Project General Notes

1. Location of service shall be approved by Southern California Edison Company.

2. All interior doors shall be Douglas fir paneled doors with 1-3/4" thickness solid core approved by owner.

3. Doors that swing over a landing or porch require a landing equal to the width of the floor in length and not more than 1/2" below threshold. Doors that do not swing over a top step or landing may open on a landing or top step that is not more than 8" below floor level.

4. Provide a water saving low flush water closet. Max. 1.28 gallons per flush. Shower heads (2.0 Gallons Per Minute), & faucets (1.5 GPM).

5. Materials other than structural elements shall be moisture resistant. Wall coverings shall be cement plaster or tile, 70""high above drain of shower or tub with shower. Thin set tile on 5/8" water resistant Gypsum Board at walls. Set tile over min. ¾" mortar bed over approved shower pan at floors.

6. Glass doors and walls panels of bathtubs and shower enclosures shall be laminated, fully tempered or wire glass.

7. Glass, which is less than 60" from a floor and within a 24" arc of a doorway's vertical edge, must be tempered glass.

8. Plumb refrigerator space for icemaker.

9. All plumbing walls shall be 2 x 6 studs.

10. Provide tile or granite countertops at bathrooms per owner. All bathroom countertops heights to be 36" high.

11. Provide granite countertops at kitchen per owner.

12. Provide smooth steel trowel finish at all stucco.

13. Provide R-11 or R-13 insulation at interior walls of all bathrooms and bedrooms. Provide R-30 insulation between floors.

14. Provide a sectional roll-up garage door with automatic opener, and detail as shown on elevation.

15. French doors and all sliding doors shall be recessed as shown on plans.

16. Handrail or guardrail on open side shall not allow that a 4" diameter sphere pass through; and the open space at riser, tread and bottom element of guardrail shall not allow a 6" diameter sphere pass through.

17. All hose bibs shall be protected by back flow prevention device.

18. **Important Note**: HVAC installer shall confer with Architect for necessary furr down locations. Consult with owner for possible FAU with Air Conditioning capability. Provide zoned heating.

19. All heating systems shall have automatic thermostats with a clock mechanism which the building occupant can manually set back; and thermostat set point at least 2 periods within 24 hours, per Section 150 (F) of CEC.

20. F.A.U. in attic
    A. Provide plywood sheathing at entire attic space.
    B. Double joists supporting FAU unit and provide seismic sway braces.
    C. Provide electrical outlet, light and switch @ access
    D. Condensation drain to approved plumbing fixture required, if any.
    E. Provide a 30" x 30" working space in front of the FAU, with 30" headroom
    F. Provide 30" side attic access with fold down ladder.

21. Provide circulation intake air supply duct of 2 square inches per 1000 BTU for F.A.U.

22. Provide "Firerock FIREPLACE" ESR-2599 or approved equal at metal fireplaces. All fireplaces shall be gas appliance only. NON WOOD-BURNING ONLY..

23. Provide 1-1/8" plwd. floor sheathing typical. Provide 5/8" plywood roof sheathing typical.

24. All windows and French doors shall have clad finish.

25. Building address shall be provided on the building in such a position as to be plainly visible from the street, CBC section 502. Internally illuminated address sign shall not contain a screw-base socket and consume no more than 5 watts of power as determined according to Section 130(d) - per Section 150 (K) 14.

26. Provide a 12" minimum access panel to bathtub trap slip joint connection or use rigid type connections.

27. Control valve for shower and tub shall be of the pressure balance or thermostatic mixing valve type, section 410.7 CPC.

28. Laundry room door shall have 100 square inch minimum for dryer make up air (CMC section 908.2).

29. Provide straight edge at interior walls, typical.

30. Provide smooth texture at all walls and ceilings.

31. Provide tankless water heaters.

32. Provide water heater vent to outside.

33. Slope grade or paving away from building, minimum 1% slope.

34. Exterior doors, doors between house and garage, and their hardware shall conform to the following security provisions:
    a. Doors shall be equipped with dead locking latch and dead bolt with hardened insert with 1" minimum throw and 5/8" minimum embedment into jamb. Both are to be key operated from the outside.
    b. Windows and door lights within 40" of the locking device shall be fully tempered/burglary resistant/or protected by bars.
    c. Overhead and sliding garage doors shall be capable of being securely locked when not otherwise locked by power operation.
    d. Sliding glass doors and sliding windows shall be capable of withstanding forced entry attempts as outlined in [6706.7].

35. Deleted.

36. See Detail 1/A8 for typical cutting, boring and notching through wood framing.

37. See Detail 2/A8 for typical one-hour wall and ceiling details.

38. See Detail 3/A8 for typical door and window opening frame details.

39. All utilities serving the site shall be installed per City of Palos Verdes Estates "Standard Underground Connection" subject to field inspection and verification

40. Obtain Sanitation District approval for any new sewer construction.

41. An approved backwater valve is required for drainage piping serving fixtures located below the elevation of the next upstream manhole cover. Fixtures above such elevation shall not discharge through the backwater valve

42. Check city records to determmine existence of cesspool on property. Any existing cesspool shall be located and inspected by city personnel before demolition or building permits can be issued.

43. Section 9.01.100 Sustainable Building Requirements for R-2 and R-3 Occupancies:
    Section 419.7 is hereby added per the above climatic findings as follows:
    - Sustainable building. All new R-2 and R-3 occupancies are required to incorporate all the following sustainable building practices in addition to the requirements of the CEC, Title 24, Part 6 unless waived by the building official.
        1. Insulate all hot water piping
        2. Install low emitting insulation in required areas of walls, floors, ceilings, and roof.
        3. Use low volatile organic compund (VOC) caulking.
        4. Pre-plumbing piping and sensor wiring from wate heater to attic for future solar water heating.
        5. Use duct mastic on all duct joints.
        6. Install "Energy Star" or equivalent bathroom fan vented to the outside.

44. The fire resistance rating of exterior walls shall comply with the provisions of CBC 704.5, section 704, table 704.8, and table 602. Fire resistance-rated exterior wall construction shall be maintained through crawl spaces, floor framing, and attic spaces in accordance with CBC 705.6. Further, projections located where openings are required to be protected shall be non-combustible, heavy timber, or one hour construction. All exterior walls with a fire separation distance of 5' or less shall be 1 hour fire-resistance rating for exposure to fire from both sides.

45. Smoke alarms (i.e. smoke detectors) shall be installed and maintained at all of the following locations:
    a) In each room used for sleeping purposes.
    b) On the ceiling or wall outside immediate vicinity of sleeping room.
    c) In each story, basement or split level within a dwelling unit.
    d) In enclosed common stairwells of two or more dwelling units.
    Where more than one smoke alarm is required to be installed, it shall be interconnected in such a manner so that the activation of one alarm will activate all of the alarms.
    In new construction, smoke alarms shall receive their primary power source from the building wiring and shall be equipped with battery back-up and low battery signal.

46. Means of egress doors shall be detailed as follows:
    a) Min. 32" (max 48") clear opening width of exit doorway. For swinging door, clear width is measured between the face of the door and the stop, with the door open 90 degrees. For non-swinging door, the clear width is to be measured from the face of the door jamb.
    b) Min. height of 80" for exterior exit doorway, 78" for interior doorway, and 76" for all other exterior doorway. (CBC 1008.1.1)
    c) Exterior egress door shall be side-hinged swinging (CBC 1008.1.2)
    d) Max. 0.75" threshold height at sliding doors and max. 0.5" for other doors.
    e) Min. width of landing at door shall not be less than width of stairway or door.
    f) Min. 36" length of landing at door measured in the direction of travel.
    g) Max. 7.75" below the top threshold height of an exterior doorway not part of required means of egress provided the door, other than storm or screen doors, does not swing over the landing. Door handles, pulls, latches, locks, and other operating devices shall be a minimum 34" to max 48" height above the floor. Manually operated flush bolts or surface bolts are not permitted on doors required for egress.

47. Walls and soffits within enclosed useable space under stairways shall be protected as follows: Interior stairs require 0.5" gypsum board on the enclosed side.

48. The walking surface of treads and landings shall not be sloped steeper than 2% (1:48) in any direction.

49. Provide emergency escape and rescue from sleeping rooms. Min. net clear opening dimensions of 24" height, 20" clear width, 5.7 sq. ft. area (5.0 sq. ft. at grade floor) and 44" max to bottom of clear opening is required.

50. Rooms containing bathtubs, showers, spas, and similar bathing fixtures shall be mechanically ventilated. Provide an exhaust fan with a min. capacity of 50 CFM. Ductless fans are unacceptable.

51. Garage door extensions springs shall be fabricated from either hard drawn-spring wire or oil tempered wire and installed in accordance with the manufacturer's instruction. Garage door springs shall comply with requirements of CBC Sect. 1211.

52. Attached garage or carport to dwelling shall be separated as follows:
    a) Min. ½" gypsum board required on the garage side separating dwelling and attic area from garage.
    b) Min.⅝" gypsum board required between garage or carport and all habitable rooms located above garage or carport (including structural members supporting the upper floor, ceiling, post and beam).
    c) Min. 1⅜" thick solid wood doors or solid or honeycomb core steel door, or min. 20 minute rated fire door assembly.
    d) Doors to be self-closing and self-latching.
    e) Garage shall not open directly into a room used for sleeping purposes.
    f) Min. 0.019" sheet steel with no opening for ducts in walls and ceilings that penetrate into the garage.

53. Penetrations in fire-resistance-rated walls shall comply with CBC 712.3. Through penetrations shall comply with CBC 712.3.1.1, CBC 712.3.1.2, or 712.3.1.
    a) Steel, ferrous or copper pipes may penetrate fire-resistance rated walls, provided the opening is protected as follows:
        i) Item penetrating concrete or masonry walls is a max. 6" nominal diameter and the area of the opening through the wall does not exceed 144 sq. in., concrete, grout or mortar is permitted where it is installed the full thickness of the wall or the thickness required to maintain the fire resisting rating ; or
        ii) When the annular spaces is protected with material ASTM E 119.
    b) Penetrations shall be fire-stopped by a system installed as tested in accordance with ASTM E 814 or UL 1479, and shall have an F rating or not less than the required fire-resisting-rating of the wall penetrated (CBC 712.3.1.2)
    c) Membrane penetrations of max 2 hr. fire resistance rated walls by steel electrical boxes are permitted, provided that each does not exceed 16 sq. in. in area and the total area of such openings does not exceed 100 sq. in. for any 100 sq. ft. of wall area, and the space between. the wall membrane and the box does not exceed ⅛". Additionally, outlet boxes on opposite sides of the wall shall be separated by a horizontal distance of not less than 24."
    e) A fire sprinkler shall be permitted to be unprotected provided such a space is covered by a metal escutcheon plate.
    f) Where walls are penetrated by other materials or openings larger than those mentioned above, they must be qualified by tests in accordance with (CBC 703.2).

54. Fireblocking shall be installed in combustible concealed locations in accordance with CBC 717.2.
    a) In concealed spaces of stud walls and partitions including furred spaces and parallel rows of studs or staggered studs as follows:
    i) Vertically at the ceiling and floor levels
    ii) Horizontally at intervals not exceeding 10"
    b) At all interconnections between concealed vertical stud wall or partition spaces and concealed horizontal spaces created by and assembly of floor joists or trusses, and between concealed vertical and horzontal spaces such as occur at soffits, drop ceilings, cove ceilings, and similar locations.
    c) In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall also comply with CBC 1009.5.3.
    d) When annular space protection is provided in accordance with CBC 707.2 EX. 6, CBC 712.4.1.2 EX. 1, or CBC 712.4.2, fireblocking shall be installed at all openings around vents, pipes, ducts, chimneys, and fireplaces with an approved material to resist the free passage of flame and the products combustion.

55. Draftstopping shall be installed in combustiable concealed locations in accordance with CBC 717.3 and 717.4, respectively, at the following locations:
    a) In floor-ceiling assembley and located above and in line with the dwelling unit separation in duplexes not equipped with and automatic sprinkler system.
    b) In attics and concealed roof spaces such that any horizontal area does not exceed 3,000 sq. ft. in dwelling not equipped with and automatic sprinkler system.
    c) Draftstopping materials shall not be less than ½" gypsum board, ⅜" wood structural panel, ⅜" particle board, 1" nominal lumber, cement fiberboard, batts or blankets of mineral wool or glass fiber, or other approved materials adequately supported.
    d) Openings in the partitions shall be protected be self-closing doors with automatic latches constructed as required for the partitions.

56. Wall, floor, and ceiling shall not exceed the flame spread classifications in CBC T-803.5.

57. Interior floor finish and floor covering materials shall comply with CBC 804.2 through 804.4.1

58. All electrical, telephone, cable television system, and similar service wires and cables shall be installed under ground. Underground future stub out is required.
    Each pane of saftey glazing installed in hazardous locations shall be identified by a manufacturer's designation specifying who applied the designation, the manufacturer or installer and the safety glazing standard. The following shall be considered specific hazardous locations for the purposed of saftey glazing. Glazing in:
    a) Swing doors.
    b) Fixed and sliding panels of sliding door assemblies and panels in sliding and bi-fold cloest door assemblies.
    c) Storm doors.
    d) Unframed swinging doors.
    e) Door and enclosures for hot tubs, whirlpools, saunas, steam rooms, bath tubs, and showers.

63. f) Fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within 24" arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60" above the walking surface. Read code for exceptions.
    g) Fixed or operable panel, other than the described in items e and f, which meets all of the following conditions.
        i) Exposed area of an individual pane greater than 9 sq. ft.
        ii) Exposed bottom edge less than 18" above the floor.
        iii) Exposed top edge greater than 36" above the floor.
        iv) One or more walking surfaces within 36" horizontally of the plane of the glazing.
    h) Guards and railings regardless of area or height above a walking surface. Included are structural baluster panels and non-structural in-fill panels.
    i) Walls and fences enclosing indoor and outdoor swimming pools and spas where all of the following conditions are present:
        i) The bottom edge of the glazing is less than 60" above a walking surface on the pool or spa side of glazing.

64. ii) The glazing is within 60" of a swimming pool or spa water's edge.
    j) Adjacent to stairways, landings and ramps within 36" horizontally of a walking surface; when the exposed surface of the glass is less than 60" above the plane of the adjacent walking surface. (Read the code for exceptions with installation)
    k) Adjacent to stairways within 60" horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60" above the nose of the tread.

    Access to mechanical appliances in under-floor areas, in attic spaces, and on roofs, or elevated structures shall be in accordance with the California Mechanical Code.

    Driveway approaches shall comply with Standard Detail ST-1 of the Department of Public Works, maximum slope shall not exceed 15%.

65.

    Guards shall be detailed as such:

66. a) Guards shall be located along open-sided walking surfaces, mezzanines, stairways, ramps and landings that are more than 30" above the floor or grade above.

67. b) Guard whose top rail does not serve as a handrail shall have a height of 42" high above the leading edge of the tread.
    c) Guard whose top rail serves as a handrail shall have a height of 34" to 38" high above the leading edge of the tread.

68. d) Triangular opening formed by tread, stair, and bottom rail shall not permit a 6" diameter sphere to pass through. (CBC 1013.3)

69. Handrails shall be detailed as follows:
    a) Continuous handrail is required when 4 or more treads are provided (CBC 1009.10).
    b) Min 34" to max 38" high above the stair tread nosing (CBC 1012.2).
    c) Min 1.25" to max. 2" circular cross section for handgrip portion of handrail.
    d) Min. 4" to max. 6.25" perimeter dimension with max 2.25" cross section for non-circular handgrip portion of handrail (CBC 1012.3).
    e) Min. 0.01" radius for edge of handrail (no sharp corner).

70. Weather proof all decks and balconies by providing Dex-o-tex (ER-1338) or an approved equal.

71. Chimneys shall extend a min. 2' above any portion of the building within 10', but not less than 3' above the roof. Chimneys shall be equipped with an approved spark arrestor.

72. This project shall comply with title 24, and 2022 CBC, 2022 CMC, 2022 CPC, 2022 CEC, and 2022 Energy Standards, 2022 California Residential Code.

73. Separate permits are required for retaining walls or block fence walls, grading work, spas, pools, separate structures, shoring, solar systems, demolition, (electrical, mechanical, and or plumbing work) and sewer cap of existing buildings.

74. All building features projecting into required setbacks are indicated on plot plan.

75. AQMD notification is required 10 days prior to beginning any partial or complete demolition work.

76. Provide proof of survey (property corners) verification by the city building inspector. Apply for demo permit (pre-demo height inspection) through building division. Demo permit required for existing structure.

77. Building Address shall be provided on the building in such a position as to be plainly visible and legible from the street.

78. Slope grade away from building minimum 2% slope (1/4" per foot).

79. See additional notes on sheet A1

80. Proposed utility meters need to be screened if located on the interior side of a dwelling and recessed behind the setback.

81. Contractor shall post the Installation Certificate (CF-6R) form and Insulation Certificate (IC-1) form in a conspicuous location or kept with plans and made available to the Inspector.

82. Contractor shall provide copies of the California Guide to Home Comfort and Energy Savings, CF-1R, MF-1R, CF-6R and Ic-1 forms to the building owner.

83. Radiant barrier shall an emittance of 0.05 or less.

84. Garage Door Springs: (per CBC Sect. 1211)
    a) Spring shall be fabricated from either hard drawn spring wire (per ASTM A227-21) or oil-tempered wire (per ASTM A229-71).
    b) Minimum design standard shall be 9,000 cycles.
    c) Physical cycling tests shall be performed and certified by an approved testing agency.
    d) Each spring shall be equipped with an approved device capable of restraining the spring or any part thereof in the event it breaks. Containment device shall be tested and certified by an approved testing agency.

RESOLUTION NO. PCR-2024-002

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF PALOS VERDES ESTATES, CALIFORNIA, APPROVING NEIGHBORHOOD COMPATIBILITY, MISCELLANEOUS AND GRADING PERMIT APPLICATIONS AT 2812 VIA CAMPESINA.

WHEREAS, on October 23, 2023, an application was submitted for the property located at Lot 14 Block 44 of Tract Number 30905 in the City of Palos Verdes Estates, County of Los Angeles, State of California, commonly known as 2812 Via Campesina, Palos Verdes Estates, California ("the

8. The applicant must comply at all times with all requirements of any law, ordinance, code or regulation of the State of California, City of Palos Verdes Estates, and any other governmental entity.

9. Landscaping is not part of this approval and shall require a separate permit. A landscape plan and certification are required and shall be in compliance with Palos Verdes Estates Municipal Chapter 18.50. The applicant shall obtain approval of a landscape plan prior to issuance of a building permit, if applicable.

Architect & Consultants

ARCHITECT:
DOUGLAS J. LEACH, ARCHITECTS, INC.
Douglas J. Leach
119 W. Torrance Blvd., Suite 24
Redondo Beach, CA 90277
Phone: (310) 372-5580
Fax: (310) 318-5801

STRUCTURAL ENGINEER:
PARSA & ASSOCIATES
Abdy Parsa
118 S. Catalina Ave.
Redondo Beach, CA 90277
Phone: (310) 318-6769
Fax: (310) 318-6336

TITLE 24 CALCULATIONS:
PERFECT DESIGN
Raymond Meng Zhong
2416 W Valley Blvd.
Alhambra, CA 91803
Phone: (626) 289-8808

SURVEYOR:
DENN ENGINEERS
3914 Del Amo Blvd.
Suite 921, CA 90503
Phone: (310) 542-9433

CIVIL ENGINEER:
PERU CONSULTANTS, INC.
Christian Perez
5061 Rockvalley Rd.
Rancho Palos Verdes, CA 90275
Phone: (562) 270-0811

SOILS ENGINEER:
T.I.N. ENGINEERING COMPANY
Tony Lee
17834 Bailey Drive
Torrance, CA 90504
Phone: (310) 371-7045

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Project Information

APPLICANT: Steve and Megan Selig
2812 Via Campecina
Palos Verdes Estates, CA 90274
(310) 872-6163

PROJECT ADDRESS: 2812 Via Campesina
Palos Verdes Estates, CA 90274

LEGAL DESCRIPTION: Lot 4 Block 1830 Tract 7540

DESIGNED BY: Douglas J. Leach, Architect
119 W. Torrance Blvd., Suite 24
Redondo Beach, CA 90277
(310) 372-5580 Fax (310) 318-5801

DATE: October 12, 2023

CODE RESEARCH

ZONE: Single Family Zone A

SETBACKS:

Front:	30' Required	30' Provided
Side:	11'-4" Required	12' Provided
Rear:	15' Required	25.4' Provided

HEIGHT LIMIT: 2 Stories: 30' Height Limit

PARKING: Minimum 2 Enclosed; 2 Enclosed Spaces Provided

TYPE OF CONSTRUCTION: Type V-B

SPRINKLERED: Yes

OCCUPANCIES: R-3 at Living Areas
U at Garage

LOT SIZE:
21,211 square feet

ALLOWABLE FLOOR AREA:
8113 equals the smaller of 30% (lot size) + 1750 or 50% (lot size)

EXISTING LOT COVERAGE: TO BE DEMOLISHED

4402	sq. ft.	20.75	% BUILDING
7399	sq. ft.	34.88	% HARDSCAPE (pool, patio, deck, driveway, etc.)
11801	sq. ft.	55.63	% TOTAL

PROPOSED LOT COVERAGE: (include only added lot coverage)

5142	sq. ft.	24.24	% BUILDING
5162	sq. ft.	24.33	% HARDSCAPE (pool, patio, deck, driveway, etc.)
10304	sq. ft.	48.57	% TOTAL

TOTAL LOT COVERAGE: (sum of existing and proposed)

5142	sq. ft.	24.24	% BUILDING
5162	sq. ft.	24.33	% HARDSCAPE (pool, patio, deck, driveway, etc.)
10304	sq. ft.	48.57	% TOTAL

EXISTING FLOOR AREA:

0	sq. ft. FIRST FLOOR	0	sq. ft. CELLAR
0	sq. ft. SECOND FLOOR	0	sq. ft. GARAGE
0	sq. ft. BASEMENT	0	sq. ft. TOTAL*

PROPOSED FLOOR AREA: (include only added floor area)

1430	sq. ft. FIRST LEVEL	135	sq. ft. MECHANICAL
4487	sq. ft. SECOND LEVEL	1097	sq. ft. GARAGE
0	sq. ft. CELLAR	7149	sq. ft. TOTAL*

TOTAL FLOOR AREA: (sum of existing and proposed)

1430	sq. ft. FIRST LEVEL	135	sq. ft. MECHANICAL
4487	sq. ft. SECOND LEVEL	1097	sq. ft. GARAGE
0	sq. ft. CELLAR	7149	sq. ft. TOTAL*

GROSS FLOOR AREA: (Areas w/ ceiling >5'-0", exterior walls, stairs, elevator, covered decks/patios, Overhand >6'-0", areas w/ ceiling > 15'-0" x 2)

1430	sq. ft. FIRST LEVEL GROSS	135	sq. ft. MECHANICAL
4975	sq. ft. SECOND LEVEL GROSS	1097	sq. ft. GARAGE
0	sq. ft. CELLAR	7637	sq. ft. TOTAL*

GRADING INFORMATION:*

PREVIOUS GRADING: (any movement of earth on this site prior to this application - First Planning Commission Approval

CUT 0 cubic yards EXPORT 0 cubic yards
FILL 0 cubic yards
TOTAL 0 cubic yards

NEW GRADING: (movement of earth required for this project)

CUT 1785 cubic yards
- 947 cy cut under house
- 767 cy cut for yard areas
- 71 cy cut for pool areas

FILL 201 cubic yards
- 36 cy fill under house
- 165 cy fill for yard areas
- 0 cy fill for pool areas

TOTAL 1986 cubic yards
11 ft. max cut/fill depth
1584 export

PROPOSED RESIDENCE FOR

2812 Via Campesina, Palos Verdes Estates

119 W. TORRANCE BLVD. SUITE 24
REDONDO BEACH, CALIFORNIA 90277
PHONE: (310) 372-5580
FAX: (310) 318-5801

DOUGLAS J. LEACH
ARCHITECT

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

REVISION

REVISED

PRINTED

2305

CS

OF

COUNTY OF LOS ANGELES FIRE DEPARTMENT NOTES:

1. Approved building address numbers,building numbers or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. The numbers shall contrast with their background, be Arabic numerals or alphabet letters, and be a minimum of 4 inches high with a minimum stroke width of 0.5 inch. Fire Code 505.1

2. The required fire flow for PUBLIC fire hydrants at this location is 1,250 ggm, at 20 psi residual pressure, for a duration of 2 hours over and above maximum daily domestic demand. Fire Code 507.3 and Appendix B105.1 Appendix B.

3. At least one egress door shall be provided for each dwelling unit. The egress door shall be side-hinged, and shall provide a minimum clear width of 32 inches when measured between the face of the door and the stop. The minimum clear height of the door shall not be less than 78 inches in height measured from the top of the threshold to the stop. Egress doors shall be readily openable from inside the dwelling without the use of a key or special knowledge or effort. Residential Code R311.2

4. An automatic residential fire sprinklers system fir one- and two- family dwellings shall be designed and installed in accordance with Section R313.3 or NFPA 13D.

5. All roof coverings shall be Class "A" as specified in Building Code 1505.2. Wood-shingle and wood-shake roofs are PROHIBITED in Very High Fire Hazard Severity Zones, regardless of classification. Residential Code R337.5 and R902.1.1

6. Roof valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley. Residential Code R337.5.3 and 705A.3

7. Roof gutters shall be provided with a means to prevent the accumulation of leaves and debris in the gutter. Residential Code R337.5.4 and 705A.4

8. Exterior wall vents shall resist the intrusion of flame and embers into the structure or vent openings shall be protected by corrosion resistant, noncombustible wire mesh with ⅛ inch openings.

9. Prior to building permit final approval, the property shall be in compliance with the vegetation clearance requirements prescribed in California Public Resources Code Section 4291, California Government Code Section 51182 and this code. Residential Code R327.1.5

10. Clearance of brush and vegetative growth shall be maintained per Fire Code 317.2.2

11. A final fuel modification plan shall be submitted and approved by the Forestry Division prior to building plan approval. Implementation of the approved Final Fuel Modification Plan and final inspection will be required prior to approval of final occupancy. Submit 3 copies of a completed fuel modification plan to the Fuel Modification Unit: Fire Station 32, 605 N. Angeleno Avenue, Azusa 91702-2904. Phone (626) 969-5205, fax (626) 969-4848 (Fire Code 317.2.1)

12. Roof valley flashing shall be not less than 0.019 inch (No. 26 galvanized sheet gage) corrotion-resistance metal installed over a minimum 36 inch wide underlayment consisting of one layer of No. 72 ASTM cap sheet meeting running the full length of valley. (Residential Code R327.5.3 and Building Code 705A.3)

13. Provide ½" plywood at all exterior walls at Main House and Garage in conjunction with the Hardie Siding, the thickness achieved satisfies 1 Hr. Rating Fire-Resistance

14. Smoke alarm shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Residential Code R314.4

15. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a batter backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. Building Code 907.2.11.4

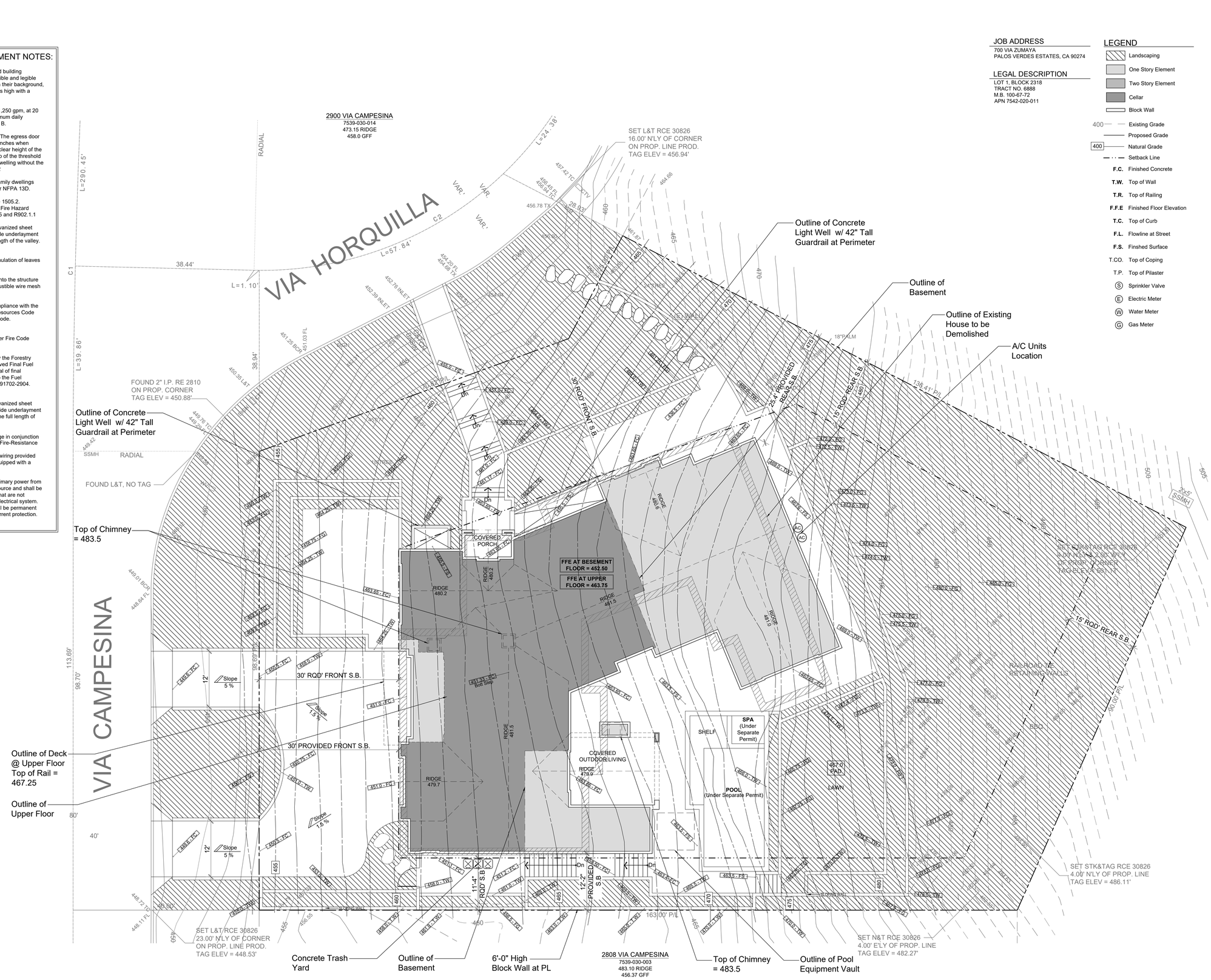
General Notes

1. A separate Public Works permit will be required for any approach to private driveways, sewer laterals, curbs, curb cores, street improvements or any work in the public right of way or parklands. Note: Public works permits are valid for 30 days and any work in the right away or parklands without a permit is subject to three times the normal fees.

2. All special inspectors shall be registered with the City of Palos Verdes Estates prior to performing any inspections and shall also notify the Building Official of each job location thereafter.

3. All stairways shall have a rise; 7¾" maximum and a run 10" minimum per section R311.7.4.1 and R311.7.4.2. The minimum headroom 6'-8" is required per section R311.7.2 of the CRC.

4. The Existing vegetation within the City right-of-way must be trimmed and maintained at height no greater than 30 inches above the driveway height within 10 feet of the curb line.



SITE PLAN
1/8" = 1'-0"

NORTH

JOB ADDRESS
700 VIA ZUMAYA
PALOS VERDES ESTATES, CA 90274

LEGAL DESCRIPTION
LOT 1, BLOCK 2318
TRACT NO. 6888
M.B. 100-67-72
APN 7542-020-011

LEGEND
- Landscaping
- One Story Element
- Two Story Element
- Cellar
- Block Wall
- 400 Existing Grade
- Proposed Grade
- [400] Natural Grade
- Setback Line
- F.C. Finished Concrete
- T.W. Top of Wall
- T.R. Top of Railing
- F.F.E Finished Floor Elevation
- T.C. Top of Curb
- F.L. Flowline at Street
- F.S. Finshed Surface
- T.CO. Top of Coping
- T.P. Top of Pilaster
- (S) Sprinkler Valve
- (E) Electric Meter
- (W) Water Meter
- (G) Gas Meter

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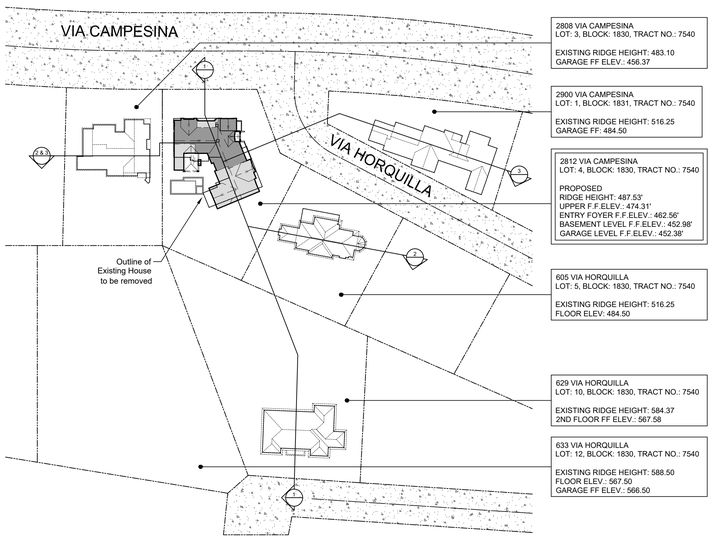
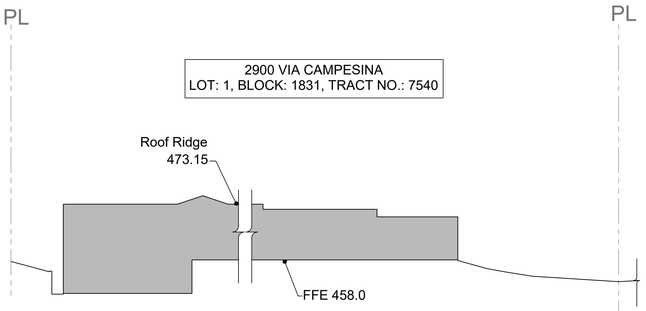
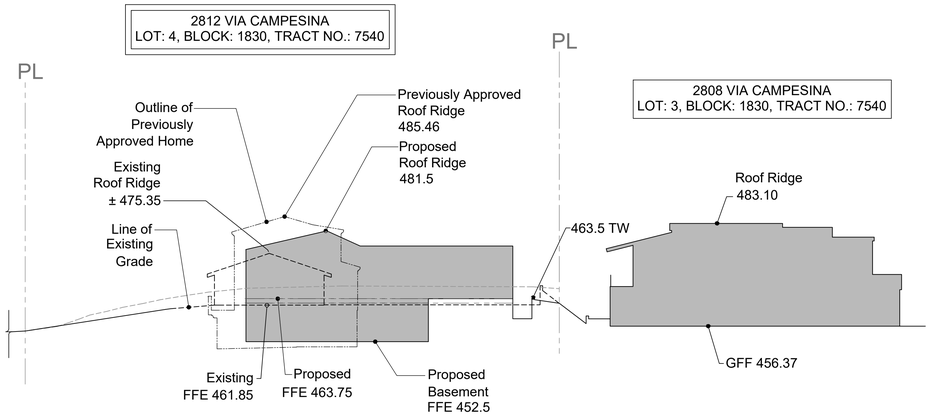


VICINITY MAP

1" = 40'-0"

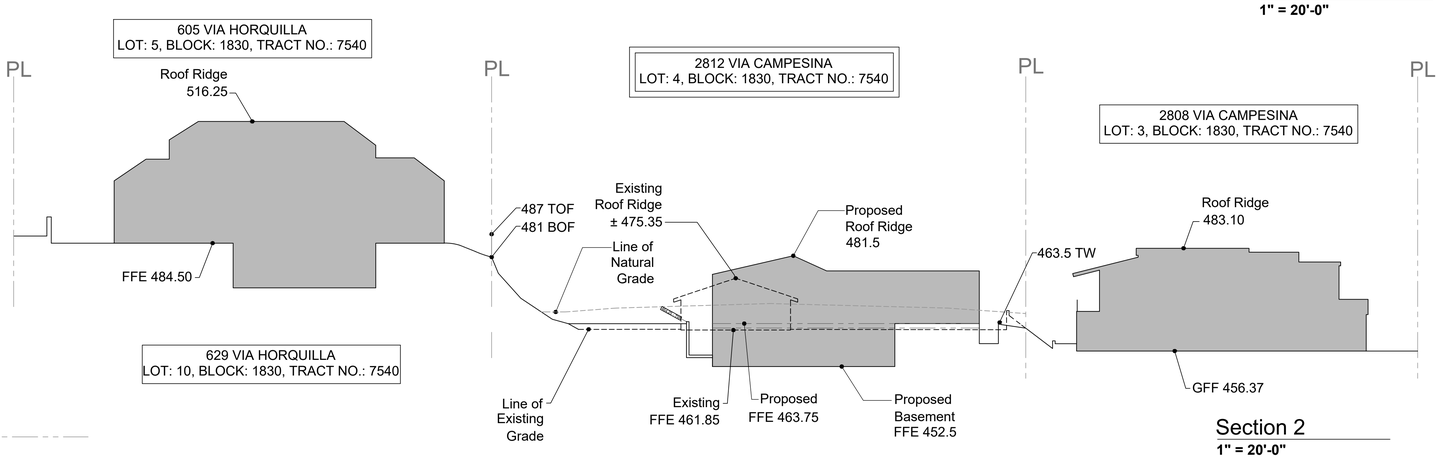
NORTH





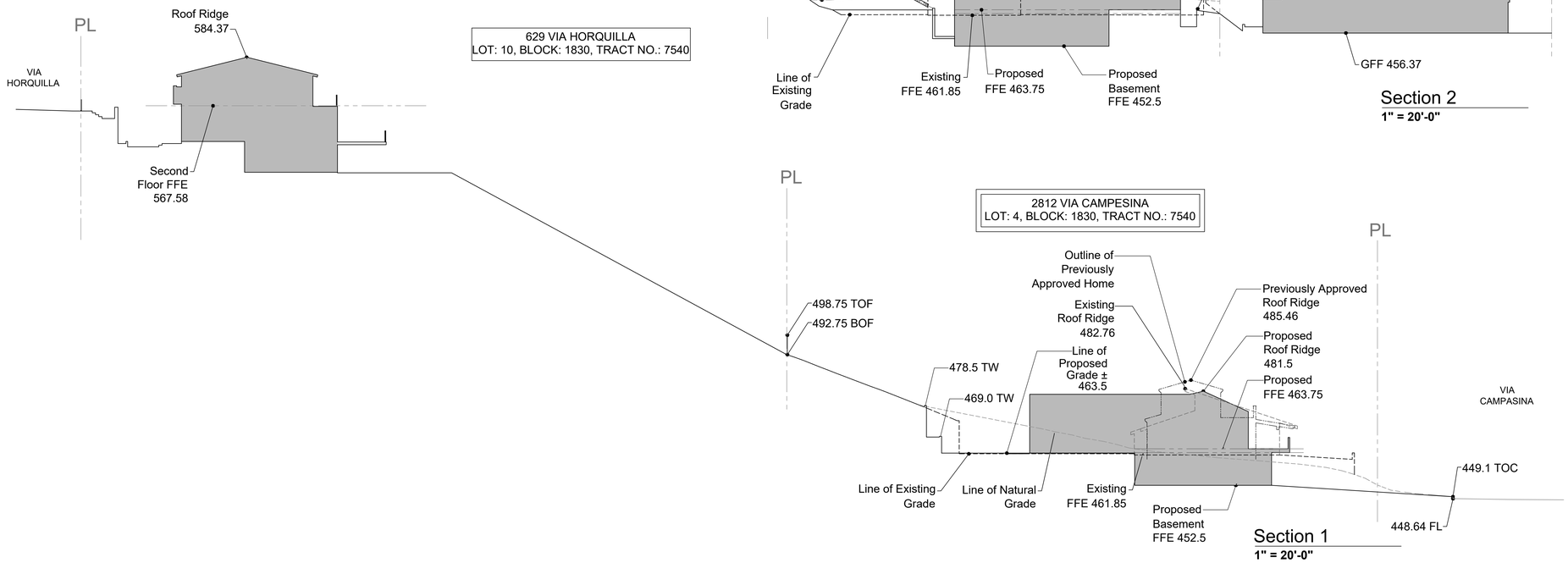
Section 3

1" = 20'-0"



