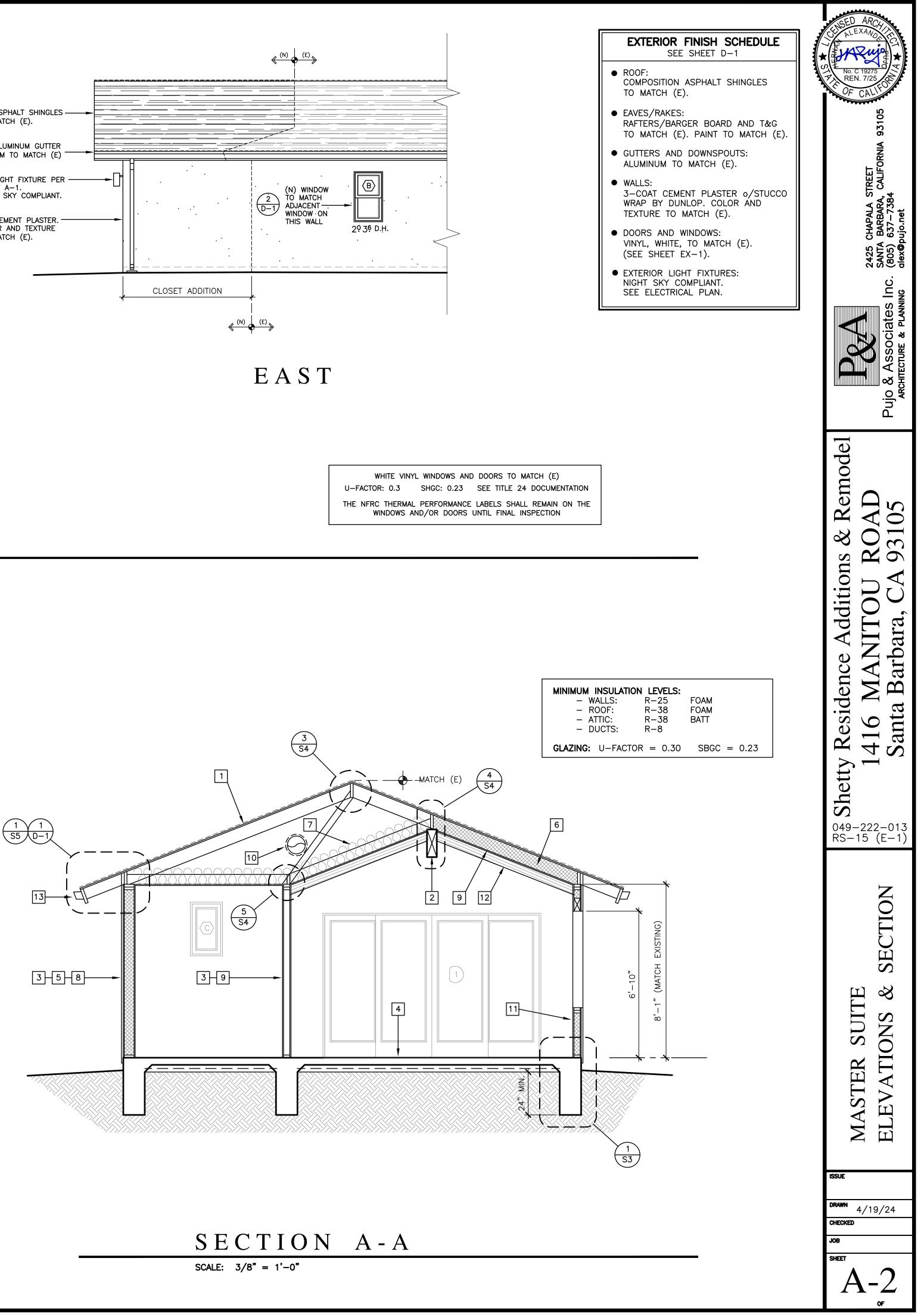
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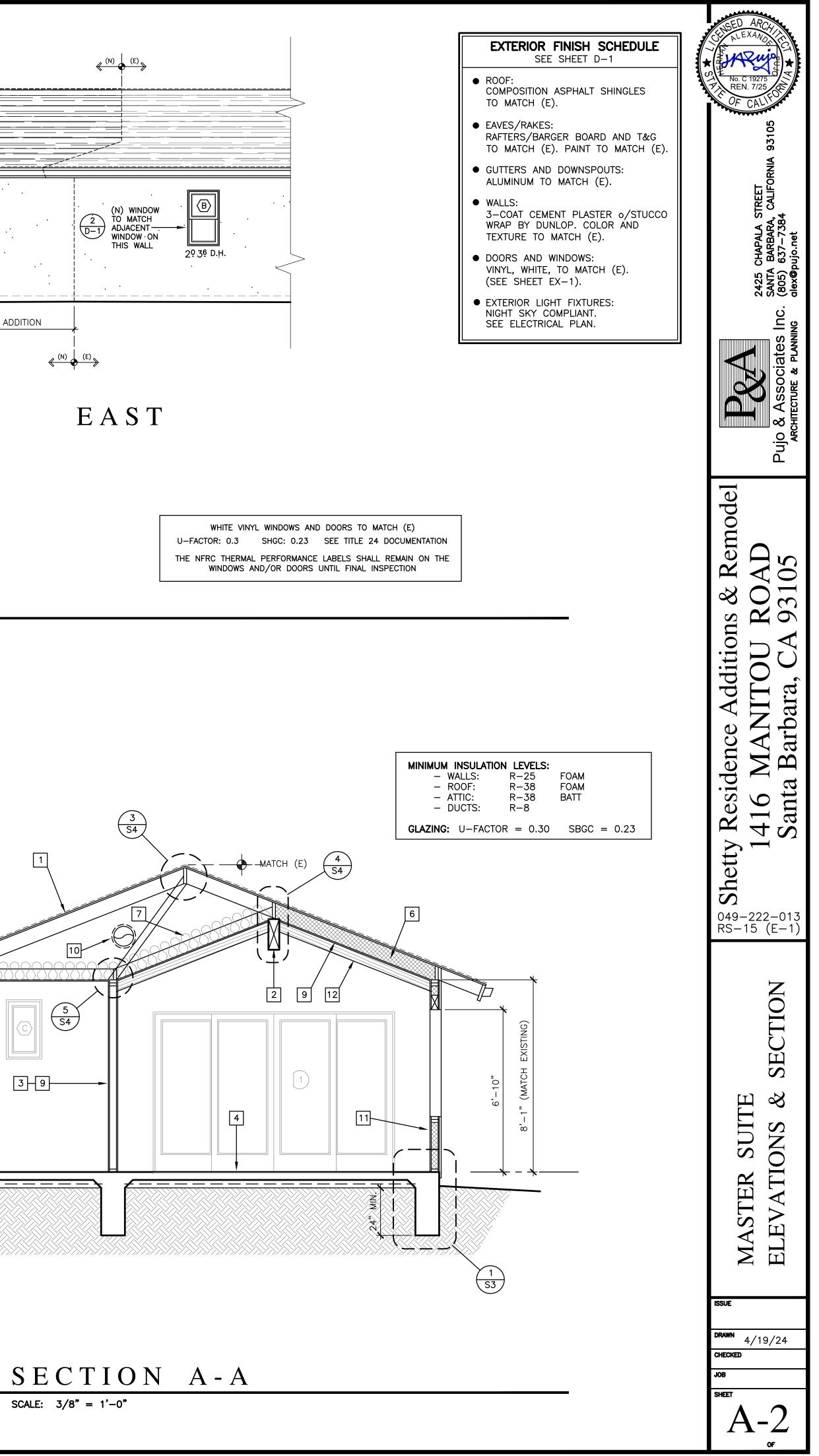
# ELEVATIONS

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

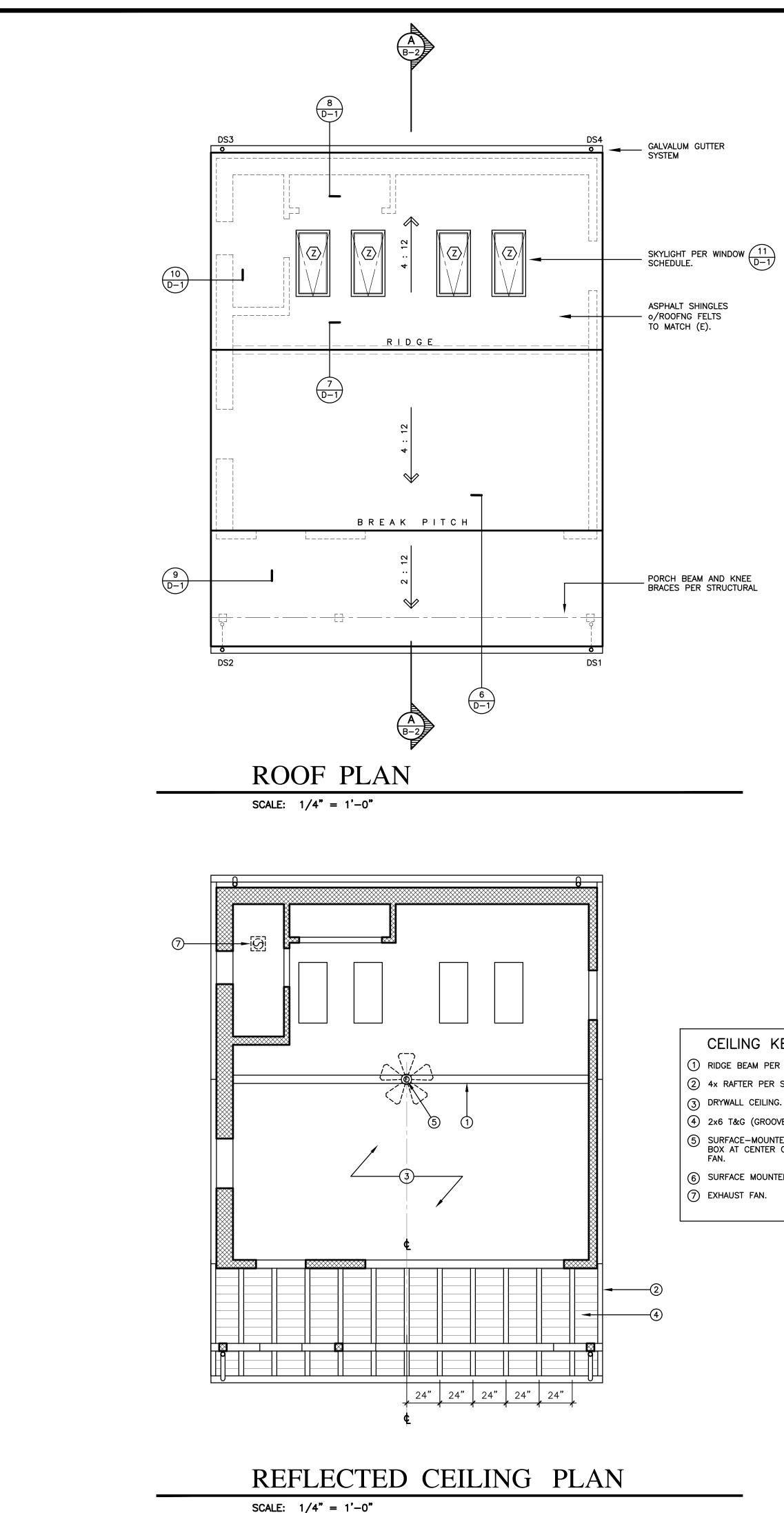


KEYNOTES:
1 ASPHALT SHINGLES o/UNDERLAYMENT o/ROOFING PLY PER STRUCTURAL.
2 RIDGE BEAM PER STRUCTURAL.
3 2x STUD WALL PER STRUCTURAL.
4 CONCRETE SLAB PER STRUCTURAL.
5 CEMENT PLASTER SYSTEM.
6 ROOF INSULATION.
7 ATTIC INSULATION.
8 WALL INSULATION.
9 GYPSUM WALL BOARD, 5/8" THICK, TYPICAL.
10 EXTEND (E) HVAC DUCTWORK.
11 (N) 2x4 STUD WALL TO LINE-UP WITH (E) STUD WALL.
12 ORNAMENTAL WOOD BEAM PER REFLECTED CEILING PLAN.
13 GUTTER SYSTEM TO MATCH (E).





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- CEILING KEYNOTES:
- (1) RIDGE BEAM PER STRUCTURAL. 2 4x RAFTER PER STRUCTURAL.
- (4) 2x6 T&G (GROOVE SIDE UP). 5 SURFACE-MOUNTED JUNCTION BOX AT CENTER OF BEAM FOR
- (6) SURFACE MOUNTED FIXTURE.