Section 2

1" = 20'-0"



Section 1

1" = 20'-0"

SITE SECTIONS

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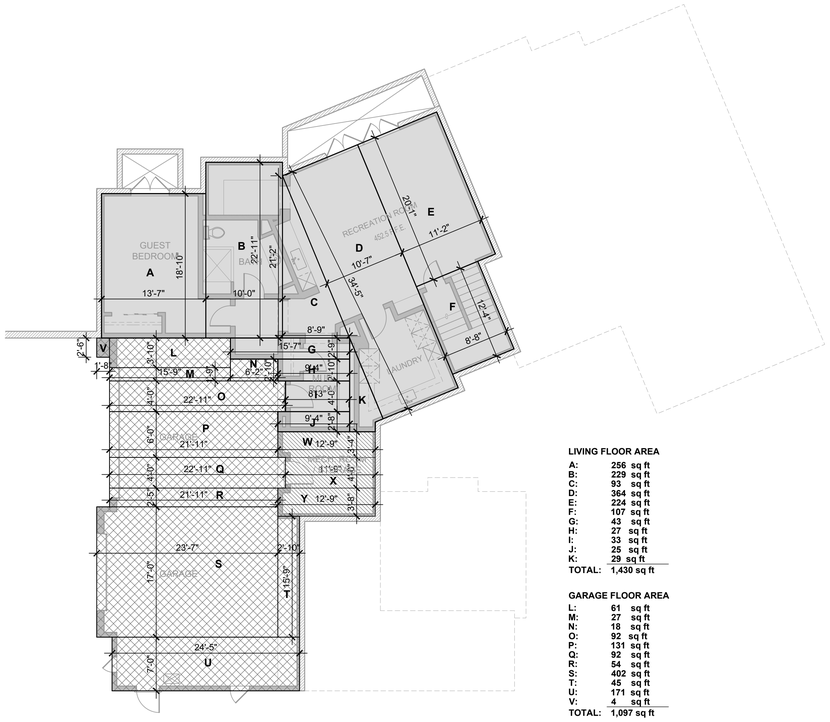


LIVING FLOOR AREA

A:	256	sq ft
B:	229	sq ft
C:	93	sq ft
D:	364	sq ft
E:	224	sq ft
F:	107	sq ft
G:	43	sq ft
H:	27	sq ft
I:	33	sq ft
J:	25	sq ft
K:	29	sq ft
TOTAL:	1,430	sq ft

GARAGE FLOOR AREA

L:	61	sq ft
M:	27	sq ft
N:	18	sq ft
O:	92	sq ft
P:	131	sq ft
Q:	92	sq ft
R:	54	sq ft
S:	402	sq ft
T:	45	sq ft
U:	171	sq ft
V:	4	sq ft
TOTAL:	1,097	sq ft

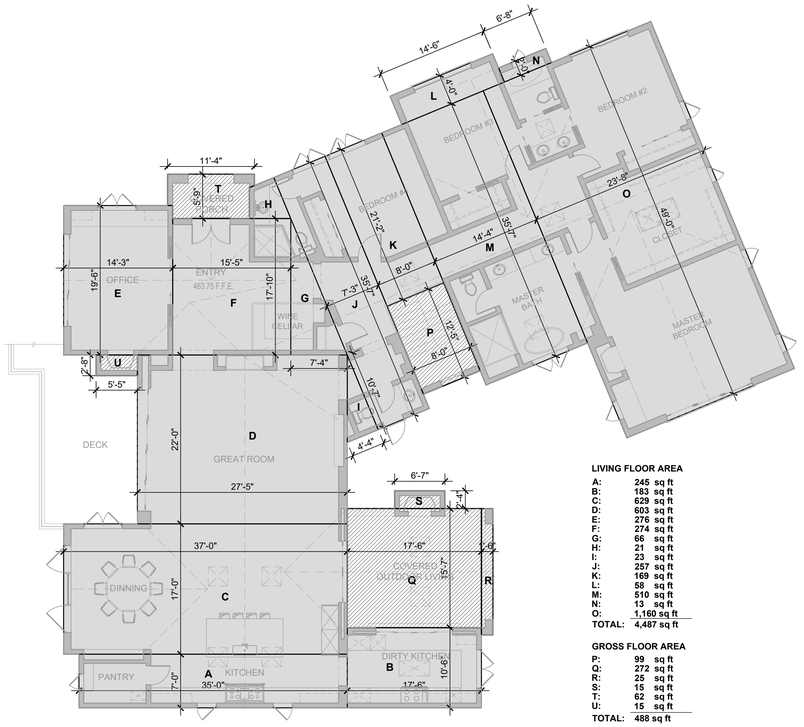
MECH. ROOM FLOOR AREA

W:	42	sq ft
X:	47	sq ft
Y:	46	sq ft
TOTAL:	135	sq ft

TOTAL FLOOR AREA: 1,430 sq ft + 1,097 sq ft + 135 sq ft = 2,662 sq ft

FIRST LEVEL FLOOR AREAS
1/8" = 1'-0"

NORTH



LIVING FLOOR AREA

A:	245	sq ft
B:	183	sq ft
C:	629	sq ft
D:	603	sq ft
E:	276	sq ft
F:	274	sq ft
G:	66	sq ft
H:	21	sq ft
I:	23	sq ft
J:	257	sq ft
K:	169	sq ft
L:	58	sq ft
M:	510	sq ft
N:	13	sq ft
O:	1,160	sq ft
TOTAL:	4,487	sq ft

GROSS FLOOR AREA

P:	99	sq ft
Q:	272	sq ft
R:	25	sq ft
S:	15	sq ft
T:	62	sq ft
U:	15	sq ft
TOTAL:	488	sq ft

TOTAL FLOOR AREA: 4,487 sq ft + 488 sq ft = 4,975 sq ft

SECOND LEVEL FLOOR AREAS
1/8" = 1'-0"

NORTH

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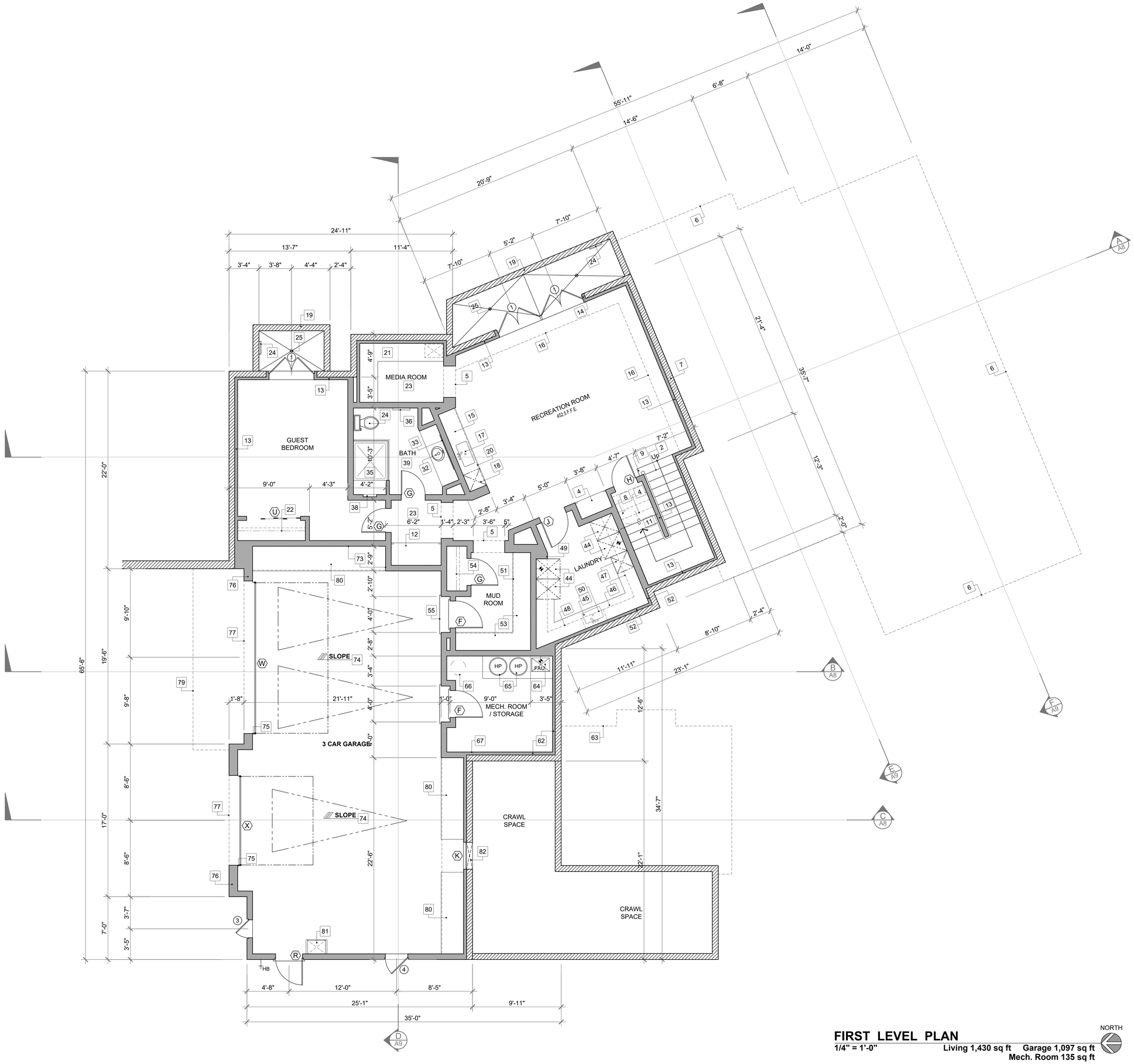

FIRST LEVEL PLAN

1/4" = 1'-0"

Living 1,430 sq ft Garage 1,097 sq ft
Mech. Room 135 sq ft

NORTH

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Office

111 Recess sliding doors as shown w/ 2x10 studs

112 Outline of flat furring above sliding doors

113 Recess window w/ 2x6 studs - furr down above

114 Outline of roof above

115 Furr down above built-in bookshelves and cabinet

116 8" x 8" exposed beam above

117 8" wide x 6" deep sloping beam above

118 36" wide metal fireplace

Decks

125 Stone over dex-o-tex at deck

126 Slope deck surface to deck drains typ. 1/4" per ft. minimum. Provide scupper overflow 2" above fin. flr. & align w/ drain

127 Min. 42" high glass railing - See detail (1/A11)

Covered Outdoor Living

134 Furr down above to 11'-0"

135 42" wide metal fireplace

136 30" square skylight above - See (7/A9)

137 Outline of roof above

138 Provide 8" wide x 6" deep false beam above

139 Extend counter w/ knee space below

140 Provide 8" x 8" false ridge beam

Bedroom #2 - #4

146 Recess windows w/ 2x6 studs - furr down above

147 Recess sliding doors w/ 2x8 studs - furr down above

148 Flat ceiling above - See sections for heights

149 Outline of roof above

Baths #2 & #3

155 Lavatory and base cabinet w/ countertop and backsplash

156 Mirror typ. behind countertop

157 Water closet per owner selection

158 Tiled shower w/ frameless tempered glass enclosure

159 Cast iron tub w/ shower head & enclosure

160 24" square skylight above

161 Shampoo shelf approx. 5'-0" off floor

Great Room and Dining Room

55 60" wide opening @ low metal fireplace

56 20" flush stone hearth

57 Recess pocketing sliding doors as shown

58 Built-in cabinets per owner

59 Recess windows as shown w/ 2x10 studs and furr down above

60 Outline of 18" wide flat furring above to accommodate heating ducts

61 Outline of 10" wide x 8" deep distressed beam above - See (12/A10)

62 Outline of roof above

63 Recess transom windows above over sliders

64 Recess bookshelves as shown - furr down above

65 Built-in china cabinet

66 Recess windows w/ 2x6 studs

Kitchen, & Dirty Kitchen

73 60" gas commercial range - Consult w/ owner for specification

74 36" refrigerator and 36" freezer w/ water line

75 Farmhouse sink w/ garbage disposal

76 Dishwasher space

77 Granite countertop typ. w/ cabinetry below

78 Outline of cabinets above

79 Furr down opening above to 8'-6"

80 Provide knee space at island for bar stools

81 See detail (6/A9) for 30" square skylight above

82 Recess windows w/ 2x6 studs - Furr down above

83 Outline of roof above

84 Full height shelving @ pantry

85 Dumbwaiter location from below

86 Recess pocketing windows as shown - furr down above

87 Sink w/ garbage disposal

88 Outline of 2' x 4' skylight above per (6/A9)

89 36" refrigerator

90 36" Cooktop w/ oven below

91 Icemaker below

92 Dishwasher location

93 Possible wine cooler

Powder Room

101 Sink selected by owner

102 Water closet - Selected by owner

103 Mirror typ. behind countertop

104 Recess door w/ 2x8 studs - furr down above

105 Laundry chute to below

106 See (10/A11) for recessed niche

SECOND LEVEL PLAN NOTES

Master Bedroom Suite

1 Outline of roof above

2 Provide 8" wide x 6" deep beam at ceiling per detail (12/A10)

3 Built-in seat as shown w/ storage below

4 42" wide opening at metal fireplace - appliance only (no flue)

5 20" flush stone hearth - Consult w/ owner for possible raised hearth

6 Recess sliding doors as shown w/ 2x10 studs

7 Outline of flat furring above recessed sliding doors

8 Outline of ceiling transition from flat to sloping

9 Recess window w/ 2x6 studs - furr down above

10 Pole and shelf - Consult w/ interior designer drawings

11 Washer / dryer below island cabinets

12 8" x 8" exposed beam above

Master Bath

18 Lavatory and base cabinet w/ curved countertop and backsplash

19 Mirror typ. behind countertop

20 Vanity area with knee space below

21 Recess window w/ 2x6 studs - Furr down above

22 Freestanding tub - Per owner selection

23 Tiled shower w/ dual heads and 18" raised tiled seat as shown

24 Shampoo shelf 5'-0" off floor

25 30" square skylight above per (7/A9)

26 Water closet per owner selection

27 Possible cabinet above toilet

28 Built-in cabinet for linen

Main Entry Hall & Secondary Hall & Covered Porch

35 Outline of furring above 10'-3" off floor - See Front Elevation

36 Recess entry door w/ 2x8 studs

37 Glass enclosure around wine cellar

38 Outline of roof above

39 Outline of furring @ opening above to 10'-0"

40 34" high wrought iron railing

41 42" high wrought iron railing per

42 Wood framed steps w/ 11" treads as shown. See details for more specific information.

Provide one hour construction under stairs.

43 Furr down opening above to 9'-0"

44 Recess window with 2x8 studs - furr down above

45 Closet w/ shelf and pole

46 30" square skylight above - see (6/A9)

47 30" square attic access above - see (11/A11)

48 Outline of FAU above in attic - see (12/A11)

WATERPROOFING

Below-ground wall waterproofing: "Fluid Applied Waterproofing" by Mar-flex Systems Inc. ICC-ES ESR-3062

3. Description:

Mar-flex 5000 is a polymer-modified asphalt and rubber polymer coating applied to the exterior surface of foundation walls as a waterproofing membrane. Sunflex is a rubber polymer coating applied to the exterior surface of foundation walls as a waterproofing membrane. The membranes are applied to either concrete or parged concrete masonry foundation walls with either a soft bristle brush, roller or by spraying.

4. Installation:

Before applying either Mar-flex 5000 or Sunflex Exterior Foundation Waterproofing Membranes to a surface, the surface shall be structurally sound, clean, dry, free of dust, mud and loose mortar, sand, soil and frost or other loose materials. Additionally, there shall be no fins, metal projections or any substance that will prevent bonding of the membranes to the surface. Voids in concrete, tie holes and honeycombed areas in foundation wall shall be filled with non-shrinking grout or an asphalt-based mastic. Where non-shrink grout is used for filling voids, adequate time shall be allowed for the grout to cure before proceeding with the membrane application. Concrete and parged concrete masonry surfaces shall be cured and dry prior to application of the liquid waterproofing membrane.

The temperature for application shall be limited to a minimum of 15°F (-9.4°C) and a maximum of 100°F (38°C). The minimum dry film thickness, shall be 0.040 in. (1.02mm) (40 mils), and shall be allowed to cure for a minimum of 24 hours before any backfill is placed against the wall.

Laundry Room & Mud Room

44 Washer/dryer selected by owner

45 Laundry sink

46 36" high counter w/ cabinets below

47 Linen collection cabinet from above

48 Outline of cabinets above

49 Consult w/ owner for possible fold down ironing board location

50 Possible drip/dry pole above sink

51 Furr down above cabinets to 9'-0"

52 2x4 P.T. studs adjacent to concrete wall

53 Consult w/ owner for cabinetry @ mud room

54 Shelf & pole @ closet

55 12" concrete tread

Mechanical Room

62 2x flat furring typ. adjacent to concrete block retaining wall

63 Outline of floor above

64 F.A.U. on raised 18" high platform

65 Provide two 2"x16 ga. seismic straps within ⅓ of the top and ⅓ of the bottom of the heat pump unit. Provide 18" high platform.

66 Possible sewage ejection pump location

67 Possible electrical equipment location

Garage

73 5/8" type 'x' gypboard finish between garage and living area - See detail (3/A10)

74 Slope concrete slab 2% to garage door from this pt. forward

75 Recess garage door as shown

76 2x10 studs @ this location

77 Outline of furring above garage door - See Exterior Elevation

78 Recess window & door w/ 2x6 studs - Furr down above

79 Outline of deck above

80 Built-in storage cabinets - furr down above for possible ducting

81 Dumbwaiter to above

82 Access door to crawl space

83 Consult w/ owner for possible slab @ crawl space

FIRST LEVEL PLAN NOTES

Recreation Room, Hallway & Guest Bedroom

1 See details (5/A10) and (6/A10) for wood framing @stairs

2 Up 19 risers w/ 11" treads typ.

3 34" high wrought iron railing w/ intermediate rails spaced such that a 4" Ø sphere cannot pass thru

4 Possible cabinet for audio equipment

5 Outline of furr down to 9'-0"

6 Outline of floor above

7 Concrete block retaining wall

8 Alternate possible sewage ejector pump location

9 Extend tread @ bottom as shown

10 Outline of stairs above

11 Provide one hour construction under stairs per detail (6/A10)

12 Full height shelving @ linen closet

13 2x flat P.T. studs adjacent to retaining wall

14 Recess window as shown - Furr down above

15 Built-in cabinets @ bar per owner

16 Furr down perimeter of room as shown if required for HVAC equipment

17 Bar sink location

18 Undercounter wine cooler

19 Concrete block retaining wall @ window well

20 Furr down above bar to 9'-0"

21 Cabinetry, microwave, etc. - See interior designer drawings

22 Shelf and pole @ closet

23 Furr down ceiling above to 9'-0" for ducting

24 Emergency exit ladder to grade above. Emergency egress ladder - Window wells with a vertical depth of more than 44 inches shall be equipped with an approved permanently affixed ladder or steps. Ladders or rungs shall have an inside width of at least 12", shall project at least 3" from the wall and shall be spaced not more than 18" on center vertically for the full height of the window well. The ladder or steps shall not encroach in the required dimensions of the window well by more than 6". The ladder or steps shall not be obstructed by the emergency escape and rescue opening. Ladders or steps required by this section of code (1026.5.2) are exempt from the stairway requirements of Section 1009.

25 Connect area drains to sump pump

Bath

32 Lavatory and base cabinet w/ countertop and backsplash

33 Mirror typ. behind countertop

34 Water closet per owner selection

35 Tiled shower w/ seat @ rear

36 Towel bar

37 Framed wall to receive counter top

38 Shampoo shelf approx. 5'-0" off floor

39 Furr down above to 9'-0" for ducting

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SECOND LEVEL PLAN

1/4" = 1'-0"

Living 4,487 sq ft

NORTH

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IMPORTANT PROJECT GENERAL NOTES:

HIGH FIRE AREA GENERAL NOTES PER CRC R337

1.) All new roofing shall be at least Class A.

2.) The exterior wall covering must be noncombustible material or ignition-resistant material.

3.) Exterior porch ceilings must be noncombustible material , ignition resistant material, or one layer of 5/8" type "X" gypsum sheathing applied behind the exterior covering on the underside of the ceiling.

4.) Exterior windows and glazed doors shall comply with one of the following:
   i. Constructed of multi-pane glazing with a minimum of one tempered pane meeting the requirements of CBC Section 2406 Safety Glazing.
   ii. Constructed of glass blocks.
   iii. Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257.
   iv. Tested to meet the performance requirements of SFM Standard 12-7A-2.

5.) All exterior doors must comply with one of the following:
   i. The exterior surface of cladding shall be of noncombustible or ignition resistant material.
   ii. Shall be constructed of solid core wood (1-3/8" with min, 1-1/4" panels)
   iii. Shall have a fire resistance rating of not less than 20 minutes.

6.) Garage doors shall resist the intrusion of embers by preventing gaps by the items listed in 708A.4.

7.) Ventilation opening shall be fully covered with metal wire mesh, vents, or other materials, or devices that meet the following requirements:
   i. The dimensions of the opening therein shall be a minimum of 1/16" and shall not exceed 1/8".
   ii. The materials used shall be noncombustible.
   iii. The materials shall be corrosion resistant.

8.) Guardrails shall be ignition resistant or minimum 2x nominal framing.

9.) Exposed wood beams shall be sawn or glue-laminated:
   i. Minimum 8 inches by 10 inches when supporting floor.
   ii. Minimum 4 inches by 6 inches when supporting roof.

10.) Exposed wood columns shall be sawn or glue-laminated:
   i. Minimum 8 inches by 8 inches where supporting floor.
   ii. Minimum 8 inches by 6 inches where supporting roof.

11.) As of March 9, 2009 state agency (AQDM) has passed a law that solid fuel burning fireplaces (wood burning) are no longer legal. Construction of such appliances or masonry units shall be constructed as such with the requirements that a complete gas burning assembly be permanently secured/attached in the fire box at final inspection.

PALOS VERDES ART JURY NOTES:

1.) Approval for construction expires eighteen months for New Single Family Residence after Issuance of PVHA building permit. Plans Submittals for other projects expire twelve (12) months from the date of issues of the PVHA building permit. landscaping must be completed within six (6) months after Certificate of Completion or Occupancy or prior to the expiration of PVHA Art Jury Approval.

2.) Consult Palso Verdes Homes Association requirement of sewer, water drainage, etc. Verify and observe all required setbacks, easements, and deed restrictions.

3.) Site survey must be signed by a licensed surveyor or registered engineer and dated within two (2) years prior to the date of submission plans.

4.) Submit all materials and color samples, stucco or plaster finish, to the Palos Verdes Art Jury.

5.) Submit roof material samples prior to purchase for review by Palos Verdes Art Jury.

6.) Exterior masonry, plaster and concrete block shall be painted. Finish to be sand float.

7.) Bring all plumbing vent within a radius of fifteen feet (15'-0") through the roof at one point. and concealed from view where possible, to the satisfaction of the PVHA. Paint all vents to match adjacent surface.

8.) Any unrestrained rafter tails, exterior exposed beam ends, purlins, look outs or similar projecting beams which are over eights inches (8") in width or thickness shall be glued laminated timber. With Art Jury approval, band sawn ends may preclude the requirement of glue-laminated members.

9.) Alternate roofing material may be required to be installed using random width shakes and butt ends staggered 3/8" - 5/8" minimum to get a random look. No uniform mechanical patterns. Rake end units not permitted. "S" tikes roofs - see booster tile eave detail. Clay bird stops are not approved. Two-piece mission tiles (with cover tiles set in mortar) is required for Spanish Colonial and Mediterranean structures, Covered tiles to be set in mortar, do not strike joints. Random exposure of covered tiles from 6" to 11". Submit blend of roofing tile for Art Jury approval.

10.) Specify material of gutter & downspouts. Gutter detail at eave to be on plan. Ribbed downspouts are not approved.

11.) Aluminum windows & screen assemblies, including skylights shall be anodized to a dark color or color treated.

12.) Exterior water heaters are not approved. If transformer and other exterior equipment are proposed, show their location, size, and enclosure or screening. The owner assumes responsibility to comply with Art Jury requirement to locate new transformers and utility equipment at an Art Jury approved location.

13.) Landscape plans to be submitted to the Aty Jury for review at Working Drawings Submittal. Tree trimming removal, and replacement must be reviewed and approved by the Art Jury prior to construction.

14.) Do nut cut down existing trees without specific approval from the Art Jury.

15.) All landscaping reviewed by the Art Jury will have the condition that if it becomes a view obstruction, it will be required to be trimmed by the Owner.

16.) Any deviation from the approved plans must have Art Jury approval prior to purchase and installation. Deviations from Art Jury plans and details will be subject to fines and corrections.

17.) Framing an Final Inspections are required by the PVHA. This is in addition to inspections required by the city. Upon project completion and prior to expiration of approved plans, Owner or authorized agent to call the PVHA to schedule framing and final inspections and required for certificate of completion or to request and extension.

18.) State law requires that upon completion of construction, the owner shall file an Application for a Certificate of Completion with the Building Department of Palos Verdes Estates.(Substitute City of Rancho Palos Verdes / County Building Department for Miraleste area.)

DOOR SCHEDULE

QTY	SYM	SIZE	TYPE	MATERIAL	FINISH	HINGE	GLAZING	MUNTIN PATTERN	REMARKS
	A	PR. 2'-6" x 9'-0" x 1 3/4"	ENTRY DOORS	METAL	METAL	SEE PLAN	PER ENERGY CALCS	3 "X"s @ EACH PANEL	EXTERIOR - SEE ELEVATIONS
	B	(4) 4'-0" x 8'-0" x 1 3/4"	SLIDING POCKETING	ALUMINUM CLAD	PAINT GRADE	SLIDING	PER ENERGY CALCS	NONE	EXTERIOR - SEE ELEVATIONS
	C	(3) - 4'-0" x 8'-0" x 1 3/4"	SLIDING	ALUMINUM CLAD	PAINT GRADE	SLIDING	PER ENERGY CALCS	NONE	EXTERIOR - SEE ELEVATIONS
	D	8'-0" x 8'-0" x 1 3/4"	SLIDING	ALUMINUM CLAD	PAINT GRADE	SLIDING	PER ENERGY CALCS	NONE	EXTERIOR - SEE ELEVATIONS
	E	(2) 4'-0" x 8'-0" x 1 3/4"	SLIDING POCKETING	ALUMINUM CLAD	PAINT GRADE	SEE PLAN	PER ENERGY CALCS	NONE	EXTERIOR - SEE ELEVATIONS
	F	3'-0" x 8'-0" x 1 3/4"	RAISED PANEL	SOLID WOOD	PAINT GRADE	SEE PLAN	NONE	NONE	TIGHT FITTING / 60 MIN. FIRE RATED W/ SELF CLOSER AND SELF LATCHING - INTERIOR @ GARAGE
	G	2'-8" x 8'-0" x 1 3/4"	RAISED PANEL	SOLID CORE	PAINT GRADE	SEE PLAN	NONE	NONE	INTERIOR
	H	2'-6" x 8'-0" x 1 3/4"	RAISED PANEL	SOLID CORE	PAINT GRADE	SEE PLAN	NONE	NONE	INTERIOR
	J	3'-0" x 8'-0" x 1 3/4"	RAISED PANEL	SOLID CORE	PAINT GRADE	SEE PLAN	NONE	NONE	100 SQ. IN. LOUVERED OPENING FOR COMBUSTION AIR AT BOTH TOP AND BOTTOM AT LAUNDRY (200 SQ. IN. TOTAL) - INTERIOR
	K	3'-0" x 4'-0" x 1 3/4"	RAISED PANEL	SOLID WOOD	PAINT GRADE	SEE PLAN	NONE	NONE	ACCESS DOOR TO UNDER FLOOR AREA - INTERIOR
	L	3'-0" x 8'-0" x 1 3/4"	RAISED PANEL	SOLID CORE	PAINT GRADE	SEE PLAN	NONE	NONE	INTERIOR
	M	2'-6" x 8'-0" x 1 3/4"	RAISED PANEL POCKET	SOLID CORE	PAINT GRADE	SLIDING	NONE	NONE	INTERIOR
	N	2'-8" x 8'-0" x 1 3/4"	RAISED PANEL POCKET	SOLID WOOD	PAINT GRADE	SLIDING	NONE	NONE	INTERIOR
	P	PR. 2'-0" x 8'-0" x 1 3/4"	RAISED PANEL	SOLID CORE	PAINT GRADE	SEE PLAN	NONE	NONE	INTERIOR
	Q	2'-8" x 8'-0" x 1 3/4"	FRENCH	ALUMINUM CLAD	PAINT GRADE	SEE PLAN	PER ENERGY CALCS	NONE	EXTERIOR @ POWDER ROOM
	R	3'-0" x 8'-0" x 1 3/4"	SOLID WOOD	SOLID CORE	PAINT GRADE	SEE PLAN	NONE	NONE	EXTERIOR @ GARAGE
	S	2'-6" x 8'-0" x 1 3/4"	GLASS	GLASS	PAINT GRADE	SEE PLAN	YES	NONE	INTERIOR - GLASS @ PANTRY
	T	PR. 3'-0" x 8'-0" x 1 3/4"	FRENCH POCKETING	GLASS	PAINT GRADE	SEE PLAN	YES	NONE	FIXED INTERIOR GLASS @ WINE CELLAR
	U	6'-0" x 8'-0" x 1 3/4"	WARDROBE SLIDER	SOLID CORE	PAINT GRADE	SLIDING	NONE	NONE	INTERIOR
	V	8'-0" x 8'-0" x 1 3/4"	WARDROBE SLIDER	SOLID CORE	PAINT GRADE	SLIDING	NONE	NONE	INTERIOR
	W	17'-0" x 8'-6"	GARAGE DOOR	METAL	METAL	NONE	SEE ELEVATIONS	NONE	SEMI-TRANSLUCENT GLASS
	X	10'-0" x 8'-6"	GARAGE DOOR	METAL	METAL	NONE	SEE ELEVATIONS	NONE	SEMI-TRANSLUCENT GLASS
	Y								
	Z								

NOTES:
1. EXTERIOR DOORS SHALL BE OF APPROVED NONCOMBUSTIBLE CONSTRUCTION OR 1¾" THICK SOLID CORE WOOD OR 20 MIN. FIRE RATED
2. EXTERIOR WINDOWS, WINDOW WALLS, GLAZED DOORS AND GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL HAVE TEMPERED GLASS OR GLASS BLOCK UNITS OR 20 MIN. FIRE RATED
3. FIRE-RESISTIVE ASSEMBLIES FOR THE PROTECTION OF OPENINGS, WHEN REQUIRED BY THE BUILDING CODE SHALL COMPLY WITH BUILDING CODE 715 AND TABLE 715.4.
4. EXTERIOR WINDOWS, WINDOW WALLS, GLAZED DOORS, AND GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL HAVE MULTI-PANE GLAZING UNITS WITH A MINIMUM OF ONE TEMPERED PANE.
5. VEHICLE ACCESS DOORS SHALL BE NONCOMBUSTIBLE OR EXTERIOR FIRE RETARDANT TREATED WOOD.
6. EGRESS DOORS SHALL BE READILY OPEN FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
7. ARCHITECT SUGGESTS "LOWEN" BRAND FOR WINDOWS

WINDOW SCHEDULE

QTY	SYM	SIZE	MATERIAL	TYPE	FINISH	HINGE	GLAZING	MUNTIN PATTERN	REMARKS
	1	PR. 2'-6" x 5'-0"	ALUMINUM CLAD	CASEMENT	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	2	2'-6" x 2'-9"	ALUMINUM CLAD	FIXED TRANSOM	PAINT GRADE	NONE	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	3	2'-0" x 5'-0"	ALUMINUM CLAD	CASEMENT	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	4	2'-6" x 4'-6"	ALUMINUM CLAD	CASEMENT	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	5	3'-0" x 6'-0"	ALUMINUM CLAD	FIXED	PAINT GRADE	NONE	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	6	2'-0" x 3'-6"	ALUMINUM CLAD	CASEMENT	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	7	PR. 2'-6" x 4'-6"	ALUMINUM CLAD	CASEMENT	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	8	(4) 2'-6" x 4'-6"	ALUMINUM CLAD	SLIDING POCKETING	PAINT GRADE	NONE	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	9	3'-0" x 5'-0"	ALUMINUM CLAD	CASEMENT	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	10	3'-0" x 2'-9"	ALUMINUM CLAD	FIXED	PAINT GRADE	FIXED	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	11	5'-0" x 5'-0"	ALUMINUM CLAD	FIXED	PAINT GRADE	FIXED	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	12	5'-0" x 2'-9"	ALUMINUM CLAD	FIXED	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	13	4'-0" x 2'-9"	ALUMINUM CLAD	FIXED TRANSON	PAINT GRADE	SEE PLAN	INSULATED	NONE	EXTERIOR - SEE ELEVATIONS
	14								
	15								

DOOR & WINDOW SCHEDULES

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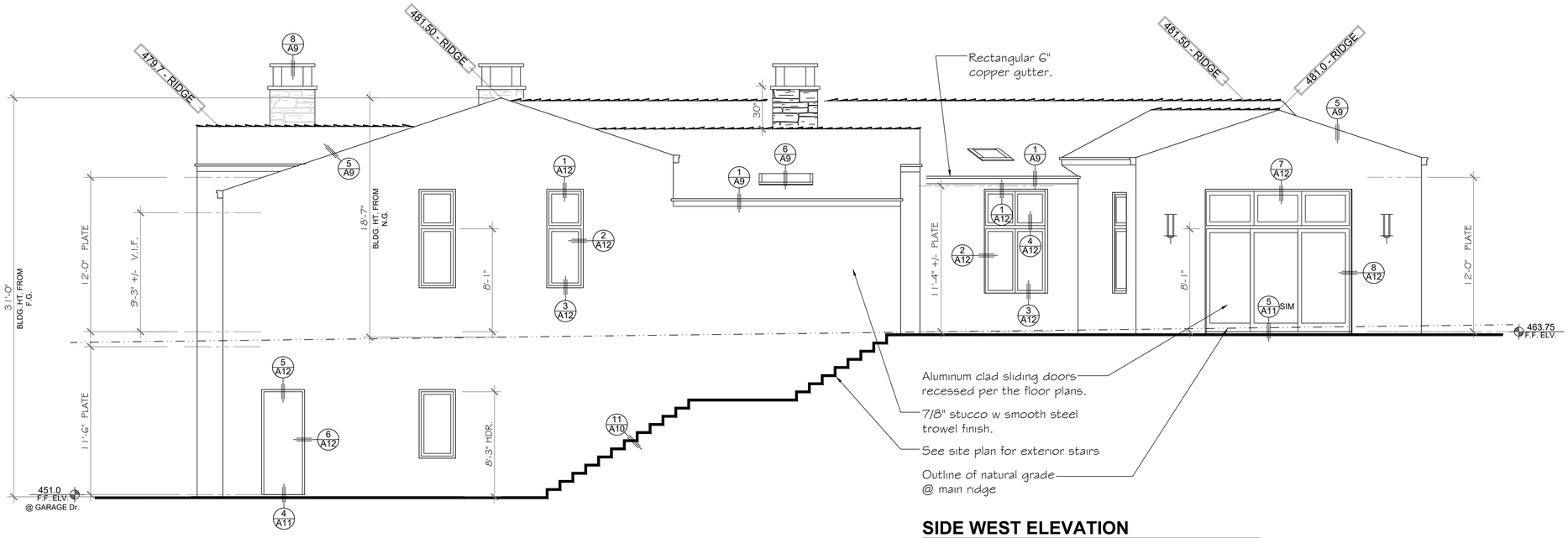
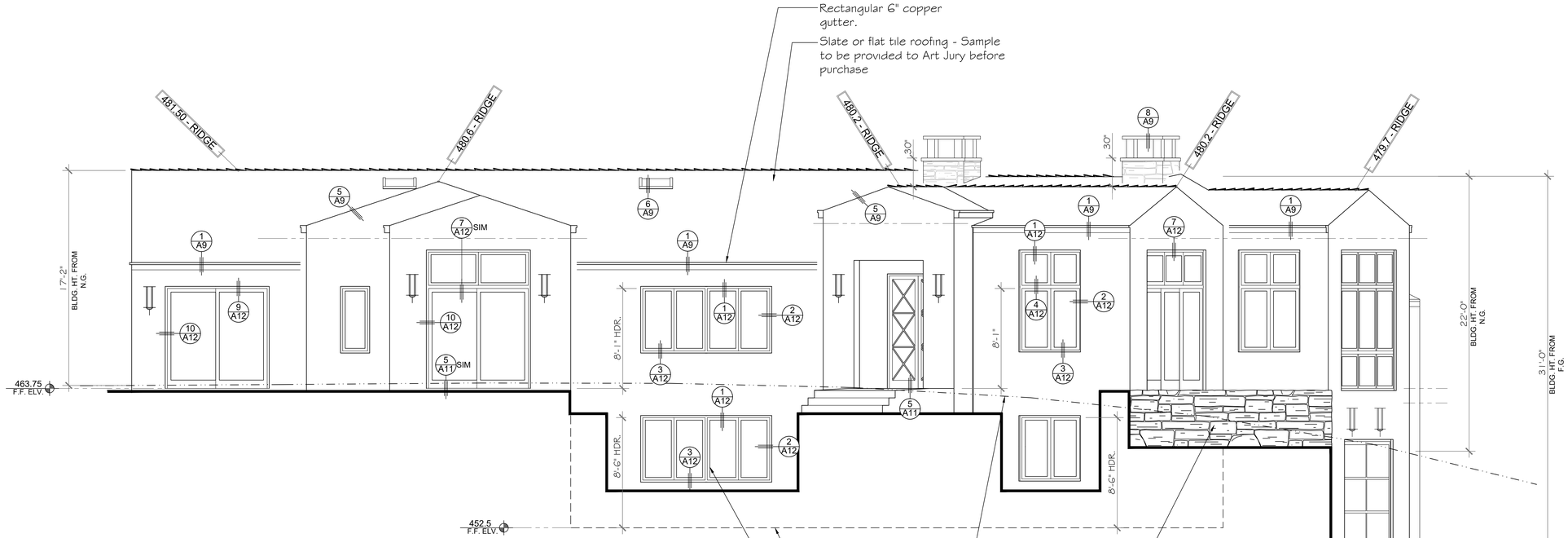