- WALL LEGEND CMU RETAINING WALL (2x6 WALL ABOVE) 2x6 STUD WALL 2x4 STUD INTERIOR WALL WALL INSULATION. INTERIOR WALL FINISH: 5/8" GYPSUM WALL BOARD (GWB), TEXTURE: "CAT'S PAW" SEE STRUCTURAL PLANS FOR SHEATHING. SEE T-24 AND A2.1 FOR INSULATION. WATER CONSERVING FIXTURE REQUIREMENTS • TOILET: MAX. 1.28 GAL. PER FLUSH. LAVATORY FAUCET: MAX. 1.5 GAL. PER MINUTE (GPM) ELECTRICAL KEYNOTES:
- 1 EXHAUST FAN: PANASONIC WHISPER GREEN SELECT 110 CFM 0.8 SONE CEILING MOUNTED ENERGY STAR RATED WHOLE HOUSE VENTILATION - BATHROOM FAN. 2 HEAT PUMP WATER HEATER: RHEEM, 40-GAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. FLOOR DRAIN LINE TO SEWER.
- 3 DAIKIN MINI SPLIT 17 WALL-MOUNTED EXTERIOR UNIT.
- 4 DAIKIN MINI SPLIT 17 WALL-MOUNTED EXTERIOR UNIT.
- 5 EXTERIOR LIGHT FIXTURE PER (12)TYP. OF (3)
- ELECTRICAL NOTES:
- 1. AT LEAST ONE 20-A CIRCUIT SHALL SUPPLY BATHROOM RECEPTACLES ONLY.
- ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, 15 AND 20-A OUTLETS SHALL BE PROTECTED BY AN ARC-FAULTED CIRCUIT INTERRUPTER(S). CEC SEC. 210L.12(B).
- 3. RECEPTACLE OUTLET LOCATIONS SHALL COMPLY w/NEC ART. 210-52(a).
- ALL NON-LOCKING TYPE 15- & 20-A RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.
- OVERHANGING LIGHT FIXTURES OR WALL FIXTURES PROJECTING MORE MORE THAN 4" FROM THE WALL SURFACE SHALL BE MOUNTED AT A MINIMUM OF 80" ABOVE THE WALKING SURFACE.
- 6. EXHAUST FANS SHALL HAVE A RATE OF 50 CFM MINIMUM AND DUCTED TO THE EXTERIOR, CONTROLLED BY A READILY ACCESSIBLE HUMIDISTAT THAT IS ENERGY STAR COMPLIANT.
- 7. ALL LIGHT FIXTURES TO HAVE LED LAMPS.
- 8. RECESSED LUMINAIRES INSTALLED IN INSULATED CEILINGS SHALL BE APPROVED FOR ZERO CLEARANCE INSULATION COVER (IC) BY UL OR OTHER TESTING RECOGNIZED BY BUILDING OFFICIAL AND SHALL BE CERTIFIED AIR TIGHT TO SHOW AIR LEAKAGE LESS THAN 2.0 CFM AT 1.57 PSF, SEALED WITH GASKET OR CAULK BETWEEN HOUSING AND CEILING.

### ENERGY CONSERVATION REQUIREMENTS:

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2. THE FOLLOWING LIGHTING IS HIGH EFFICACY: PIN-BASED COMPACT FLUORESCENT, PULSE-START METAL HALIDE, HIGH PRESSURE SODIUM, GU-24 (OTHER THAN LED'S), INSEPARABLE SOLID STATE LUMINAIRES (SSL'S) INSTALLED OUTDOORS OR INSEPARABLE SSL LUMINAIRES WITH COLORED LIGHT SOURCES FOR DECORATIVE LIGHTING PURPOSES.

3. RECESSED DOWNLIGHTS IN CEILINGS: 1) SHALL NOT HAVE SCREW BASED SOCKETS, 2) SHALL CONTAIN JA8-CERTIFIED LIGHT SOURCES AND 3) SHALL MEET PERFORMANCE REQUIREMENTS OF CEC SECTION 150.0(k)1C.

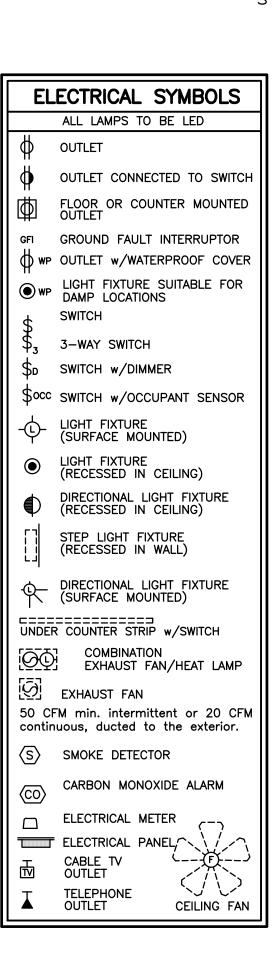
4. MANUFACTURER'S LITERATURE INDICATING THAT PROPOSED LED AND/OR LOW VOLTAGE LIGHT FIXTURES ARE HIGH EFFICACY AND CALIFORNIA CERTIFIED SHALL BE PROVIDED ON SITE AT THE TIME OF FIELD INSPECTION. SEE LISTING OF CERTIFIED FIXTURES AT: http://appliances.energy.ca.gov/advancedsearch.aspx

5. EXCEPT FOR CLOSETS LESS THAN 70 SQUARE FEET AND HALLWAYS, ALL LUMINAIRES THAT ARE INSTALLED WITH JA8-CERTIFIED LIGHT SOURCES ARE REQUIRED TO BE CONTROLLED BY EITHER A DIMMER OR VACANCY SENSOR.

6. AT LEAST ONE BATH LUMINAIRE SHALL BE CONTROLLED BY A MANUAL ON/AUTOMATIC-OFF VACANCY SENSOR. [CEC 150(k) 2(J)]

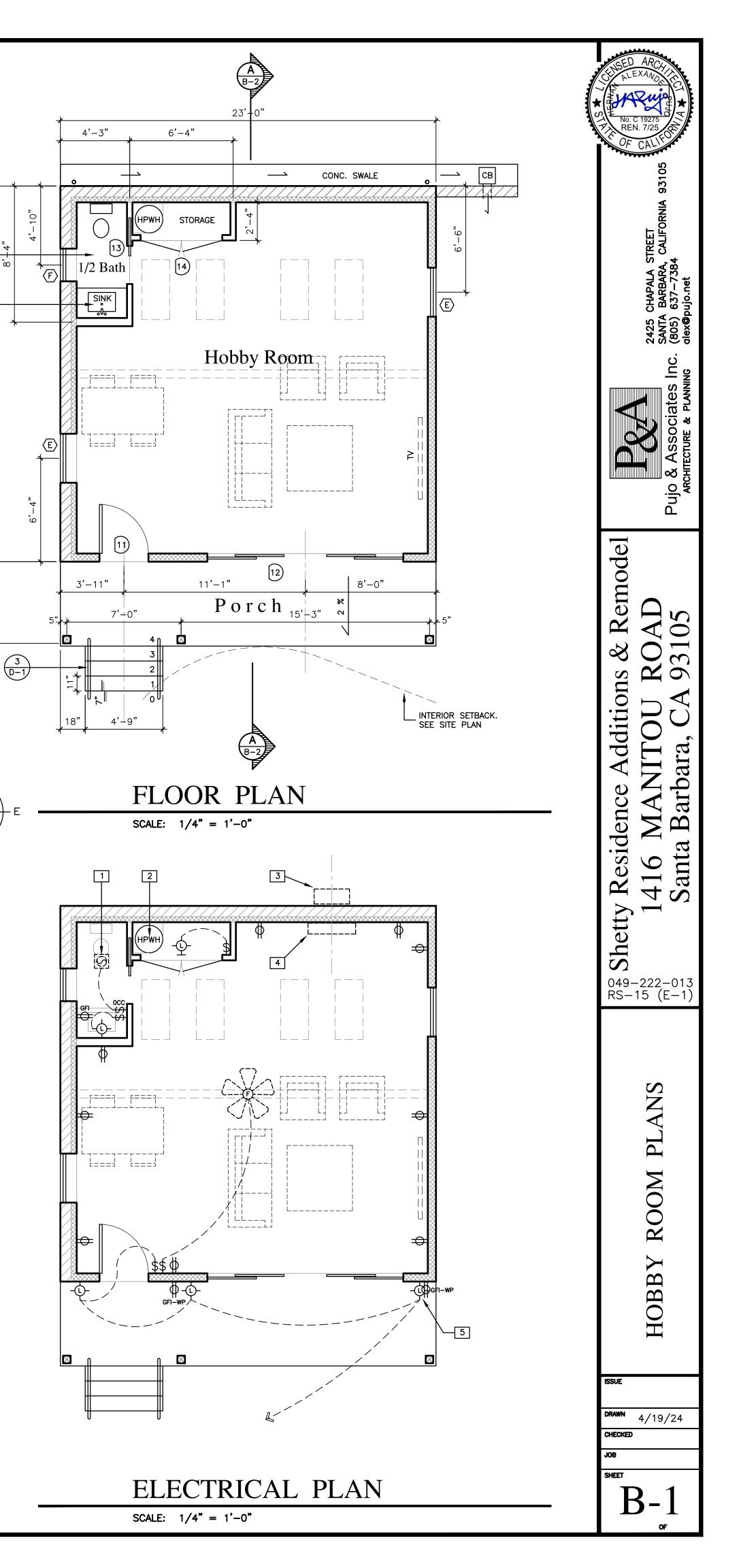
7. OUTDOOR LIGHTING PERMANENTLY MOUNTED SHALL BE HIGH EFFICACY AND MUST BE CONTROLLED BY AN ON/OFF SWITCH THAT OVERRIDES TO 'ON' THE ITEMS LISTED BELOW. ALSO, THE LIGHTING MUST BE ONE OF THE FOLLOWING METHODS:

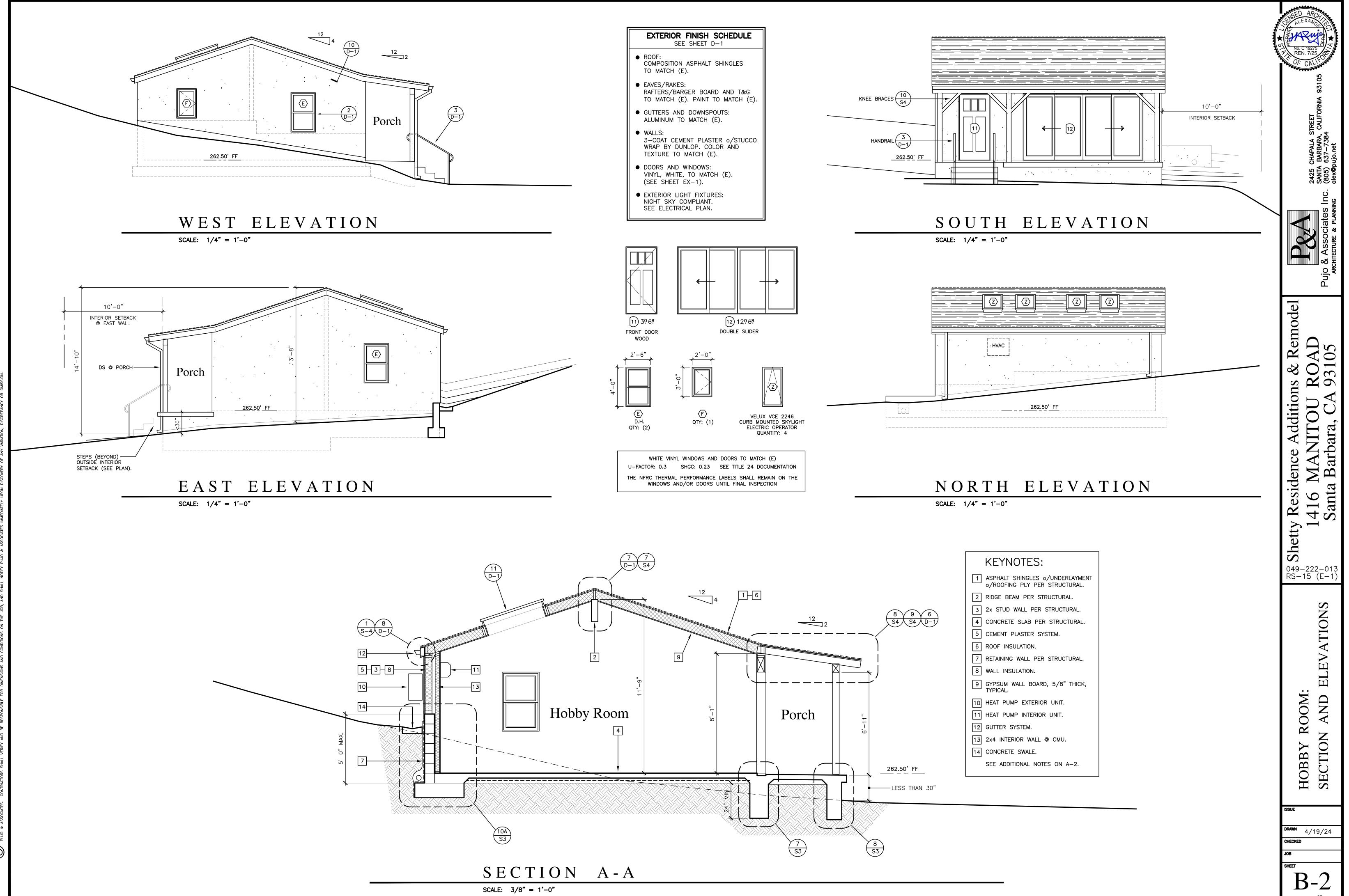
i) CONTROLLED BY PHOTOCELL AND MOTION SENSOR. ii) CONTROLLED BY PHOTOCELL AND AUTOMATIC TIME SWITCH CONTROL.