SIDE WEST ELEVATION
1/4" = 1'-0"



VIA HORQUILLA EAST ELEVATION
1/4" = 1'-0"

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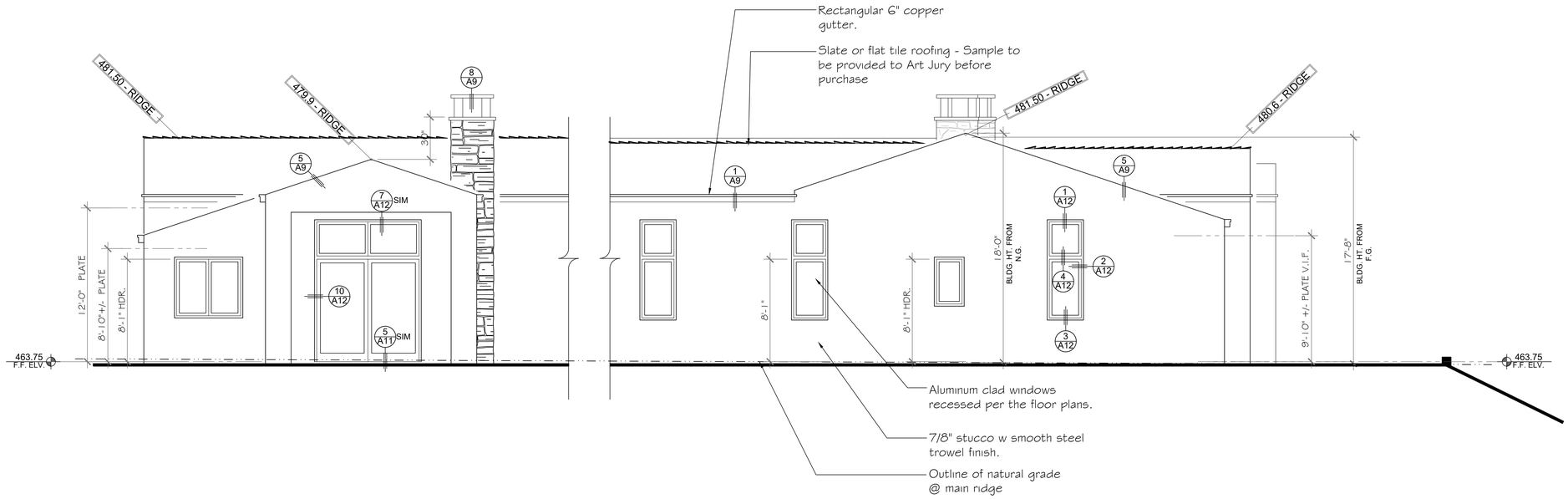
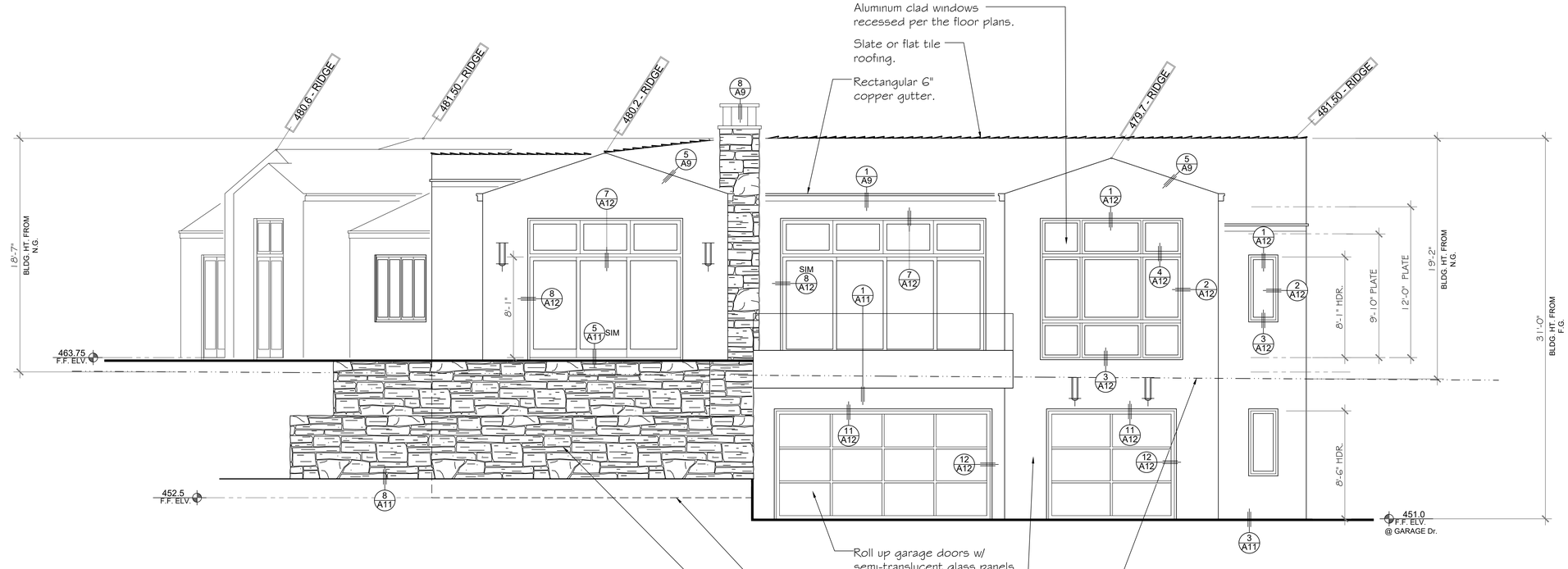


REAR SOUTH ELEVATION

1/4" = 1'-0"



VIA CAMPESINA NORTH ELEVATION

1/4" = 1'-0"

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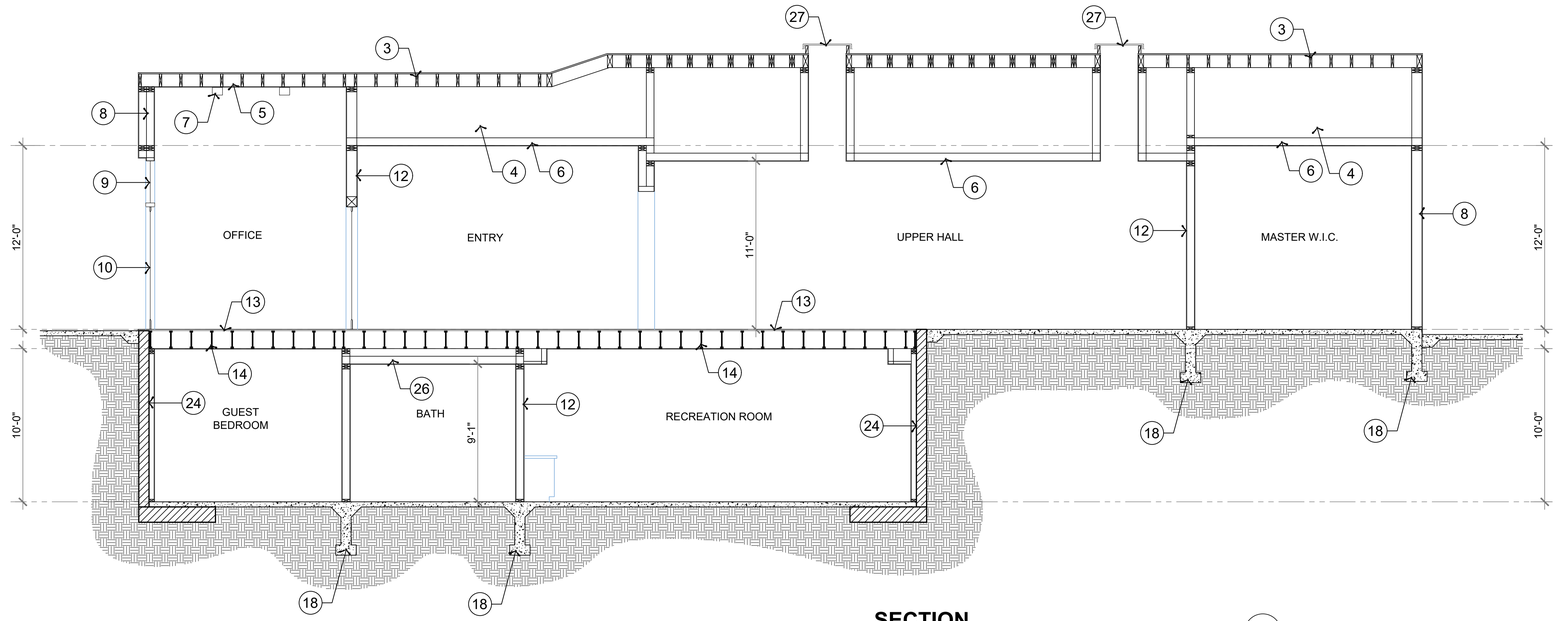
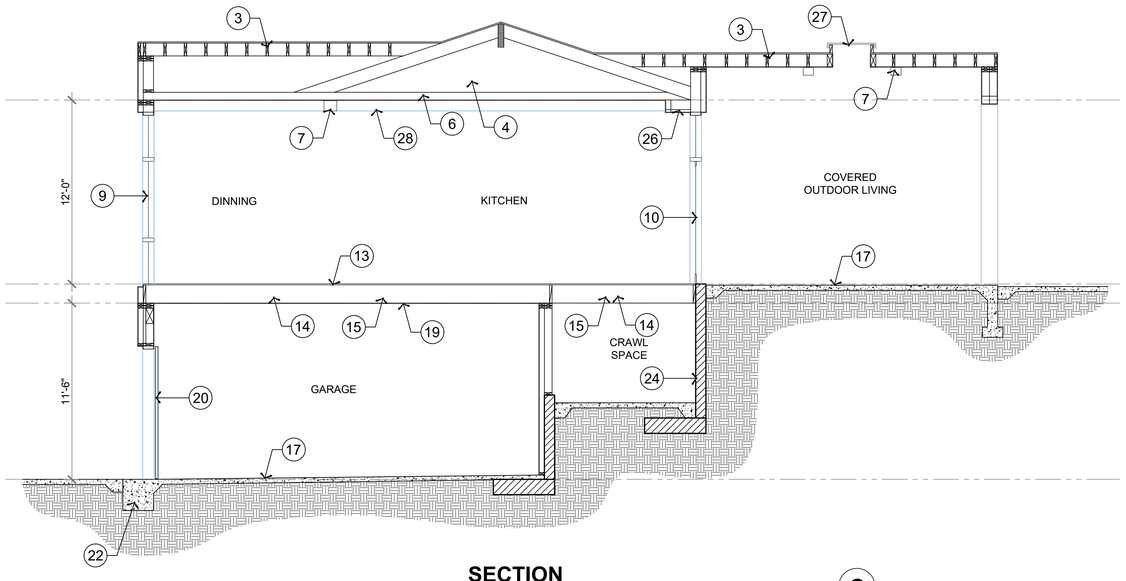
SECTION NOTES:

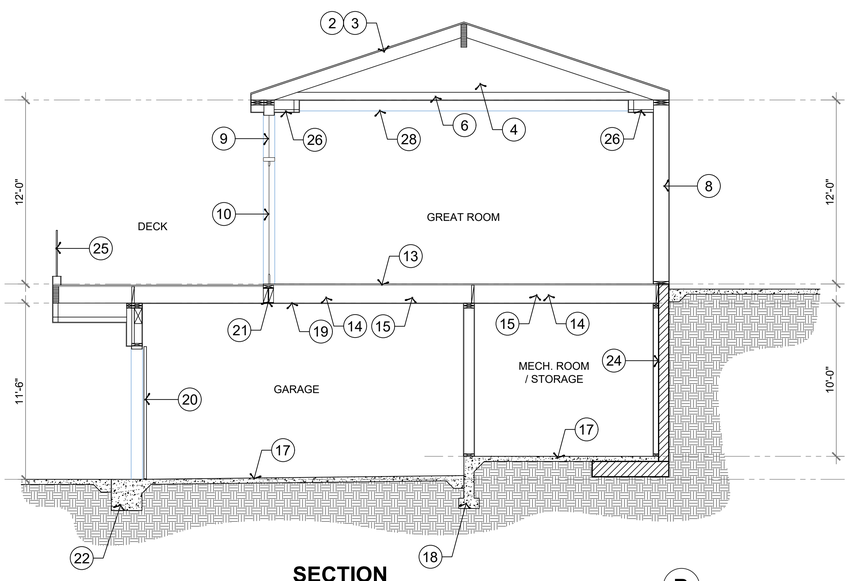
1. See floor plan for volume ceiling @ master bedroom
2. See roof plan for slope
3. Typ. roof rafter - See Framing Plan
4. R-30 insulation @ attic space
5. R-30 insulation @ sloped roof
6. Typ. ceiling joist
7. See floor plan notes for false beam size
8. 2 x 6 stud wall w/ R-19 insulation @ exterior
9. Typ. aluminum clad window assembly
10. Typ. aluminum clad (french) door assembly - w/ tempered glazing
11. Metal guardrail assembly
12. Interior finish
13. 1-1/8" floor plywood
14. Typ. floor joist - See Framing Plan
15. R-19 insulation @ floor
16. Outline of cabinetry
17. Concrete slab on grade
18. Continuous concrete footing - See Foundation Plan
19. 5/8" type 'x' gypboard @ walls & ceiling throughout garage, against living area & beneath stairs
20. 8'-6" high garage door
21. Steel beam - See Framing Plans
22. Parallam beams - See Framing Plans
23. Grade Beam- See Foundation Plan
24. Concrete Retaining Wall w/ 2x flat P.T. studs & R-15 insulation - See Foundation Plans
25. Glass railing @ deck
26. Furr down ceiling as shown
27. Skylight assembly per architectural detail
28. Outline of false beam beyond



SECTION A
1/4" = 1'-0"



SECTION C
1/4" = 1'-0"



SECTION B
1/4" = 1'-0"

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SECTION NOTES:

1. See floor plan for volume ceiling @ master bedroom
2. See roof plan for slope
3. Typ. roof rafter - See Framing Plan
4. R-30 insulation @ attic space
5. Two layers of R-30 insulation @ sloped roof
6. Typ. ceiling joist
7. See floor plan notes for false beam size
8. 2 x 6 stud wall w/ R-19 insulation @ exterior
9. Typ. aluminum clad window assembly
10. Typ. aluminum clad (french) door assembly - w/ tempered glazing
11. Metal guardrail assembly
12. Interior finish
13. 1-1/8" floor plywood
14. Typ. floor joist - See Framing Plan
15. R-19 insulation @ floor
16. Outline of cabinetry
17. Concrete slab on grade
18. Continuous concrete footing - See Foundation Plan
19. 5/8" type 'x' gypboard @ walls & ceiling throughout garage, against living area & beneath stairs
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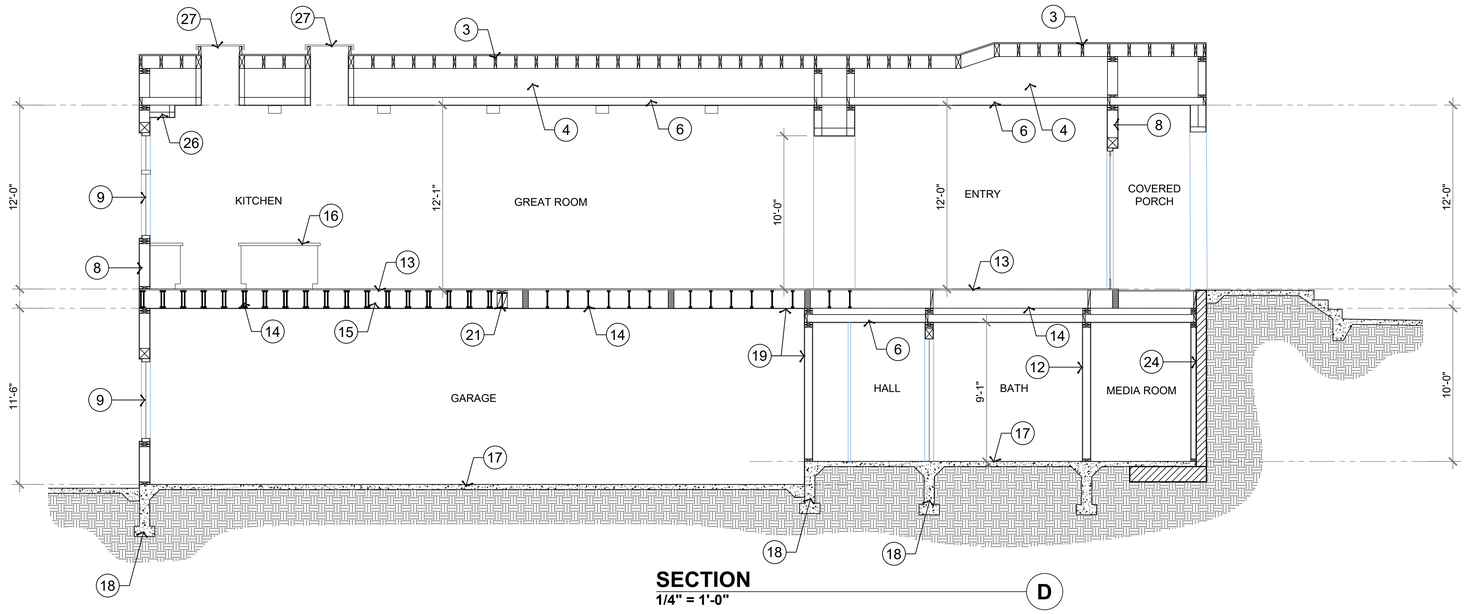
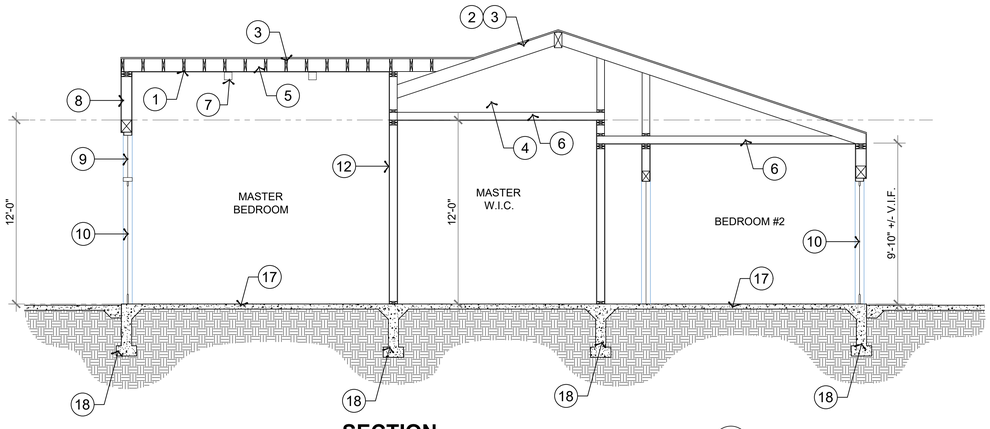
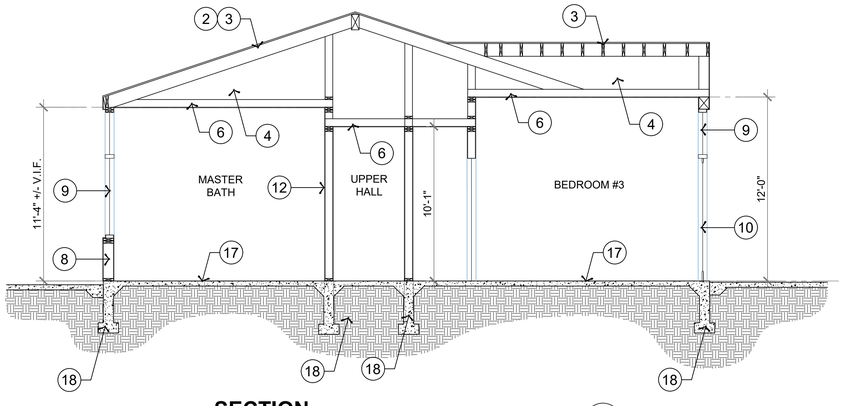
28. Outline of false beam beyond



SECTION D
1/4" = 1'-0"



SECTION F
1/4" = 1'-0"



SECTION E
1/4" = 1'-0"

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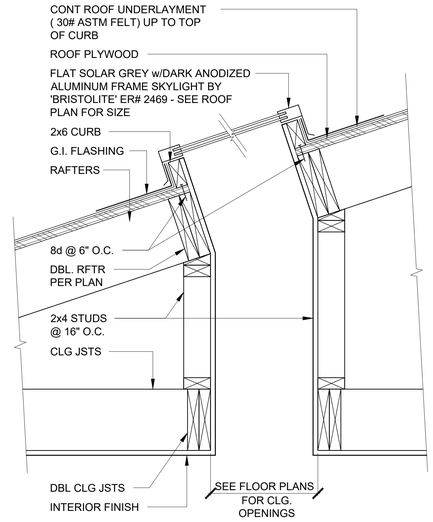
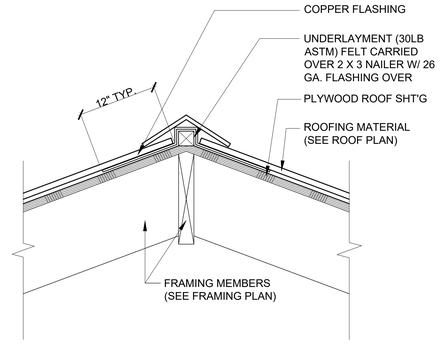
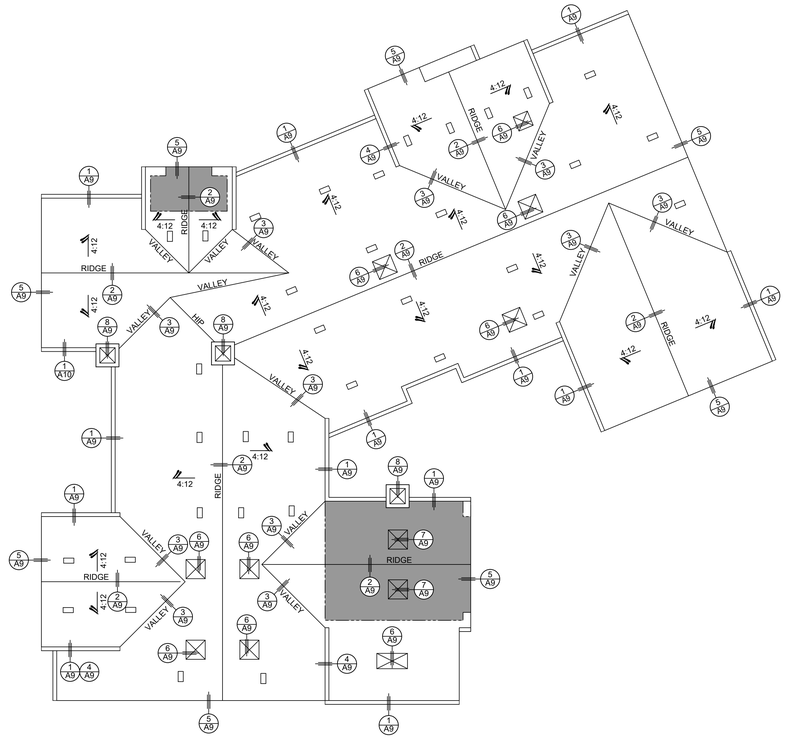


SKYLIGHT
1½" = 1'-0" — 6



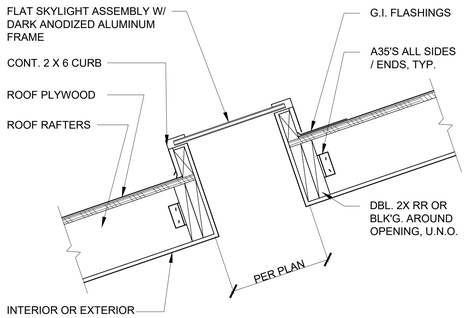
RIDGE / HIP / FLASHING
1½" = 1'-0" — 2



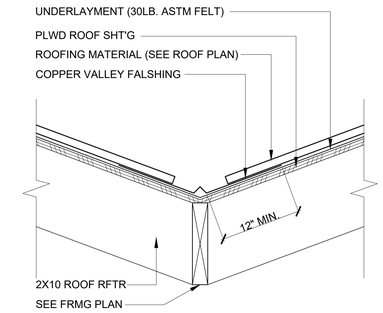
ROOF PLAN
1/8" = 1'-0"

ROOF PLAN NOTES

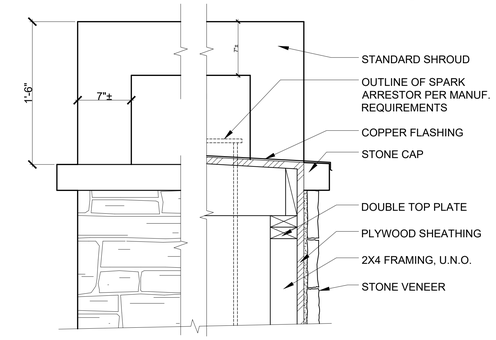
1. Minimum class "A" roof material: Lightweight concrete roofing shingles @ varies widths. by Tejas Borja ICC-ESR - 2111 - Flat -10 - Grey (ASTM C 406) Over minimum 2 layers of ASTM D226 Type 1 (#15) asphalt-saturated organic felt, or 1 layer of ASTM D226 Type II (#30) asphalt-saturated organic felt. Wood Shingle and wood shake are PROHIBITED in Very High Fire Hazard Severity Zones, regardless of classification (Fire Code 4710.1.2)
2. Roof Pitch = See Plans
3. Skylights to be "Bristol Fiberlite" ESR-3177 or approved equal by the Architect and Building Department. Provide flat anodized skylights.
4. All fireplaces to be provided with approved spark arrestor.
5. Attic Vent Calculations:
   Vent Area = 0.67 sq.ft.
   Upper level attic area = 3648 sq. ft. / 150 = 24.3 sq. ft. of vents / 0.67 = 36.3 ; therefore, 36 vents provided (▭)
   Metal Model "Flat" Vents by O'Hagins Inc. (ICC = 9650A)
6. All gutters shall be copper 6" rectangular



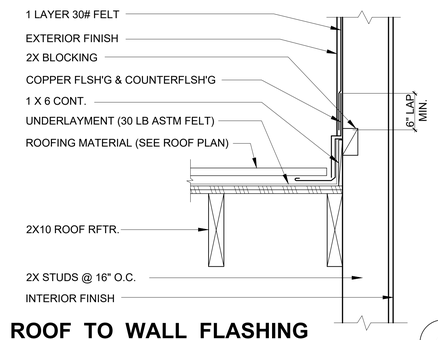
SKYLIGHT AT SLOPED ROOF / CLG.
1½" = 1'-0" — 7



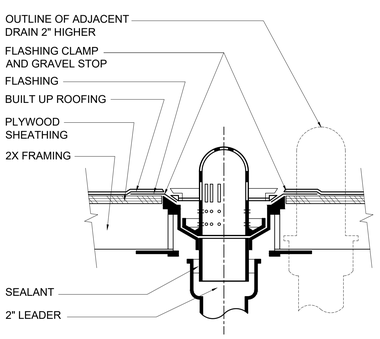
VALLEY FLASHING
1½" = 1'-0" — 3



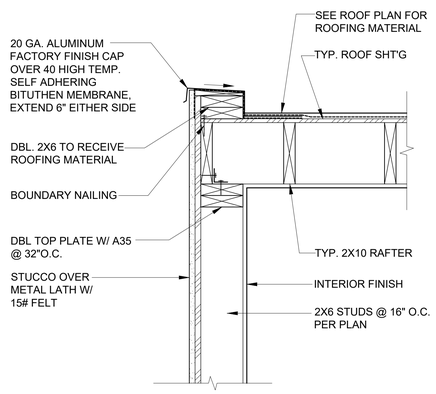
CHIMNEY CAP DETAIL
1½" = 1'-0" — 8



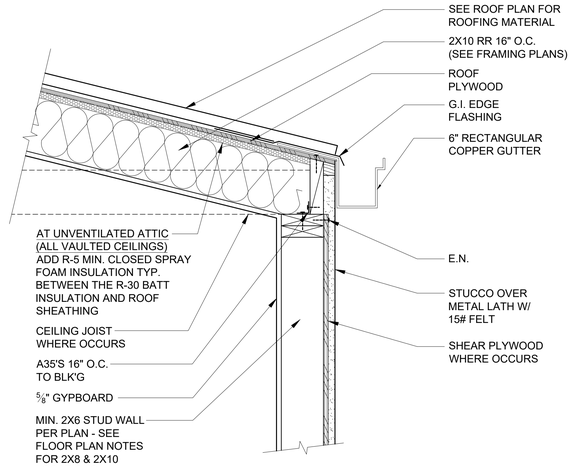
ROOF TO WALL FLASHING
1½" = 1'-0" — 4



DECK DRAIN DETAIL
1½" = 1'-0" — 9



RAKE DETAIL
1½" = 1'-0" — 5



TYPICAL EAVE DETAIL
1½" = 1'-0" — 1

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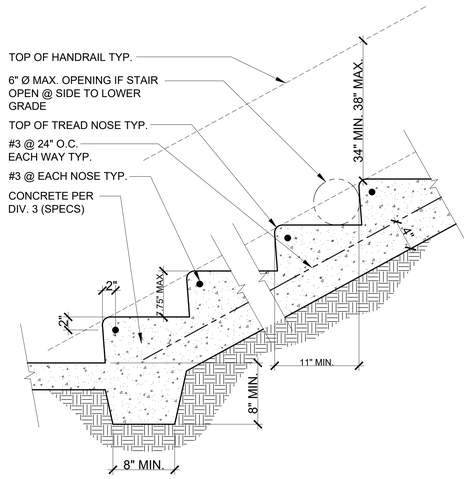
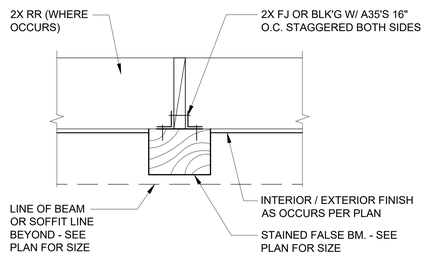
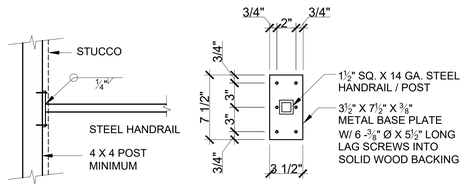


CONCRETE STAIR ON GRADE
1½" = 1'-0" — 11

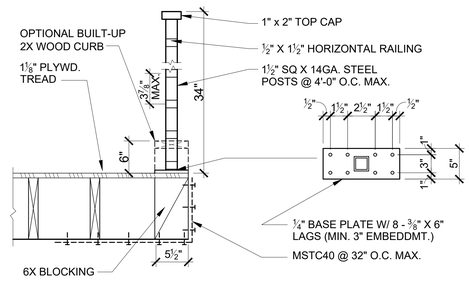


DECORATIVE CEILING BEAM
1½" = 1'-0" — 12



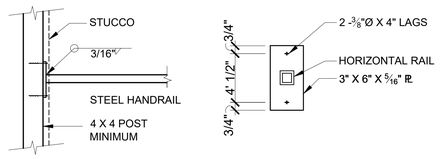
HANDRAIL TO WALL / BRACKET

NOTE:
INTERIOR DESIGNER DETAIL SUPERCEDE THIS DETAIL. VERTICAL MEMBERS ARE POSSIBLE IN LIEU OF HORIZONTAL. CONSULT W/ OWNER



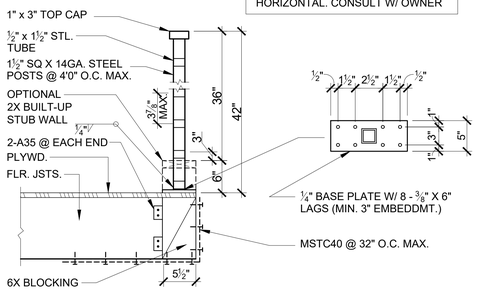
HANDRAIL TO STAIR/ PLATE

HANDRAIL
NO SCALE — 8



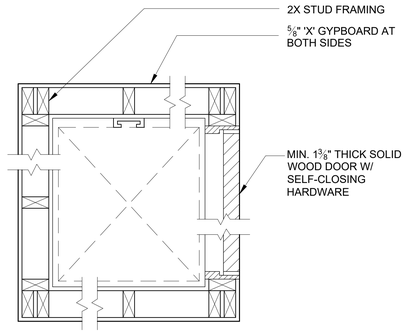
GUARDRAIL TO WALL

NOTE:
INTERIOR DESIGNER DETAIL SUPERCEDE THIS DETAIL. VERTICAL MEMBERS ARE POSSIBLE IN LIEU OF HORIZONTAL. CONSULT W/ OWNER

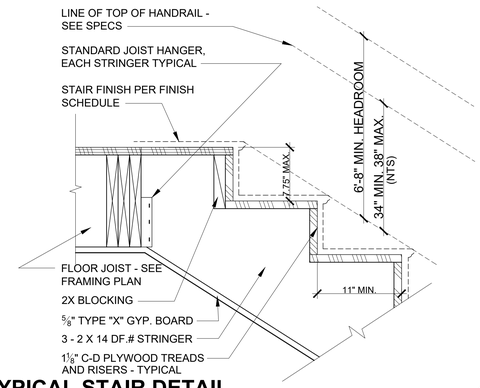


GUARDRAIL POST TO FLOOR

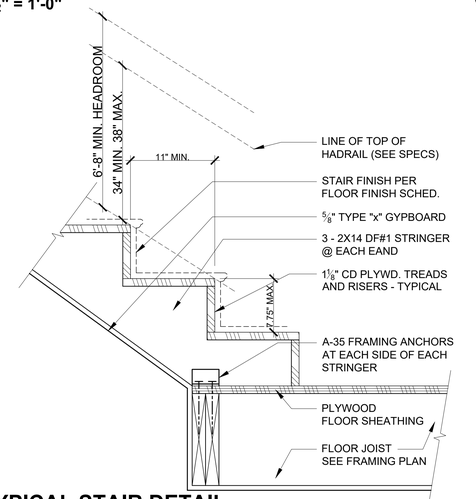
GUARDRAIL
NO SCALE — 9



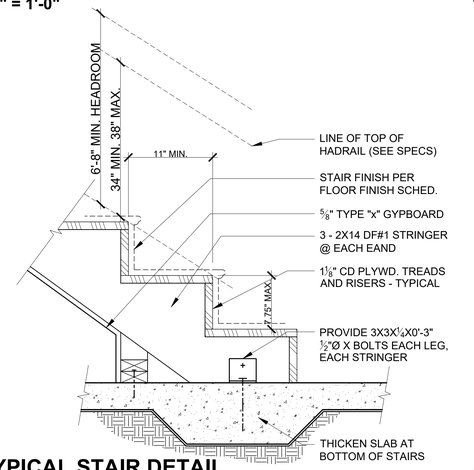
DUMBWAITER SHAFT DETAIL
NO SCALE — 10



TYPICAL STAIR DETAIL
1½" = 1'-0" — 4

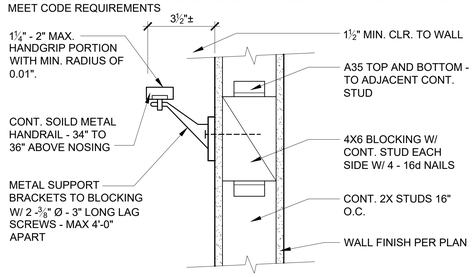


TYPICAL STAIR DETAIL
1½" = 1'-0" — 5



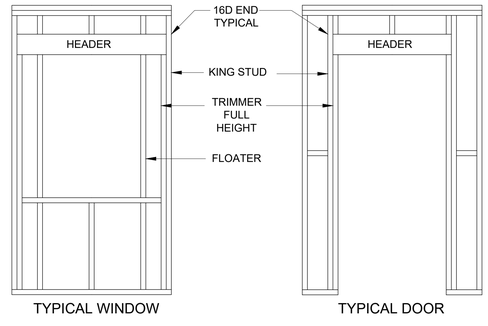
TYPICAL STAIR DETAIL
1½" = 1'-0" — 6

1. HANDRAIL SHALL TERMINATE INTO A NEWEL POST OR SAFETY POST - OR RETURN TO WALL.
2. ALTERNATE HANDRAIL DETAILS SHALL BE APPROVED BY THE OWNER AND SHALL MEET CODE REQUIREMENTS

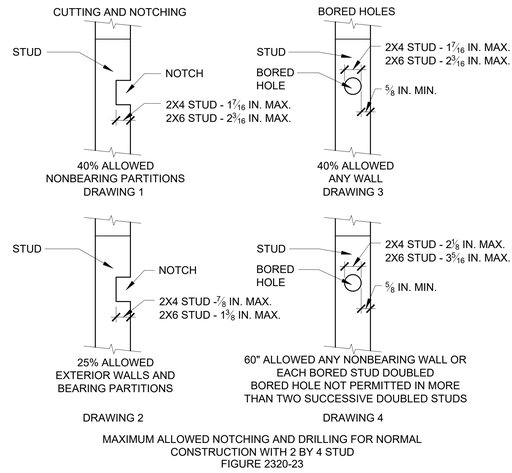


HANDRAIL TO WALL
NO SCALE — 7

DOOR AND WINDOW FRAMING REQUIREMENT



WINDOW AND DOOR FRAMES
1½" = 1'-0" — 1



MAXIMUM ALLOWED NOTCHING AND DRILLING FOR NORMAL CONSTRUCTION WITH 2 BY 4 STUD
FIGURE 2320-23

CUTTING NOTCHING AND BORRING OF STUDS
NO SCALE — 2

SYSTEM DESCRIPTION	SKETCH AND DESIGN DATA
GA FILE NO. FC 5420 WOOD JOISTS, GYPSUM WALLBOARD ⅝" type "X" gypsum wallboard or veneer base applied at right angles to 2x10 wood joists 16" o.c. with 6d coated nails 1⅞" long 0.0915" shank, ¼" heads, 6" o.c. Joists supporting 1" nominal wood sub and finish floor, or 15/32" plywood finished floor with long edges T&G and 15/32" interior plywood with exterior glue subfloor perpendicular to joists with joints staggered. ONE HOUR CEILING	1 HOUR FIRE / 35 to 39 STC SOUND Approx. Ceiling Weight: 2½ psf Fire Test: ULR3501-5, 9, 7-15-52 ULR1319-2, 3, 6-5-52 Design L 501 ULC Design M500 Sound Test: See FC 5410 IIC & Test: 32 (66 C&P) NGC 5032, 7-19-66
GA FILE NO. WP 3510 GYPSUM WALLBOARD, WOOD STUDS One layer ⅝" type "X" gypsum wallboard or veneer base applied parallel with or at right angles to each side of 2x4 wood studs spaced 24" o.c. with 6d coated nails 1⅞" long, 0.0915 shank, ¼" heads, 7" o.c. Wallboard nailed to top and bottom plates at 7" o.c. Stagger joints 24" o.c. each side. (LOAD-BEARING) ONE HOUR WALL	1 HOUR FIRE / 35 to 39 STC SOUND Thickness: 4⅞" Approx. Weight: 7 psf Fire Test: ULR3501-47, -48, 9-17-65. Design U309 ULR1319-129, 7-22-70 Design U314 Sound Test: NGC2404, 10-14-70

ONE HOUR CEILING AND WALL
NO SCALE — 3

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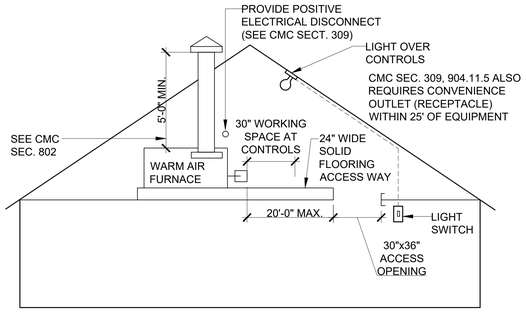


RELATED CODE SECTION : CMC SECT. 931

CENTRAL WARN-AIR FURNACE INSTALLED IN AN ATTIC MUST BE ACCESSIBLE FOR ROUTINE INSPECTIONS AND MAINTENANCE BY THE OWNER/OCCUPANT AND FOR SERVICE AND REPAIR AS NEEDED. CHANGING FILTERS, LUBRICATING MOTOR AND FAN BEARING, CHECKING BELT TENSION, AND RELIGHTING THE PILOT FOLLOWING A SERVICE INTERRUPTION ARE NORMAL OWNER FUNCTIONS. ADEQUATE LIGHT AND ELECTRICAL OUTLET, SAFE ACCESS WAY AND SUFFICIENT WORKING SPACE IN THE CONTROL SIDE ALL ENCOURAGE AND FACILITATE MAINTENANCE AND ALSO ENABLE RAPID EGRESS IN EMERGENCY.

NOTES:

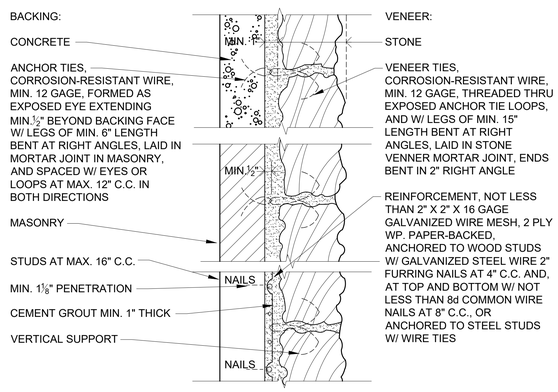
1. PROVIDE DOUBLE JOIST BELOW UNIT.
2. PROVIDE SEISMIC BRACES OR ANCHOR UNIT TO PLATFORM.
3. CONDENSATE DRAIN SHALL TERMINATE AT AN APPROVED PLUMBING FIXTURE.

WARM AIR FURNACE - ATTIC
NOT TO SCALE — 12

INTERIOR FINISH DETAIL
1½" = 1'-0" — 13

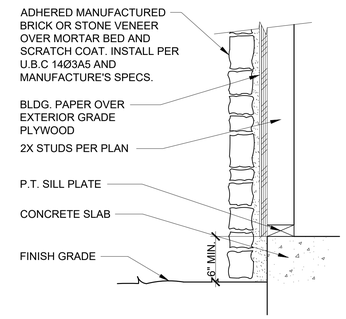
NOTE: SEE FLOOR PLAN NOTES FOR PERIMETER MOULDING

INTERIOR FINISH DETAIL
1½" = 1'-0" — 12

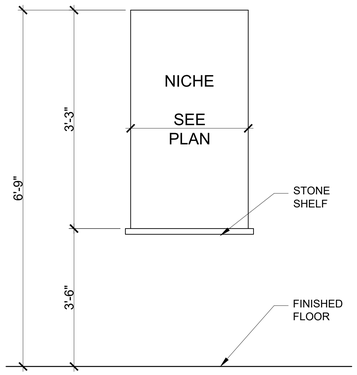


STONE VENEER UNITS (MAX. 2" THICK) ANCHORED TO CONCRETE, MASONRY OR STUD BACKING

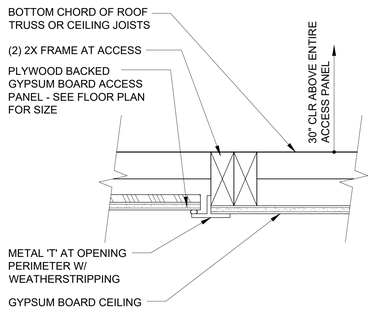
STONE VENEER
NO SCALE — 8



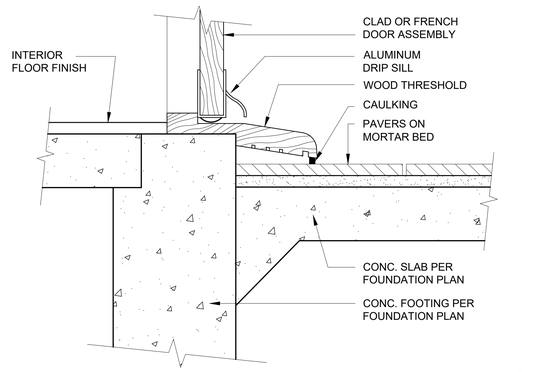
STONE VENEER @ GRADE
1½" = 1'-0" — 9



RECESSED NICHE
3/4" = 1'-0" — 10

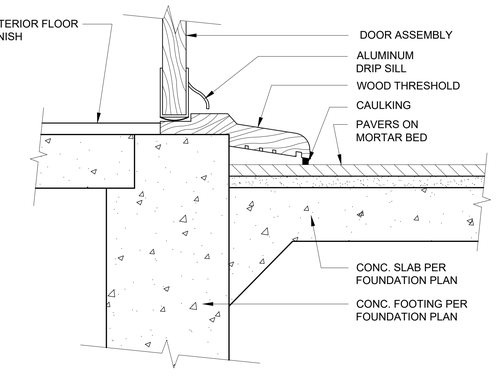


ATTIC ACCESS
3" = 1'-0" — 11



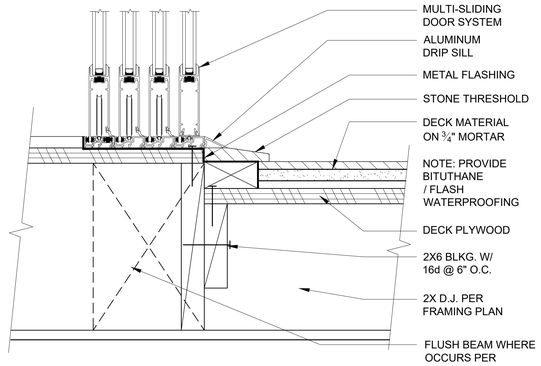
CLAD DOOR / THRESHOLD - SWINGS OUT
3" = 1'-0" — 4

NOTE: DOOR AND WINDOW MANUFACTURER HAS NOT BEEN SELECTED - CONTRACTOR TO SUBMIT SAMPLES OF WINDOW/DOOR AND DETAILS FOR ART JURY REVIEW PRIOR TO ORDERING

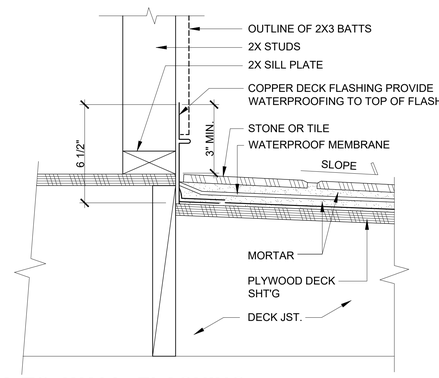


DOOR / THRESHOLD SWINGS IN
3" = 1'-0" — 5

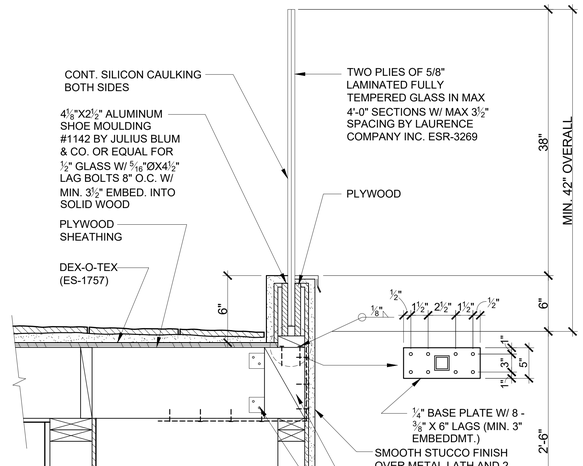
NOTE: DOOR AND WINDOW MANUFACTURER HAS NOT BEEN SELECTED - CONTRACTOR TO SUBMIT SAMPLES OF WINDOW/DOOR AND DETAILS FOR ART JURY REVIEW PRIOR TO ORDERING



WOOD DOOR / THRESHOLD AT DECK
3" = 1'-0" — 6

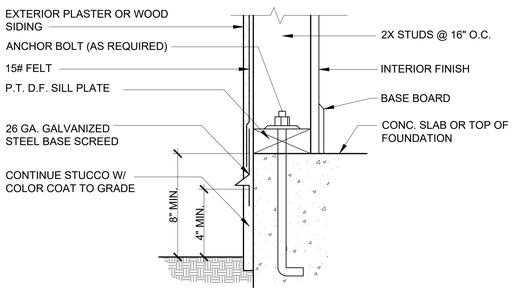


DECK TO WALL FLASHING
3" = 1'-0" — 7



EXTERIOR GLASS GUARDRAIL
1½" = 1'-0" — 1

GUARDRAIL AT LIGHT WELL (If Required)
1½" = 1'-0" — 2



G.I. WEEP SCREED
1½" = 1'-0" — 3

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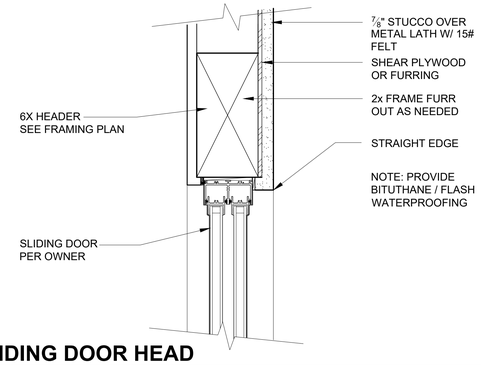
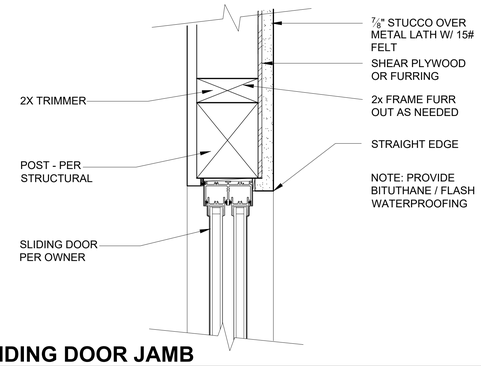
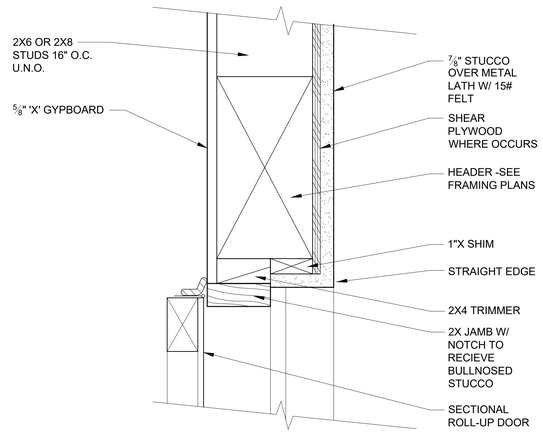


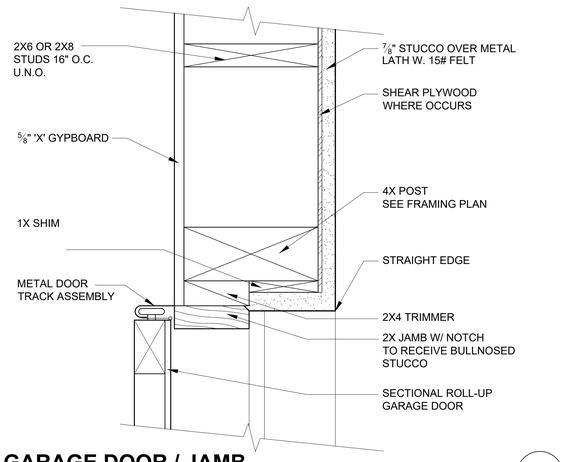
SLIDING DOOR HEAD 9
3" = 1'-0"



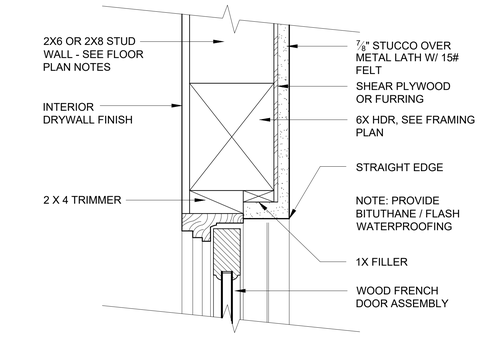
SLIDING DOOR JAMB 10
3" = 1'-0"



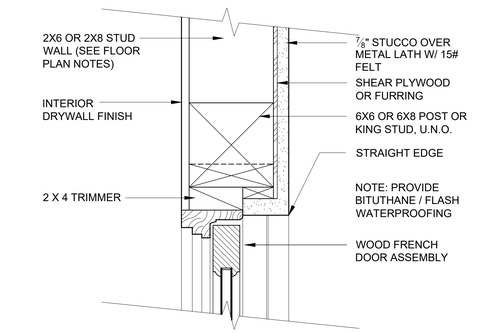
GARAGE DOOR / HEAD 11
3" = 1'-0"



GARAGE DOOR / JAMB 12
3" = 1'-0"

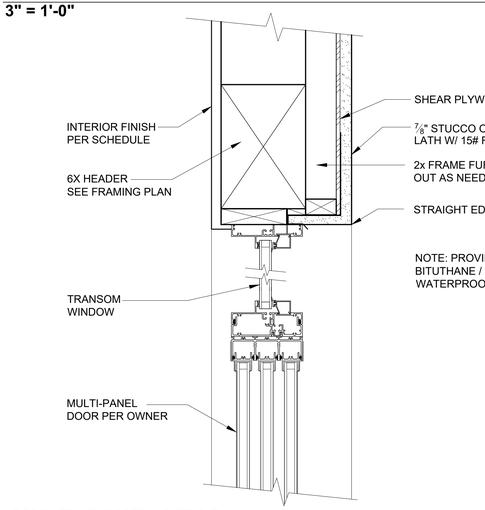


CLAD DOOR / HEAD - SWINGS OUT 5
3" = 1'-0"

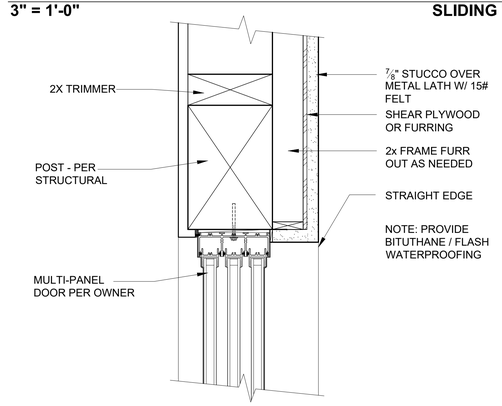


NOTE: DOOR AND WINDOW MANUFACTURER HAS NOT BEEN SELECTED - CONTRACTOR TO SUBMIT SAMPLES OF WINDOW/DOOR AND DETAILS FOR ART JURY REVIEW PRIOR TO ORDERING

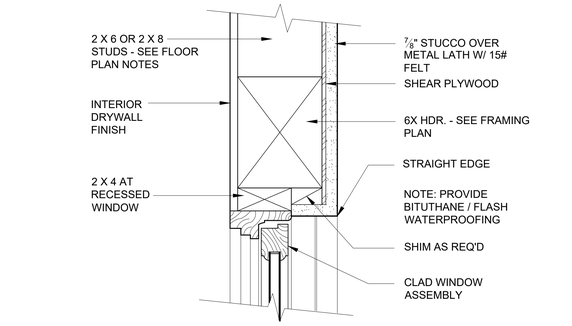
CLAD DOOR / JAMB - SWINGS OUT 6
3" = 1'-0"



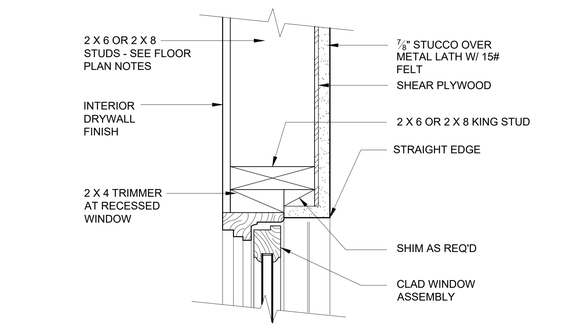
MULTI-PANEL HEAD 7
3" = 1'-0" SLIDING



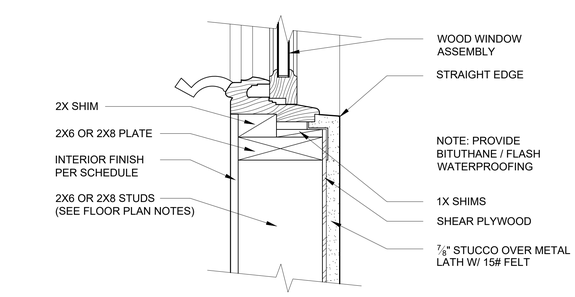
MULTI-PANEL JAMB 8
3" = 1'-0" SLIDING



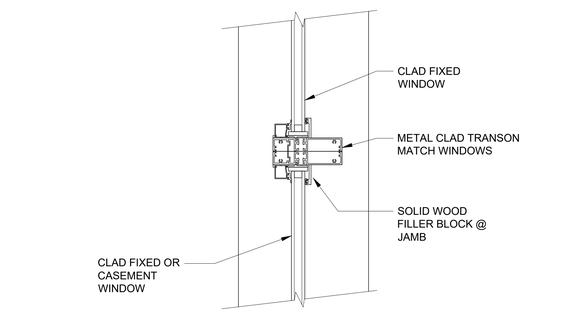
CLAD WINDOW / HEAD 1
3" = 1'-0"



CLAD WINDOW / JAMB 2
3" = 1'-0"



CLAD WINDOW / SILL 3
3" = 1'-0"



WINDOW / WINDOW MULLION 4
3" = 1'-0"

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General Notes

GENERAL

1. All workmanship and materials shall conform to the 2022 Edition of CRC, CBC, CMC, CPC & CEC.
2.Proof of certificate of all necessary insurance shall be filed with the Owner to indemnify and hold harmless the Owner, Landlord, Architect and agents thereof from damages and losses resulting from Contractor's execution of work.
3. The architectural plans shall be used for all dimensions and wall layouts. All dimensions shall take precedence over scale shown on plans. Contractor shall verify all dimensions and report any discrepancies to the Architect before proceeding with construction.
4. During construction the Contractor shall notify the Architect of any unusual or unforeseen condition prior to continuing with construction. Where the intent of the drawings is doubt or a discrepancy between the drawings and the condition in the field exists the Architect shall be notified before to continuing with work. There shall be no deviation from structural details without the approval of the Architect. Approval by City Inspector does not constitute authority to deviate from plans or specifications.
5. Before submitting his bid, the Contractor shall examine the site to compare it with the plan and note as to the conditions under which this work will be performed.
6. Unless specifically detailed on these drawings, the Contractor shall provide temporary braces, shoring and guys wherever necessary to support all loads to which the structure may be subjected during construction. This temporary support system shall hold all elements and members in their final position until totally and finally connected to the permanent bracing elements.
7. Contractor shall comply all local, California state and federal regulations (Cal State Construction, CalOSHA, etc.)
8. The typical notes and details shall apply unless specific details occur elsewhere. Where no detail is shown construction shall be as for similar work.
9. If a conflict is found between different portions of the contract documents the Contractor shall notify the Architect immediately. Continued construction of the area in conflict shall be at the Contractor's risk until the conflict is resolved by the Architect.

INSPECTIONS AND QUALITY CONTROL

1. The Contractor shall have primary responsibility for quality and shall provide supervision and internal control processes as necessary to assure that the work is performed in accordance with contract documents.
2. The Contractor shall coordinate the work with inspection requirements.
3. The Contractor shall be responsible for assuring that all required inspections are performed.
4. The Contractor shall cooperate with any inspector authorized by Owner, Building Department, Architect and Engineer of Record and shall allow complete access to the site to any such inspector at all times.
5. The contractor shall maintain on site copies of all required material certifications and report to of all required tests and inspections. Access to these records shall be provided to the Owner, Building Department, Architect and Engineer of Record, or the testing agency on request.
6. Any required special inspections will be provided by a registered Deputy Inspector approved by the Architect and licensed by the Governing Agency to perform special inspections, The special inspector shall be employed by the Owner, the Architect or Engineer of Record, but not by the Contractor or any other person responsible for the construction work.
7. Inspection by a Registered Deputy Inspector is required for the following:
   a. All field welding, unless noted otherwise on drawing.
   b. Installation of high strength bolts, e.g. ASTM A-325 bolts.
   c. For concrete w/compressive strength greater than 2,500 psi.
   d. Installation of epoxy bolts or dowels.

FOUNDATION

1. Foundation design is based on a certified soils report, otherwise CBC minimum or local ordinances will apply.
2. The bottom of all footings shall be free of loose soil.
3. Footing backfill and all utility trench backfill shall be mechanically compacted in layers. Flooding is not be permitted.
4. Foundation as shown is for bidding purposes. Actual conditions may vary at time of construction and additional work may be required.
5. There shall be no deviation from structural details without the approval of the Architect. Approval by City Inspector does not constitute authority to deviate from plans or specifications.
6. Cement: Test, Type II Portland, ASTM - C15
7. Aggregates: ASTM - C33. Maximum size 1 ½" for footings and 1" for all other work.
8. Dowels: to be provided for all vertical and horizontal reinforcing bars in walls, columns, etc. of the same size and number from footings, supporting beams and/or columns.
9. All reinforcing steel and dowels shall be well secured in place prior to pouring concrete.

WOOD

1. All lumber shall be Douglas Fir or Douglas Fir Larch. All nails shall be Common Wire Nails unless otherwise noted.
2. All beams and post shall be #1 grade, unless noted otherwise.
3. All joist, rafters studs and plates shall be #2 grade, unless noted otherwise.
4. All nailing shall be in accordance with the CBC 2022, Table 2304.10.2 using Common Wire Nails.
5. Nailing of roof and floor sheathing shall be inspected by Building Department before covering.
6. All plywood shall be PS 1-09 and / or PS 2-10
7. Sill plates shall be pressure treated Douglas Fir, Sill plate bolts shall be ⅝" diameter x 12" long (7" minimum embedment) @ min 4'-0" on center and starting not more than 9" from ends of each sill plate, unless otherwise noted.
8. All bolts and lag screws shall have standard cut washers under heads & nuts and upon installation all nuts and screws shall be tightened and retightens before covering. Bolt holes in wood shall be 1/32" to 1/16" oversized. Holes over 1/16" larger shall require replacement of lumber piece.
9. Screws and lag bolts shall not be hammered into place.
10. Sill plates of interior non bearing and not plywood walls may be anchored to concrete with ½" diameter power driven pins with steel washers at 30" unless detailed otherwise, ICC # 1372
11. All breaks for vents, ducts, plumbing shall be strapped with 1 ½" x ⅛" steel straps with four 16d nails on each side.
12. If top plates or studs are notched or drilled with a hole larger than ⅓ of the member width, a 14 gauge bent plate channel (1½" flanges) shall be slipped over the member, channel shall extend 12" beyond holes one each side, Nail with 6 8d each side of opening. Place nails in side flanges.
13. Install 2x full depth cross bridging at 10' - 0" on center for roof rafters and 8'-0" on center for floor joists.
14. Install 2x solid blocking at each support.
15. Install 2x solid fire blocking in stud walls at 10'-0" max. or at ceiling line or as permitted by governing code.
17. Doubled 2x joists shall be nailed with 16d common nails at 9" on center.
1 ½" from top and bottom staggered.
18. 3 or more joists or rafters shall be joined together with ½" diameter machine bolts at 18" on center. 3" from top and bottom, staggered, with 2 bolts vertically spaced over support.
19. Notching shall not be in excess of 25% in bearing walls and 40% in nonbearing walls.
20. Bored holes shall not exceed 40% in bearing walls and 60% in nonbearing walls.
21. Bored holes shall not be within 2" of the top or bottom of joist and the diameter of such holes shall not exceed 1/3 of the depth of the joist.
22. Notches in the ends of joist shall not exceed ⅛ the depth of the joist and shall not be located in the middle 1/3 of the span per the requirements of CBC 2022, 2308.4.2.4 - Conventional Light frame Construction Provisions.
23. Provide fire blocking along the run of stairways at the junction of vertical and horizontal surfaces such as drop soffits, along landings, in furred spaces and vertical.
24. All lumber shall be D.F. Larch-Grading rules agency WCL1B/WWPA
25. All parallam shall be E=2.0x10^6 psi min.
26. All parallams/micro-lams :
a) are to be fabricated in the shop of a licensed fabricator b) manuf. logo to be imprinted on the side of the beam.
c) beams to be load tested by manuf. and test results submitted to the building inspector.
d) parallam to be e= 2.0x10^6 ICC # ER -4979, ner -481.
27. All tji's shall comply ICC ES ESR - 1153 ; ESR - 1387
28. Provide double f/j's (u.o.n) under all parallel partitions.
29. All nailing shall be per table 23-11-b-1
30. Contractor shall provide shoring as required by the local juridiction.
31. All parallams shall have min. e= 2.0x10^{6}psi/ ICC # ER- 4979, ner -481
32. If/where stud heights at non-bearing rake walls exceed 14', use 3x4@16"oc.
33. All Timber Strands must be min. E=1.7x10^6 psi.

REINFORCING STEEL

1. Reinforcing steel shall be new stock deformed bars conforming to ASTM A-615 grade 40 bars up to and including #4 and grade 60 for all bars greater than #5. All bars shall be deformed and shall comply with ASTM A-305.

2. All reinforcing steel shown continuous may be lapped 30 times bar diameter for grade 40 and 40 times bar diameter for grade 60. However, minimum lap shall be 24".

3. Do not weld grade 60 reinforcing steel unless it is ASTM A-706.

CONCRETE

1. Concrete shall have the following compressive strength at 28 days,U.O.N. on plans:
   a. Continuous and Isolated Footings = 2,500 psi
   b. Slab on Grade = 2,500 psi
   c. At concrete grade bm's = Fc = 3,500 psi with Deputy Inspector.
2. Continuous inspection by a Registered Deputy Inspector is required for all concrete with design compressive strength greater than 2,500 psi.
3. Concrete mixes shall be designed by an approved laboratory currently doing this type of work.
4. Portland cement shall conform to ASTM C-150 type I or II. Hardrock Aggregate shall conform to ASTM C-33, Their maximum sizes shall be 1½" for footings, caissons and grade beams and ¾" for all other work.
5. Forms:
   a. Shall be smooth, well braced and tight so as to prevent leakage and conform to the shape and dimensions specified.
   b. Clear coverage of concrete over outer reinforcing bars as follows:
      A) Footings and walls against earth shall be 3" clear if not formed or 2" clear if formed
      B) Main bars in columns and beams: 2" clear
      C) Formed walls: 1½" clear - #5 or smaller; 2" clear - #6 or larger.
6. All reinforcing steel and dowels shall be well secured in place prior to placing concrete.
7. All reinforcing shown continuous may be lapped 30 times bar diameter for grade 40 and 40 times bar diameter for grade 60. However, minimum lap shall be 2'-6".
8. Mix that produces lowest slump compatible with proper placement to be used. Maximum slump shall be 4½" unless otherwise approved by the Architect.
9. Concrete structural members (walls, beams, etc.) shall remain shored until the concrete has reached its design strength,
10. Removal of forms:
   a. Supporting vertical surfaces - 2 days minimum.
   b. Supporting beams and girders - 15 days minimum.
11. Drypack shall be one of the following nonshrink grouts mixed with water according to manufacturers speculations:
   BURKE READY-TO-USE GROUT EMBECO 636;
   MASTERFLOW 713; FIVE STAR GROUT;
   RAPIDSET GROUT;
   SAUREISEN NO. F100 LEVEL-FILL GROUT;
   BONSALL NON-METALLIC CONSTRUCTION GROUT
12. Contractor shall review Electrical Plan prior to forming concrete walls for lacement of any flush electrical boxes.
13. See foundation plan for additional notes.

WELDING

1. All welds shall be made and inspected in accordance with all requirements of the latest edition of the Structural Welding Code of the American Welding Society (AWS D1.1) & A I S C A S P
2. Arc-welding electrodes shall be E-70 series and conform to ASTM A-233.
3. All welding shall be performed by welders certified by the city agency of project location for the type of weld being made. Light gauge welding (material less than ⅛" thick) to be performed by a licensed light gauge welder.
4. Welding of dowels to steel shall be by the reinforcing steel subcontractor certified by the city agency governing project.
6. All structural welds, shop or field shall be inspected by a Deputy Inspector certified by the city agency governing project unless specifially noted otherwise. Continuous inspection shall be provided for multiple pass welds.
7. All partial and full penetration welds shall be ultrasonically inspected.
8. Contractor shall retest any weld suspected by the Architect, Engineer of Record or Deputy Inspector of being unsound.
9. Any weld found to be defective shall be repaired or replaced in an approved manner.
10. Field welding requires continuous inspection by a registered Deputy Inspector unless noted otherwise on plan.
11. All structural steel shall be A-36.

ABBREVIATIONS

CBC	California Building Code
ICC	International Code Council (Author of UBC & authority for general code requirements)
ACI	American Institute of Concrete
AISC	American Institute of Steel Construction (source authority for structural steel work)
AWS	American Welding Society (source authority for welding work)
ASTM	American Society for Testing Materials (source authority for material quality and testing standards)
CRSI	Concrete Reinforcing Steel Institute (source authority for reinforcing steel fabrication & installation)
ABV	Above
BTWN	Between
REQD	Required
BOT	Bottom
CG	Compacted Grade
C/L	Center Line Center Line
COL	Column
CONT	Continuous
(E)	Existing (Contractor to Field Verify)
ELEV	Elevation
FIN	Finish
FP	Fireplace
FPW	Full Penetration Weld
FFE	Finish Floor Elevation
FG	Finish Grade
FS	Finish Surface
HORZ	Horizontal
HSB	High Strength Bolts (indicates ASTM A325,UNO)
MAX	Maximum
M.B.	Machine Bolt(s) (indicates ASTM A307 fasteners)
MIN	Minimum
(N)	New
NG	Natural Grade
NIC	Not In Contract
NOM	Nominal
NTS	Not To Scale
O/C	On Center
P/L	Plate Line Property Line
PPW	Partial Penetration Weld
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
TofRF	Top of Roof

CONCRETE BLOCK MASONRY

1. Block shall be hollow concrete units conforming to ASTM C-90 Grade N., F'm= 1,500psi.

2. Walls below grade shall be grouted solid.

3. All cells containing reinforcing bars and all bond beams and lintels shall be grouted solid.

4. Cement shall be as called for in concrete notes.

5. Mortar shall conform to C.B.C. 2022, 2103.2, F'c= 2,500 psi at 28 days.

6. Grout shall conform to requirements of 2022, 2103.3, F'c= 2,500 psi at 28 days.

7. Reinforcing bars shall be as indicated in Reinforcing Steel Notes.

8. Provide a minimum of 1-½" grout between main reinforcing bars and masonry units.

9. Cells shall be in vertical alignment. Wall bars are to be set to align with cores containing dowels from footings.

10. Maximum grout pour height for low lift construction shall be four feet.

11. High lift grouted construction may be used if in conformance with C.B.C. and project specification.

12. Use care to prevent mortar and grout spillage on the face of masonry . Clean such spillage immediately. Repair any damages or interstices between block , and remove all stains at completion of work.

13. All isolated bolts embedded in masonry shall be grouted solidly in place with not less than 2" of grout surrounding each bolt.

14. Refer to Architectural drawings for surface texture, laying pattern, height of units and joint type.

REINFORCING STEEL
1. All reinforcing steels shall be new deformed bars conforming to ASTM A615 Grade 60 (U.N.O.)No. 3 ties and stirrups shall conform to ASTM A 615 Grade 40.

2. All mesh shall conform to ASTM A 185 and shall have a minimum side and end lap of 1 ½ mesh or 9", whichever is greater.

3. All detailing, fabrication and erection of reinforcing steel shall conform to the ACI Manual of Standard Practice for Detailing Reinforced Concrete Structures, ACI 318.

4. unless shown otherwise, reinforcing bars in continuous concrete beams and spandrels shall have top bars spliced at the midspan and bottom bars spliced over the supports.

5. Dowels from footings into walls and columns shall be the same size, spacing and numbers as the vertical reinforcing callled out in the walls and columns.

6. Reinforcing shall have minimum concrete cover as follows: (unless specifically detailed.)

7. Walls and columns
unformed surfaces exposed to earth.....3"
Formed surfaces exposed to weather or earth
No. 5 bars and smaller.....1-½"
No. 6 bars and larger.....2"
Formed surfaces not exposed to weather or earth;
No. 11 bars and smaller.....1"
No. 14 and No. 18 bars.....1-½"
Bush hammered surfaces.....2"

Beams
Surface poured against earth.....3"
All other surfaces.....2"

Slabs
Surfaces poured directly on earth.....2"
All other surfaces.....¾"

Columns
Interior.....1-½"

STRUCTURAL STEEL
1. All structural steel work shall be designed, fabricated and erected to AISC specifications and standard practices for buildings.
2. Structural steel plates and shapes shall conform to ASTM A-36.
3. Structural steel pipe shall conform to ASTM A-53, grade "B".
4. Structural steel tube shall conform to ASTM A-500, grade "B".
5. Paint one coat of rust-inhibitive paint, and two coats in exposed areas.
6. A Licensed fabricator approved by the building department shall furnish shop drawings for approval by Engineer prior to fabrication of structural steel members. Holes for bolts and/or rivets shall not be cut with a torch.
7. Bolt holes for steel connections shall be 1/16" larger in diameter than anchor bolts.
8. All connections not detailed on plans shall be detailed by steel fabricator and shall be submitted on shop drawings for approval by Engineer.
9. Bolts shall be ASTM a-307, U.N.O.