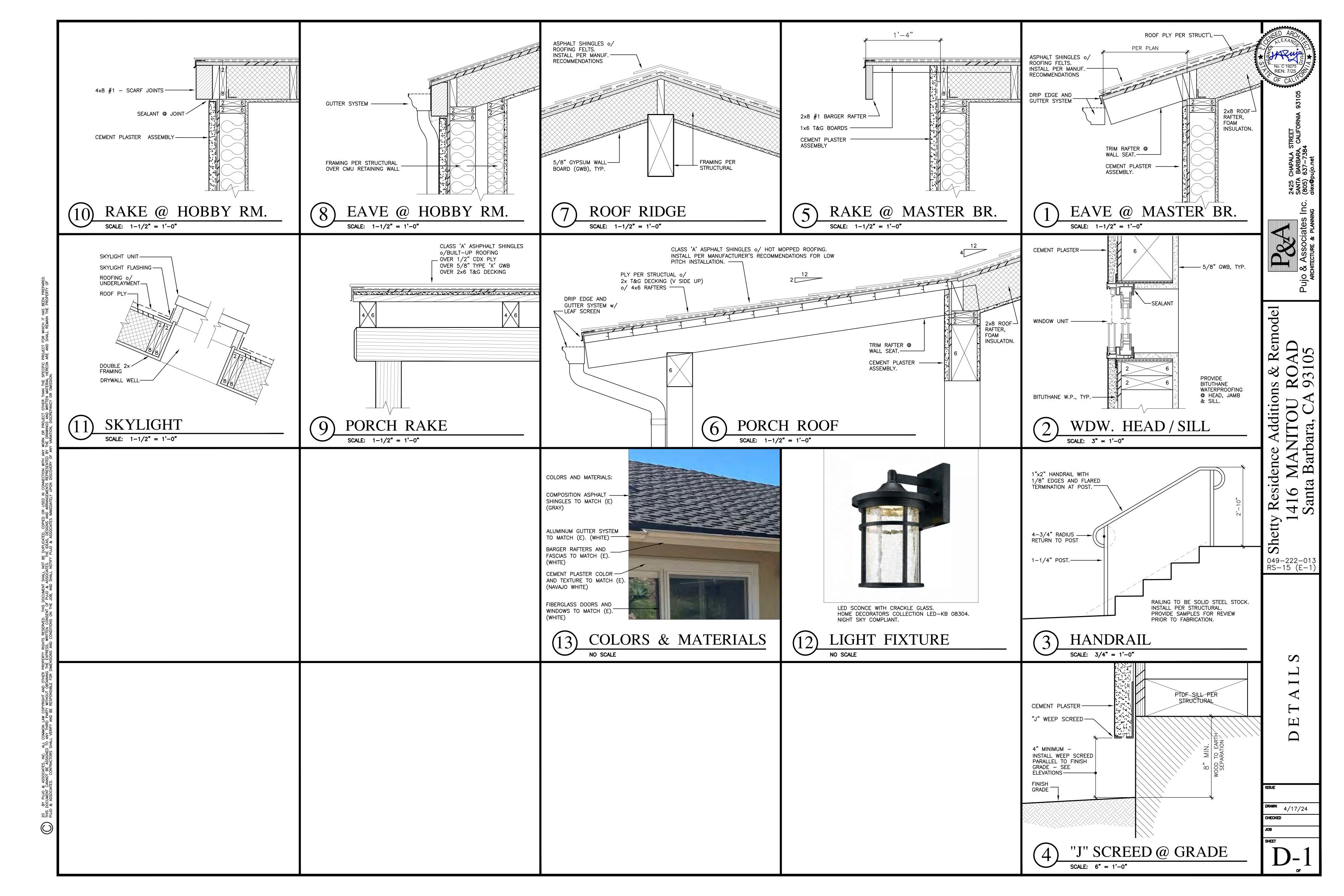
TILE FLOORING AND 40" H. TILE WAINSCOT -

@ 1/2 BATH





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# California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y N/A RESPON. PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	Y N/A RESPON. PARTY	<b>4.106.4.2 New multifam</b> When parking is provided requirements of Sections whole number. A parking
	<b>301.1 SCOPE.</b> Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.		space shall count as at le applicable minimum park for further details.
	<b>301.1.1 Additions and alterations. [HCD]</b> The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.		4.106.4.2.1Multifamily d than 20 sleeping units The number of dwelling u this section.
	The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.		<b>1.EV Capable.</b> Te of parking facilities EVSE. Electrical lo system, including EVs at all required
	<b>Note:</b> Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.		The service panel for future EV charg
	<b>Note:</b> On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.		Exceptions: 1.When EV cha of EV capable s 2.When EV cha
	<b>301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD]</b> The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.		2. When EV char spaces, the EV chargers Notes: a.Construction future EV charg
	SECTION 302 MIXED OCCUPANCY BUILDINGS		b.There is no re EV chargers ar
	<ul> <li>302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. Exceptions:         <ol> <li>[HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.</li> <li>[HCD] For proceeding of CAL Comply have building building with Spectra.</li> </ol> </li> </ul>		<b>2.EV Ready</b> . Twei Level 2 EV chargir dwelling unit when Exception: Areas c
	<ul> <li>2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.</li> <li>DIVISION 4.1 PLANNING AND DESIGN</li> </ul>		4.106.4.2.2 Multifamily sleeping units or guest The number of dwelling u this section.
	ABBREVIATION DEFINITIONS:HCDDepartment of Housing and Community DevelopmentBSCCalifornia Building Standards CommissionDSA-SSDivision of the State Architect, Structural SafetyOSHPDOffice of Statewide Health Planning and DevelopmentLRLow Rise		<b>1.EV Capable</b> . Te of parking facilities EVSE. Electrical lo system, including a EVs at all required
	HRHigh RiseAAAdditions and AlterationsNNew		The service panel for future EV char
	CHAPTER 4 RESIDENTIAL MANDATORY MEASURES		Exception: Whe parking spaces reduced by a n Notes:
	SECTION 4.102 DEFINITIONS 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)		a.Construction b.There is no re
	<b>FRENCH DRAIN.</b> A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.		EV chargers ar <b>2.EV Ready.</b> Twe
	<b>WATTLES.</b> Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.		Level 2 EV chargir dwelling unit when Exception: Area
	<ul> <li>4.106 SITE DEVELOPMENT</li> <li>4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.</li> </ul>		<b>3.EV Chargers.</b> Fi Where common us area and shall be a
	<b>4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION.</b> Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.		When low power L an automatic load capacity to each s shall have sufficier served by the ALM have a capacity of capacity to the req
	<ol> <li>Retention basins of sufficient size shall be utilized to retain storm water on the site.</li> <li>Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.</li> </ol>		<b>4.106.4.2.2.1 Electric</b> Electric vehicle chargi
	<ol> <li>Compliance with a lawfully enacted storm water management ordinance.</li> <li>Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.</li> </ol>		Exception: Electric v shall not be required requirements.
	(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html) 4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will		4.106.4.2.2.1.1 Locat EVCS shall comply w 1.The charging s
	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:		the California Bu 2.The charging s
	<ol> <li>Swales</li> <li>Water collection and disposal systems</li> <li>French drains</li> <li>Water retention gardens</li> <li>Other water measures which keep surface water swew from buildings and sid in groundwater</li> </ol>		Chapter 2, to the Exception: Electr Building Code, C
	<ol> <li>Other water measures which keep surface water away from buildings and aid in groundwater recharge.</li> <li>Exception: Additions and alterations not altering the drainage path.</li> </ol>		4.106.4.2.2.1.2, <b>4.106.4.2.2.1.2 Elect</b> The charging space
	<b>4.106.4 Electric vehicle (EV) charging for new construction.</b> New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the <i>California Electrical Code</i> , Article 625.		1.The minimum leng 2.The minimum wid
	<ul> <li>Exceptions:         <ol> <li>On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:</li></ol></li></ul>		3.One in every 25 cl aisle. A 5-foot (1524 12 feet (3658 mm).
	<ul> <li>power.</li> <li>1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.</li> <li>2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional</li> </ul>		a.Surface slope for the percent slope) in an <b>4.106.4.2.2.1.3 Access</b> In addition to the requ
	parking facilities. 4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each		comply with the acces spaces and EVCS in 1109A.
	dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.		4.106.4.2.3 EV space 1.Single EV space re- circuit. The raceway soriginate at the main proximity to the locati raceway termination p have a 40-ampere mi
	Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the <i>California Electrical Code</i> .		installed, or space(s) Exception: A racewa installed in close pro
	<b>4.106.4.1.1 Identification.</b> The service panel or subpanel circuit directory shall identify the overcurrent		construction in acco

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			_	<b>J</b>	
u duallings, batala and matala and new residential nerking facilities	Y	N/A	RESPON. PARTY	Exception: A raceway is not required if a minimum installed in close proximity to the location or the pr construction in accordance with the California Elec	oposed location of the EV space at the time of o
y dwellings, hotels and motels and new residential parking facilities. parking spaces for new multifamily dwellings, hotels and motels shall meet the 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest space served by electric vehicle supply equipment or designed as a future EV charging				<b>4.106.4.2.4 Identification.</b> The service panel or subpanel circuit directory shall iden future EV charging purposes as "EV CAPABLE" in accor	
ast one standard automobile parking space only for the purpose of complying with any ng space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2				<b>4.106.4.2.5 Electric Vehicle Ready Space Signage</b> . Electric vehicle ready spaces shall be identified by signate	ge or pavement markings, in compliance with C
evelopment projects with less than 20 dwelling units; and hotels and motels with less r guest rooms. hits, sleeping units or guest rooms shall be based on all buildings on a project site subject to				Traffic Operations Policy Directive 13-01 (Zero Emission successor(s).	
				4.106.4.3 Electric vehicle charging for additions and alte multifamily buildings. When new parking facilities are added, or electrical syste	ems or lighting of existing parking facilities are a
(10) percent of the total number of parking spaces on a building site, provided for all types shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 d calculations shall demonstrate that the electrical panel service capacity and electrical ny on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EV spaces at a minimum of 40 amperes.				altered and the work requires a building permit, ten (10) altered shall be electric vehicle charging spaces (EV spa Notes:	
r subpanel circuit directory shall identify the overcurrent protective device space(s) reserved ng purposes as "EV CAPABLE" in accordance with the California Electrical Code.				<ul><li>1.Construction documents are intended to demonstrate EV charging.</li><li>2.There is no requirement for EV spaces to be construct</li></ul>	
gers (Level 2 EVSE) are installed in a number equal to or greater than the required number baces.				DIVISION 4.2 ENERGY EFFICIE 4.201 GENERAL	
gers (Level 2 EVSE) are installed in a number less than the required number of EV capable number of EV capable spaces required may be reduced by a number equal to the number of installed.				<b>4.201.1 SCOPE.</b> For the purposes of mandatory energy ef Commission will continue to adopt mandatory standard	S.
				4.303 INDOOR WATER USE	CY AND CONSERVATION
ocuments are intended to demonstrate the project's capability and capacity for facilitating ng.				<b>4.303.1 WATER CONSERVING PLUMBING FIXTURES AN</b> urinals) and fittings (faucets and showerheads) shall o and 4.303.4.4.	
quirement for EV spaces to be constructed or available until receptacles for EV charging or installed for use.					t is required prior to issuance of a certificate of t
y-five (25) percent of the total number of parking spaces shall be equipped with low power g receptacles. For multifamily parking facilities, no more than one receptacle is required per more than one parking space is provided for use by a single dwelling unit.				completion, certificate of occupancy, or final pe Code Section 1101.1, et seq., for the definition buildings affected and other important enactme	
parking facilities served by parking lifts.				<b>4.303.1.1 Water Closets.</b> The effective flush volume flush. Tank-type water closets shall be certified to the Specification for Tank-type Toilets.	
evelopment projects with 20 or more dwelling units, hotels and motels with 20 or more rooms. Tooms. hits, sleeping units or guest rooms shall be based on all buildings on a project site subject to				<b>Note</b> : The effective flush volume of dual flush to ftwo reduced flushes and one full flush.	toilets is defined as the composite, average flus
(10) percent of the total number of parking spaces on a building site, provided for all types shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2				<b>4.303.1.2 Urinals.</b> The effective flush volume of wal The effective flush volume of all other urinals shall no	
In a be electric vehicle charging spaces (LV spaces) capable of supporting future Lever 2 ind calculations shall demonstrate that the electrical panel service capacity and electrical my on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EV spaces at a minimum of 40 amperes.				4.303.1.3 Showerheads.	
r subpanel circuit directory shall identify the overcurrent protective device space(s) reserved ng purposes as "EV CAPABLE" in accordance with the California Electrical Code.				<b>4.303.1.3.1 Single Showerhead.</b> Showerhea gallons per minute at 80 psi. Showerheads sha WaterSense Specification for Showerheads.	
The EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of equired by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be mber equal to the number of EV chargers installed over the five (5) percent required.				showerhead, the combined flow rate of all the s	<b>ne shower</b> . When a shower is served by more showerheads and/or other shower outlets contro minute at 80 psi, or the shower shall be designe time.
ocuments shall show locations of future EV spaces.				<b>Note</b> : A hand-held shower shall be cons	idered a showerhead.
uirement for EV spaces to be constructed or available until receptacles for EV charging or installed for use.					he maximum flow rate of residential lavatory fai
ty-five (25) percent of the total number of parking spaces shall be equipped with low power g receptacles. For multifamily parking facilities, no more than one receptacle is required per more than one parking space is provided for use by a single dwelling unit.					si. <b>Id Public Use Areas.</b> The maximum flow rate
s of parking facilities served by parking lifts.				buildings shall not exceed 0.5 gallons per minu	
e (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. e parking is provided, at least one EV charger shall be located in the common use parking vailable for use by all residents or guests.				more than 0.2 gallons per cycle.	ets when installed in residential buildings shall r flow rate of kitchen faucets shall not exceed 1.8
evel 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, nanagement system (ALMS) may be used to reduce the maximum required electrical				per minute at 60 psi. Kitchen faucets may tem	porarily increase the flow above the maximum rate of 1.8 gall must default to a maximum flow rate of 1.8 gall
ace served by the ALMS. The electrical system and any on-site distribution transformers capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) S. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical ired EV capable spaces.				<b>Note</b> : Where complying faucets are unavailabl reduction.	e, aerators or other means may be used to ach
vehicle charging stations (EVCS). g stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.				Efficiency Regulations), Sections 1605.1 (h)(4)	the <i>California Code of Regulations</i> , Title 20 (Ap Table H-2, Section 1605.3 (h)(4)(A), and Sectio
hicle charging stations serving public accommodations, public housing, motels and hotels to comply with this section. See California Building Code, Chapter 11B, for applicable				Code of Regulations, Title 20 (Appliance Efficie	itomatic shutoff. and code section have been reprinted from the ency Regulations),Section 1605.1 (h)(4) and Sec
on. h at least one of the following options:				1605.3 (h)(4)(A).	
ace shall be located adjacent to an accessible parking space meeting the requirements of ding Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.				TABLE H-2 STANDARDS FOR COMMERCIA	
ace shall be located on an accessible route, as defined in the California Building Code, building.				VALUES MANUFACTURED ON (	
vehicle charging stations designed and constructed in compliance with the California apter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section em 3.				PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
c vehicle charging stations (EVCS) dimensions. shall be designed to comply with the following:				Product Class 1 ( $\leq$ 5.0 ozf) Product Class 2 (> 5.0 ozf and $\leq$ 8.0 ozf)	1.00
h of each EV space shall be 18 feet (5486 mm).				Product Class 3 (> 8.0 ozf)	1.28 prerinse spray values manufactured on or after v
of each EV space shall be 9 feet (2743 mm). arging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum				1, 2006, shall have a minimum spray force of n 4.303.2 Submeters for multifamily buildings and dwellin	ot less than 4.0 ounces-force (ozf)[113 grams-fo
mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is				buildings. Submeters shall be installed to measure water usage California Plumbing Code.	-
is EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 direction.				<b>4.303.3 Standards for plumbing fixtures and fittings.</b> Plu accordance with the <i>California Plumbing Code</i> , and shall me	
sible EV spaces. rements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall sibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready nultifamily developments shall comply with California Building Code, Chapter 11A, Section				1701.1 of the <i>California Plumbing Code</i> . NOTE: THIS TABLE COMPILES THE DATA IN SECTION 4	
requirements.				CONVENIENCE FOR THE USER.	
uired. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch all not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall ervice or subpanel and shall terminate into a listed cabinet, box or enclosure in close a or the proposed location of the EV space. Construction documents shall identify the				FIXTURE TYPE	FLOW RATE
n or the proposed location of the EV space. Construction documents shall identify the bint, receptacle or charger location, as applicable. The service panel and/ or subpanel shall imum dedicated branch circuit, including branch circuit overcurrent protective device accorded to permit installation of a branch circuit overcurrent protective device.				SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @
eserved to permit installation of a branch circuit overcurrent protective device. It is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is cimity to the location or the proposed location of the EV space, at the time of original				LAVATORY FAUCETS (RESIDENTIAL)	0.5 GPM @ 60 PSI
anity to the location of the proposed location of the EV space, at the time of original dance with the California Electrical Code.				USE AREAS KITCHEN FAUCETS	1.8 GPM @ 60 PSI
future EV spaces, receptacles or EV chargers. Construction documents shall also provide ge of installed or future receptacles or EVSE, raceway method(s), wiring schematics and				METERING FAUCETS WATER CLOSET	0.2 GAL/CYCLE 1.28 GAL/FLUSH
ons. Plan design shall be based upon a 40-ampere minimum branch circuit. Required components that are planned to be installed underground, enclosed, inaccessible or in paces shall be installed at the time of original construction.				URINALS	0.125 GAL/FLUSH