SYMBOLS:

(BL)
|-|-|-|= 4x BLOCKING
B.D.= BOTH DIRECTIONS
B.N. = BOUNDARY NAILING
C/J = CEILING JOIST
CANT. = CANTILEVER
C.J.P.= COMPLETE JOINT PENETRATION
C.B. = CEILING BEAM
C.C.= SIMPSON COLUMN CAP
C.B.= SIMPSON COLUMN BASE
CONT.= CONTINUOUS
C.T.P.= CONTINUOUS TOP PLATES
(IF SPLICE NEEDED USE MST48)
CS= CORNER STRAP, MSTC28
(E)= EXISTING
E.N. = EDGE NAILING
F/J = FLOOR JOIST
H.B.=HIGH BEAM
K.P. = KING POST
M.B= MACHINE BOLT
O.C. = ON CENTER
P = POST
PLM = PARALLAM
PA= POST ABOVE
PC= SIMPSON POST CAP
R/R = ROOF RAFTER
R/J = ROOF JOIST (FLAT)
(S) = MST60 STRAP
SIM. = SIMILAR
SA= STRAP ABOVE
SPC= STEEL PIPE COLUMN
TYP. = TYPICAL
U.P.A. = UNDER POST ABOVE
U.O.N. = UNLESS OTHERWISE NOTED
V.I.F.= VERIFY IN FIELD

SHEAR PANEL SCHEDULE

KEY	1	2	3
MATERIAL	15/32" PLYWD STRUCT. 1	15/32" PLYWD STRUCT. 1	15/32" PLYWD STRUCT. 1
No. OF PLIES	4 OR 5 PLY	4 OR 5 PLY	4 OR 5 PLY
EDGE NAIL	10d @ 6" O.C.	10d @ 4" O.C.	10d @ 3" O.C.
FIELD NAIL	10d @ 12" O.C.	10d @ 12" O.C.	10d @ 12" O.C.
SPLICE AT VERTICAL EDGES, MINIMUN	2x STUD	3x STUD	3x STUD
SPLICE AT HORIZONTAL EDGES, MINIMUN	2x BLOCKING	3x BLOCKING	3x BLOCKING
(MIN. U.O.N.) WALL BOUNDARY	4x	4x	4x
SILL PLATE	2x	3x	3x
SILL NAIL	16d @ 6" O.C.	3/8" x 8" LAG SCREWS @ 8" OC.	3/8" x 8" LAG SCREWS @ 8" OC.
ANCHOR BOLT	5/8" @ 16" O.C.	5/8" @ 16" O.C.	5/8" @ 16" O.C.
FRAMING ANCHOR	A35 @ 16" O.C.	A35 @ 16" O.C.	A35 @ 16" O.C.
ALLOW LOAD	≤ 255 LB/FT	≤ 380 LB/FT	≤ 500 LB/FT
HOLDOWN BETWEEN FLOORS	MST 48 OR MSTC 48B3	MST 60 OR MSTC 66B3	MST 72 OR MSTC 66B3
HOLDOWN TO FOUNDATIONS	HDU4	HDU5	HDU8
NAIL PATTERN	N / A	STAGGERED IN TWO LINES ALONG PANEL EDGES	STAGGERED IN TWO LINES ALONG PANEL EDGES

1- ALL NAILS SHALL BE COMMON NAILS.
2- SQUARE PLATE WASHER SHALL BE USED WITH ALL ANCHOR BOLTS & HOLD DOWN BOLTS.
FOR 5/8"dia BOLT ——— 3 x 3 x 1/4
FOR 3/4"dia BOLT ——— 3 x 3 x 1/4
FOR 7/8"dia BOLT ——— 3 x 3 x 5/16
FOR 1"dia BOLT ——— 3 1/2 x 3 1/2 x 3/8
3- ALL SHEAR PANELS SHALL BE FULL HEIGHT TO DIAPHRAGM.
4- SHEAR PANELING MAY BE INSTALLED ON EITHER SIDE OF THE WALL.
5- "APA" APPROVED "OSB" MAY BE USED IN LIEU OF PLYWOOD.
6- BOLT HOLES SHALL BE MAX. 1/16" OVERSIZED AT THE CONNECTOR OF HOLD DOWN TO POST.
7- ALL HOLD-DOWNS SHALL BE TORQUED AS REQUIRED BY MANUFACTURER. THEY SHALL ALSO BE RE-TIGHTENED.
8- MINIMUM LENGHT OF SHEAR PANELS ARE CALLED ON PLANS NEXT TO THEM (L=)
9- ALL NUT AND WASHER SHALL BE TIGHTENED ON EACH ANCHOR BOLT TO THE PLATE.
10- MINIMUM EDGE NAILING DISTANCE AT PANEL EDGES AND ENDS SHALL BE 1/2"
11- TWO LAYERS OF GRADE "D" PAPER ARE REQUIRED UNDER STUCCO APPLIED OVER WOOD SHEATHING (SHEAR WALLS). SEC.2506.4 CBC.

STRUCTURAL OBSERVATION

1- Structural observation is required per city of Palos Verdes Estates Ordinance, at different construction stages for structural systems, by the Engineer of the record or his representative.

2- Observation is required for at least:
a) Foundation trench widths, reinforcement, anchor bolts, hold-downs before Foundation is poured.
b) Retaining walls, size & reinforcement.
c) All framing elements and details
d) All shear elements and details.
The contractor must comply with the reported deficiencies and get a written report for compliance.

3- Structural observation is the visual observation of elements and connections of structural system at significant construction stages for general conformance to approved plans and specifications.

4- Structural observation does not waive the responsibility for the inspections required of the Building Inspector or Deputy Inspector.

5- The Engineer or Architect of record shall develop all changes relating to the structural systems. The Building Department must review and approve plans and specifications before construction, for all the revisions.

6- Contractor shall give minimum 4 buisness days notice prior to structural observation to the Engineer of the record.

DESIGN CRITERIA

GRAVITY:

ROOF: DL 15 psf, LL 20 psf — 35 psf
FLOOR: DL 12 psf, LL 40 psf — 52 psf
DECKS: DL 25 psf, LL 60 psf — 85 psf

SEISMIC:

- RISK CATEGORY II
-Ss = 1.827 g
-S1 = 0.664 g
-SITE CLASS : D-STIFF SOIL
- SIMPLIFIED DESIGN METHOD
V = CSW
-CS = SDS / (R/I)
-SDS = 1.461
-R = 6.5
- I = 1.0
-CS = 1.461 / (6.5/1.0) = 0.22
- ρ= 1.3
V = 0.22 x 1.3 x 1/1.4 = 0.21W

WIND:

ASCE 7_16
Ps = λ Kzt Ips 30
-λ = 1.35
-Kzt = 1.0
- Ps30 = 14.4 psf
- Ps = 1.35x1.0x1.0x14.4 = 20 psf
- Cat. C
- Wind load = 94 mph

PARSA & ASSOCIATES engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

STAMP:
REGISTERED PROFESSIONAL ENGINEER ANDY PARSA No. C38604 EXP. 3-31-2025 CIVIL STATE OF CALIFORNIA

PROJECT # 23/18
DRAWN BY: B.F
S1

FOUNDATION NOTES:

1. All anchor bolts (A.B.'s) shall be 5/8" dia. x 12" long "L" bolts.

2. All A.B.'s shall be spaced equally within a shear panel, no closer than 9" and no further than 12" from panel end.

3. All footings shall have A.B.'s at 4'-0" o.c. minimum. Each wall panel shall have minimum 2-A.B.'s per panel.

4. All ftgs. shall be embedded min. 36 inches into competent terrace & at least 24 inches below lowest adjacent garde approved by soil Engineer. See sht. 16 of Soil's report.

5. Slab on grade shall be min. 6" thk. w/ #4 @ 12" o.c. at slab center over vapor retarder & capillary break, per shts 20 & 21 of Soil's Report and Fig. 3

6. Install templates for all A.B.'s and hold-downs before pouring concrete.

7. Minimum sill bolt embedment shall be 7" measured from the top of the lower pour (between slab and footing in double pour cases).

8. Top of foundation wall to be minimum 8 inches above finish grades at all points.

9. Place A.B.'s @ 16" o.c. at all shear panel sills, min. U.O.N.

10. Place 4-#5 horizontal bar { 2-#5 top, 2-#5 bottom } At all continuous Ftg.

11. All concrete shall be 5,000 psi. at 28 days. F'c = 5,000 psi at grade beam W/ Deputy Inspector, per Soil's Report, page 23 & 24.

12. For locations of ret.wls/ftg, see arch/site plans center.

13. All foundation, soil, compaction, grading, drainage, flatwork, etc, work shall be in compliance with Soil's report AGI # 1674-05, 1674-04 and their latest report (verify W/ AGI) and report by T.I.N File No. 242764, dated Feb. 6, 2024 . an approved copy of such report shall be considered as an indispensable part of plans, an a copy present at site at all times

14. For reinf. splice, ties. etc. see detail (95/S8)

15. For ftg/wall intersections, see detail . (82/S8)

16. For all dimensions, hold-down/ foundation location, refer to architectural plans.

17. All clearances, dimensions, must be verified in field in field and against architectural plans before Foundation pour.

18. For concrete steps on grade, see (96/S8)

19. Where stepped foundation required, see (97/S9)

20. Seismic coeff. used are, per Soil's report. Fa= 1.2 & Sds= 1.461g

21. All Hardy frame panel concrete templates must be installed per manufacturer's instructions.Verify all height/ width clearance/ curb height/ widths before installation.

22. Provide survey stakes prior to foundation inspection to verify lot lines.

23. All holdown anchors shall be tied in place prior to calling foundation inspection.

24. "Hold-downs shall be re-tightened just prior to covering the wall framing"

25. All slab rebars shall be constructed, per sht's.20 & 21 Soil's report.

26. Where adjacent ret. walls ftgs. too close to building ftgs. they may be lowered & poured monolithic, see (87/S8)

27. Where concrete stem wall exceeds 2'-6" in height, place #5 @ 16" o.c. horiz./vert. at wall center.

28. Allowable Soil bearing pressure= 2,500 psf for Foundations into approved Soil.

29. Whenever the Soil report states "should" the meaning of this word is to be "shall" for applying any recommendation of the report. The Soil Engineer shall approve & stamp the Foundation plan.

30. Provide min. edge distance of 1-7/8 for 5/8"d A.B'S (CBC. 1806.6)

31. The location and the elevation of the Foundation forms shall be certified by a licensed surveyor on a form provided by the City before approval by the Palos Verdes Estates building & Safety Department.

32. Plans shall be signed and wet stamped by Soils Engineer and or/Geologist when required indicating that plans are in compliance with approved report on file with the city of P.V.E & A-33 of Calif.. building code.

33. Foundation excavations shall be inspected and approved by both the Geological and Geotechnical Consultants prior to placement of steel or concrete. A memo igned by both consultants indicating that this inspection and approval has been completed shall be available at the job site for the building inspector at the foundation inspector.

34. A properly sized nut and washer shall be tightened on each A.B to the plate per sec. 1806.6 CBC.

35. Pre-saturation memo from Soils Eng.. is required prior to pre-slab inspector.

36. All shear hardware and A.B's with non-standard spacing are to be fixed in place for the foundation inspector.

37. Use type I or II portland cement for all concrete, per Soil's Report.

38. Where continuous footing needs to be deepened to reach approved soil, see detail (101/S9) It must be approved by Soil Eng. before application. See Soil's Report.

39. Contractor must verify location of all existing underground utility/sewer/ etc./ and any other existing items, and protect them as required before ground and foundation work begins. Contact project architect immediately and get instructions before proceeding with the project.

40. Where there are surcharged retaining walls (verify in field), contact project Engineer before any foundation work, grading or forming starts.

41. Retaining walls at sloping condition shall have min. 24" free board for slough condition.

42. All retaining walls must be backfilled/drained per Soil's report. See page 5 & 6, File 1674-05, 01/27/23

43. All retaining walls shall be drained, waterproofed, backfilled & constructed per soil's repot page 25 and Fig. 4.

44. All exterior flat works must be constructed per soil's report Sht. 20 & 21.

45. Final as-graded report will be required at Ftg./slab inspection. Pre-saturation memo from Soil Engineer is required prior to pre-slab inspection.

46. Where A.B's missing, they may be replaced by same dia. bolt, min. 4" embed in Simp. SET-XP epoxy, ICC ERS-2508 with Dep. Inspector.

47. Fasteners in pressure-treated and fire-retardant, treated wood shall be of hot-dipped, zinc-coated galvanized steel, stainless steel, silicon bronze or copper per 402.1.1 CRC

48. Provide H/3 (min 10 Feet, max 40') horizontal confinement at bottom of footings to slopes per Soil's Report.

49. Pre-demo\grading meeting is required with City Building official, G.C., owner or his agent, Soil Eng., Geologist and Grading Contractor prior to any work commencing on job.

50. A survey shall be provided by a licensed surveyor on structures which define property lines, setbacks, designated park land or street right-of-way.

51. Contractor must provide methods for a capillary break in the slab prior to inspection per Sht. 20 & 21 of Soil's Report and Figure 3.

52. All foundation shall bear upon like material

53. Provide naturally durable wood or wood that is preservative-treated at locations per CRC 317.1

ADDITIONAL NOTES:

1- ALL PARALLAMS/TIMBERSTRANDS:
 a) ARE TO BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR
 b) MANUF. LOGO TO BE IMPRINTED ON THE SIDE OF THE BEAM.
 c) BEAMS TO BE LOAD TESTED BY MANUF. AND TEST RESULTS SUBMITTED TO THE BUILDING INSPECTOR.
 d) LVL TO BE E= 2.1x10^6 ICC ES ESR - 1387, 3,100 PSI
2- ALL TIMBERSTRANDS, SHALL BE 1.7x10^6 PSI=E & BE IN COMPLIANCE ICCES ESR - 1387 CCMC 12627 - R
3- PROVIDE DOUBLE F/JS (U.O.N) UNDER ALL PARALLEL PARTITIONS.
4- ALL NAILING SHALL BE PER TABLE 230 4.9.1 CBC
5- CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED BY THE CITY OF PALOS VERDES E. WHERE /IF REQ'D.
6- ROOFING MATERIAL (TILES) SHALL NOT EXCEED 8 PS.F
7- ALL PARALLAMS SHALL HAVE MIN. E= 2.0x10^{6}PSI/ICC # ER- 4979, NER -481
8- FINISHED RIDGE HEIGHT SHALL NOT EXCEED THE ELEVATION SHOWN ON THE PLOT PLAN. DETAIL THE THICKNESS AND DIMENSION OF THE ROOFING MATERIAL AT THE RIDGE AND CROSS REFERENCE ON THE ROOF FRAMING PLAN. (ALLOW FOR THE THICKNESS OF ROOFING MATERIALS.) THE RIDGE HEIGHT SHALL BE CERTIFIED BY A LICENSED SURVEYOR ON A FORM PROVIDED BY THE CITY PRIOR TO APPROVAL OF THE ROOF FRAMING/SHEATHING BY THE PALOS VERDES ESTATES BUILDING AND SAFETY DEPARTMENT.
9- ALL 2X LUMBER SHALL BE # 2 OF & ALL OTHERS #1 DF. IN COMPLIANCE W/ GRADING RULES AGENCY WCLIB/ WWPA
10- IF/WHERE STUD HEIGHTS AT NON-BEARING RAKE WALLS EXCEED 14', USE 3X4@16"OC.
11- FABRICATION OF STRUCTURAL STEEL SHALL BE BY AN APPROVED FABRICATOR OR FABRICATION SHALL BE CONTINUOUSLY INSPECTED BY A REGISTERED SPECIAL INSPECTOR.
12- ALL WORK SHALL CONFORM TO CBC 2022.
13- SAWN LUMBER SHALL HAVE MAXIMUM 19% MOISTURE CONTENT.
14- CITY SHALL BE NOTIFIED IF PROJECT ARCH./ENG. CHANGES IN WRITING. THE PROFESSIONAL OF RECORD SHALL REVIEW AND COORDINATE ALL SUBMITTED DOCUMENTS PREPARED BY OTTERS, INCLUDING DEFERRED SUBMITTAL ITEMS. THE PROFESSIONAL OF RECORD SHALL SUBMIT DEFERRED DOCUMENTS TO THE CITY IN A TIMELY MANNER.
15- WHEN SUBMITTED BY THE PROFESSIONAL OF RECORD, OTHERS' DOCUMENTS SHALL BEAR A NOTATION INDICATING THE DOCUMENTS HAVE BEEN REVIEWED BY THE PROFESSIONAL OF RECORD HAND HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THIS NEEDS TO BE ON PLANS, NEXT TO THE OTHERS ITEM SUBMITTED 'BY OTHERS'.
16- TJI JOIST SHALL BE BY WEYERHAEUSER, IDAHO, ICC ESR-1153. ALL TJI MUST BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR. TRUSSES SHALL BE LEGIBLY BRANDED, MARKED & PERMANENTLY IDENTIFIED WITH NAME OF MANUF.
17- ALL SPECIAL INSPECTORS SHALL BE REGISTERED WITH THE CITY OF PALOS VERDES. PRIOR TO PERFORMING ANY INSPECTIONS AND SHALL ALSO NOTIFY THE BUILDING OFFICIAL OF EACH JOB LOCATION THERE AFTER.

DESIGN CRITERIA

GRAVITY:

ROOF:	DL	15 psf
	LL	20 psf
		35 psf
FLOOR:	DL	12 psf
	LL	40 psf
		52 psf
DECKS:	DL	25 psf
	LL	60 psf
		85 psf

SEISMIC:

- RISK CATEGORY II
-Ss = 1.827 g
-S1 = 0.664 g
-SITE CLASS : D-STIFF SOIL
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V = CSW
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ASCE 7_16
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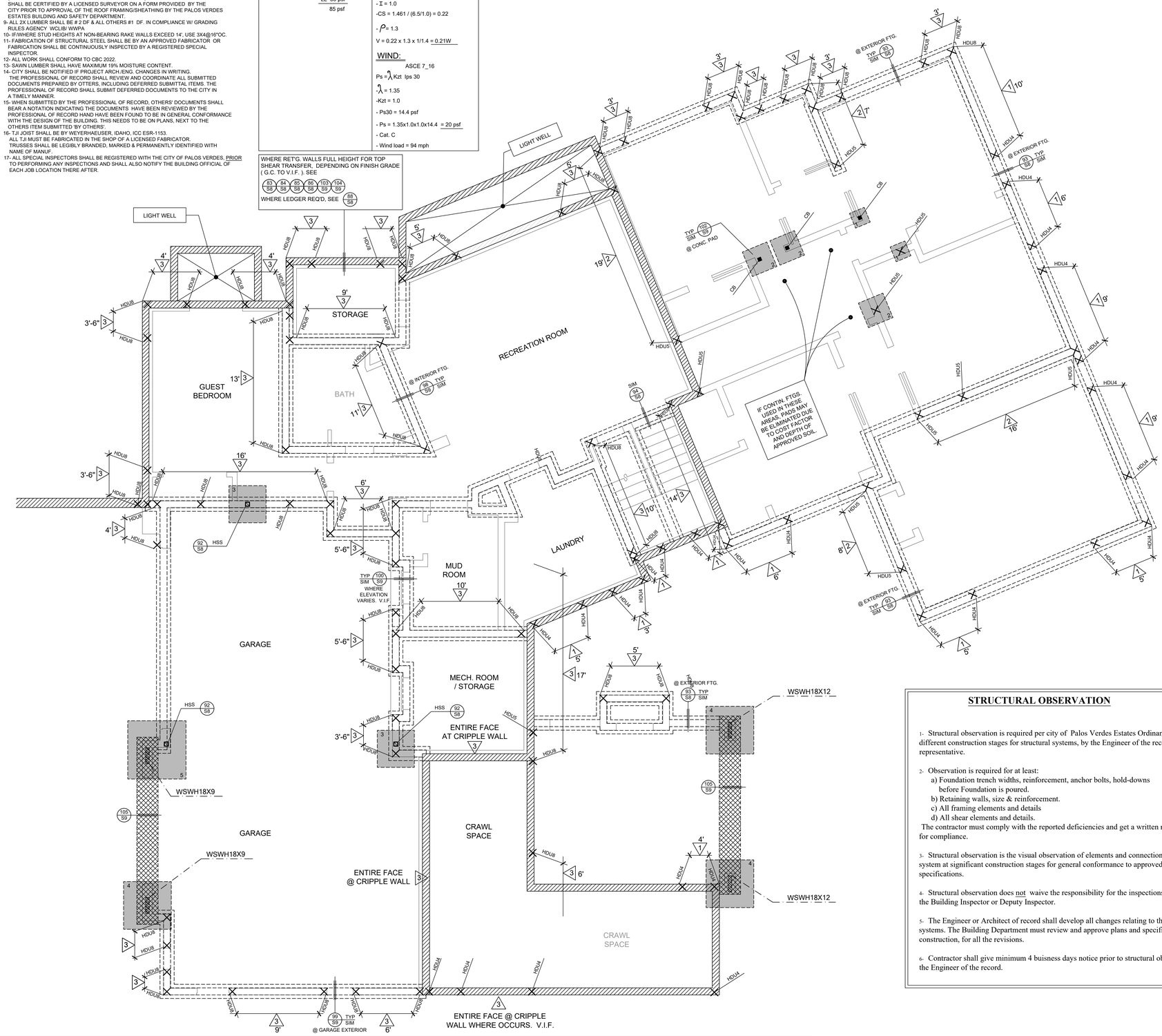
-λ = 1.35
-Kzt = 1.0
- Ps30 = 14.4 psf
- Ps = 1.35x1.0x1.0x14.4 = 20 psf
- Cat. C
- Wind load = 94 mph

WHERE RET'G. WALLS FULL HEIGHT FOR TOP SHEAR TRANSFER, DEPENDING ON FINISH GRADE (G.C. TO V.I.F.). SEE (83/S8) (84/S8) (85/S8) (86/S8) (103/S9) (104/S9)
WHERE LEDGER REQ'D, SEE (98/S8)

NOTES:

- ALL FOUNDATION WORK MUST BE IN COMPLIANCE W/ REPORTS BY AGI AND T.I.N. (TONY LEE) AND APPROVED BY THEM.
- VERIFY ALL CONDITIONS, APPROVED SOIL DEPTH, REQUIRED CLEARANCES, ETC. BEFORE GRADING STARTS AND STEEL FABRICATED.



STRUCTURAL OBSERVATION

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2- Observation is required for at least:
 a) Foundation trench widths, reinforcement, anchor bolts, hold-downs before Foundation is poured.
 b) Retaining walls, size & reinforcement.
 c) All framing elements and details
 d) All shear elements and details.
The contractor must comply with the reported deficiencies and get a written report for compliance.

3- Structural observation is the visual observation of elements and connections of structural system at significant construction stages for general conformance to approved plans and specifications.

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6- Contractor shall give minimum 4 buisness days notice prior to structural observation to the Engineer of the record.

LEGEND

- 1 = 1'-6" Square Concrete Pad, 14" thick w/ #5 @ 6" O.C. Horizontal Bottom, Each Way
- 2 = 2'-6" Square Concrete Pad, 14" thick w/ #5 @ 6" O.C. Horizontal Bottom, Each Way
- 3 = 3'-6" Square Concrete Pad, 14" thick w/ #5 @ 6" O.C. Horizontal Bottom, Each Way
- 4 = 4'-6" Square Concrete Pad, 14" thick w/ #5 @ 6" O.C. Horizontal Bottom, Each Way
- 5 = 5'-6" Square Concrete Pad, 14" thick w/ #5 @ 6" O.C. Horizontal Bottom, Each Way
- (105/S9) = 24" Square Conc. Grade Beam With { 4 - #5 Horizontal. Top} { 4- #5 Horizontal bottom} & #3 ties @ 9"oc f'c= 5,000 PSI W/ Dep. Inspect.
- = 16" Min. Wide Continuous Footing with 2 - #5 horizontal top and 2 - #5 horizontal bottom.
- = Non surcharged, level granular backfill Retaining walls. G.C. to V.I.F. before grading begins. If any surcharge condition or slope behind wall, consult with Parsa & Assoc. for further instructions.
- (90/S8) Toe under
- (91/S8) Toe out
- WSWH1 = WSWH Simpson Strong Walls installed per Manuf. instruction, Top flush with drag member (see plans) & bottom directly on concrete and not on mud-sill.
- (43/S8) For flush condition, following options may be considered: a) Increase concrete curb height
- (44/S8) SIM b) Shave top per Manuf. instructions. c) Shave bottom of drag beam.
- (56/S7) (58/S7) Hold-down w/ 4x Min. (U.O.N) at both ends of shear panels. See S.W. Sch. for size.
- HSS = 4 ½ X 4 ½ X ¼ Hollow Structural Steel Tube. A500B (3 -Total)

FOUNDATION PLAN

1/4" = 1'-0"

PA#: 23135

PARSA & ASSOCIATES engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

STAMP: REGISTERED PROFESSIONAL ENGINEER ABBAS PARSA No. C38604 EXP. 3-31-2025 CIVIL STATE OF CALIFORNIA

PROJECT # 23135
DRAWN BY: B.F
S2

STRUCTURAL NOTES / TYPICAL / SIMILAR ALL LEVELS-EVERYWHERE UON.

1- FOR ALL EXPOSED ELEMENTS, CONDITIONS - ALSO REFER TO ARCH PLANS.

2- VERIFY ALL CLEARANCES, HEIGHT / WIDTH / LENGTH LIMITS, ETC. BEFORE GRADING BEGINS.

3- (1/S5) OR (2/S5) AT KING POST (K.P.)

4- (3/S5) AT END OF HIP / VALLEY BEAMS TO EXTERIOR WALLS

5- (4/S5) AT ROOF BEAM CONNECTION

6- (8/S5) SHAVE BEAM END WHERE REQUIRED TO FIT WITHIN ROOF FRAMING SPACE

7- (31/S6) (32/S6) AT INTERIOR NON-BEARING PARTITION WALL

8- (12/S5) (13/S5) SPLICE LOW ROOF TO ADJACENT UPPER WALL
INSTALL MIN. (2) AT WALL/CRIPPLE WALL - SEE PLANS

9- (54/S7) ROOF/FLOOR SHEATHING - 3/4" THICK MAY BE USED AT DECKS IF REQUIRED FOR DRAINAGE SLOPE

10- (18/S5) PLACE RIPPED ON TOP OF TJI WHERE NEEDED FOR DRAINAGE SLOPE MIN. 1/2": 1'-0" - SEE ARCH. PLANS

11- (19/S5) BEAM MAY BE PUSHED UP INTO RR SPACE WHERE REQUIRED FOR CLEARANCE BELOW.

12- (22/S5) TOP PLATE SPLICE

13- (27/S6) (28/S6) (35/S6) AT WOOD POST / BEAM CONNECTION

14- (37/S6) (38/S6) (39/S6) RELATIVE WOOD POST/BEAM POSITION-V.I.F.

15- (34/S6) AT VENEER TO STUD WALL

16- (29/S6) JOIST/BEAM - BEAM/BEAM CONNECTION - U.O.N.

17- (36/S6) TJI CONNECTORS

RR = 2 x 10 @ 16" O.C. ROOF RAFTERS

2-RR = 2 - 2 x 10 @ 16" O.C. DOUBLE ROOF RAFTER

(R) = 4 x 10 SLOPED RAFTER W/ B.N. ON TOP

(A) = 14" TJI 360 @ 16" O.C.

(B) = 14" TJI 560 @ 16" O.C.

(C) = 2 - 14" TJI 560 @ 16" O.C. DOUBLE JST.

(D) = 11 7/8" TJI 230 @ 16" O.C.
(18/S5) PLACE RIPPED BOARDS ON TOP FOR DRAINAGE SLOPE (MINIMUM ½" : 1'-0"). SEE ARCH. PLANS.)

NOTE: ALL LVL SHALL BE 3,100 PSI, 2.1 E.

(P3) = 3 ½ x 14 LVL

(P5) = 5 ¼ x 14 LVL

(P7) = 7 x 14 LVL

(P4) = 3 ½ x 11 7/8 LVL

(P6) = 7 x 11 7/8 LVL

WSWH = WSWH SIMPSON STRONG WALLS INSTALLED PER MANUF. INSTRUCTION, TOP FLUSH WITH DRAG MEMBER (SEE PLANS) & BOTTOM DIRECTLY ON CONCRETE AND NOT ON MUD-SILL.

(43/S6)
(44/S6) SIM

FOR FLUSH CONDITION, FOLLOWING OPTIONS MAY BE CONSIDERED:
A) INCREASE CONCRETE CURB HEIGHT
B) SHAVE TOP PER MANUF. INSTRUCTIONS.
C) SHAVE BOTTOM OF DRAG BEAM.

(55/S7) (57/S7) (59/S7) TIE-DOWN STRAP W/ 4x POST MIN. (U.O.N) AT BOTH ENDS OF SHEAR PANELS. SEE S.W. SCH. FOR SIZE. WHEN OVER A BEAM, DO NOT USE AND BEND MST STRAP. USE PRE-BENT MSTC-B3

(56/S7) (58/S7) HOLD DOWN W/ 4 X POST MIN. (U.O.N. AT BOTH ENDS OF SHEAR PANELS. SEE S.W. SCH. FOR SIZE.

HSS = 4 ½ X 4 ½ X ¼ HOLLOW STRUCTURAL STEEL TUBE. A500B (3 -TOTAL)

ADDITIONAL NOTES:

1- ALL PARALLAMS/TIMBERSTRANDS:
a) ARE TO BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR
b) MANUF. LOGO TO BE IMPRINTED ON THE SIDE OF THE BEAM.
c) BEAMS TO BE LOAD TESTED BY MANUF. AND TEST RESULTS SUBMITTED TO THE BUILDING INSPECTOR.
d) LVL TO BE E= 2.1x10^6 ICC ES ESR - 1387, 3,100 PSI
2- ALL TIMBERSTRANDS, SHALL BE 1.7x10^6 PSI=E & BE IN COMPLIANCE ICCES ESR - 1387 CCMC 12627 - R
3- PROVIDE DOUBLE FJ/S (U.O.N) UNDER ALL PARALLEL PARTITIONS.
4- ALL NAILING SHALL BE PER TABLE 2304.9.1 CBC
5- CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED BY THE CITY OF PALOS VERDES E. WHERE /IF REQ'D.
6- ROOFING MATERIAL (TILES) SHALL NOT EXCEED 8 PS.F
7- ALL PARALLAMS SHALL HAVE MIN. E= 2.0x10^6PSI/ICC # ER- 4979, NER -481
8- FINISHED RIDGE HEIGHT SHALL NOT EXCEED THE ELEVATION SHOWN ON THE PLOT PLAN, DETAIL THE THICKNESS AND DIMENSION OF THE ROOFING MATERIAL AT THE RIDGE AND CROSS REFERENCE ON THE ROOF FRAMING PLAN. (ALLOW FOR THE THICKNESS OF ROOFING MATERIALS.) THE RIDGE HEIGHT SHALL BE CERTIFIED BY A LICENSED SURVEYOR ON A FORM PROVIDED BY THE CITY PRIOR TO APPROVAL OF THE ROOF FRAMING/SHEATHING BY THE PALOS VERDES ESTATES BUILDING AND SAFETY DEPARTMENT.
9- ALL 2X LUMBER SHALL BE # 2 DF & ALL OTHERS #1 DF. IN COMPLIANCE W/ GRADING RULES AGENCY WCLIB/ WWPA
10- IF/WHERE STUD HEIGHTS AT NON-BEARING RAKE WALLS EXCEED 14', USE 3X4@16"OC.
11- FABRICATION OF STRUCTURAL STEEL SHALL BE BY AN APPROVED FABRICATOR OR FABRICATION SHALL BE CONTINUOUSLY INSPECTED BY A REGISTERED SPECIAL INSPECTOR.
12- ALL WORK SHALL CONFORM TO CBC 2022.
13- SAWN LUMBER SHALL HAVE MAXIMUM 19% MOISTURE CONTENT.
14- CITY SHALL BE NOTIFIED IF PROJECT ARCH./ENG. CHANGES IN WRITING. THE PROFESSIONAL OF RECORD SHALL REVIEW AND COORDINATE ALL SUBMITTED DOCUMENTS PREPARED BY OTTERS, INCLUDING DEFERRED SUBMITTAL ITEMS. THE PROFESSIONAL OF RECORD SHALL SUBMIT DEFERRED DOCUMENTS TO THE CITY IN A TIMELY MANNER.
15- WHEN SUBMITTED BY THE PROFESSIONAL OF RECORD, OTHERS' DOCUMENTS SHALL BEAR A NOTATION INDICATING THE DOCUMENTS HAVE BEEN REVIEWED BY THE PROFESSIONAL OF RECORD HAND HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THIS NEEDS TO BE ON PLANS, NEXT TO THE OTHERS ITEM SUBMITTED 'BY OTHERS'.
16- TJI JOIST SHALL BE BY WEYERHAEUSER, IDAHO, ICC ESR-1153. ALL TJI MUST BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR. TRUSSES SHALL BE LEGIBLY BRANDED, MARKED & PERMANENTLY IDENTIFIED WITH NAME OF MANUF.
17- ALL SPECIAL INSPECTORS SHALL BE REGISTERED WITH THE CITY OF PALOS VERDES, PRIOR TO PERFORMING ANY INSPECTIONS AND SHALL ALSO NOTIFY THE BUILDING OFFICIAL OF EACH JOB LOCATION THERE AFTER.

SYMBOLS:

(BL)
|-|-|-|-|= 4x BLOCKING
B.D.= BOTH DIRECTIONS
B.N. = BOUNDARY NAILING
C/J = CEILING JOIST
CANT. = CANTILEVER
C.J.P.= COMPLETE JOINT PENETRATION
C.B. = CEILING BEAM
C.C.= SIMPSON COLUMN CAP
C.B.= SIMPSON COLUMN BASE
CONT.= CONTINUOUS
C.T.P.= CONTINUOUS TOP PLATES (IF SPLICE NEEDED USE MST48)
CS= CORNER STRAP, MSTC28
(E)= EXISTING
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H.B.=HIGH BEAM
K.P. = KING POST
M.B= MACHINE BOLT
O.C. = ON CENTER
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PLM = PARALLAM
PA= POST ABOVE
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R/R = ROOF RAFTER
R/J = ROOF JOIST (FLAT)
(S) = MST60 STRAP
SIM. = SIMILAR
SA= STRAP ABOVE
SPC= STEEL PIPE COLUMN
TYP. = TYPICAL
U.P.A. = UNDER POST ABOVE
U.O.N. = UNLESS OTHERWISE NOTED
V.I.F.= VERIFY IN FIELD

DESIGN CRITERIA

GRAVITY:

ROOF:	DL 15 psf LL 20 psf	35 psf
FLOOR:	DL 12 psf LL 40 psf	52 psf
DECKS:	DL 25 psf LL 60 psf	85 psf

SEISMIC:

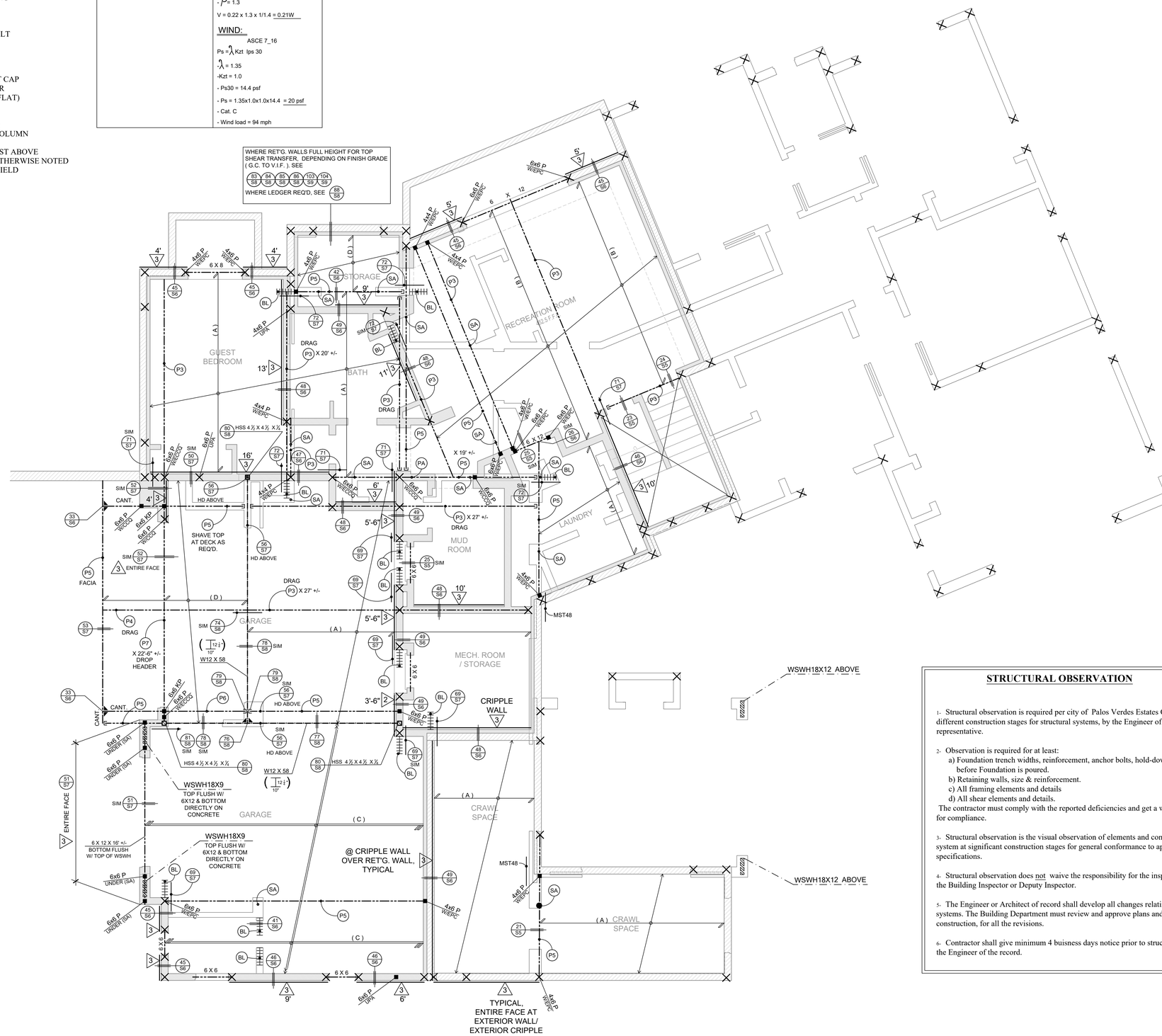
- RISK CATEGORY II
-Ss = 1.827 g
-S1 = 0.664 g
-SITE CLASS : D-STIFF SOIL
- SIMPLIFIED DESIGN METHOD
V = CSW
-CS = SDS / (R/I)
-SDS = 1.461
-R = 6.5
- I = 1.0
-CS = 1.461 / (6.5/1.0) = 0.22
- ρ= 1.3
V = 0.22 x 1.3 x 1/1.4 = 0.21W

WIND:

ASCE 7_16
Ps = λ Kzt Ips 30
-λ = 1.35
-Kzt = 1.0
- Ps30 = 14.4 psf
- Ps = 1.35x1.0x1.0x14.4 = 20 psf
- Cat. C
- Wind load = 94 mph

CEIL'G JST. TABLE

2x6 @ 16" OC. ---------- MAX ALLOW CLEAR SPAN ----- 12'-0"
2x8 @ 16" OC. ---------- MAX ALLOW CLEAR SPAN ----- 18'-0"
2x10 @ 16" OC. ---------- MAX ALLOW CLEAR SPAN ----- 22'-0"



STRUCTURAL OBSERVATION

1- Structural observation is required per city of Palos Verdes Estates Ordinance, at different construction stages for structural systems, by the Engineer of the record or his representative.