URINALS UNCLOSS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

Y	=	YES
N/A	=	NOT APPLICABLE
RESPON. PARTY	=	RESPONSIBLE PARTY (ie: ARCHITE
		OWNER, CONTRACTOR, INSPECTO
		N/A =

		RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)
cuit is iginal	Y N/A RESPON. PARTY	
		4.304 OUTDOOR WATER USE 4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with
served for		a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
Itrans		NOTES:
liturio		<ol> <li>The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are</li> </ol>
		available at: https://www.water.ca.gov/
ded or ded or		DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE
		EFFICIENCY 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE
		<ul> <li>4.400 ENHANCED DURABILITY AND REDUCED MAINTENANCE</li> <li>4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such</li> </ul>
ig future		openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.
or use.		4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
		<b>4.408.1 CONSTRUCTION WASTE MANAGEMENT.</b> Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste
ergy		management ordinance.
		Exceptions:
		<ol> <li>Excavated soil and land-clearing debris.</li> <li>Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably</li> </ol>
ind 03.1.3,		close to the jobsite. 3. The enforcing agency may make exceptions to the requirements of this section when isolated
		jobsites are located in areas beyond the haul boundaries of the diversion facility.
onserving al		<b>4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN</b> . Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as
ee Civil Iential		necessary and shall be available during construction for examination by the enforcing agency. 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling,
s per		reuse on the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or
se		<ul><li>bulk mixed (single stream).</li><li>3. Identify diversion facilities where the construction and demolition waste material collected will be</li></ul>
volume		<ul> <li>taken.</li> <li>Identify construction methods employed to reduce the amount of construction and demolition waste generated.</li> </ul>
per flush.		<ul><li>generated.</li><li>5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.</li></ul>
		<b>4.408.3 WASTE MANAGEMENT COMPANY.</b> Utilize a waste management company, approved by the
nan 1.8		enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.
J.S. EPA		<b>Note:</b> The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.
nan one ed by		4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined
to only		weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1
		<b>4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE.</b> Projects that generate a total combined
		weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction
cets shall ets shall		requirement in Section 4.408.1 <b>4.408.5 DOCUMENTATION</b> . Documentation shall be provided to the enforcing agency which demonstrates
		compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4.
f lavatory dential		Notes:
ot deliver		<ol> <li>Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.</li> </ol>
		<ol> <li>Mixed construction and demolition debris (C &amp; D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).</li> </ol>
gallons te, but not ns per		4.410 BUILDING MAINTENANCE AND OPERATION 4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact
		disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:
ve		1. Directions to the owner or occupant that the manual shall remain with the building throughout the
liance		<ul> <li>life cycle of the structure.</li> <li>2. Operation and maintenance instructions for the following:</li> <li>a. Equipment and appliances, including water-saving devices and systems, HVAC systems,</li> </ul>
1607		photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
California		<ul> <li>b. Roof and yard drainage, including gutters and downspouts.</li> <li>c. Space conditioning systems, including condensers and air filters.</li> </ul>
ion		<ul> <li>d. Landscape irrigation systems.</li> <li>e. Water reuse systems.</li> <li>3. Information from local utility, water and waste recovery providers on methods to further reduce</li> </ul>
		resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area.
		<ol><li>Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.</li></ol>
		<ol> <li>Information about water-conserving landscape and irrigation design and controllers which conserve water.</li> <li>Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5</li> </ol>
		feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking,
		painting, grading around the building, etc. 9. Information about state solar energy and incentive programs available.
		<ol> <li>A copy of all special inspections verifications required by the enforcing agency or this code.</li> <li>Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.</li> </ol>
		12. Information and/or drawings identifying the location of grab bar reinforcements.
anuary ce(gf)]		<b>4.410.2 RECYCLING BY OCCUPANTS.</b> Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the denositing storage and collection of non-beginning materials for recording including (ct a minimum) paper.
oo(Ai)]		depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.
with the		Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section
		42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.
		DIVISION 4.5 ENVIRONMENTAL QUALITY
		SECTION 4.501 GENERAL 4.501.1 Scope The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous,
		irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.
		SECTION 4.502 DEFINITIONS 5.102.1 DEFINITIONS
		The following terms are defined in Chapter 2 (and are included here for reference) AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door
20		cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.
		<b>COMPOSITE WOOD PRODUCTS.</b> Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural
		structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.
		93120.1. <b>DIRECT-VENT APPLIANCE.</b> A fuel-burning appliance with a sealed combustion system that draws all air for
		combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

# California

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				Y N/A RESPON. PARTY	
					TABLE
	<b>MAXIMUM INCREMENTAL REACTIVITY (MIR).</b> The maximum change compound to the "Base Reactive Organic Gas (ROG) Mixture" per weigh bundred the of a group (a O <sup>3</sup> /a ROC)	in weight of ozone formed nt of compound added, exp	by adding a ressed to		(Less Wat
	hundredths of a gram (g O <sup>3</sup> /g ROC). Note: MIR values for individual compounds and hydrocarbon solvents an and 94701.	e specified in CCR, Title 17	, Sections 94700		SEALAN
	MOISTURE CONTENT. The weight of the water in wood expressed in p	ercentage of the weight of t	he oven-drv wood.		ARCHITE MARINE I
	PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for	all ingredients in a product	subject to this		NONMEN
	article. The PWMIR is the total product reactivity expressed to hundredth product (excluding container and packaging).	C C	ed per gram of		ROADWA
	Note: PWMIR is calculated according to equations found in CCR, Title 1		contributo to		SINGLE-F
	<b>REACTIVE ORGANIC COMPOUND (ROC).</b> Any compound that has the ozone formation in the troposphere.				OTHER SEALAN
	<b>VOC.</b> A volatile organic compound (VOC) broadly defined as a chemica with vapor pressures greater than 0.1 millimeters of mercury at room ter	nperature. These compound	ds typically contain		ARCHITE
	hydrogen and may contain oxygen, nitrogen and other elements. See Co 4.503 FIREPLACES	CR Title 17, Section 94508(	а).		NON-F
	<b>4.503 FIREPLACES</b> <b>4.503.1 GENERAL</b> . Any installed gas fireplace shall be a direct-vent se woodstove or pellet stove shall comply with U.S. EPA New Source Performance Perfor				PORC
	applicable, and shall have a permanent label indicating they are certified pellet stoves and fireplaces shall also comply with applicable local ordina	I to meet the emission limits			MARINE
			PINO		OTHER
	<b>4.504.1 COVERING OF DUCT OPENINGS &amp; PROTECTION OF MECH</b> <b>CONSTRUCTION.</b> At the time of rough installation, during storage on the startup of the heating, cooling and ventilating equipment, all duct and other	ne construction site and unti	il final		
	openings shall be covered with tape, plastic, sheet metal or other methor reduce the amount of water, dust or debris which may enter the system.	ds acceptable to the enforc			
	4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials		on.		
	4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant	and caulks used on the pro	pject shall meet the		TABL
	requirements of the following standards unless more stringent loc management district rules apply:	ai or regional air pollution of	aıı quality		GRAM
	<ol> <li>Adhesives, adhesive bonding primers, adhesive primers shall comply with local or regional air pollution control of</li> </ol>				COMP( COATI
	applicable or SCAQMD Rule 1168 VOC limits, as show Such products also shall comply with the Rule 1168 pro	n in Table 4.504.1 or 4.504 phibition on the use of certai	.2, as applicable. in toxic		FLAT C
	compounds (chloroform, ethylene dichloride, methylene tricloroethylene), except for aerosol products, as specif	chloride, perchloroethylen			NON-F
	2. Aerosol adhesives, and smaller unit sizes of adhesives				
	units of product, less packaging, which do not weigh me than 16 fluid ounces) shall comply with statewide VOC prohibitions on use of cortain toxic compounds, of <i>Colif</i>	standards and other require	ements, including		SPECI ALUMI
	prohibitions on use of certain toxic compounds, of <i>Calif</i> commencing with section 94507.	onna Code of Regulations,	nue 17,		BASEN
	<b>4.504.2.2 Paints and Coatings.</b> Architectural paints and coating the ARB Architectural Suggested Control Measure, as shown in T				BITUM
	apply. The VOC content limit for coatings that do not meet the de listed in Table 4.504.3 shall be determined by classifying the coat	finitions for the specialty co	atings categories		BITUM
	coating, based on its gloss, as defined in subsections 4.21, 4.36, Board, Suggested Control Measure, and the corresponding Flat, I	and 4.37 of the 2007 Califor	rnia Air Resources		BOND
	Table 4.504.3 shall apply.	0			CONC
	<b>4.504.2.3 Aerosol Paints and Coatings.</b> Aerosol paints and coating the terms of ter	cluding prohibitions on use o	of certain toxic		DRIVE
	compounds and ozone depleting substances, in Sections 94522( <i>Regulations</i> , Title 17, commencing with Section 94520; and in are Quality Management District additionally comply with the percent	as under the jurisdiction of	the Bay Area Air		DRY F
	Quality Management District additionally comply with the percent 8, Rule 49.	v oo by weight of product li	THE OF REGULATION		FAUX I FIRE R
]	<b>4.504.2.4 Verification.</b> Verification of compliance with this sectio enforcing agency. Documentation may include, but is not limited		equest of the		FLOOF
	1. Manufacturer's product specification.	U. U.			FORM-
	2. Field verification of on-site product containers.				GRAPH
					HIGH T
	TABLE 4.504.1 - ADHESIVE VOC LIMIT         (Less Water and Less Exempt Compounds in Grams p	1.2	1	1 1	
	I LESS WALE AND LESS EXEMPL COMPOUNDS IN GRAMS D		_	1 1	LOW S
	ARCHITECTURAL APPLICATIONS				MAGN
		er Liter)			MAGN
	ARCHITECTURAL APPLICATIONS         INDOOR CARPET ADHESIVES         CARPET PAD ADHESIVES	er Liter) VOC LIMIT 50 50			MAGNI MASTI METAL
	ARCHITECTURAL APPLICATIONSINDOOR CARPET ADHESIVESCARPET PAD ADHESIVESOUTDOOR CARPET ADHESIVES	er Liter) VOC LIMIT 50 50 150			MAGNI MASTI METAL MULTI
	ARCHITECTURAL APPLICATIONS         INDOOR CARPET ADHESIVES         CARPET PAD ADHESIVES	er Liter) VOC LIMIT 50 50			MAGNE MASTIC METAL MULTIC PRETR PRIME
	ARCHITECTURAL APPLICATIONSINDOOR CARPET ADHESIVESCARPET PAD ADHESIVESOUTDOOR CARPET ADHESIVESWOOD FLOORING ADHESIVES	er Liter) VOC LIMIT 50 50 150 100			MAGNI MASTI METAL MULTIO PRETE PRIME REACT
	ARCHITECTURAL APPLICATIONSINDOOR CARPET ADHESIVESCARPET PAD ADHESIVESOUTDOOR CARPET ADHESIVESWOOD FLOORING ADHESIVESRUBBER FLOOR ADHESIVES	er Liter) VOC LIMIT 50 50 150 100 60			MAGN MASTI METAL MULTI PRETF PRIME REACT RECYC
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	ARCHITECTURAL APPLICATIONSINDOOR CARPET ADHESIVESCARPET PAD ADHESIVESOUTDOOR CARPET ADHESIVESWOOD FLOORING ADHESIVESRUBBER FLOOR ADHESIVESSUBFLOOR ADHESIVESCERAMIC TILE ADHESIVESVCT & ASPHALT TILE ADHESIVESDRYWALL & PANEL ADHESIVES	er Liter) VOC LIMIT 50 50 150 100 60 50 65 50 50 50			MAGN MASTI METAI MULTI PRETF PRIME REACT REACT REOF RUST
	ARCHITECTURAL APPLICATIONSINDOOR CARPET ADHESIVESCARPET PAD ADHESIVESOUTDOOR CARPET ADHESIVESWOOD FLOORING ADHESIVESRUBBER FLOOR ADHESIVESSUBFLOOR ADHESIVESCERAMIC TILE ADHESIVESVCT & ASPHALT TILE ADHESIVES	er Liter) VOC LIMIT 50 50 150 100 60 50 65 50			MAGN MASTI METAL MULTI PRETF PRIME REACT RECYC ROOF RUST SHELL CLEAF
	ARCHITECTURAL APPLICATIONSINDOOR CARPET ADHESIVESCARPET PAD ADHESIVESOUTDOOR CARPET ADHESIVESWOOD FLOORING ADHESIVESRUBBER FLOOR ADHESIVESSUBFLOOR ADHESIVESCERAMIC TILE ADHESIVESVCT & ASPHALT TILE ADHESIVESDRYWALL & PANEL ADHESIVESCOVE BASE ADHESIVES	er Liter) VOC LIMIT 50 50 150 100 60 50 65 50 50 50 50 50 50			MAGN MASTI METAI MULTI PRETF PRIME REAC RECYO ROOF RUST SHELL CLEAF OPAQ
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# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE **RESIDENTIAL MANDATORY MEASURES, SHEET 2** (January 2023)