2- Observation is required for at least:
a) Foundation trench widths, reinforcement, anchor bolts, hold-downs before Foundation is poured.
b) Retaining walls, size & reinforcement.
c) All framing elements and details
d) All shear elements and details.
The contractor must comply with the reported deficiencies and get a written report for compliance.

3- Structural observation is the visual observation of elements and connections of structural system at significant construction stages for general conformance to approved plans and specifications.

4- Structural observation does not waive the responsibility for the inspections required of the Building Inspector or Deputy Inspector.

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FIRST FLOOR FRAMING PLAN

1/4" = 1'-0"

PA#: 23135

PARSA & ASSOCIATES engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769
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STAMP:
REGISTERED PROFESSIONAL ENGINEER
ABDY PARSA
No. C38604
EXP. 3-31-2025
CIVIL
STATE OF CALIFORNIA

PROJECT # 23135
DRAWN BY: B.F
S3

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(R) = 4 x 10 SLOPED RAFTER W/ B.N. ON TOP

(A) = 14" TJI 360 @ 16" O.C.

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	LL	20 psf
		35 psf
FLOOR:	DL	12 psf
	LL	40 psf
		52 psf
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SEISMIC:

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-S1 = 0.664 g
-SITE CLASS : D-STIFF SOIL
- SIMPLIFIED DESIGN METHOD

V = CSW
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-SDS = 1.461
-R = 6.5
- I = 1.0
-CS = 1.461 / (6.5/1.0) = 0.22

- ρ= 1.3

V = 0.22 x 1.3 x 1/1.4 = 0.21W

WIND:

ASCE 7_16
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-λ = 1.35
-Kzt = 1.0
- Ps30 = 14.4 psf
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- Wind load = 94 mph

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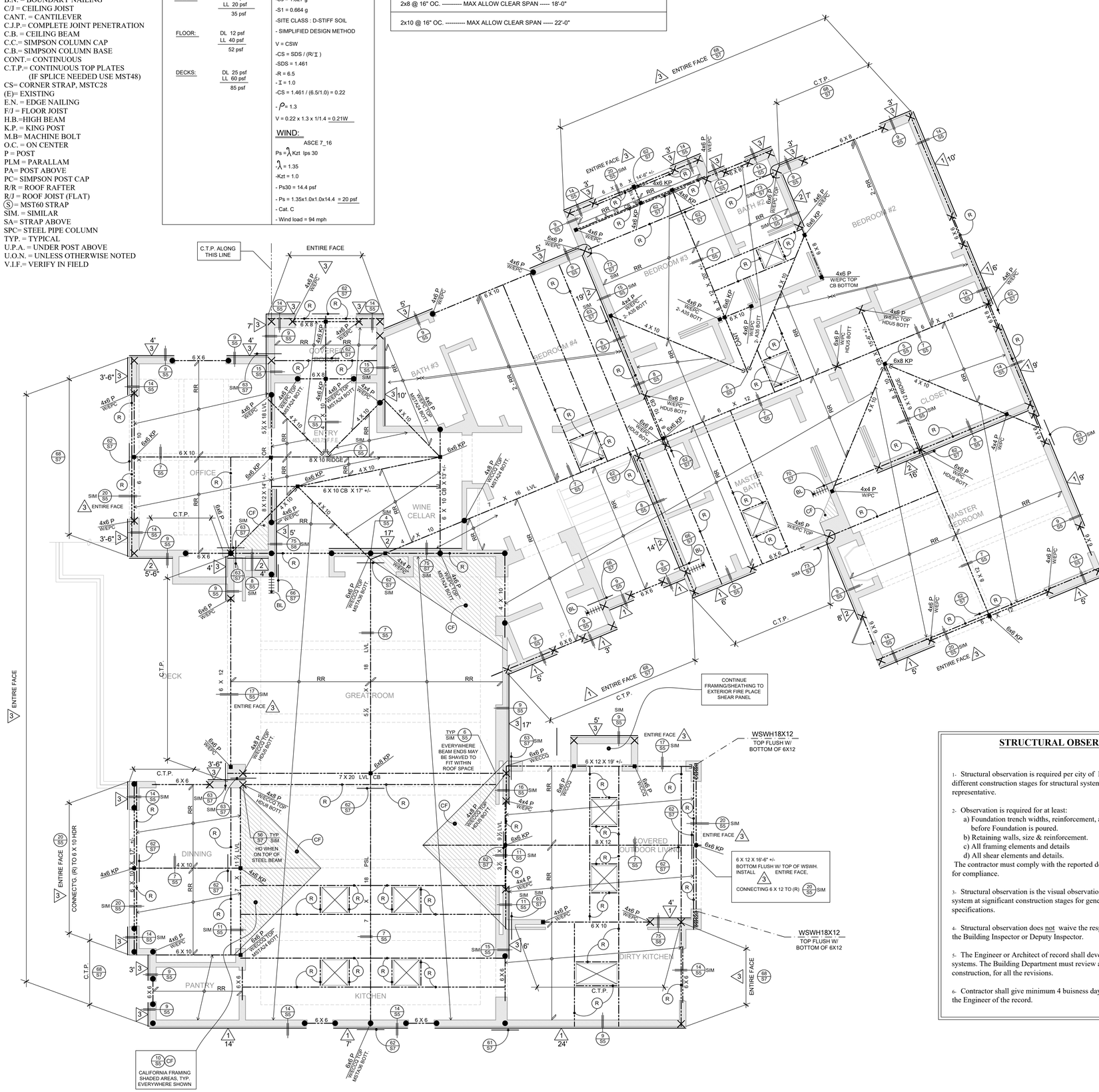

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ROOF FRAMING PLAN

1/4" = 1'-0"

PA#: 23135

PARSA & ASSOCIATES
engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769
2812 VIA CAMPESINA
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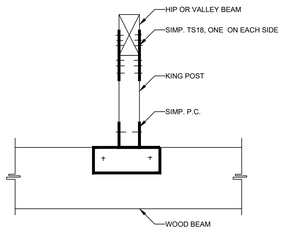
STAMP: REGISTERED PROFESSIONAL ENGINEER ABDY PARSA No. C38604 EXP. 3-31-2025 CIVIL STATE OF CALIFORNIA

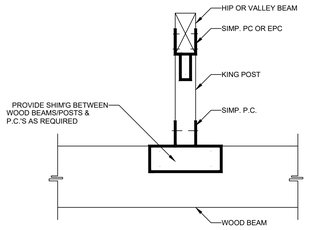
PROJECT # 23135

DRAWN BY: B.F

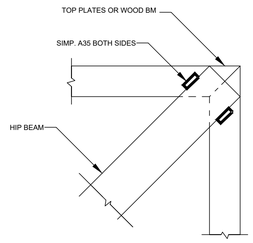
S4



ROOF FRAMING 1

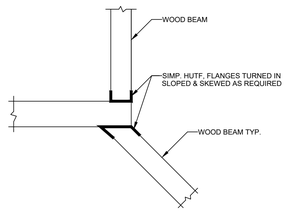


ROOF FRAMING 2

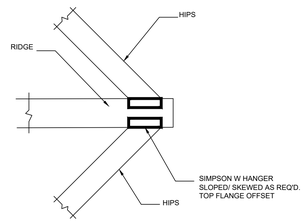


(TOP VIEW)

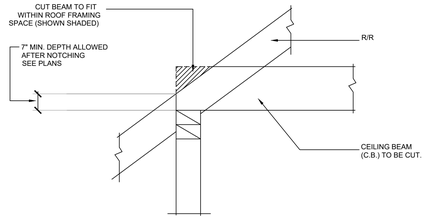
ROOF FRAMING 3



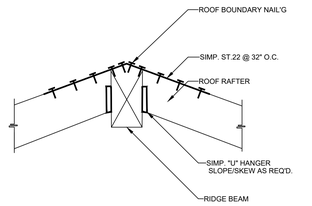
ROOF FRAMING 4



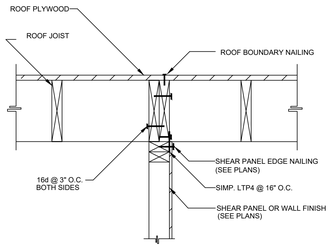
RIDGE/HIP CONNECTION 5



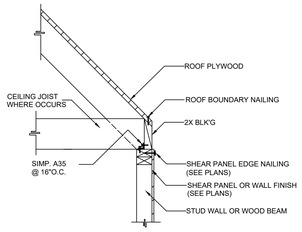
CEILING BEAM END CUT 6



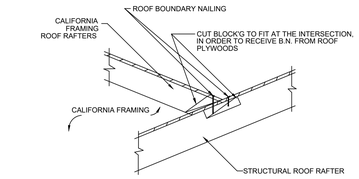
ROOF FRAMING 7



ROOF SHEAR TRANSFER 8

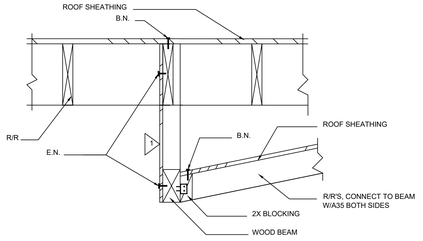


ROOF SHEAR TRANSFER 9

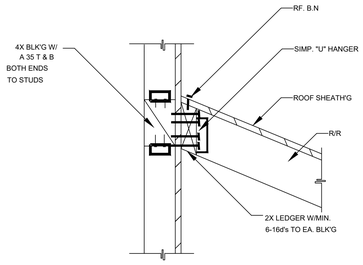


OTHER CALIFORNIA FRAMING CONNECTION SHALL HAVE SIMILAR CONNECTION AT INTERSECTION

ROOF SHEAR TRANSFER 10



ROOF SHEAR TRANSFER 11



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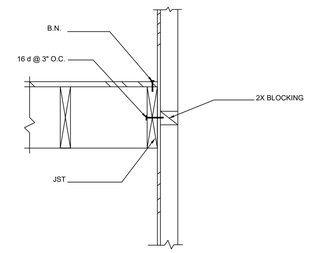
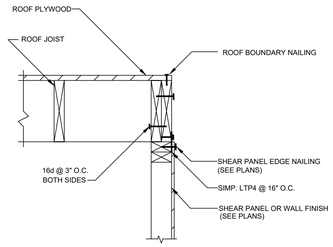
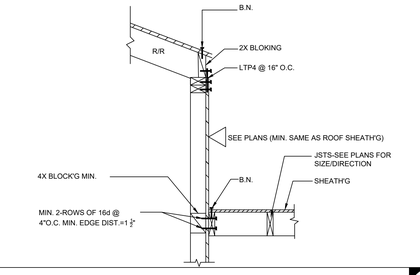


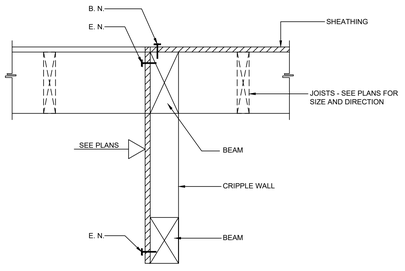
ROOF SHEAR TRANSFER 13



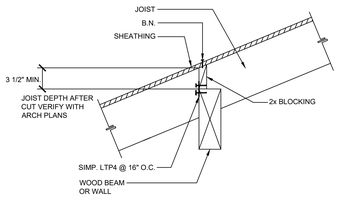
ROOF SHEAR TRANSFER 14



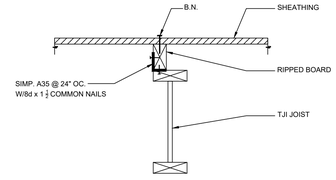
ROOF SHEAR TRANSFER 15



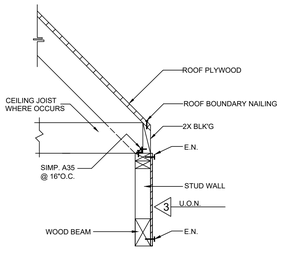
SHEAR TRANSFER 20



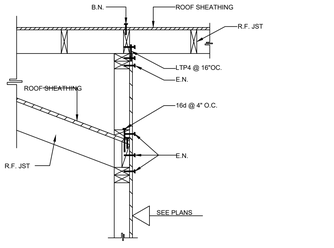
ROOF SHEAR TRANSFER 19



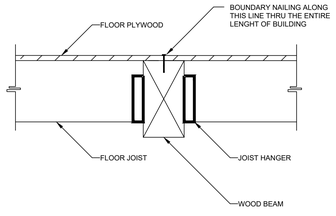
ROOF SHEAR 18



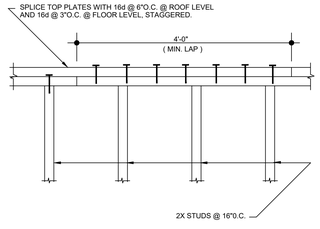
ROOF SHEAR TRANSFER 17



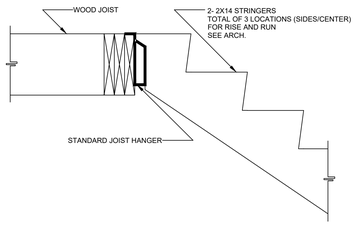
ROOF SHEAR TRANSFER 16



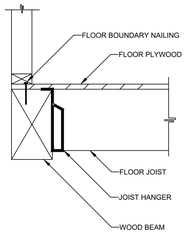
FLOOR FRAMING 21



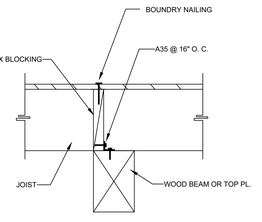
FLOOR FRAMING 22



FLOOR FRAMING 23



FLOOR FRAMING 24



FLOOR FRAMING 25

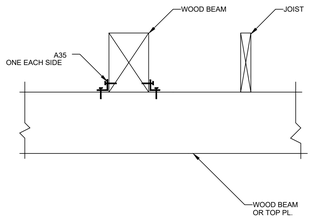
PARSA & ASSOCIATES engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769

2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

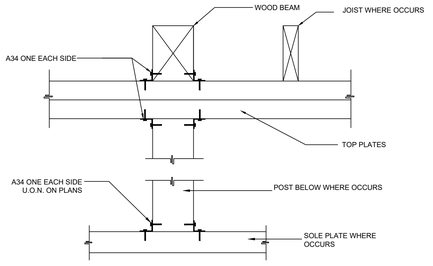
STAMP:
REGISTERED PROFESSIONAL ENGINEER
ABDY PARSA
No. C38604
EXP. 3-31-2025
CIVIL
STATE OF CALIFORNIA

PROJECT # 23135
DRAWN BY: B.F

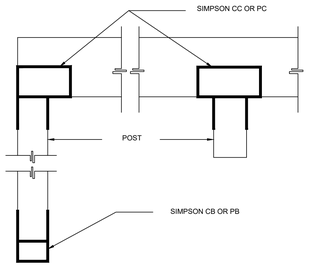
S5



FLOOR FRAMING 26



FLOOR FRAMING 27

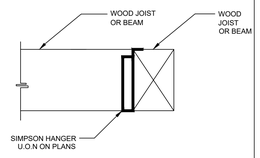


FLOOR FRAMING 28

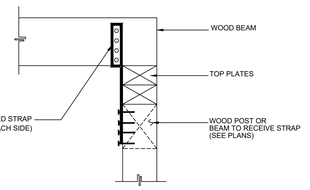
USE:

U26	AT 2x8
U26-2	AT 2-2x8
U-46	AT 4X8
U210	AT 2x10
U210-2	AT 2-2x10
U-210	AT 2x12
U-210-2	AT 2-2x12
U410	AT 4x12
U612	AT 6x12
U812	AT 8x12
HU214	AT 2x14
HU214-2	AT 2-2x14
HUS412	AT 4X14
HU614	AT 6x14
HW814	AT 8x14
HU412 TF	AT 3-1/2x 11-1/4 OR 11-7/8 PLS
HU612 TF	AT 5 1/4x11 1/4 PLS OR 11 7/8 PLS
HHUS7.25/10	AT 7x11-1/4 OR OR 11-7/8 PLS
HHUS410	AT 3-1/2x14 PLS, FACE MOUNT
HWU3.56/14	AT 3-1/2x14 PLS, TOP FLANGE
HHUS5.50/10	AT 5-1/4x14 PLS, FACE MOUNT
GLTV5.514	AT 5-1/4x14 PLS, TOP FLANGE
HGU57.25/14	AT 7x14 PLS FACE MOUNT
HGLTV414-2	AT 7x14 PLS TOP FLANGE

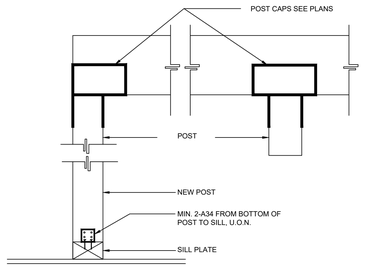
-NOTES
-SLOPE/ SKEW HANGER AS REQUIRED
-AT 90º CORNERS USE HUC (CONCEALED FLANGES)
-WHERE USED @ STEEL BMS. PLACE SOLID BLK'G BETWEEN FLANGES TO RECEIVE HANGER NAIL'G
-BLK'G TO BE CONNECTED TO STEEL WEB W/ MIN 5/8" ø M.B.S.@ 12" OC. STAG. 11/2" MIN, EDGE DIST.



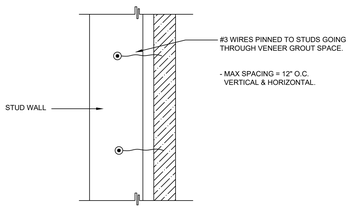
FLOOR FRAMING 29



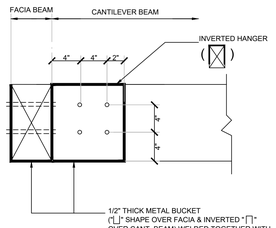
FLOOR FRAMING 30



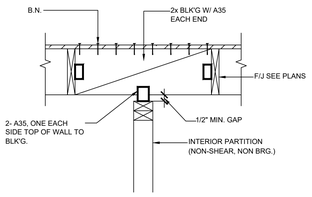
FLOOR FRAMING 35



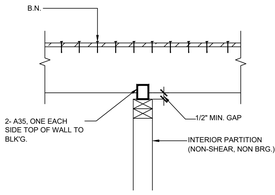
VENEER TIES 34



FLOOR FRAMING 33



FLOOR FRAMING 32



FLOOR FRAMING 31

FRAMING CONNECTORS (SIMPSON STRONG-TIE)

Joist		Single Joist — Top Mount				Single Joist — Face Mount				Face Mount Skewed 45° Joist Hanger [1]			
				Nailing				Nailing				Nailing	
Depth	T_#	Hanger	Capacity (lbs)	Header	Joist	Hanger	Capacity (lbs)	Header	Joist	Hanger	Capacity (lbs)	Header	Joist
9¼"	110	ITS1.81/9.5	975	10d	N.A	IUS1.81/9.5	950	10d	N.A	SUR/L1.81/9	1,220	16d	10d x 1½"
	210	ITS2.06/9.5	1,070	10d	N.A	IUS2.06/9.5	950	10d	N.A	SUR/L2.18	1,330	16d	10d x 1½"
11" ₄"	230	ITS2.37/9.5	1,120	10d	N.A	IUS2.37/9.5	950	10d	N.A	SUR/L2.37/9	1,330	16d	10d x 1½"
	110	ITS1.81/11.88 [1]	975	10d	N.A	IUS1.81/11.88 [1]	975	10d	N.A	SUR/L1.81/11	1,240	16d	10d x 1½"
	210	ITS2.06/11.88 [1]	1,070	10d	N.A	IUS2.06/11.88 [1]	1,070	10d	N.A	SUR/L2.1/11	1,380	16d	10d x 1½"
	230	ITS2.37/11.88 [1]	1,120	10d	N.A	IUS2.37/11.88 [1]	1,120	10d	N.A	SUR/L2.37/11	1,410	16d	10d x 1½"
	360	ITS2.37/11.88 [1]	1,140	10d	N.A	IUS2.37/11.88 [1]	1,140	10d	N.A	SUR/L2.37/11	1,430	16d	10d x 1½"
	560	ITS3.56/11.88 [1]	1,150	10d	N.A	IUS3.56/11.88 [1][2]	1,150	10d	N.A	SUR/L410	1,455	16d/16d	
14"	110	ITS1.81/14	975	10d	N.A	IUS1.81/14 [1]	975	10d	N.A	SUR/L1.81/14	1,240	16d	10d x 1½"
	210	ITS2.06/14	1,070	10d	N.A	IUS2.06/14 [1]	1,070	10d	N.A	SUR/L2.1/11	1,380	16d	10d x 1½"
	230	ITS2.37/14	1,120	10d	N.A	IUS2.37/14 [1]	1,120	10d	N.A	SUR/L2.37/14	1,410	16d	10d x 1½"
	360	ITS2.37/14	1,140	10d	N.A	IUS2.37/14 [1]	1,140	10d	N.A	SUR/L2.37/14	1,430	16d	10d x 1½"
	560	ITS3.56/14 [1]	1,150	10d	N.A	IUS3.56/14 [1][2]	1,150	10d	N.A	SUR/L414	1,460	16d/16d	
16"	210	ITS2.06/16	1,070	10d	N.A	IUS2.06/16 [1]	1,070	10d	N.A	SUR/L2.1/11	1,380	16d	10d x 1½"
	230	ITS2.37/16	1,120	10d	N.A	IUS2.37/16 [1]	1,120	10d	N.A	SUR/L2.37/16	1,410	16d	10d x 1½"
	360	ITS2.37/16	1,140	10d	N.A	IUS2.37/16 [1]	1,140	10d	N.A	SUR/L2.37/16	1,430	16d	10d x 1½"
	560	ITS3.56/16 [1]	1,150	10d	N.A	IUS3.56/16 [1][2]	1,150	10d	N.A	SUR/L416	1,460	16d/16d	

Joist		Double Joist —Top Mount				Double Joist —Face Mount			
				Nailing				Nailing	
Depth	T_#	Hanger	Capacity (lbs)	Header	Joist	Hanger	Capacity (lbs)	Header	Joist
9¼"	110	MIT49.5	2,115	16d	10d x 1½"	MIU3.56/9 [1]	2,215	16d	10d x 1½"
	210	MIT4.28/9.5	2,115	16d	10d x 1½"	MIU4.28/9	2,395	16d	10d x 1½"
	230	MIT359.5-2	2,115	16d	10d x 1½"	MIU4.75/9	2,395	16d	10d x 1½"
11" ₄"	110	MIT411.88	2,115	16d	10d x 1½"	MIU3.56/11 [1]	2,215	16d	10d x 1½"
	210	MIT4.28/11.88	2,115	16d	10d x 1½"	MIU4.28/11 [1]	2,395	16d	10d x 1½"
	230	MIT5911.88-2	2,115	16d	10d x 1½"	MIU4.75/11 [1]	2,490	16d	10d x 1½"
	360	MIT5911.88-2	2,115	16d	10d x 1½"	MIU4.75/11	2,525	16d	10d x 1½"
	560	BIT-3211.88	2,925	16d/16d		HUI414-2	2,385	16d/16d	
14"	110	MIT414	2,115	16d	10d x 1½"	MIU3.56/14 [1]	2,215	16d	10d x 1½"
	210	MIT4.28/14	2,115	16d	10d x 1½"	MIU4.28/14 [1]	2,395	16d	10d x 1½"
	230	MIT3514-2	2,115	16d	10d x 1½"	MIU4.75/14 [1]	2,490	16d	10d x 1½"
	360	MIT5914-2	2,115	16d	10d x 1½"	MIU4.75/14 [1]	2,525	16d	10d x 1½"
	560	BIT-3214	2,925	16d/16d		HUI414-2	2,925	16d/16d	
16"	210	LBV4.28/16	2,395	16d	10d x 1½"	MIU4.28/16 [1]	2,395	16d	10d x 1½"
	230	LBV4.75/16	2,115	16d	10d x 1½"	MIU4.75/16 [1]	2,490	16d	10d x 1½"
	360	LBV4.75/16	2,115	16d	10d x 1½"	MIU4.75/16 [1]	2,525	16d	10d x 1½"
	560	BIT-3216	2,925	16d/16d		HUI416-2	2,925	16d/16d	

Joist		Variable Slope Seat Connector			
				Nailing	
T_#	Hanger	Capacity (lbs)	Header	Joist	
110	VPA25	975	10d	10d x 1½"	
210	VPA2.1	1,070	10d	10d x 1½"	
230	VPA35	1,120	10d	10d x 1½"	
360	VPA35	1,140	10d	10d x 1½"	
560	VPA4	1,230	10d	10d x 1½"	

Hanger information on these two pages was provided by either Simpson Strong- Tie® or USP Structural Connectors ® For additional information, please refer to their literature.

Joist		Variable Slope Seat Joist Hanger				
			Capacity (lbs)		Nailing	
T_#	Hanger	Sloped Only	Sloped and Skewed	Header	Joist	
110	LSSU25	1,110 [1]	995	10d	10d x 1½"	
210	LSSU2.1	1,110 [1]	995	10d	10d x 1½"	
230	LSSU35	1,110 [1]	995	10d	10d x 1½"	
360	LSSU535	1,110 [1]	995	10d	10d x 1½" [3]	
560	LSSU410	1,725 [1]	1,625	16d	10d x 1½"	

General Notes

Bold italic hangers require web stiffeners.

Capacities will vary with different nailing criteria or other support conditions; contact your Weyerhaeuser representative for assistance.

Hanger capacities shown are either joist bearing capacity or hanger capacity—whichever is less. Joist end reaction must be checked to ensure it does not exceed the capacity shown in the tables.

All capacities are for downward loads at 100% duration of load.

Fill all round, dimple, and positive-angle nail holes.

Use sloped seat hangers and beveled web stiffeners when TJI® joist slope exceeds ¼ 12.

Leave 1/16" clearance (1/8" maximum) between the end of the supported joist and the header or hanger.

Nails: 16d = 0.162" x 3½", 10d = 0.148" x 3", and 10d x 1½" = 0.148" x 1½".

FLOOR FRAMING 36

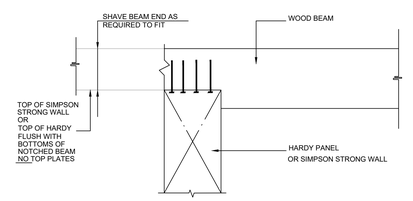
WOOD POST / BEAM CONNECTION 37

WOOD POST TO BEAM CONNECTION 38

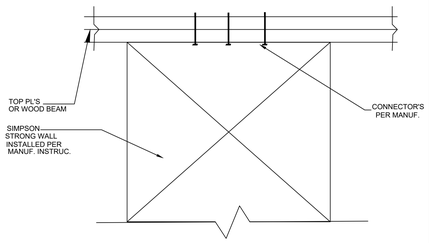
POST CONNECTION AT U.P.A.
(UNDER POST ABOVE) 39

- REFER TO ARCHITECTURAL PLANS FOR ALL OTHER INFO.

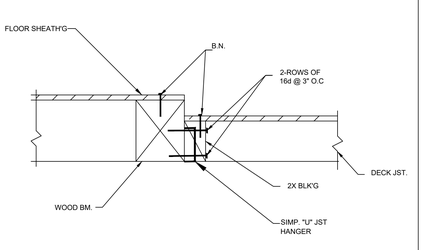
FLOOR FRAMING 40



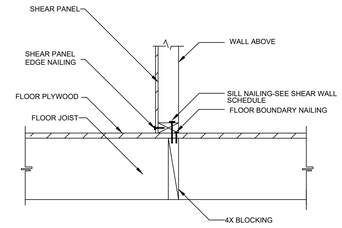
FLOOR SHEAR TRANSFER 44



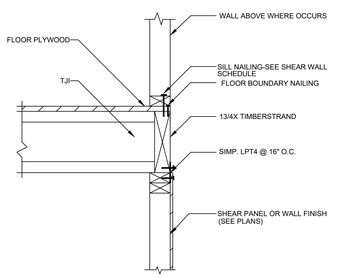
FLOOR SHEAR TRANSFER 43



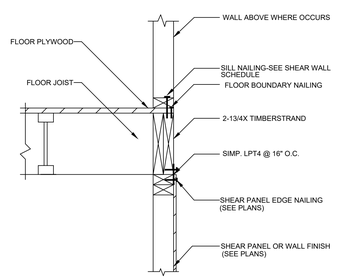
FLOOR SHEAR TRANSFER 42



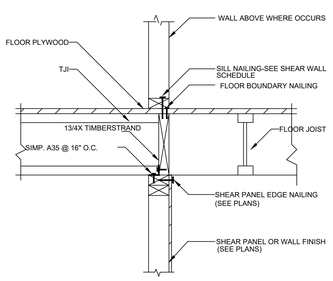
FLOOR SHEAR TRANSFER 41



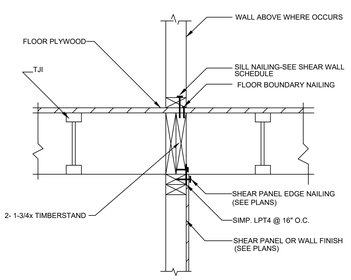
FLOOR SHEAR TRANSFER 45



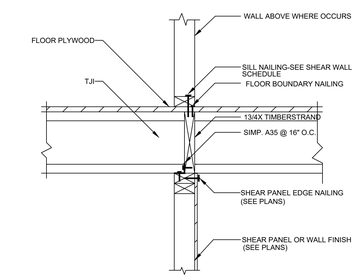
FLOOR SHEAR TRANSFER 46



FLOOR SHEAR TRANSFER 47



FLOOR SHEAR TRANSFER 48



FLOOR SHEAR TRANSFER 49

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PROJECT # 23135

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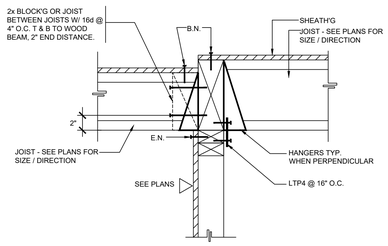
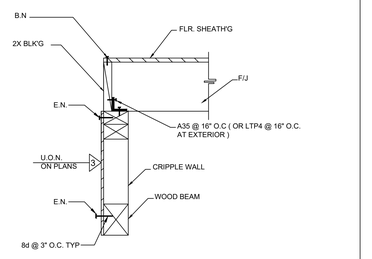
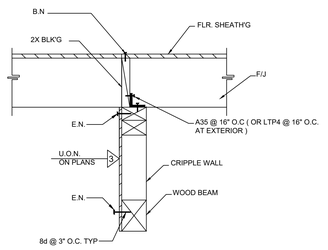
S6



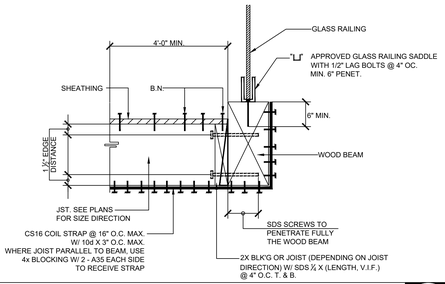
FLOOR SHEAR TRANSFER 50



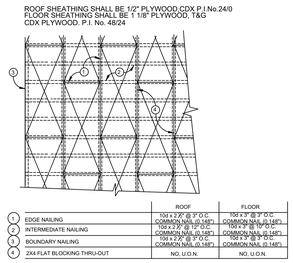
FLOOR SHEAR TRANSFER 51



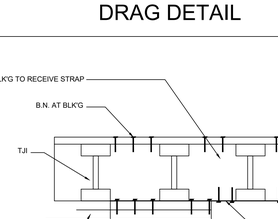
FLOOR SHEAR TRANSFER 52



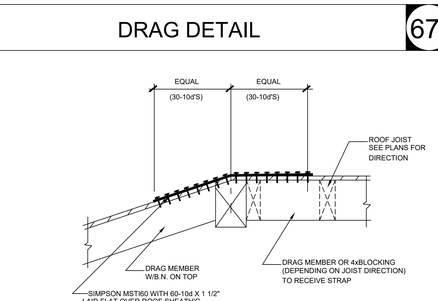
FLOOR SHEAR TRANSFER 53



ROOF AND FLOOR PLYWOOD LAYOUT AND NAILING 54



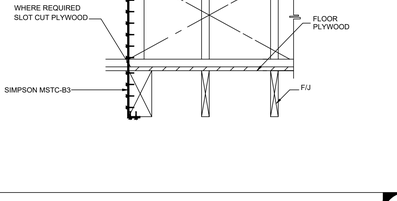
TIE-DOWN DETAIL 59



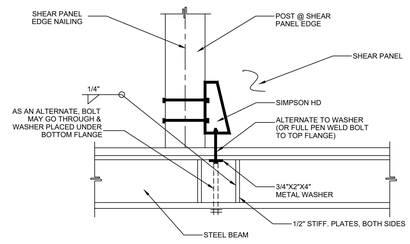
MODEL NO.	WOOD SCREWS TO POST #	WOOD SCREWS TO POST SIZE	CONCRETE BOLT Dia.	CONCRETE BOLT 1-POUR	CONCRETE BOLT 2-POUR	"E" (INCHES)	MIN. EPOXY EMBED.
HDU4	10	SDS 1/4" x 2 1/2"	5/8"	SSTB20	SSTB24	17"	12"
HDU5	14	SDS 1/4" x 2 1/2"	5/8"	SSTB20	SSTB24	17"	16"
HDU8	20	SDS 1/4" x 2 1/2"	7/8"	SSTB28	SSTB34	25"	16"
HDU11	30	SDS 1/4" x 2 1/2"	1"	SB1x30	SB1x30	24"	20"

	CODE REPORTS #'S
HDU'S	ESR-2330 , RR25720
SSTB & SB	ESR-2611 , RR25827
EPOXY, SET-XP22 EPOXY WITH DEPUTY INSPECTOR	ESR-2508 , RR25744

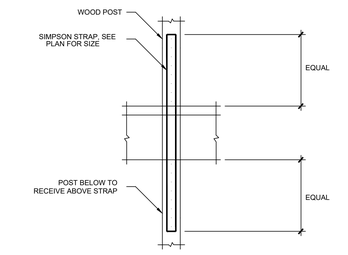
HOLDOWN DETAIL 58



TIE-DOWN DETAIL 57



TIE-DOWN DETAIL 56



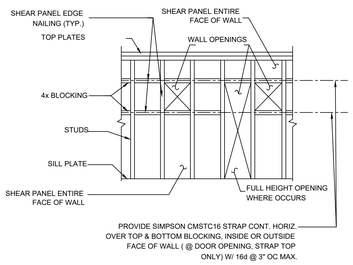
TIE-DOWN DETAIL 55

DRAG DETAIL 60

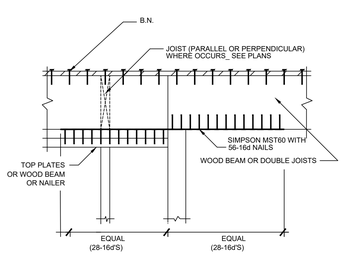
DRAG DETAIL 61

DRAG DETAIL 62

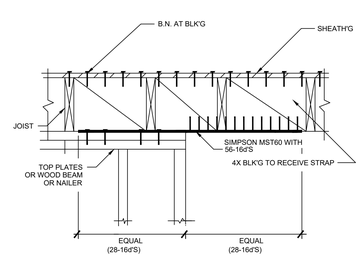
DRAG DETAIL 63



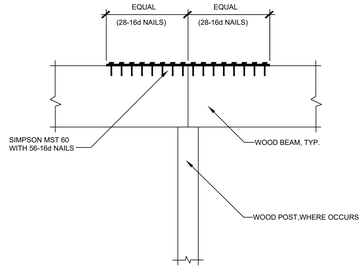
DRAG DETAIL 68



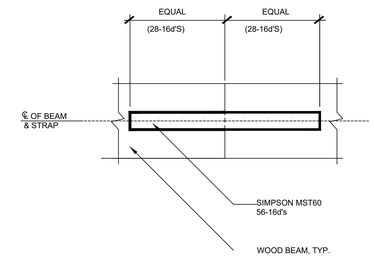
DRAG DETAIL 67



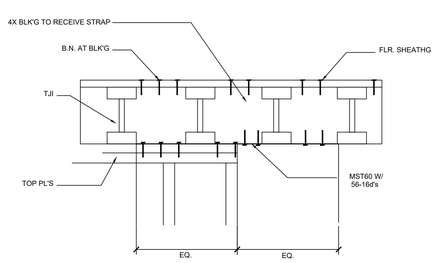
DRAG DETAIL 66



DRAG DETAIL 65

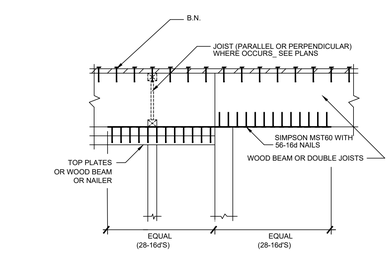


DRAG DETAIL 64

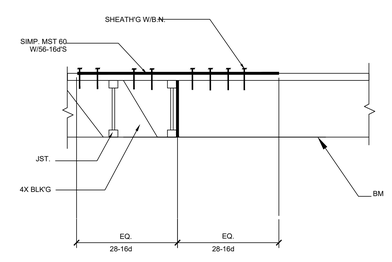


DRAG DETAIL 69

DRAG DETAIL 70



DRAG DETAIL 71



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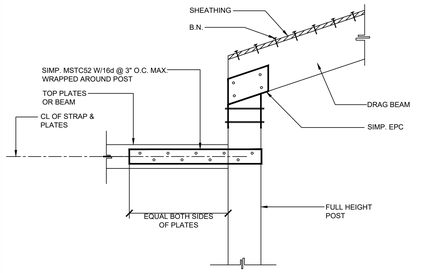