E 4.504.2 - SEALANT VOC LIMI	Т
ater and Less Exempt Compounds in Gran	ns per Liter)
NTS	VOC LIMIT
ECTURAL	250
DECK	760
MBRANE ROOF	300
ΙΑΥ	250
-PLY ROOF MEMBRANE	450
	420
NT PRIMERS	
ECTURAL	
-POROUS	250
OUS	775
ED BITUMINOUS	500
DECK	760
	750

.E 4.504.3 - VOC CONTENT LIMI⁻ HITECTURAL COATINGS₂₃	ISFUR
S OF VOC PER LITER OF COATING, LESS	WATER & LESS EXEMP
OUNDS	VOC LIMIT
	50
	100
AT-HIGH GLOSS COATINGS	150
	400
IENT SPECIALTY COATINGS	400
INOUS ROOF COATINGS	50
INOUS ROOF PRIMERS	350
BREAKERS	350
RETE CURING COMPOUNDS	350
RETE/MASONRY SEALERS	100
WAY SEALERS	50
OG COATINGS	150
FINISHING COATINGS	350
ESISTIVE COATINGS	350
RCOATINGS	100
RELEASE COMPOUNDS	250
HIC ARTS COATINGS (SIGN PAINTS)	500
EMPERATURE COATINGS	420
TRIAL MAINTENANCE COATINGS	250
OLIDS COATINGS1	120
ESITE CEMENT COATINGS	450
C TEXTURE COATINGS	100
LIC PIGMENTED COATINGS	500
COLOR COATINGS	250
REATMENT WASH PRIMERS	420
RS, SEALERS, & UNDERCOATERS	
	100
	350
	250
COATINGS	50
PREVENTATIVE COATINGS	250
ACS	
2	730
JE	550
ALTY PRIMERS, SEALERS & RCOATERS	100
5	250
E CONSOLIDANTS	450
/ING POOL COATINGS	340
IC MARKING COATINGS	100
TILE REFINISH COATINGS	420
RPROOFING MEMBRANES	250
COATINGS	275
PRESERVATIVES	350
RICH PRIMERS	340

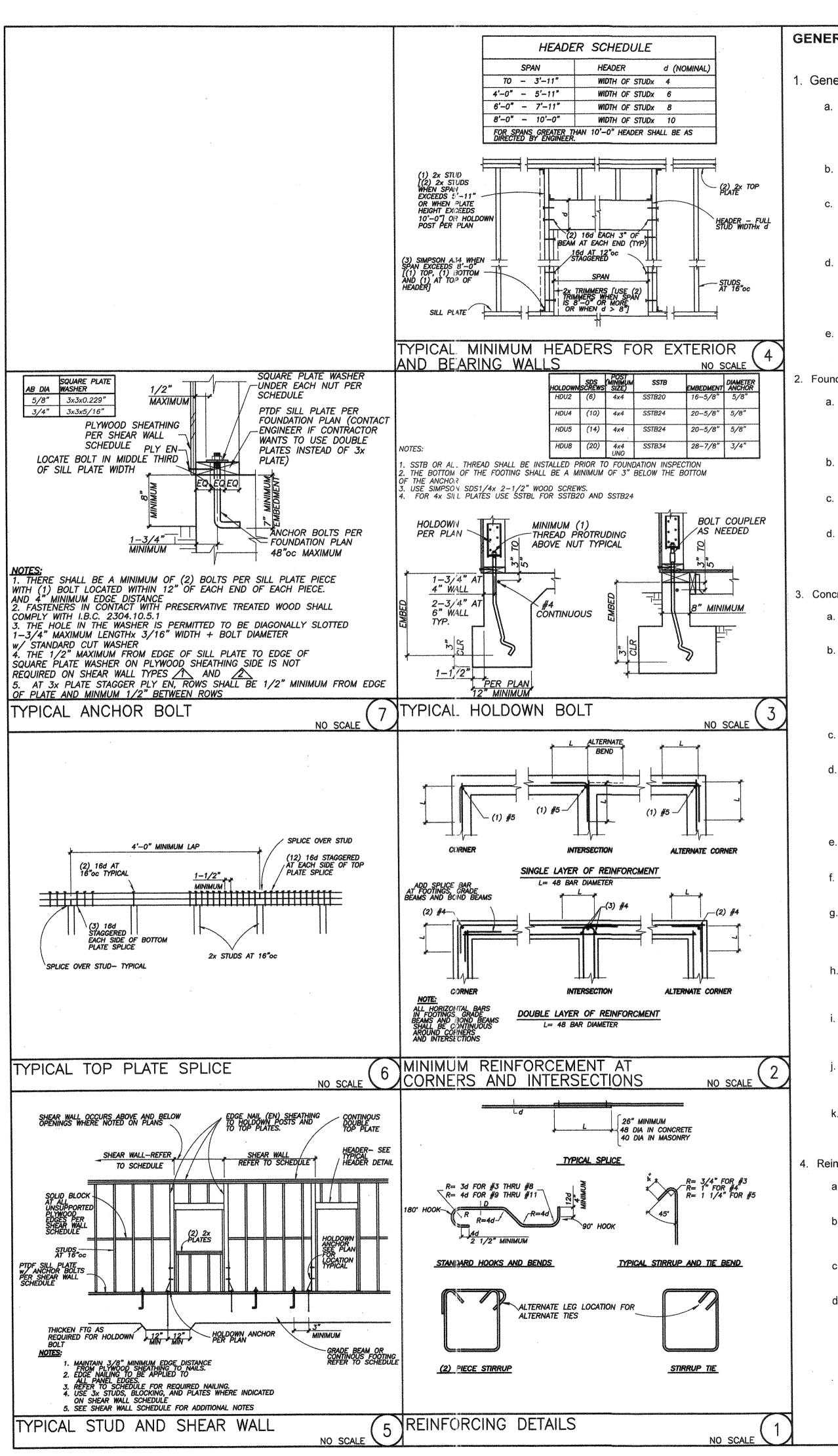
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

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

Y N/A RESPON		Y N/A RESPON.	OWNER, CONTRACTOR, INSPECTOR ETC.)
PARTY		PARTY	
	TABLE 4.504.5 - FORMALDEHYDE LIMITS		CHAPTER 7
	MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION PRODUCT CURRENT LIMIT		INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS 702 QUALIFICATIONS
	HARDWOOD PLYWOOD VENEER CORE 0.05		<b>702.1 INSTALLER TRAINING.</b> HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or
	HARDWOOD PLYWOOD COMPOSITE CORE 0.05		certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC system
	PARTICLE BOARD0.09MEDIUM DENSITY FIBERBOARD0.11		Examples of acceptable HVAC training and certification programs include but are not limited to the following: 1. State certified apprenticeship programs.
	THIN MEDIUM DENSITY FIBERBOARD20.13		<ol> <li>Public utility training programs.</li> <li>Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.</li> </ol>
	1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL		<ol> <li>Programs sponsored by manufacturing organizations.</li> <li>Other programs acceptable to the enforcing agency.</li> </ol>
	MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.		<b>702.2 SPECIAL INSPECTION [HCD].</b> When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition the satisfaction of the enforcing agency for the particular type of inspection or task to be performed.
	2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).		other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may considered by the enforcing agency when evaluating the qualifications of a special inspector:
	<b>DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)</b> <b>4.504.3 CARPET SYSTEMS.</b> All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for		<ol> <li>Certification by a national or regional green building program or standard publisher.</li> <li>Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.</li> <li>Successful completion of a third party apprentice training program in the appropriate trade.</li> <li>Other programs acceptable to the enforcing agency.</li> </ol>
	California Specification 01350) See California Department of Public Health's website for certification programs and testing labs.		<ul> <li>Notes:</li> <li>1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.</li> </ul>
	https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.		2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).
	<b>4.504.3.1 Carpet cushion.</b> All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)		[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent sha employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from recognized state, national or international association, as determined by the local agency. The area of certification
	See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.		shall be closely related to the primary job function, as determined by the local agency. Note: Special inspectors shall be independent entities with no financial interest in the materials or the
	<ul> <li>4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.</li> </ul>		project they are inspecting for compliance with this code.
	4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)		<b>703 VERIFICATIONS</b> <b>703.1 DOCUMENTATION.</b> Documentation used to show compliance with this code shall include but is n limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other
	See California Department of Public Health's website for certification programs and testing labs. hhtps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.		methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified the appropriate section or identified applicable checklist.
	<b>4.504.5 COMPOSITE WOOD PRODUCTS.</b> Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5		
	<b>4.504.5.1 Documentation.</b> Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:		
	<ol> <li>Product certifications and specifications.</li> <li>Chain of custody certifications.</li> <li>Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).</li> <li>Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.</li> <li>Other methods acceptable to the enforcing agency.</li> </ol>		
	<b>4.505 INTERIOR MOISTURE CONTROL</b> <b>4.505.1 General.</b> Buildings shall meet or exceed the provisions of the <i>California Building Standards Code</i> .		
	<b>4.505.2 CONCRETE SLAB FOUNDATIONS.</b> Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the		
	California Residential Code, Chapter 5, shall also comply with this section. 4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the		
	following: 1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with		
	<ul> <li>a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.</li> <li>2. Other equivalent methods approved by the enforcing agency.</li> </ul>		
	<ul> <li>3. A slab design specified by a licensed design professional.</li> <li>4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent</li> </ul>		
	<ol> <li>moisture content. Moisture content shall be verified in compliance with the following:</li> <li>1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements</li> </ol>		
	<ul> <li>found in Section 101.8 of this code.</li> <li>2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.</li> <li>3. At least three random moisture readings shall be performed on wall and floor framing with documentation</li> </ul>		
	acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying		
	<ul> <li>recommendations prior to enclosure.</li> <li>4.506 INDOOR AIR QUALITY AND EXHAUST</li> <li>4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:</li> </ul>		
	<ol> <li>Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.</li> <li>Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.</li> </ol>		
	<ul> <li>a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.</li> <li>b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)</li> </ul>		
	<ul> <li>Notes:</li> <li>1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.</li> <li>2. Lighting integral to bathroom exhaust fans shall comply with the <i>California Energy Code</i>.</li> </ul>		
	<ul> <li>4.507 ENVIRONMENTAL COMFORT</li> <li>4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:</li> </ul>		
	<ol> <li>The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.</li> <li>Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.</li> <li>Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential</li> </ol>		
	Equipment Selection), or other equivalent design software or methods. <b>Exception:</b> Use of alternate design temperatures necessary to ensure the system functions are acceptable.		

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	-

Y	=	YES
N/A	=	NOT A
RESPON. PARTY	=	RESPO



### **GENERAL STRUCTURAL NOTES**

### 1. General

- a. Details shown on engineering drawings are typical, similar details apply to similar conditions, contractor shall verify existing conditions. Any existing conditions requiring construction different from that shown shall be reported to the architect or engineer immediately.
- b. All drawings shall be read in conjunction with architectural, mechanical and electrical and all other contract drawings and specifications.
- c. Dimensions shown shall take precedence over scale on plans, sections and details. Notes and detail on the drawings shall take precedence over general notes and typical details. Discrepancies shall be brought to the attention of the architect or engineer immediately.
- d. The contract structural drawings and specifications represent the finished structure. Unless otherwise indicated, they do not indicate the method of construction. The contractor shall provide all measures necessary to protect the structure, workmen or other persons during construction per OSHA regulations.
- e. Not all general notes apply, notes shall be used where applicable. The details on this sheet shall be used whenever applicable, unless noted otherwise (UNO).

2. Foundation Notes

- a. Soils Report by: Pacific Materials Laboratory of SB, Inc Dated: 3/28/24 Revised File Number: 23-15928-2 Revised
- This Report shall be made part of these plans.
- b. Foundation design is based on soils bearing pressure of 2000 psf and an expansion index of LOW \*
- c. All earthwork, excavations and site preparations shall be performed as per recommendations outlined in the soils report.
- d. Soil engineer shall inspect foundation prior to the placement of any concrete and Soil compaction report shall be provided to the building inspector at the job site prior to placement of concrete in the foundation(if soils report is noted above).

3. Concrete

- a. All Concrete work shall be performed in accordance with the current edition of the ACI 318 and the 2022 California Building Code (CBC).
- b. Minimum compressive strength at 28 days shall be: 2500 psi for slabs on grade 2500 psi for footings 2500 psi for retaining walls Deputy inspection is not required unless specifically noted on details and where compressive strength exceed 2500 psi.
- c. Mix designs shall be submitted and approved by the Architect and Engineer prior to starting the work.
- d. All concrete UNO shall be regular weight hard rock type (150 pcf). Aggregates shall be natural sand and rock conforming to ASTM C33 with proven shrinkage characteristics of less than 0.05%. Aggregates for exposed exterior slabs shall conform to ASTM C289. Maximum size of aggregate is to be 1". Pea gravel is not allowed.
- e. Cement for all concrete shall be Type 2, Low Alkali conforming to ASTM C150. Use a minimum of 5 1/2 sacks per yard.
- f. Slump shall not exceed 4" but shall be greater than 2 1/2". Concrete for slabs on grade may be placed with a maximum slump of 5".
- g. All reinforcing steel, anchor bolts, holdown bolts, dowels and other inserts shall be securely fastened in the forms before concrete is poured. All penetrations through grade beams and all penetrations greater than 6" in diameter shall be approved by the engineer.
- h. Concrete slabs on grade shall be maintained in a moist condition for 7 days after placement. Alternate methods may be approved by the architect or engineer if satisfactory performance can be assured.
- Vibrate all concrete in place with a mechanical vibrator in accordance with the general provisions outlined in "309R-05: Guide for Consolidation of Concrete" by ACI Committee 309.
- Finish interior slabs with a smooth trowel. Finish exterior slabs with a light broom perpendicular to travel to provide a non-slip surface. Slabs shall be planar to within 1/8" in 10 feet.
- k. For post installed anchors, use Simpson SET XP Epoxy (ICC-ES ESR-2508), install per manufacturer's instructions. Special Inspection is required, see note 8.

### 4. Reinforcing Steel

- a. Reinforcing steel shall be ASTM A615 Grade 60 for #4 bars and larger and ASTM A615 Grade 40 for #3 bars and smaller.
- b. Reinforcement hooks and bends shall comply with Chapter 25 of ACI & detail 1/-. Bends to #6 bars and larger shall be done in a shop. Make all bends cold.
- Splices in concrete shall be 30 bar diameters (26" min.) UNO in details. Splices in masonry shall be 40 bar diameters (26" min.) UNO in details.
- Specified concrete cover for reinforcing bars for: (Except as noted otherwise in details) Footings - X.
- 1 1/2" Slab on Grade Retaining Wall
  - 3" on dirt side 2" on exposed side

### 5. Masonry

- a. Concrete Masonry units (CMU) shall be Grade "N" lightweight units f'c= 1500 psi conforming to ASTM C90. All masonry units shall be laid true, level and plumb and in accordance with Chapter 21 of the CBC.
- b. Mortar shall be Type M with compressive strengths of 1250 psi at 7 days and 2500 psi at 28 days, in accordance with ASTM C270 and CBC Section 2103.2. Do not use masonry cement.
- c. Grout shall be in accordance with CBC 2103.3 with a compressive strength of 1250 psi at 7 days and 2000 psi at 28 days. All Masonry units shall be solid grouted UNO. Consolidate all grout using an electrical mechanical vibrator. Grout lifts shall not exceed 4' without cleanouts and 6' feet with cleanouts.
- 6. Structural Steel
  - a. All structural steel and miscellaneous metals shall conform to ASTM A36. Pipe columns shall conform to ASTM A53, Grade B. Steel Tubing shall conform to ASTM A500, Grade B. Anchor Bolts shall conform to ASTM A307, Grade A. Nuts and bolts shall conform to ASTM A325N.
  - b. All fabricators shall submit shop drawings to the architect and engineer prior to fabrication. All fabrication and erection shall be performed in accordance with the latest AISC Specification. Steel fabricator shall field check all dimensions prior to erection for a proper fit.
  - c. All welding and fabrication shall comply to AWS Specifications and to be performed by welders certified by local Building Official. All welding shall be performed by electric arc process as required per AWS D1.1. Welds are designed at full stress and must be performed in the shop of a licensed fabricator approved by the local Building Department.
  - d. Continuous deputy inspection is required for all field welding
  - e. All Structural steel not embedded in concrete and not covered by fire resistive elements shall be shop painted.
  - f. Field cutting or burning of structural steel shall not be permitted unless written approval is obtained by the architect or engineer.
- 7. Structural Wood
  - a. All lumber shall be Douglas Fir Larch shall be used and complies with DOC Wood in contact with masonry or cor (sill plates, ledgers, nailers, etc.) Joists, plates, nailers, blocking and p 3X and 4X beams 6X beams 2X and 3X studs

All lumber shall be grade marked. Structural members shall not be cut or drilled unless specifically noted or detailed. Obtain engineer's written approval for any notches or holes not detailed.

- b. All joists and rafters shall be solid blocked at all points of bearing. Solid midheight, but not to exceed 8'-0" oc vertically.
- c. Glu-laminated beams shall be fabricated by a licensed fabricator and shall have AITC certifications. Simple span glu-lams shall be a combination 24F-V4 and cantilever glu-lams shall be a combination 24F-V8.
- d. TJI's, Microlams and Parallams shall be manufactured by Trus-Joist. Submit shop drawings and calculations for each different joist, span and loading condition. Use 1.8E WS Microlam LVL where Microlam (ML) is UNO. Install all joists and beams per manufacturer's specifications including all necessary stiffeners, bridging, blocking and hangers except notch or bore joists or beams unless written approval is obtained from engineer.
- e. All plywood sheathing shall be APA rated and comply with DOC PS 1 or PS 2, thicknesses are noted on plans. Use exterior glue on roof sheathing. Glue all contact surfaces at floor sheathing and use screw shank or ring shank nails. See shearwall schedule for wall sheathing requirements. Plywood machine nailing will not be accepted if nailheads penetrate outer ply or if minimum edge distances are not maintained.
- f. Nailing shall be in accordance with CBC Table 2304.10.2 except where nailing is exceeded in shearwall schedule and on plans and details. Where necessary to prevent splitting of wood, bore a hole 75% the head nails:
- g. Use ASTM A307 bolts with washers at each head and nut. Use 3" sq. x 0.229" plate washers or equal at anchor bolts in. All bolt holes in wood shall be a maximum of 1/32" to 1/16" oversized. Lag bolts and wood enclosing walls.
- i. Prefabricated connectors shall be Simpson Strong-Tie Connectors. A current Simpson Wood Construction Connectors Catalog shall be at the job site at all times.

### 8. Special Inspections

- a. In addition to regular inspections, the following checked items will also
- 1. Soils compliance prior to foundation inspection
- 2. Structural Concrete over 2500 psi 3. Plywood shearwalls 2, 3, 4
- 4. Field Welding
- 5. High Strength Bolts
- 6. Expansion Anchors/Epoxy 7. Special Masonry
- 8. Piles/Caissons
- 9. Steel Frame
- 10. Metal Plate Connected Wood Trusses over 60" tall A report shall be given to the Building Inspector at framing Inspection.

h (DF) UI C PS 20:	NO. The following grades
ncrete	PTDF (pressure treated)
oosts	#2 DF or better
	#2 DF UNO
	#1 DF UNO
	#2 DF

blocking is required at 8'-0" oc unless continuously braced at bottom edge. Stud partitions over 10' high shall have 2x bridging, same width as stud, at

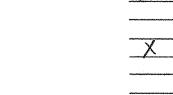
called out and 2.0E WS Parallam PSL where parallam (PSL) is called out where plans and details exceed manufacturer's recommendations. Do not

diameter of the nail. Use common nails only, do not use sinkers or clipped

8d diameter = 0.131", 10d diameter = 0.148", 16d diameter = 0.162"

screws shall be screwed in and not driven. Re-tighten all bolts just prior to

require Special Inspection in accordance with CBC Sec 1704 and 1705: Х



STRUCTURAL INFORMATIC	<u>DN:</u>	
Code: 2022 Calif. Building Co	ode (CBC)	
₋oads:		
	<u>Dead</u>	Live
Roof:	13 psf	20 <b>psf</b>
Risk Category:		
mportance Factor, le:		1.00
Wind Design Data:		
Basic Design Wind Speed	I, V:	100 mp
ASD Wind Speed, Vasd:		78 mph
Wind Exposure:		С
Seismic Design Data:		
Mapped S <sub>S</sub> :		2.282
Mapped S <sub>1</sub> :		0.812
S <sub>DS</sub> :		1.521
S <sub>D1</sub> :		0.920
Site Class: (Default see A	SCE 11.4.3)	D
Seismic Design Category	:	E
Basic Seismic force resist	ting system:	
Bearing walls syste	em – wood she	earwalls
Cs:		0.2341
R:		6.5
Analysis Procedure Used		
Equivalent Lateral	Force Analysi	S

Corrie Putney Engineer, li 598 Westfield C /entura, CA 93	St.
305-901-2078 engineercorrie@g	mail.com
PROFESS RIE A P	Reter .
No. C54 Exp. 12-31	IZI INTER
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RESIDENCE A	ITOU RD. ARBARA, 931
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expressiv reserve tew copyright and rights in these plane are roopied manifer whickseve to be assigned to without first obtain written permission JoFlo DES	
drawn	

	S H	EARW	ALL	SCH	EDUL	E
	SHEAR- WALL	<sup>1</sup> / <sub>2</sub> " STRUC I PLYWOOD, see note 2 for nail size	RIM/BLKG TO PL. CONN.	BOTTOM PL. CONN.	SILL PL. AND ANCHOR BOLTS	ALLOW. SHEAR see note 1
	1	10d @ 6"oc BN, EN 10d @ 12"oc FN	A35 @ 16"oc	2x SILL PL w/ 16d @ 4"oc	2x FDN SILL PL w/ 5/8" DIA. @ 48"oc	310 plf
;	2	10d @ 4"oc BN, EN 10d @ 12"oc FN <b>Spec. Insp. Reqd.</b>	A35 @ 16"oc	3x SILL PL w/ SDS1/4x6" SCREW @ 6"oc	3x FDN SILL PL w/ 5/8" DIA. @ 32"oc	460 plf
	3	10d @ 3"oc BN, EN 10d @ 12"oc FN <b>Spec. Insp. Reqd.</b>	A35 @ 12"oc,	3x SILL PL w/ 3/8" DIA. LAG BOLT @_6"oc	3x FDN SILL PL w/ 5/8" DIA. @ 24"oc	610 plf
	4	10d @ 2"oc BN, EN 10d @ 12"oc FN <b>Spec. Insp. Reqd.</b>	A35 @ 8"oc	3x SILL PL w/ 3/8" DIA. LAG BOLT @ 4"oc	3x FDN SILL PL w/ 5/8" DIA. @ 16"oc	800 plf

Shearwall Schedule Notes:

5.