DRAG DETAIL 73

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EXP. 3-31-2025
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PROJECT # 23139
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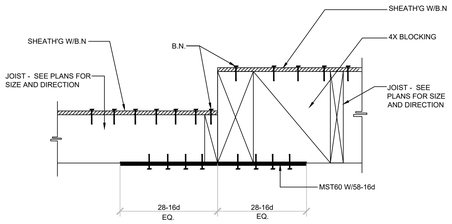
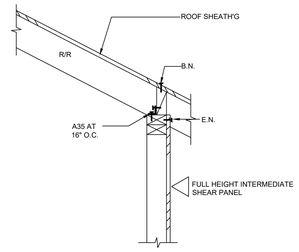
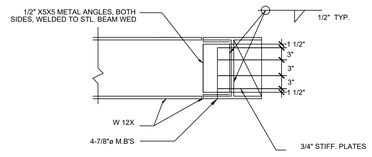
S7



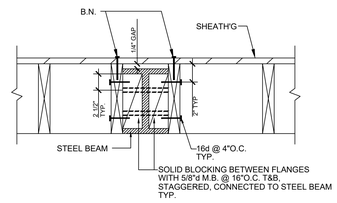
DRAG DETAIL 74



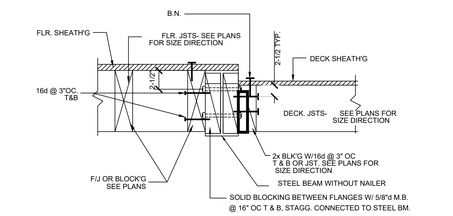
ROOF SHEAR TRANSFER 75



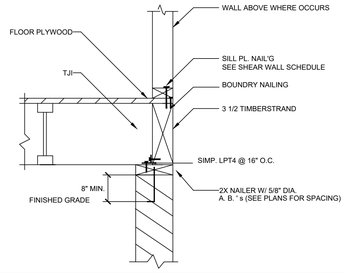
STEEL BEAMS 76



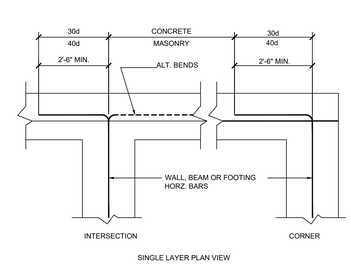
STEEL BEAMS 77



STEEL SHEAR TRANSFER 78

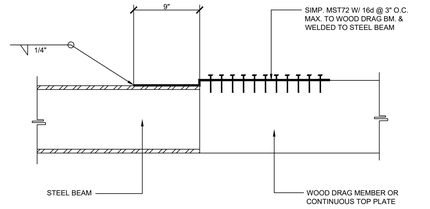


STRUCTURAL DETAIL 83

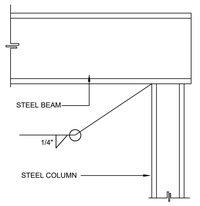


SINGLE LAYER PLAN VIEW

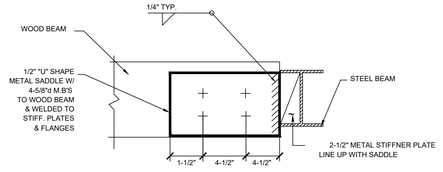
STRUCTURAL DETAIL 82



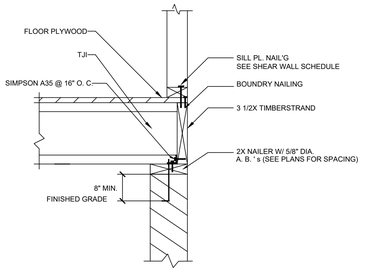
DRAG CONNECTION 81



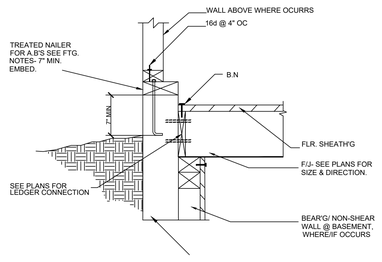
STEEL BEAMS 80



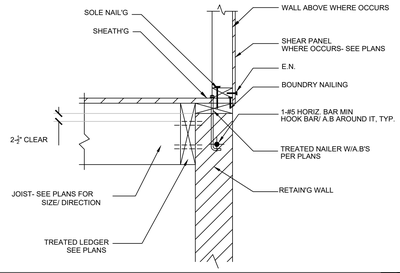
STEEL BEAMS 79



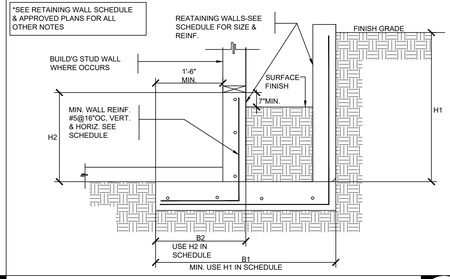
STRUCTURAL DETAIL 84



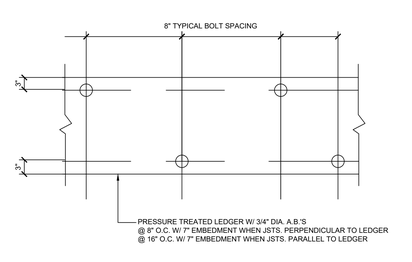
RETAINING WALL 85



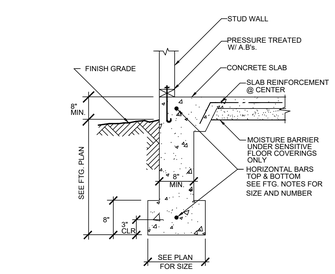
STRUCTURAL DETAIL 86



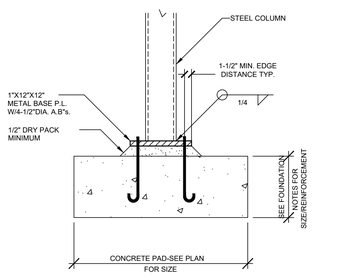
STRUCTURAL DETAIL 87



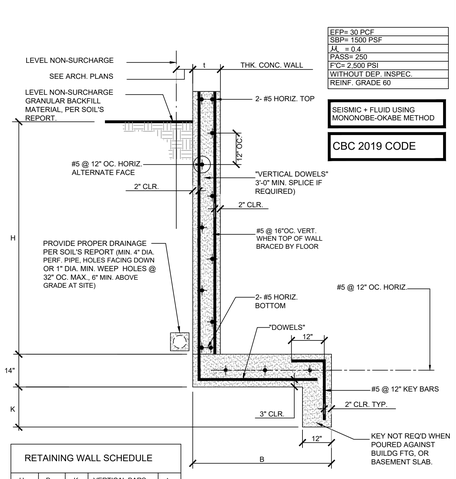
STRUCTURAL DETAIL 88



FOUNDATION DETAIL 93

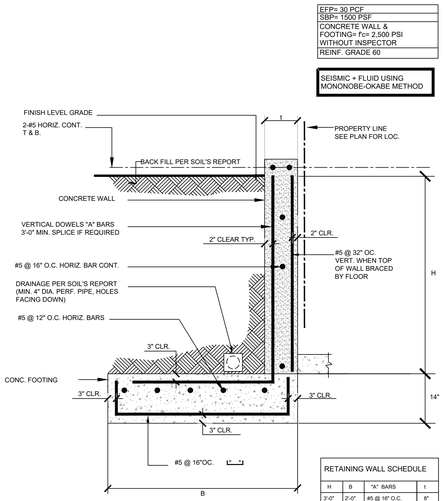


FOUNDATION DETAIL 92



RETAINING WALL SCHEDULE				
H	B	K	VERTICAL BARS	t
4'-0"	2'-0"	4"	#5 @ 16" O.C.	8"
5'-0"	2'-9"	8"	#5 @ 16" O.C.	8"
6'-0"	3'-3"	12"	#5 @ 16" O.C.	8"
7'-0"	4'-0"	16"	#5 @ 16" O.C.	8"
8'-0"	4'-9"	20"	#5 @ 6" O.C.	8"
9'-0"	5'-9"	26"	#5 @ 6" O.C.	10"
10'-0"	6'-9"	30"	#5 @ 6" O.C.	10"
11'-0"	7'-3"	34"	#6 @ 6" O.C.	12"
12'-0"	8'-3"	38"	#6 @ 6" O.C.	12"

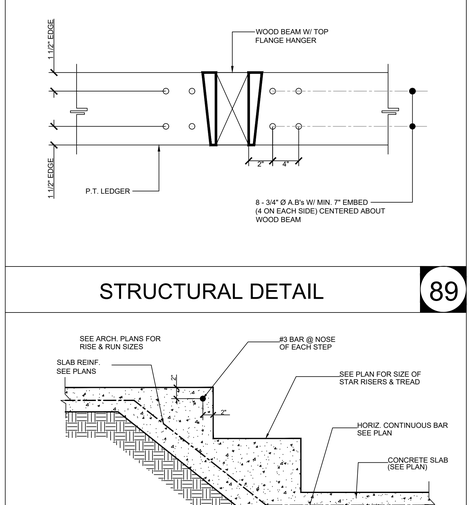
RETAINING WALL 91



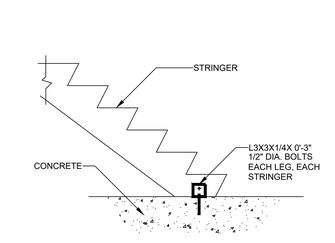
FOUNDATION EMBEDMENT BACK FILL, DRAINEGE, ETC. MUST BE PER SOIL'S REPORT

RETAINING WALL SCHEDULE			
H	B	"A" BARS	t
3'-0"	2'-0"	#5 @ 16" O.C.	8"
4'-0"	2'-6"	#5 @ 16" O.C.	8"
5'-0"	3'-0"	#5 @ 16" O.C.	8"
6'-0"	4'-0"	#5 @ 16" O.C.	8"
7'-0"	5'-0"	#5 @ 16" O.C.	8"
8'-0"	6'-3"	#5 @ 6" O.C.	8"
9'-0"	7'-6"	#5 @ 6" O.C.	10"
10'-0"	9'-3"	#5 @ 6" O.C.	10"
11'-0"	11'-6"	#5 @ 6" O.C.	12"

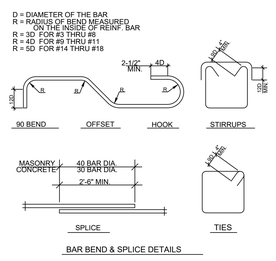
RETAINING WALL 90



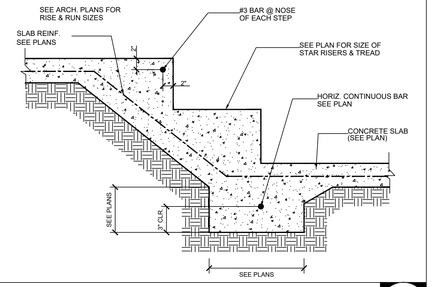
STRUCTURAL DETAIL 89



FOUNDATION DETAIL 94



FOUNDATION DETAIL 95



FOUNDATION DETAIL 96

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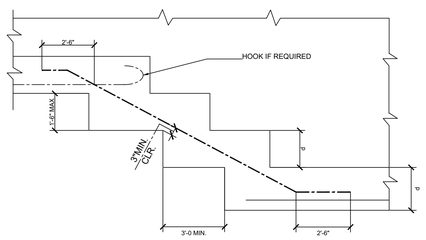
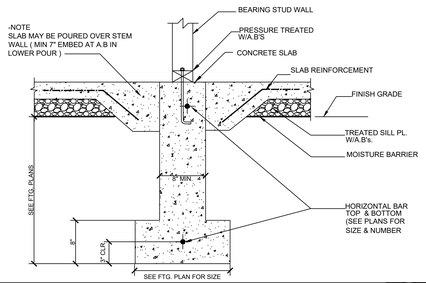
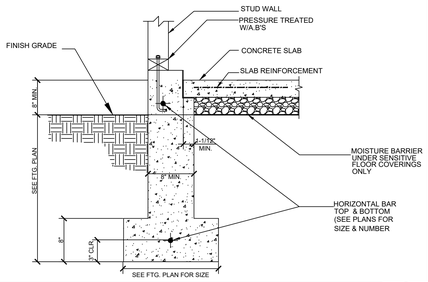
S8



FOUNDATION DETAIL 97



FOUNDATION DETAIL 98



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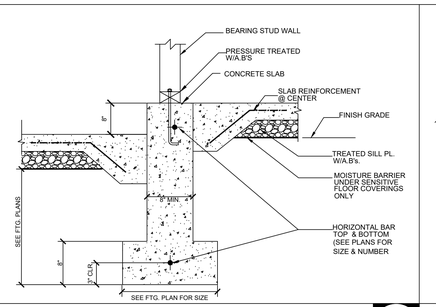

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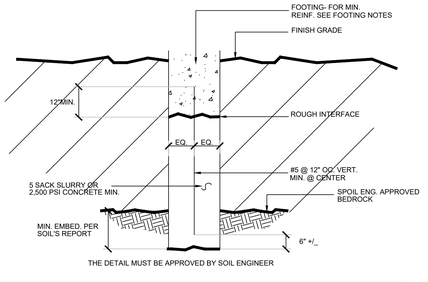
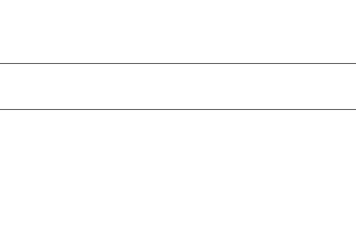


DEEPENED FOOTING INTO SOIL ENG. APPROVED SOIL. 101



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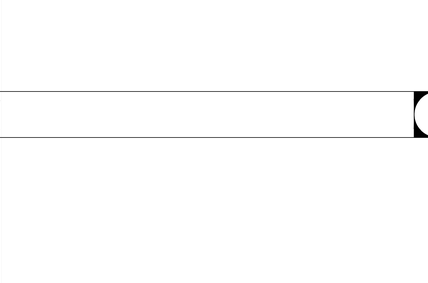

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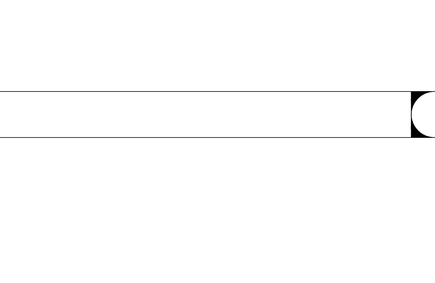

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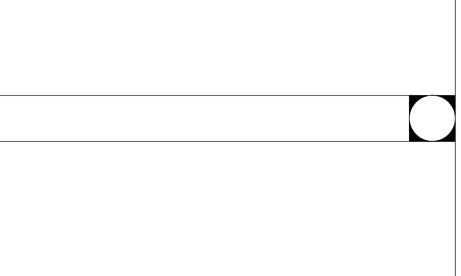

FOUNDATION DETAIL 102

PARSA & ASSOCIATES
engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769

2812 VIA CAMPESINA
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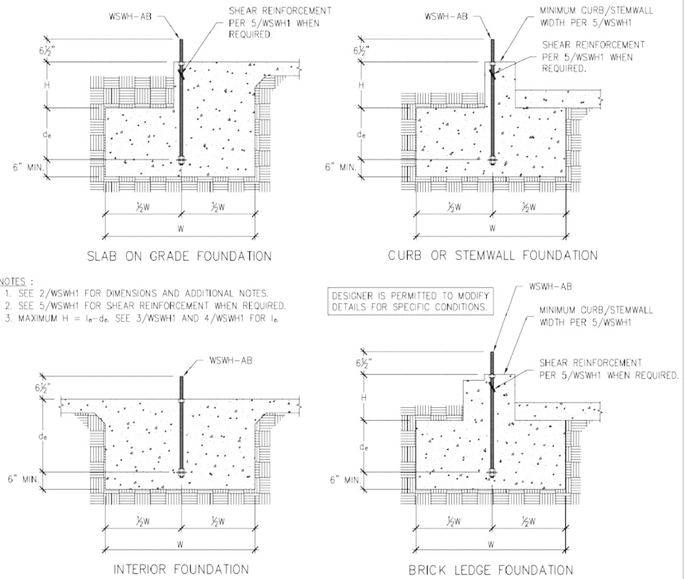
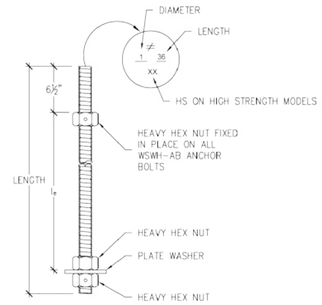
STAMP:
REGISTERED PROFESSIONAL ENGINEER
ARDY PARSA
No. C38604
EXP. 3-31-2025
CIVIL
STATE OF CALIFORNIA

PROJECT # 23135
DRAWN BY: B.F

S9

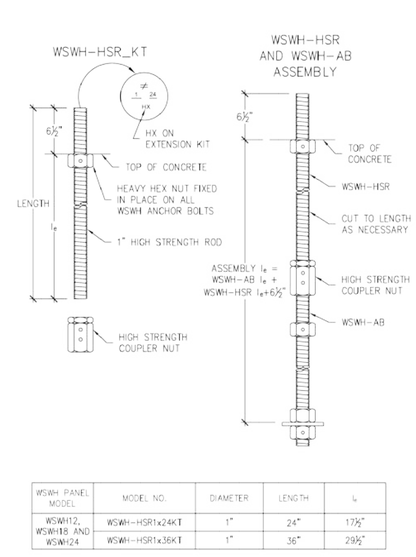


STRONG-WALL® WSWH ANCHORAGE – TYPICAL SECTIONS | 1



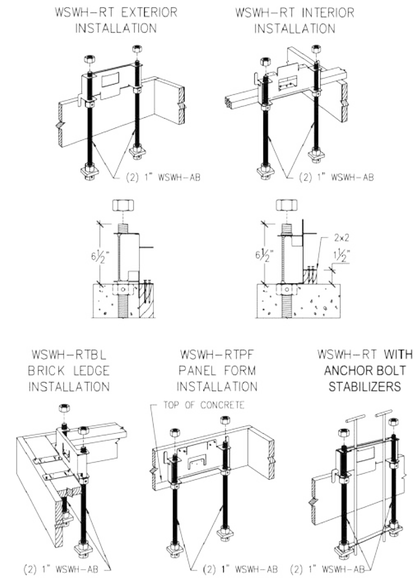
WSWH PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	le
WSWH12, WSWH18 AND WSWH24	WSWH-AB1x24	1"	24"	15½"
	WSWH-AB1x24HS	1"	24"	15½"
	WSWH-AB1x30	1"	30"	21½"
	WSWH-AB1x30HS	1"	30"	21½"
	WSWH-AB1x36	1"	36"	27½"
	WSWH-AB1x36HS	1"	36"	27½"

WSWH ANCHOR BOLTS | 3

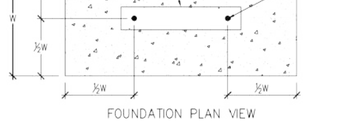


WSWH PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	le
WSWH12, WSWH18 AND WSWH24	WSWH-HSR1x24KT	1"	24"	17½"
	WSWH-HSR1x36KT	1"	36"	29½"

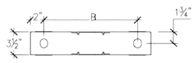
WSWH ANCHOR BOLT EXTENSION | 4



WSWH ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW



WSWH PLAN VIEW ANCHORAGE LAYOUT

ANCHOR BOLT LAYOUT	
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODEL NO.	DISTANCE FROM CENTER-TO-CENTER OF WSWH-AB, B (in)
WSWH12	8⅛
WSWH18	14
WSWH24	20

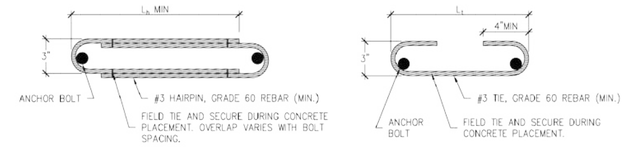
NOTES :
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D, ACI 318-14 CHAPTER 17 AND ACI 318-19 CHAPTER 17 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSWH-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A193 GRADE B7).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C-F, DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3, ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-19 SECTION 17.10.5.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE DESIGNER MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSWH1 FOR de.

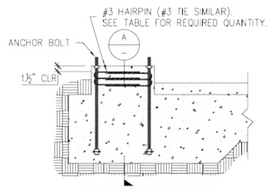
WSWH ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE					
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSWH-AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	16,000	33	11
			17,100	35	12
		HIGH STRENGTH	34,100	52	18
			36,800	55	19
	UNCRACKED	STANDARD	15,700	28	10
			17,100	30	10
		HIGH STRENGTH	33,500	45	15
			36,800	48	16
WIND	CRACKED	STANDARD	6,200	16	6
			11,400	24	8
		HIGH STRENGTH	17,100	32	11
			21,100	36	12
			27,300	42	14
			34,100	48	16
			36,800	51	17
	UNCRACKED	STANDARD	6,400	14	6
			12,500	22	8
		HIGH STRENGTH	17,100	28	10
			22,900	33	11
			26,400	36	12
			34,200	42	14
			36,800	44	15

WSWH ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE					
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSWH-AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	16,000	31	11
			17,100	33	11
		HIGH STRENGTH	33,900	49	17
			36,800	52	18
	UNCRACKED	STANDARD	16,300	27	9
			17,100	28	10
		HIGH STRENGTH	34,000	43	15
			36,800	46	16
WIND	CRACKED	STANDARD	5,600	14	6
			10,200	21	7
		HIGH STRENGTH	17,100	30	10
			20,000	33	11
			26,500	39	13
			33,600	45	15
			36,800	48	16
	UNCRACKED	STANDARD	6,200	13	6
			12,600	21	7
		HIGH STRENGTH	17,100	26	9
			21,800	30	10
			28,900	36	12
			33,100	39	13
			36,800	42	14

WSWH ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE					
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSWH-AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	16,000	27	9
			17,100	29	10
		HIGH STRENGTH	34,700	44	15
			36,800	46	16
	UNCRACKED	STANDARD	15,700	23	8
			17,100	25	9
		HIGH STRENGTH	33,900	38	13
			36,800	40	14
WIND	CRACKED	STANDARD	6,800	14	6
			11,600	20	7
		HIGH STRENGTH	17,100	26	9
			21,400	30	10
			28,400	36	12
			32,400	39	13
			36,800	43	15
	UNCRACKED	STANDARD	6,800	12	6
			12,400	18	6
		HIGH STRENGTH	17,100	23	8
			22,800	27	9
			26,700	30	10
			30,700	33	11
			36,800	37	13

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2





STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL SHEAR ANCHORAGE						
MODEL	SEISMIC[3]			WIND[4]		
	la OR le (in.)	SHEAR REINFORCEMENT	MIN. CURB/ STEMWALL WIDTH (in.)	SHEAR REINFORCEMENT	MIN. CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD, V (lb.)
						UNCRACKED / CRACKED
WSWH12	10¼	(1) #3 TIE	6	SEE NOTE 7	6	1,080 / 770
WSWH18	15	(2) #3 HAIRPINS[5,6]	6	(1) #3 HAIRPIN	6	HAIRPIN REINF. ACHIEVES MAX. ALLOW SHEAR LOAD OF THE WSWH
WSWH24	19	(2) #3 HAIRPINS[5]	6	(2) #3 HAIRPINS[5]	6	

NOTES :
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-19, ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC SHEAR REINFORCEMENT DESIGNS CONFORM TO ACI 318-19, SECTION 17.10.6.3, ACI 318-14, SECTION 17.2.3.5.3
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B.
5. ADDITIONAL TIES MAY BE REQUIRED AT GARAGE CURB OR STEMWALL INSTALLATIONS BELOW ANCHOR REINFORCEMENT PER DESIGNER.
6. USE (1) #3 HAIRPIN FOR WSWH18 WHEN STANDARD STRENGTH ANCHOR IS USED.
7. USE (1) #3 TIE FOR WSWH12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
8. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSWH SHEAR ANCHORAGE SOLUTIONS.
9. CONCRETE EDGE DISTANCE FOR ANCHORS MUST COMPLY WITH ACI 318-19 SECTION 17.9.2, ACI 318-14 SECTION 17.7.2 AND ACI 318-11 SECTION D.8.2.
10. THE DESIGNER MAY SPECIFY ALTERNATE SHEAR ANCHORAGE.

STRONG-WALL® WSWH SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

NO.	DATE	REVISIONS
0	02.26.2021	FIRST RELEASE - 2018 IBC
1	03.16.2021	2021 IBC REVISIONS

SIMPSON Strong-Tie, Co. Inc.
• 5956 W. Las Positas Blvd.
Pleasanton, CA 94588
• Tel: (800) 999-5099
• Website: www.strongtie.com
THERE IS NO EQUAL

STRONG-WALL® WSWH
ANCHORAGE DETAILS
ENGINEERED DESIGNS

NAME
DATE 03-26-2021
SCALE N.T.S.
CHECKED
SHEET WSWH1
OF SHEETS
JOB NO.

STAMP: REGISTERED PROFESSIONAL ENGINEER ALBERT PARSA No. C38604 EXP. 3-31-2025 CIVIL STATE OF CALIFORNIA

PROJECT # 23135
DRAWN BY: B.F
S10

PARSA & ASSOCIATES
engineers
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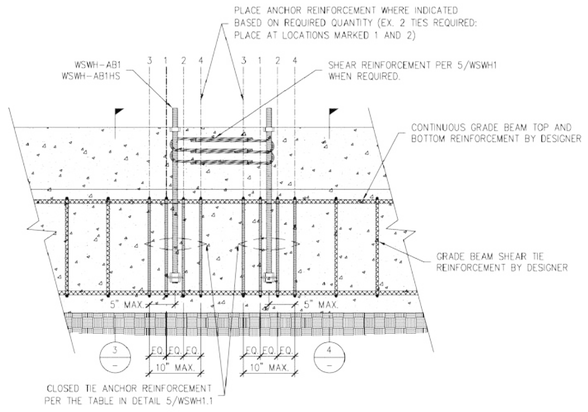
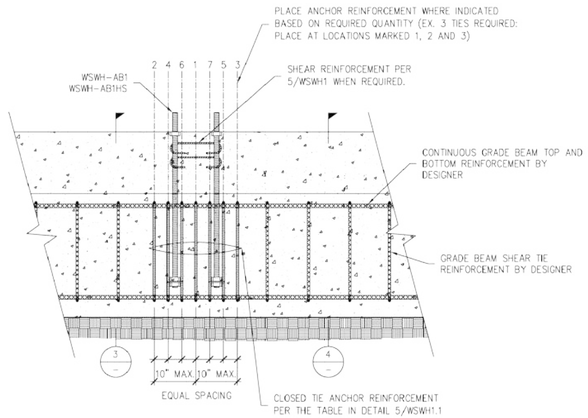
PALOS VERDES ESTATES, CA 90274

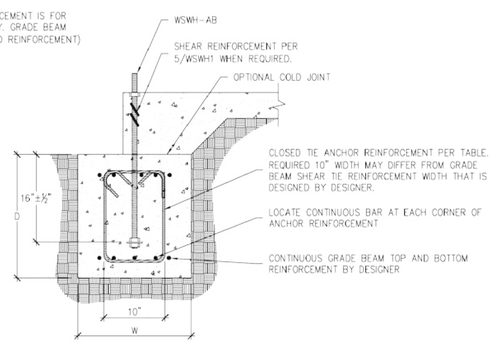


GRADE BEAM ELEVATION AT 18" AND 24" WALL MODELS | 1



GRADE BEAM ELEVATION AT 12" WALL MODEL | 2

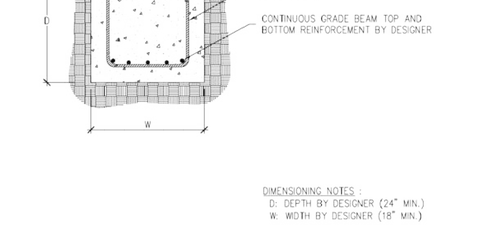
NOTES :
ANCHOR REINFORCEMENT IS FOR ANCHORAGE ONLY. GRADE BEAM DESIGN (SIZE AND REINFORCEMENT) BY DESIGNER.



ANCHOR REIN. NOTE :
MINIMUM DISTANCES FROM THE ANCHOR BOLT PLATE WASHER TO TOP AND BOTTOM OF CLOSED TIE REINFORCEMENT ARE 13" AND 5" RESPECTIVELY.

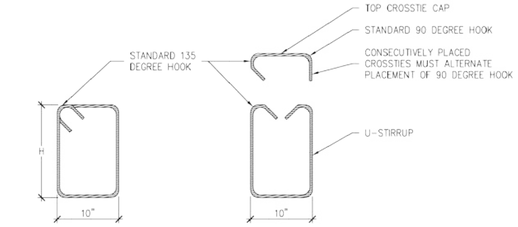
DIMENSIONING NOTES :
D: DEPTH BY DESIGNER (24" MIN.)
W: WIDTH BY DESIGNER (18" MIN.)

GRADE BEAM SECTION AT ANCHOR REINFORCEMENT | 3



DIMENSIONING NOTES :
D: DEPTH BY DESIGNER (24" MIN.)
W: WIDTH BY DESIGNER (18" MIN.)

GRADE BEAM SECTION AWAY FROM ANCHOR REINFORCEMENT | 4



DIMENSIONING NOTES :
H: HEIGHT OF ANCHOR REINFORCEMENT ASSEMBLY BY DESIGNER, SEE DETAIL 3/WSWH1.1 FOR MINIMUM REQUIREMENTS

CLOSED TIE ANCHOR REINFORCEMENT | 6

WSWH GRADE BEAM ANCHOR REINFORCEMENT

HIGH STRENGTH STRONG-WALL® WOOD SHEARWALL WIDTH (in.)	ANCHOR MODEL NO.	ANCHOR DIAMETER (in.)	ANCHOR REINFORCEMENT FOR WIND AND SEISMIC[1,8,9]		AMPLIFIED LRFD APPLIED DESIGN SEISMIC MOMENT (ft.-lbs.)[4,5,6,7]	
			STANDARD STRENGTH WSWH-AB1	HIGH STRENGTH (HS) WSWH-AB1HS	STANDARD STRENGTH WSWH-AB1	HIGH STRENGTH (HS) WSWH-AB1HS
12" MODEL	WSWH-AB1 WSWH-AB1HS	1	3-#4 CLOSED TIES PER (2/-)	7-#4 CLOSED TIES PER (2/-)	29,500	31,300
18" MODEL			2-#4 CLOSED TIES PER (1/-)	4-#4 CLOSED TIES PER (1/-)	48,000	72,900
24" MODEL					67,100	103,500

NOTE :
1. ANCHOR REINFORCEMENT CONFORMS TO ACI 318-19 SECTION 17.5.2.1, ACI 318-14 SECTION 17.4.2.9 AND ACI 318-11 SECTION D.5.2.9. FULL-SCALE TESTING WAS USED TO VALIDATE ANCHOR REINFORCEMENT CONFIGURATION AND PLACEMENT.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH, f'_c = 2500 psi.
3. CLOSED TIE ANCHOR REINFORCEMENT TO BE ASTM A615 GRADE 60 (MIN) #4 REBAR.
4. GRADE BEAM LONGITUDINAL AND TIE REINFORCEMENT SHALL BE SPECIFIED BY THE DESIGNER FOR FLEXURE AND SHEAR LOADING. DESIGN SHOULD CONSIDER PROJECT SPECIFIC DESIGN LOADS AND ALLOWABLE SOIL PRESSURE.
5. SIMPSON STRONG-TIE RECOMMENDS USING THE TABULATED MINIMUM AMPLIFIED LRFD APPLIED SEISMIC DESIGN MOMENT TO ENSURE GRADE BEAM DESIGN FLEXURE AND SHEAR STRENGTH IS ADEQUATE TO PREVENT PLASTIC HINGE FORMATION UNDER DEMANDS ASSOCIATED WITH ANCHORAGE FORCES CORRESPONDING TO ACI 318-19 SECTION 17.10.5.3, ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-11 SECTION D.3.3.4.3.
6. DESIGNER MAY USE REDUCED MOMENT DUE TO APPLIED WSWH LATERAL LOAD. MINIMUM MOMENT SHALL BE THE LESSER OF THE TABULATED MOMENT OR THE AMPLIFIED LRFD DESIGN MOMENT FOR SEISMIC: (ASD DESIGN DEMAND SHEAR/0.7) x Ω_o x WSWH WALL HEIGHT FOR GRADE BEAM DESIGN.
7. MINIMUM GRADE BEAM DESIGN MOMENT FOR WIND AND SEISMIC IN SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C: (ASD DESIGN DEMAND SHEAR/0.6) x WSWH WALL HEIGHT.
8. CLOSED TIE MAY BE SINGLE PIECE HOOP OR TWO PIECE ASSEMBLY WITH A U-STIRRUP WITH STANDARD 135 DEGREE HOOKS AND A TOP CROSS TIE CAP. SEE DETAIL 6/WSWH1.1.
9. SEE DETAILS FOR GRADE BEAM ANCHOR REINFORCEMENT PLACEMENT, INSTALLATION AND SPACING REQUIREMENTS. CLOSED TIE ANCHOR REINFORCEMENT QUANTITY IS PER WALL FOR THE 12" WALL MODEL AND PER ANCHOR FOR THE 18" AND 24" MODELS.

WSWH-AB ANCHOR GRADE BEAM REINFORCEMENT AND DESIGN MOMENTS | 5

NO.	DATE	REVISIONS
0	10/12/2020	FIRST RELEASE - 2018 IBC
1	03/16/2021	2021 IBC REVISIONS

SIMPSON Strong-Tie Co. Inc.
• 5956 W. Las Positas Blvd.
Pleasanton, CA 94588
• Tel: (800) 999-5099
• Website: www.strongtie.com
THERE IS NO EQUAL

STRONG-WALL® WSWH
ALTERNATE ANCHORAGE DETAILS
ENGINEERED DESIGNS

SIMPSON Strong-Tie THERE IS NO EQUAL

NAME
DATE 03-16-2021
SCALE N.T.S.
CHECKED
SHEET WSWH1.1
OF SHEETS
JOB NO.

PARSA & ASSOCIATES
engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769

2812 VIA CAMPESINA,
PALOS VERDES ESTATES, CA 90274

STAMP:
REGISTERED PROFESSIONAL ENGINEER
ABDY PARSA
No. C38604
EXP. 3-31-2025
CIVIL
STATE OF CALIFORNIA

PROJECT # 23135
DRAWN BY: B.F.