"Sattlenington of the

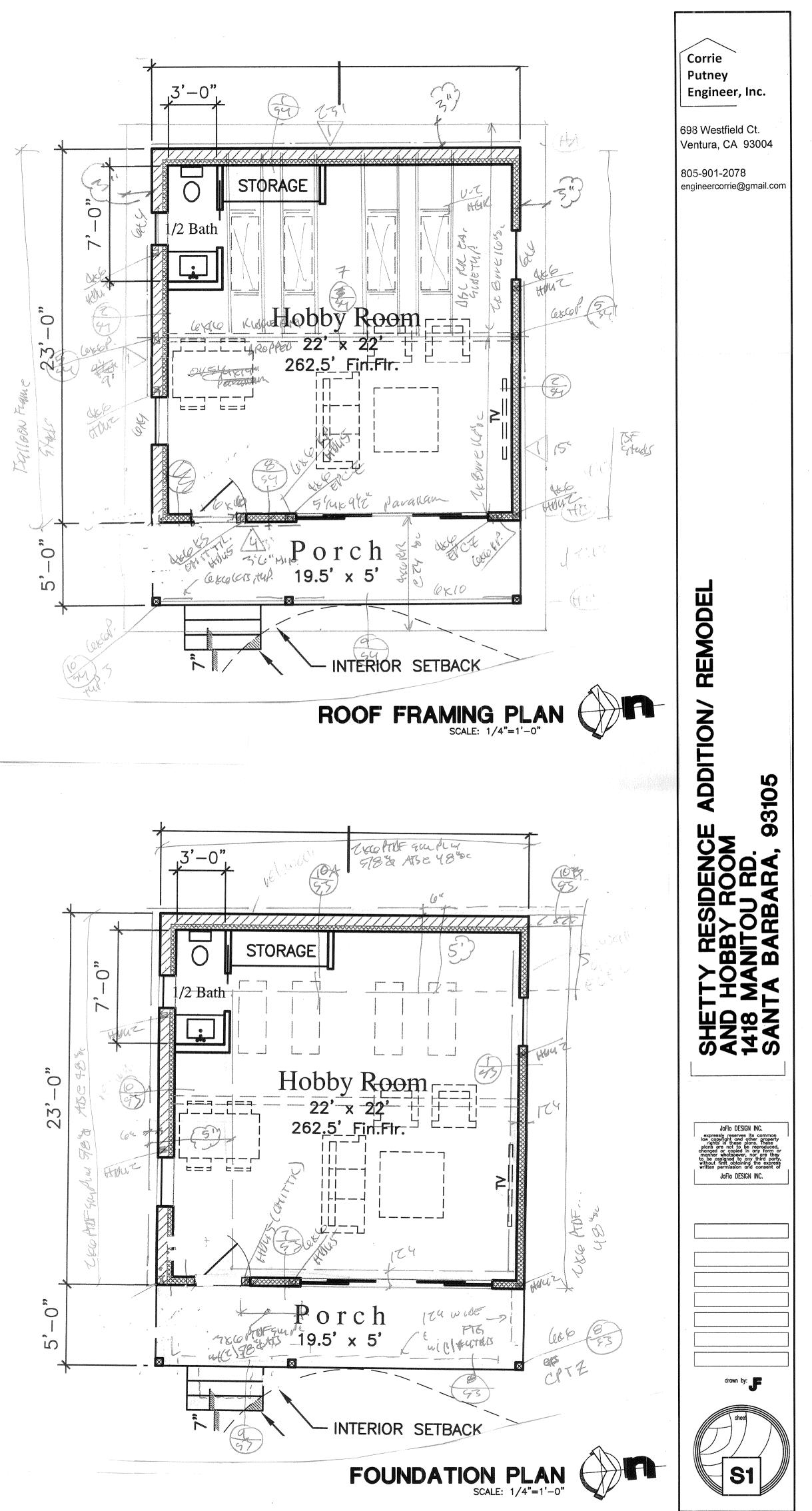
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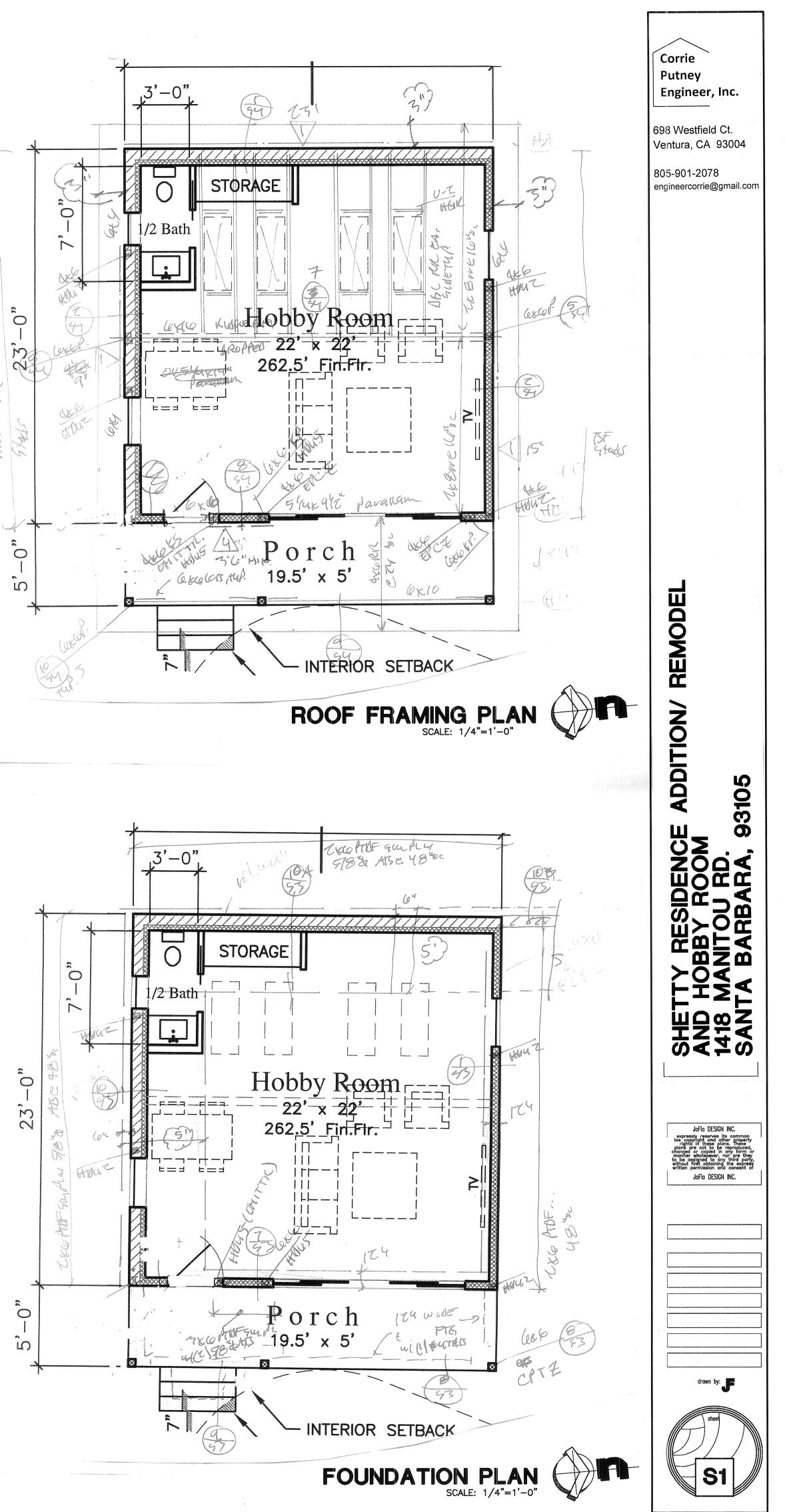
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shearwalls or equivalent wood structural panel. Where plywood is indicated on any portion of a wall line, continue the same installation on the entire wall line, including around doors and windows. Allowable shear includes 0.92 factor for Holdowns attached to inside face of end post. Use common carbon steel smooth shanked nails, do not use sinkers or clipped head 2. nails (10d common= 3"x 0.148" dia. x 0.312" head dia.), 16d = 3.5" x 0.162" dia. x 0.344" head dia.). Galvanized box nails may be substituted (10d galv box = 3"x 0.126" dia. x 0.312" head dia.). All bolt holes in wood shall be a maximum of 1/32" to 1/16" oversized. The following applies to shearwalls 2, 3 and 4:
 A. Shearwall Periodic Special Inspection Required per IBC Sec 1705.12.2.2. The following elements of the shearwall shall be inspected: nailing, bolting, anchoring and other fastening of elements of the lateral resisting system including shearwalls, roof and floor diaphragms, drag struts, braces, shear panels and holdowns. See also note 8 on sheet S0. Use 3x PTDF foundation sill plates over concrete and masonry at new В. construction. Use 3/8" diameter lag bolts to 3x minimum blocking or rim joist with 4" minimum embedment. Predrill 3/16" diameter hole for threaded shank and 3/8" diameter for unthreaded shank. C. Use 3x studs at all plywood panel edges or double 2x studs faced together with 10d staggered and spaced per shearwall BN spacing. Provide 1/2" edge distance for plywood nailing, stagger nailing in double top D. plates, at plywood joints and at sill plate nailing. 4. Use PTDF sill plates. Sill plates shall be attached with 5/8" diameter anchor bolts embed 7" minimum at 48" oc, UNO in shearwall schedule. There shall be a minimum of 2 bolts per sill plate piece with one bolt located within 9" of each end of each piece. Anchor bolts shall have square plate washers 3" square x 0.229", see detail 7/S0.

Note that a holdown bolt does not count as an anchor bolt, see detail 5/S0. Holdown anchor and nut shall be tightened just prior to covering the wall framing. 6. Use 2 layers of Grade D paper between plywood shear panel and exterior lath.

1. Use 15/32" or ½" Structural Plywood (5 ply), Product Standard Doc PS1 or PS2 on all





S	Н	Ε	Α	R	W	Α	L	L	S	C	Н	Ε	D	U	L	Ε
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SHEAR- WALL	<sup>1</sup> ⁄ <sub>2</sub> " STRUC I PLYWOOD, see note 2 for nail size	RIM/BLKG TO PL. CONN.	BOTTOM PL. CONN.	SILL PL. AND ANCHOR BOLTS	ALLOW. SHEAR see note 1
1	10d @ 6"oc BN, EN 10d @ 12"oc FN	A35 @ 16"oc	2x SILL PL w/ 16d @ 4"oc	2x FDN SILL PL w/ 5/8" DIA. @ 48"oc	310 plf
2	10d @ 4"oc BN, EN 10d @ 12"oc FN <b>Spec. Insp. Reqd.</b>	A35 @ 16"oc	3x SILL PL w/ SDS1/4x6" SCREW @ 6"oc	3x FDN SILL PL w/ 5/8" DIA. @ 32"oc	460 plf
3	10d @ 3"oc BN, EN 10d @ 12"oc FN <b>Spec. Insp. Reqd.</b>	A35 @ 12"oc.	3x SILL PL w/ 3/8" DIA. LAG BOLT @ 6"oc	3x FDN SILL PL w/ 5/8" DIA. @ 24"oc	610 plf
4	10d @ 2"oc BN, EN 10d @ 12"oc FN <b>Spec. Insp. Reqd.</b>	A35 @ 8"oc	3x SILL PL w/ 3/8" DIA. LAG BOLT @ 4"oc	3x FDN SILL PL w/ 5/8" DIA. @ 16"oc	800 plf

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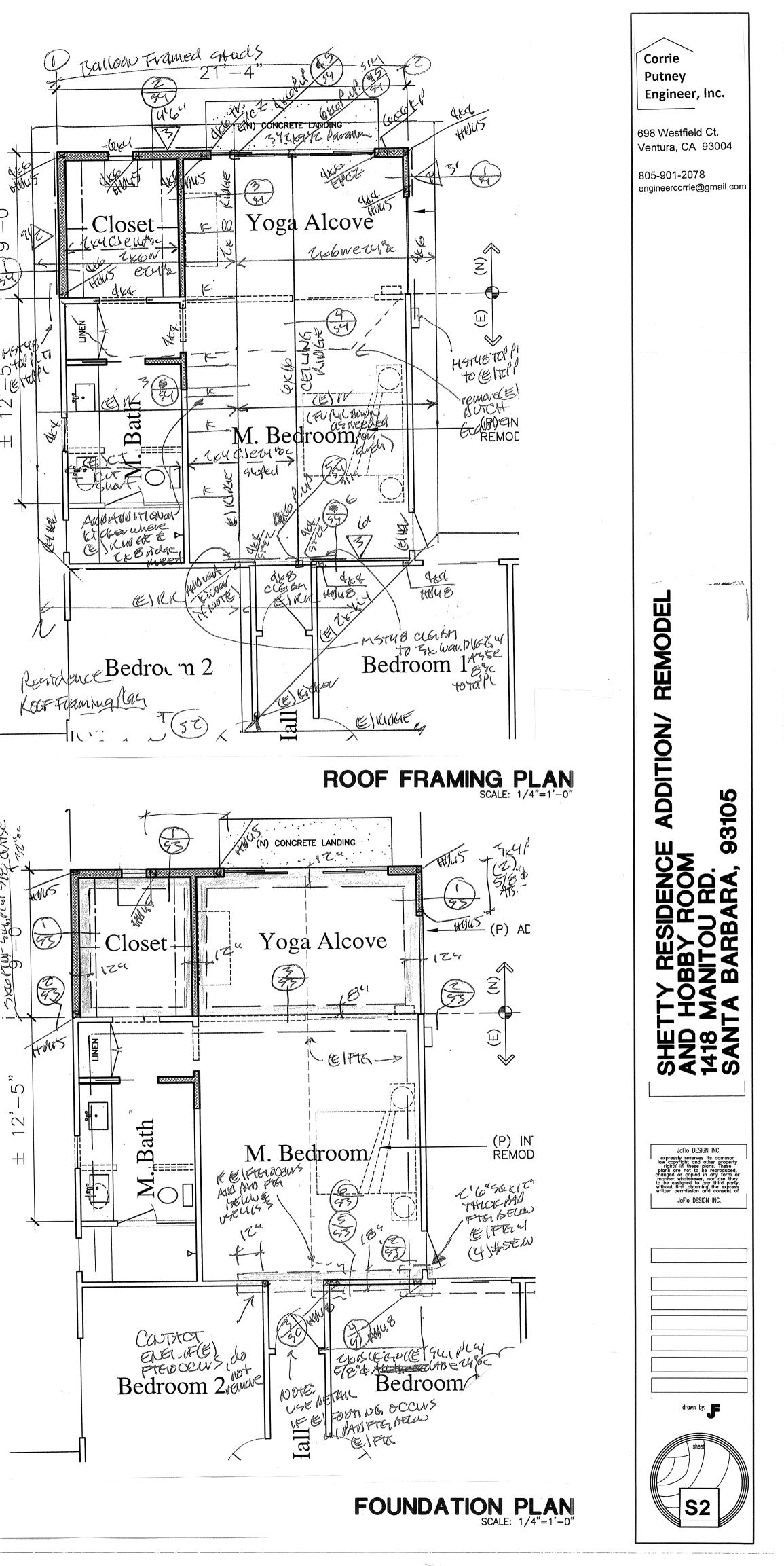
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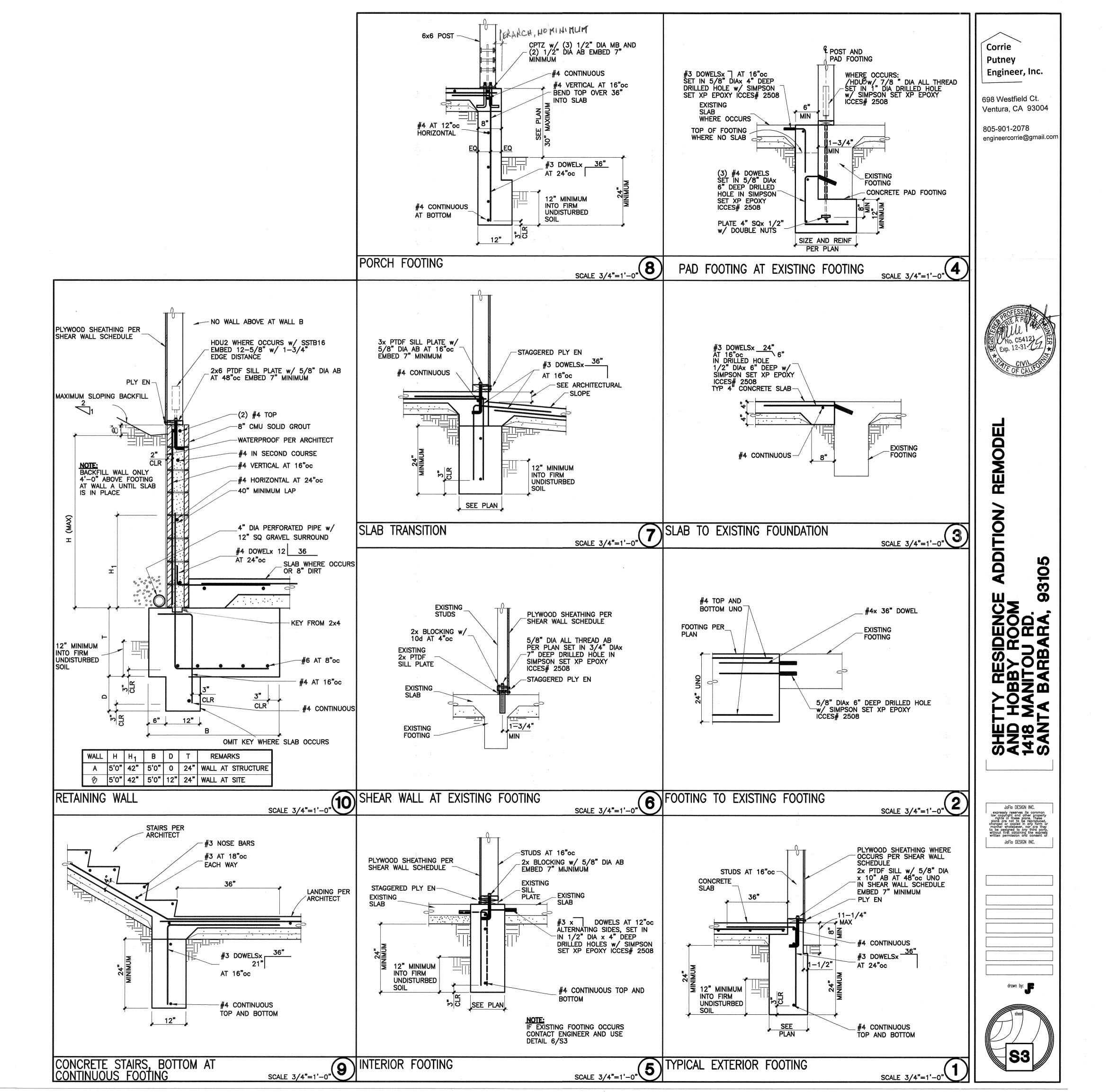
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Shearwall Schedule Notes:

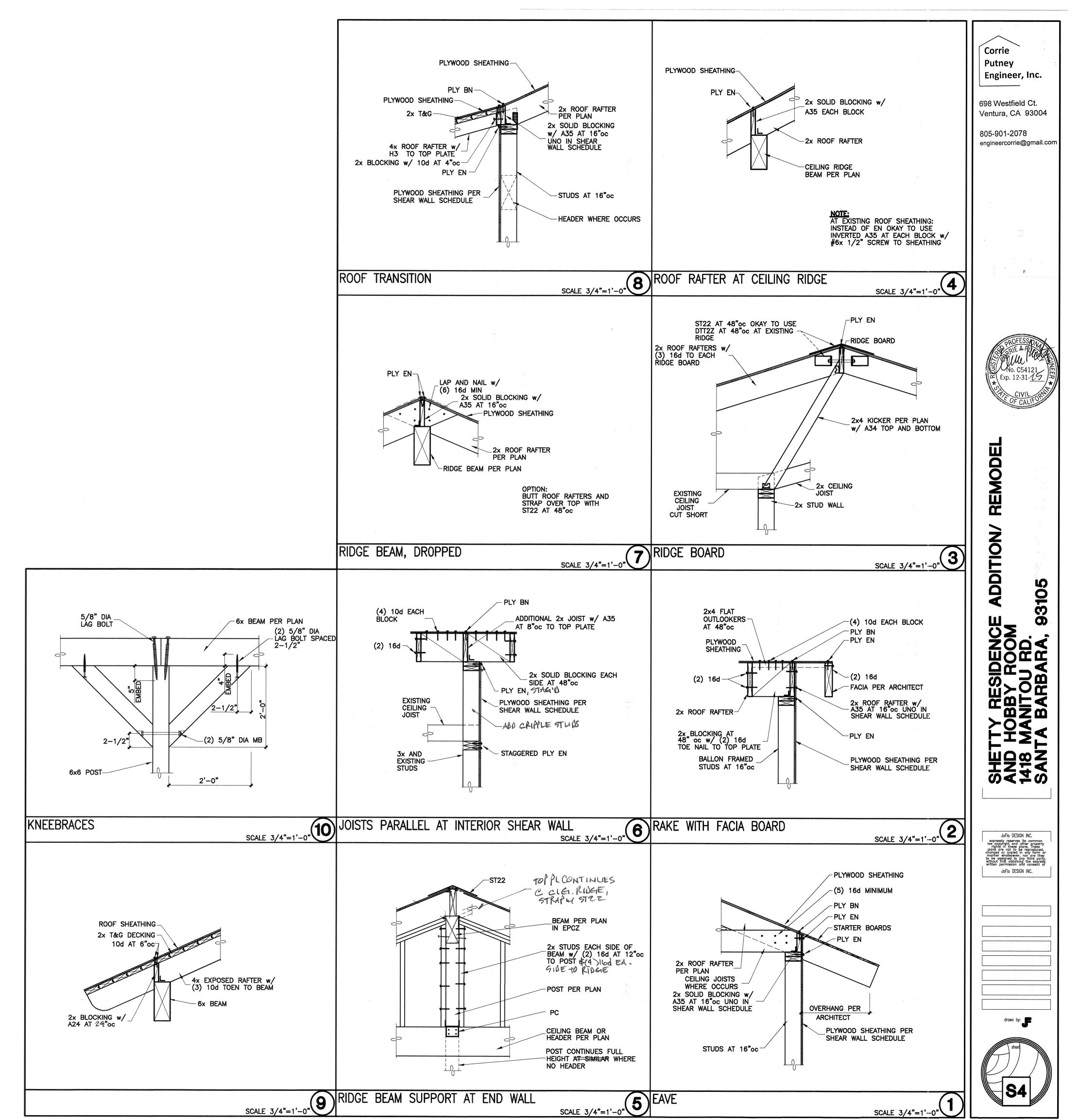
5.

- Use 15/32" or 1/2" Structural Plywood (5 ply), Product Standard Doc PS1 or PS2 on all 1 shearwalls or equivalent wood structural panel. Where plywood is indicated on any portion of a wall line, continue the same installation on the entire wall line, including around doors and windows. Allowable shear includes 0.92 factor for Holdowns attached to inside face of end post.
- Use common carbon steel smooth shanked nails, do not use sinkers or clipped head 2. nails (10d common= 3"x 0.148" dia. x 0.312" head dia.), 16d = 3.5" x 0.162" dia. x 0.344" head dia.). Galvanized box nails may be substituted (10d galv box = 3"x 0.126" dia. x 0.312" head dia.). All bolt holes in wood shall be a maximum of 1/32" to 1/16" oversized.
- 3.
  - The following applies to shearwalls 2, 3 and 4: A. Shearwall Periodic Special Inspection Required per IBC Sec 1705.12.2.2. The following elements of the shearwall shall be inspected: nailing, bolting, anchoring and other fastening of elements of the lateral resisting system including shearwalls, roof and floor diaphragms, drag struts, braces, shear panels and holdowns. See also note 8 on sheet S0.
  - Β. Use 3x PTDF foundation sill plates over concrete and masonry at new construction. Use 3/8" diameter lag bolts to 3x minimum blocking or rim joist with 4" minimum embedment. Predrill 3/16" diameter hole for threaded shank and 3/8" diameter for unthreaded shank.
  - Use 3x studs at all plywood panel edges or double 2x studs faced together C. with 10d staggered and spaced per shearwall BN spacing. Provide 1/2" edge distance for plywood nailing, stagger nailing in double top D.
- plates, at plywood joints and at sill plate nailing. 4. Use PTDF sill plates. Sill plates shall be attached with 5/8" diameter anchor bolts embed 7" minimum at 48"oc, UNO in shearwall schedule. There shall be a minimum
- of 2 bolts per sill plate piece with one bolt located within 9" of each end of each piece. Anchor bolts shall have square plate washers 3" square x 0.229", see detail 7/S0. Note that a holdown bolt does not count as an anchor bolt, see detail 5/S0. Holdown anchor and nut shall be tightened just prior to covering the wall framing.
- Use 2 layers of Grade D paper between plywood shear panel and exterior lath. 6.













COMMUNITY DEVELOPMENT DEPARTMENT 630 GARDEN ST. SANTA BARBARA, CA 93101

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# FINAL APPROVAL CHECKLIST SUPPLEMENTAL APPLICATION





### WHAT IS FINAL APPROVAL?

Final approval is the last level of design review before applying for a Building Permit (BLD) application. Final approval generally occurs at a separate hearing, after project design approval, and includes a complete set of working drawings with all details, color samples, door hardware, and exterior lighting fixtures for review. Applicants may also request project design approval and final approval on the same hearing date, if sufficient details are provided.

### HOW DOES THE PROCESS WORK?

Once a project receives project design approval, it shall constitute the substantive design approval of the project. If substantial changes to the plans are proposed after project design approval, a new project design approval will be required. Design review comments on final approval should only address whether the design substantially conforms to the project design approval, and comments on details and landscaping.

### WHEN IS A COMPLETED CHECKLIST REQUIRED?

A completed **Final Approval Submittal Checklist** is required when you submit for final approval. To resubmit an application, upload documents, like plans and letters, into the record in the City's Accela Citizen Access Portal (ACA) system, along with the <u>Resubmittal Form</u>. All forms must be completed, signed, and submitted as a PDF attachment to your electronic submittal.

# **I**) FINAL APPROVAL CHECKLIST

Provide required details and sheet references with your submittal for final approval. Fill in the blank or indicate N/A if "not applicable". Final approval does not permit the omission of any required information.

PROJECT ADDRESS:	PLN RECORD ID:
PRUJEUTADDRESS:	

ALL	BUILDING ELEVATIONS	Sheet #			Sheet #
	Exterior Details			Paint or Stain Color (trim, etc.)	
	Exterior Finishes			Materials (roofing, plaster, etc.)	
	Parapet Heights			Exterior Lighting (incl. cut sheets)	
	Roof/Attic/Understory Vents			Specification Sheets, as applicable	
CON	ISTRUCTION DETAILS	Sheet #			Sheet #
	Retaining Wall			Ironwork	
	Window/Door detail			Stairs	
	Roof Details (eaves)			Handrails	
	Decks			Skylights	
	Fences/Arbors/Trellis			Awnings	
	Trash/Recycling Enclosures			Gutters and Down Spouts	
ELECTRICAL/MECHANICAL/PLUMBING EQUIPMENT			Sheet #		
	Transformer Vault				
	Utility Service Meter				
	Screening Elements				
	Generators/Electrical/Mechanical/HVAC (including cut sheets & dBA at property lines)				
	Fire Valves (Verify Fire Sprinkler Ordinance per SBMC §8.04 requirements)				
	Cross Connection Control Devices (backflow device)				
CON	ISULTANT/ENGINEER SHEETS	Sheet #			Sheet #
	Electrical			Structural	
	Mechanical			Plumbing	

ROOFTOP ARCHITECTURAL DETAILS			
	HVAC Equipment (exhaust fans, condensing units, air conditioning units, etc.)		
	Dimensions of equipment and screening		
	Mission tile roofing installation specifications		
	Specification Sheets, if applicable		
	Parapet Height		
	Screens		
	Chimney Caps		
	Flashing		
	Gutters/ Scuppers		
	Solar panel location or potential future solar panel installation (if applicable)		
	High fire roof coverings, valleys, gutters		
COLOI	R AND MATERIAL BOARDS	Sheet #	

### COLOR AND MATERIAL BOARDS

Paint and Stain Color Names and Numbers 

Material Type, Brand and Inventory Number

### LANDSCAPE PLAN

Irrigation Plan		High Fire/Defensible Space	
Plant Species/Number/Sizes		Water Conservation Standards	
Planters, Pots, Furniture		Site Walls (materials and color)	
Paving Materials		Backflow Device	
Erosion Control Measures		Rooftop Garden/Landscaped Roof	

Sheet #

### Storm Water Management Program (SWMP) Sheet # Location of filtration devices Cross-section details Drainage flow from all impervious areas Amounts of new, replaced, or removed impervious areas

Hydrology/Storm Water Report 

Sheet #