S11

STRONG-WALL® WSWH MODELS — 1

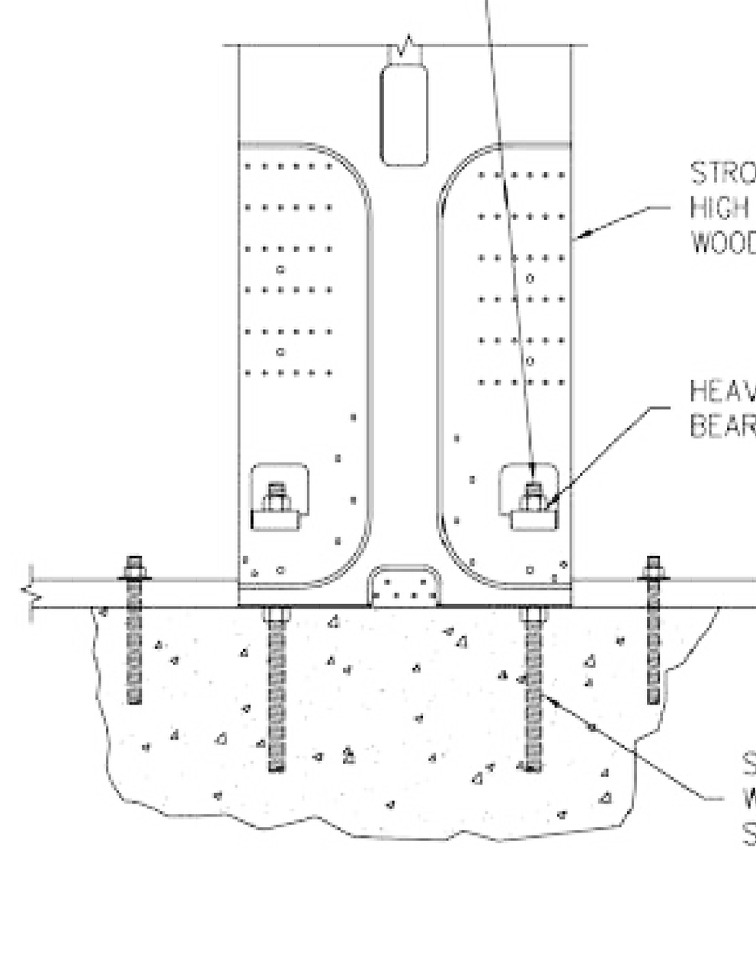
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS QUANTITY	ANCHOR BOLTS DIA. (in.)	TOTAL WALL WEIGHT (lb.)
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74½".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

STANDARD INSTALLATION BASE CONNECTION — 4

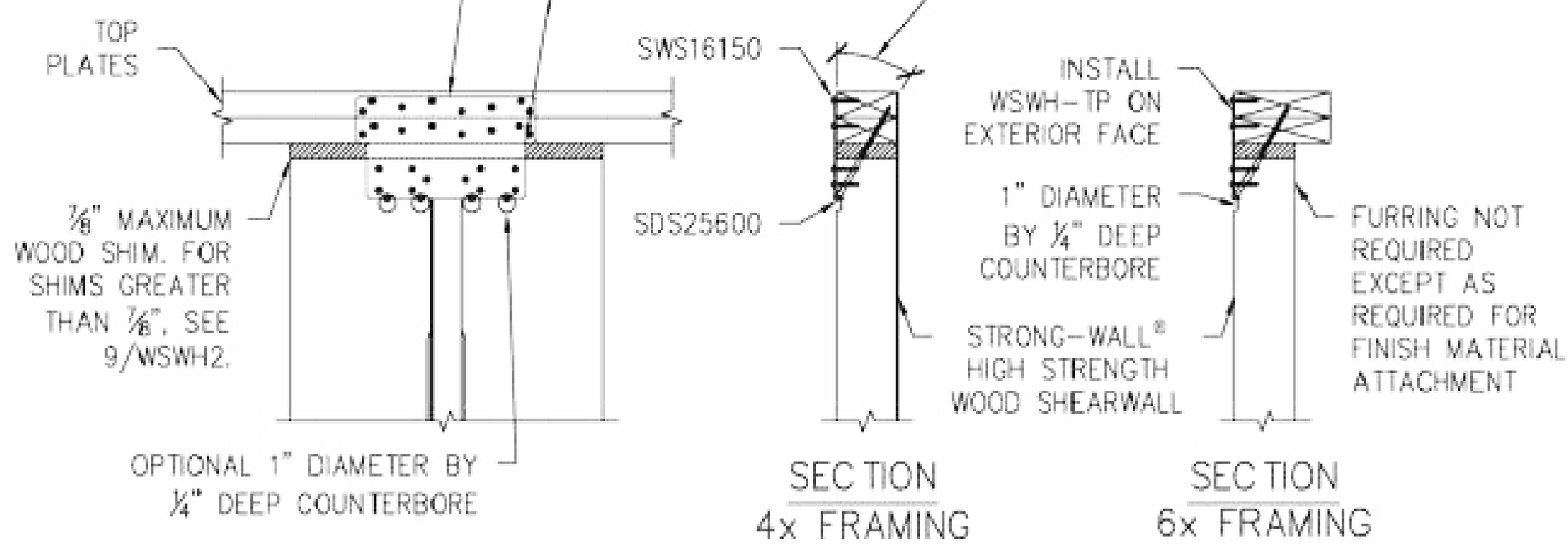
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



TOP CONNECTION — 6

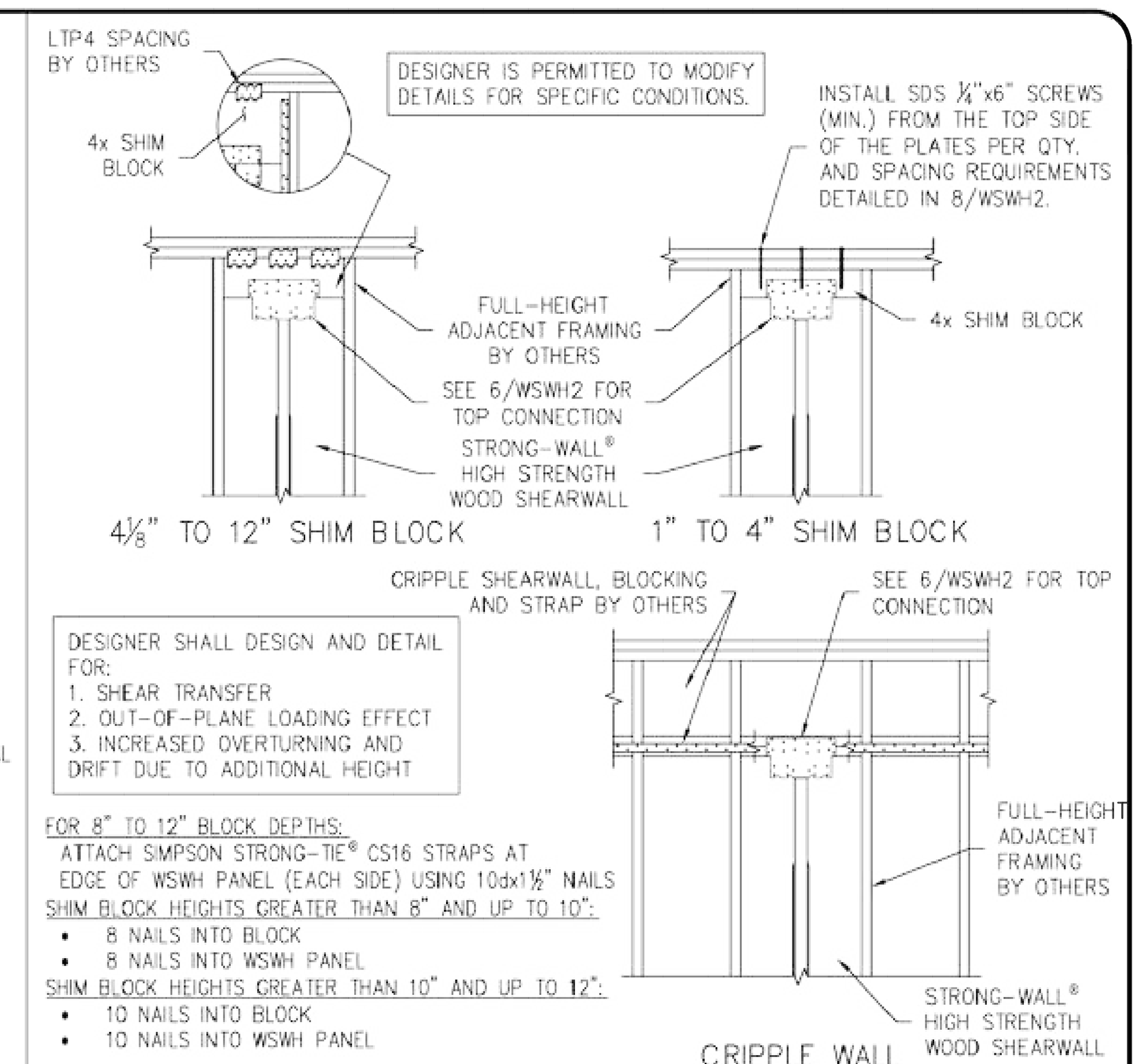
WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY SWS16150	FASTENER QUANTITY SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



TOP OF WALL HEIGHT ADJUSTMENTS — 9

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

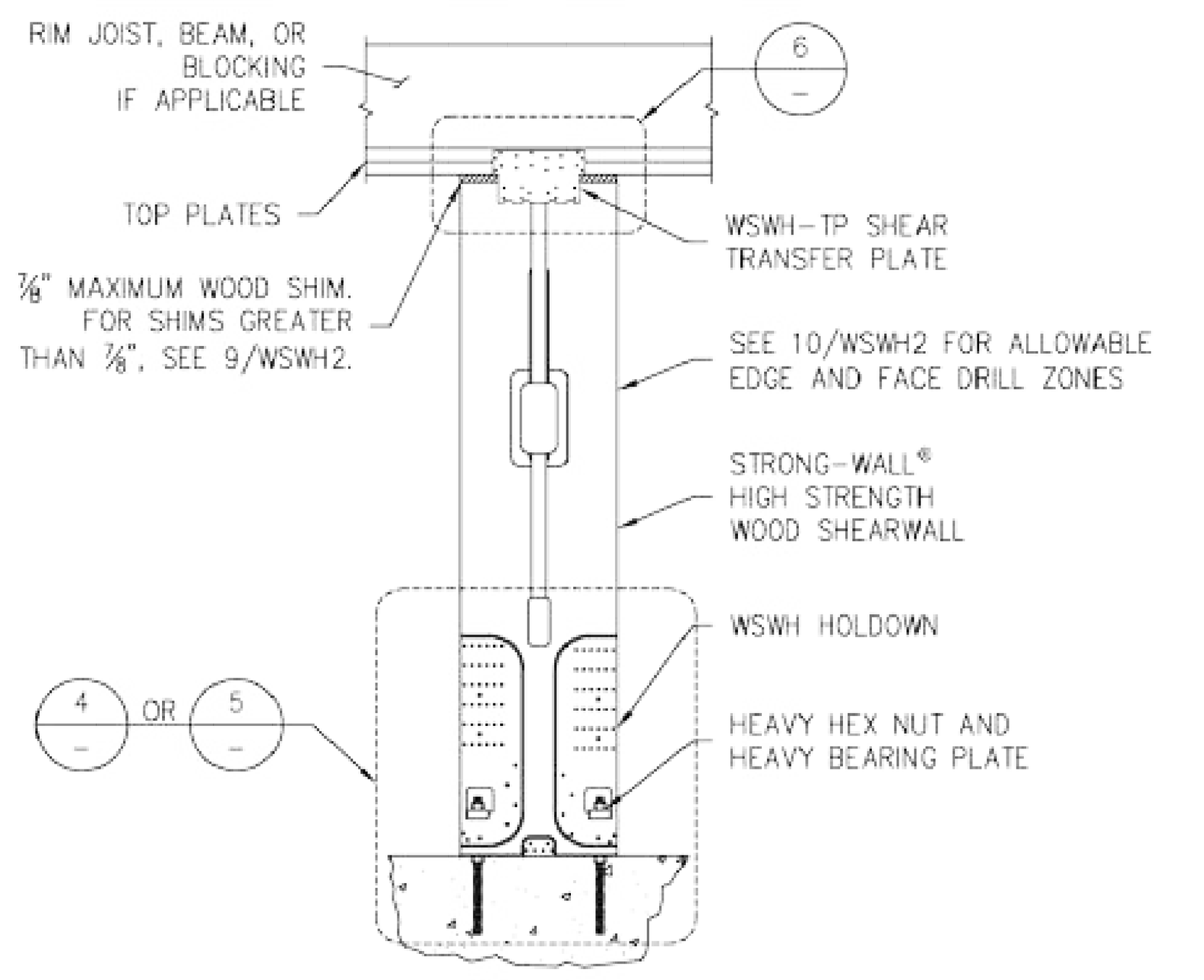


DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS
SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL

SINGLE STORY WSWH ON CONCRETE — 2

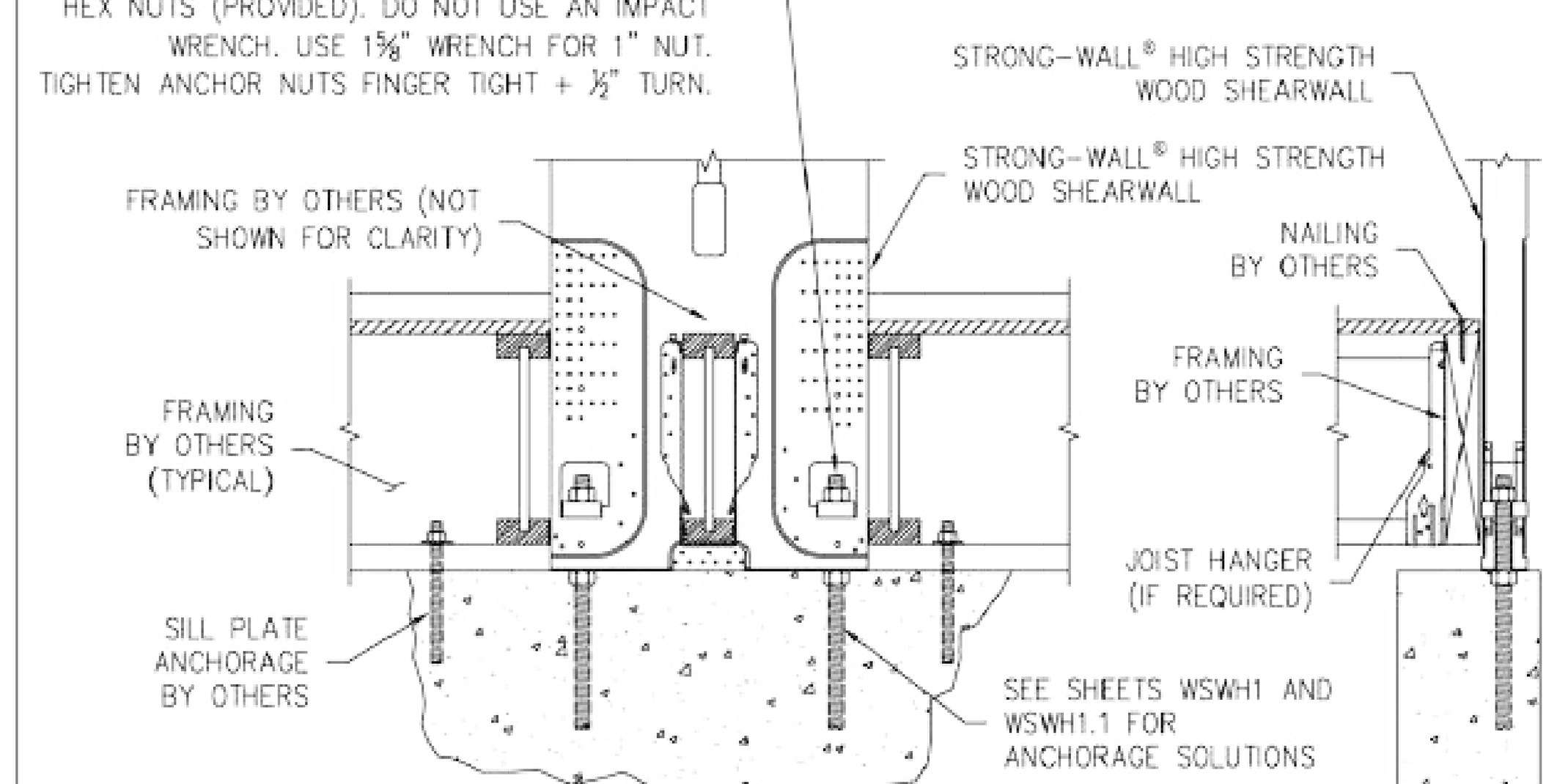


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

WOOD FLOOR SYSTEM BASE CONNECTION — 5

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

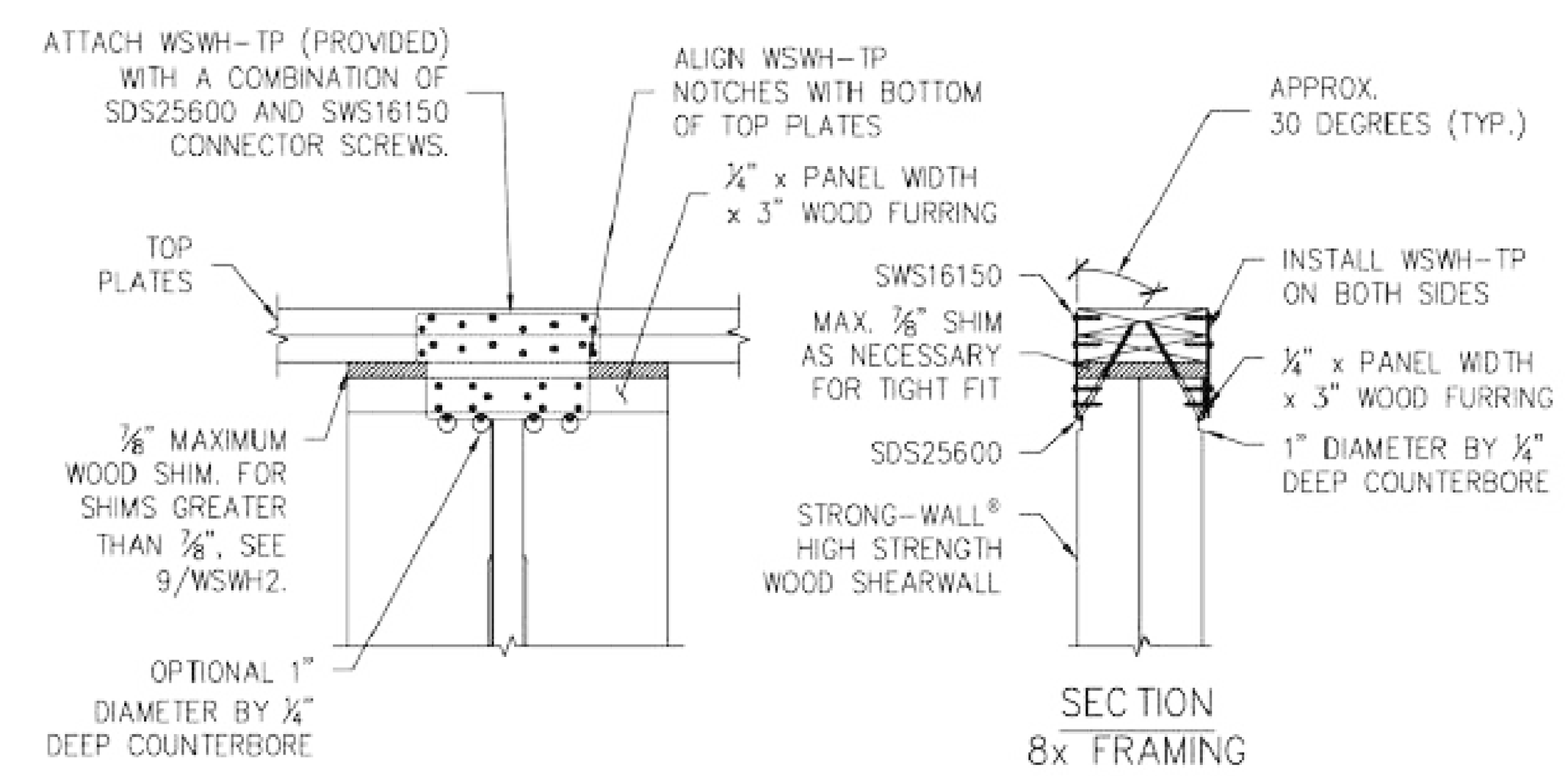


STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

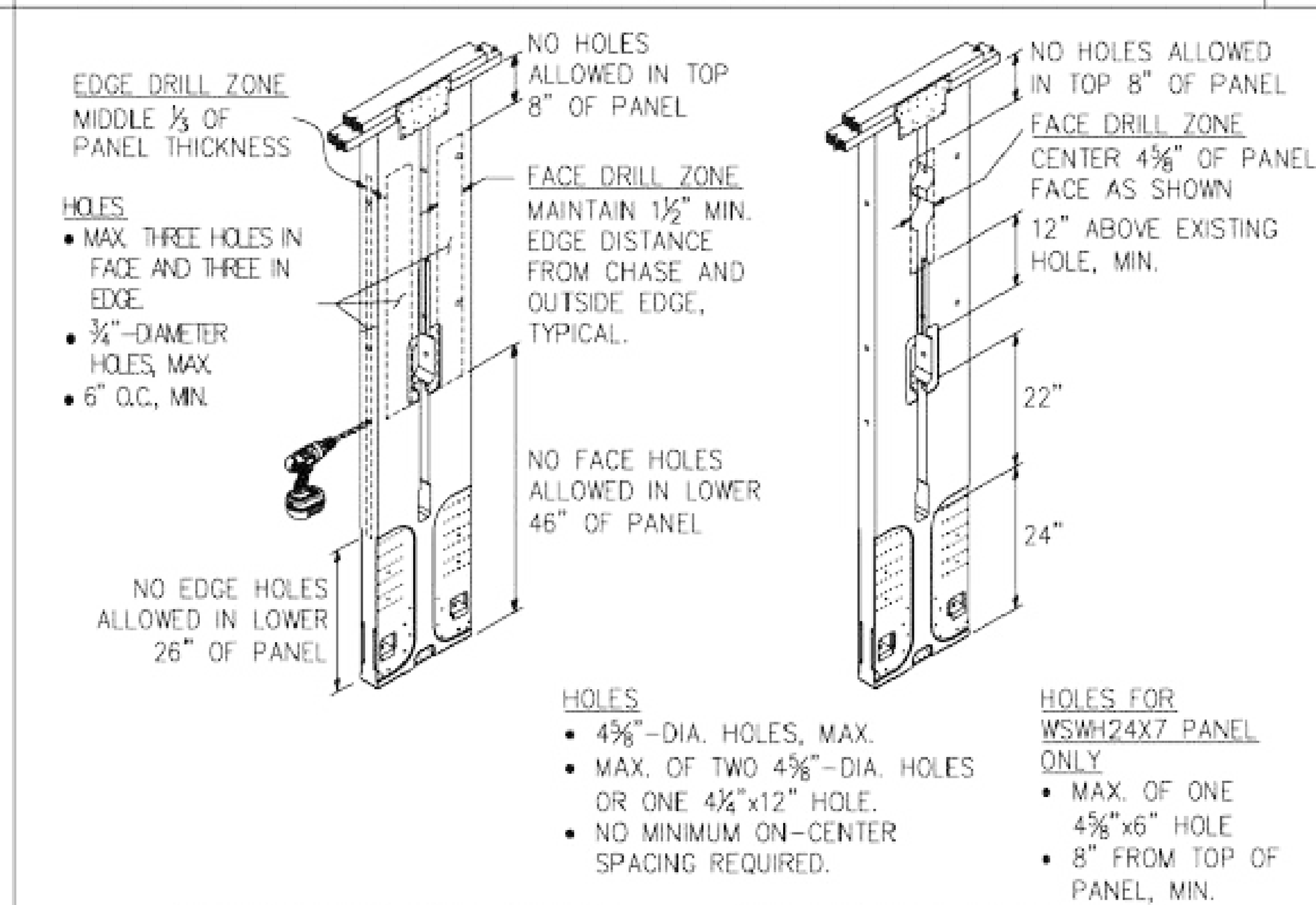
BACK-TO-BACK TOP CONNECTION — 7

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY SWS16150	FASTENER QUANTITY SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



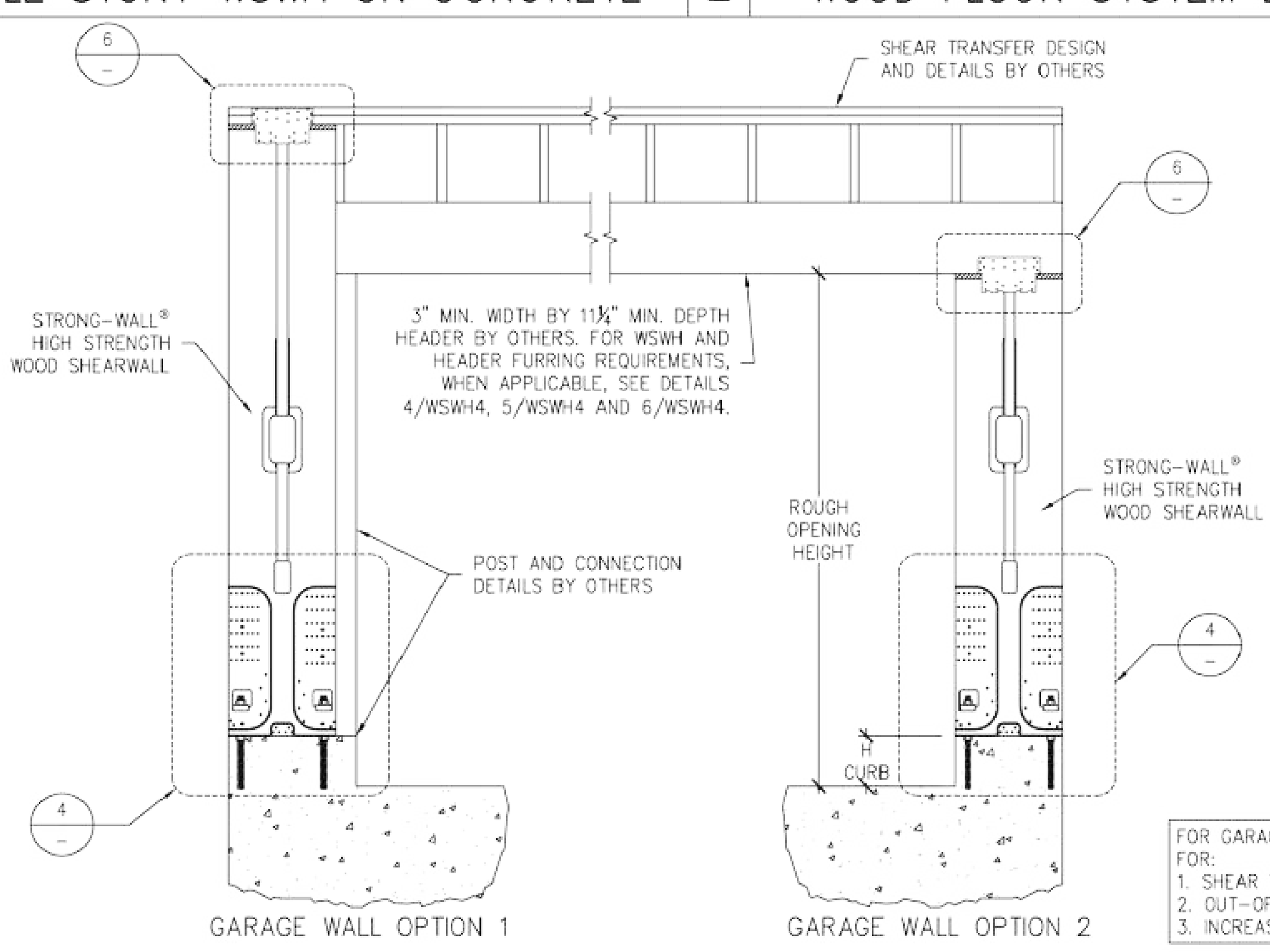
TRIM ZONE AND ALLOWABLE HOLES — 10



ALLOWABLE SMALL HOLES FACE AND EDGE DRILL ZONES

ALLOWABLE LARGE HOLES IN ADDITION TO ALLOWABLE SMALL HOLES

ALTERNATE WSWH GARAGE FRONT OPTIONS — 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74½".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

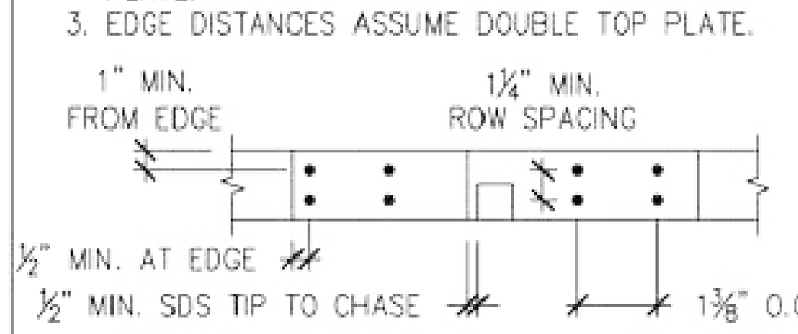
RAKE WALL — 8

QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

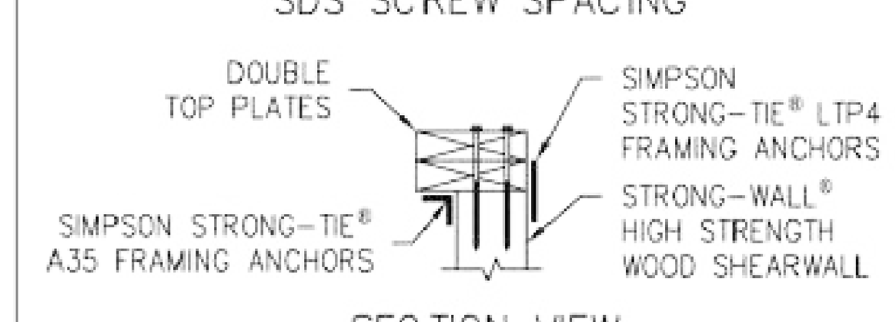
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12–4:12	2	3
5:12–8:12	1½	4½
9:12–12:12	1½	5½

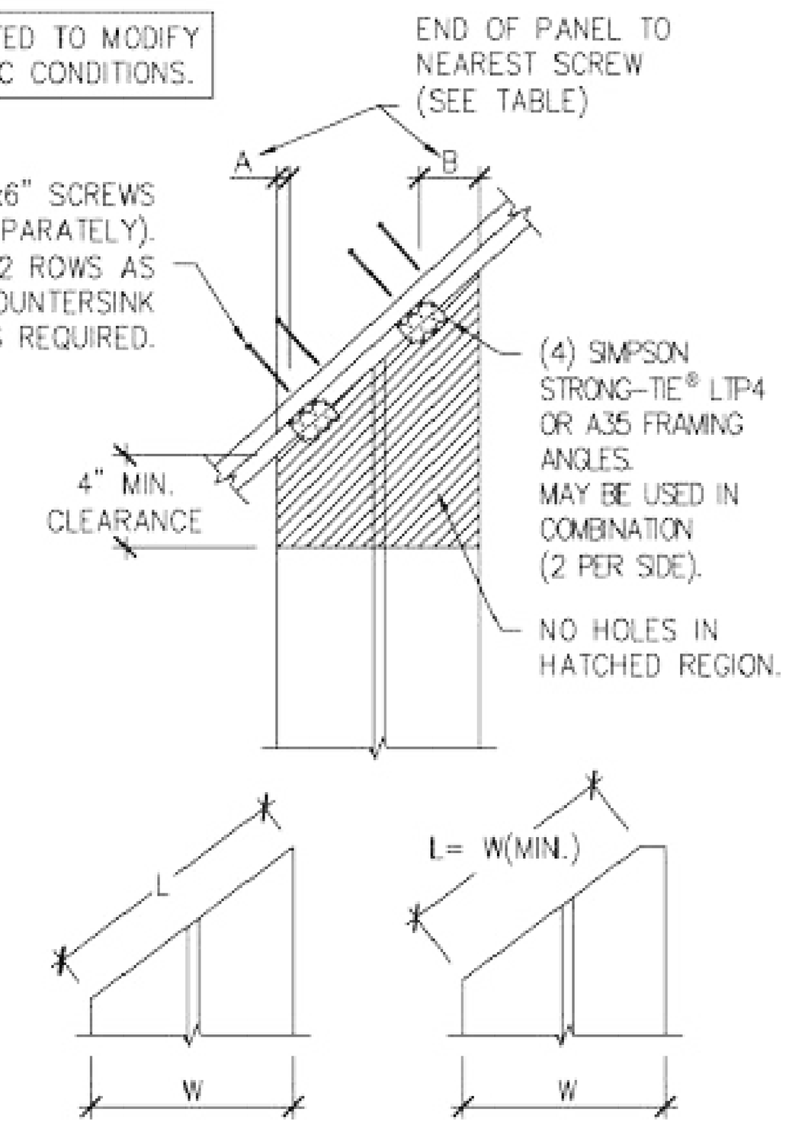
NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.



PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

NOTES — 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISIONS
0	11-20-2020	FIRST RELEASE: 2018 IBC
1	03-16-2021	2021 IBC REVISIONS

SIMPSON Strong-Tie, Co. Inc.
5956 W. Las Positas Blvd
Pleasanton, CA 94588
Tel: (800) 999-5099
Website: www.strongtie.com

STRONG-WALL® WSWH
FRAMING DETAILS
ENGINEERED DESIGNS

NAME
DATE 03-16-2021
SCALE N.T.S.
CHECKED
SHEET WSWH2
OF SHEETS
JOB NO.

PARSA & ASSOCIATES engineers
118 S. CATALINA AVENUE, SUITE E, REDONDO BEACH, CALIFORNIA 90277 TEL: (310) 318-6769

2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

REGISTERED PROFESSIONAL ENGINEER ABDY PARSA No. C38604 STATE OF CALIFORNIA

S12

ELECTRICAL SYMBOLS

- LED Ceiling Light
- Halogen Ceiling Light
- LED Pendant Light
- LED Wall Light
- Fluorescent Wall Light
- Recessed Light
- LED Lamp
- 2 — 2 ½" Halogen w/ Remote Transformer
- 3 — 4" Halogen
- F — Fluorescent
- F — Fluorescent Light w/ Diffuser
- LED Chandelier
- Step Lighting
- L — 4" Ø Low-voltage LED Fixture
- Spot Light
- Fan to Outside Air - w/ Humidostat and Min. 50 CFM
- Heat-a-lite w/ Fan to Outside Air
- Flood Lamps
- Duplex Outlet
- +42" — Outlet w/ Specified Height From Finished Floor
- ½ Switched ½ Hot Outlet
- WP — Waterproof Outlet
- 220 — Outlet w/ Specified Voltage
- FLR — Floor Outlet
- Single Pole Switch
- Provide Quad Outlets at Walls likely to be used for T.V./stereo equipment per owner
- ½ - Hot Quad Outlet
- Nutone "heat-a-ventlite" (QT-909 3WH) ceiling-mounted unit contains heater/exhaust fan/fluorescent light, low watt night light, switch to control panel at wall.
- 3 — 3-way Switch
- D — Switch w/ Dimmer
- Power Panel
- Ceiling Fan
- DB — Door Bell
- DC — Door Chimes
- C — Intercom
- Television Outlet
- Phone Jack
- Smoke/Carbon Monoxide Detector
- Gas Outlet
- HB — Hose Bibb
- Built-in Blender
- T — Thermostat
- Garbage Disposal
- Timer
- V — Vacuum Outlet
- C — Network Computer System
- C — Solar Photo Cell
- Wall Wash
- G.F.I. — G.F.I. Ground Fault Interrupter
- A.F.I. — A.F.I. Arc Fault Interrupter
- V.S. — Vacancy Sensor
- W.P. — Water Proof
- F.A.U. — F.A.U. Forced Air Unit
- F — Fluor. Light Under Cab
- Rope Lighting behind Crown Molding and Soffit
- Ceiling Mounted Outlet for Overhead Garage Door Opener w/ Remote Switch

ELECTRICAL NOTES

1 All smoke detectors shall be connected to the building wiring system and be interconnected, provide battery back-up and install per CBC section 310.9.1. Smoke detectors shall sound and be audible in all living areas.

2 Provide pre-wire for security system.

3 Consult with owners for possible intercom system.

4 All appliances with motor larger than ¼ horsepower shall be on a separate electrical circuit supplied by 12 AWG wire, minimum.

5 All closet lights shall be a minimum of 12" away from shelves and shall have protective covers.

6 Rooms containing bathtubs, showers, spas, and similar bathing fixtures shall be mechanically ventilated. provide an exhaust fan with a min. capacity of 50 cfm. ductless fans are unacceptable.

7 Provide for stereo speaker 16 ga or larger wiring throughout the house and a cat 5E control wire.

8 Provide for computer wiring at office and all bedrooms.

9 Electrical contractors shall submit load calculations to building department to justify size of electrical service prior to installation.

10 All electric services must have provisions for future undergrounding Ord. 252

11 Provide "Category 5E" telephone cabling.

12 Provide RG-6 quad T.V. cabling.

13 Provide "home run" wiring typ. for telephone, T.V. & computer jacks.

14 Bundle "Category 5E" telephone data cabling & RG-6 quad cabling together in a structured format.

15 Provide bid for central vacuum system and installation per owner's request.

16 Bathroom receptacles shall be served by a dedicated 20 amp circuit.

17 All branch circuits that supply 125 volt, single phase, 15 and 20 amp. receptacle outlets installed in bedrooms shall be protected by arc-fault circuit interrupter(s) - NEC Sect. 210-12(b)

18 LED High-efficacy light fixtures in the kitchen shall be switched separately

19 Lighting in bathrooms, laundry room and utility rooms shall be controlled by manual-on occupant sensors

20 Lighting in hallways, dining room, family room, living room, nook, bedrooms and closets with an area of 70 square feet or more shall be controlled by dimmer switch

21 Per the 2022 CEC, All Outdoor lighting must be high efficacy and must be controlled by a motion sensor with integral photo control

22 Electrical panel to be less than 200 Amperes. If more than 200 Amperes is required, contractor to submit plans under separate permit. Such plans will include but not limited to; wiring diagrams, load schedule, homeruns, wire sizes, location and size of service panels and subpanels, method of grounding of service. Further, provide a 3" diameter stub-out conduit.

23 Two 20-Amp small appliance branch circuits serving the kitchen counter receptacles shall have no other outlets per CEC Article 210.52(B)

24 All bedroom receptacles shall be protected by an arc-fault circuit interrupter listed to provide protection of the entire branch circuit per CEC Article 210.12(B)

25 All new plumbing fixtures shall be certified low flow fixtures

26 Receptacles in the kitchen counter shall be started within 24" of the wall or counter edge and spaced not more than 48" o.c. per CEC Article 210.52(B)3

27 An approved HERS provider and certified rater shall conduct the field verification and diagnostic testing.

28 Contractor shall provide a Certificate of Field Verification and Diagnostic Testing (CF-4R), signed and dated by the HERS rater to the Building Department prior to final inspection.

29 All new branch circuits shall comply with CEZ 2004 Articles 210-52 and 210-12

30 The CF-6R form shall be completed prior to final inspections

31 The requirements apply only to permanently installed luminaires, i.e., luminaires that are part of the house, as opposed to portable luminaires such as torchieres or table lamps that are provided by the occupant. Permanently installed luminaires include ceiling luminaires, chandeliers, vanity lamps, wall sconces and any other type of luminaire that is a permanent part of the house.

32 Luminaires that are recessed into insulated ceilings are required to be rated for insulation contact ("IC-rated") so that insulation can be placed over them. The housing of the luminaire shall be airtight to prevent conditioned air escaping into the ceiling cavity or attic, unconditioned air infiltrating from the ceiling or attic into the conditioned space.

33 Exterior doors that provide direct access to the swimming pool or spa shall be equipped with an alarm that produces an audible warning when the door is opened - unless pool has a power safety cover or spa has a listed safety cover. (CBC Sect. 3109.4)

34 Rooms containing bathtubs, showers, spas, and similar bathing fixtures shall be mechanically ventilated. Provide an exhaust fan with a min. capacity of 50 CFM. Ductless fans are unacceptable.

35 Provide a min. 1 foot-candle of stairway illumination at tread runs (CBC 1205.4).

36 Provide whole house indoor air quality ventilation by means of continuous exhaust ventilation, supply ventilation, or a combination of both exhaust and supply ventilation in each individual dwelling unit. See Energy Calculations (Title 24) for required CFM per California Energy Code.

37 All receptacle outlets shall be listed tamper-resistant receptacle per CEC Section 406.11.

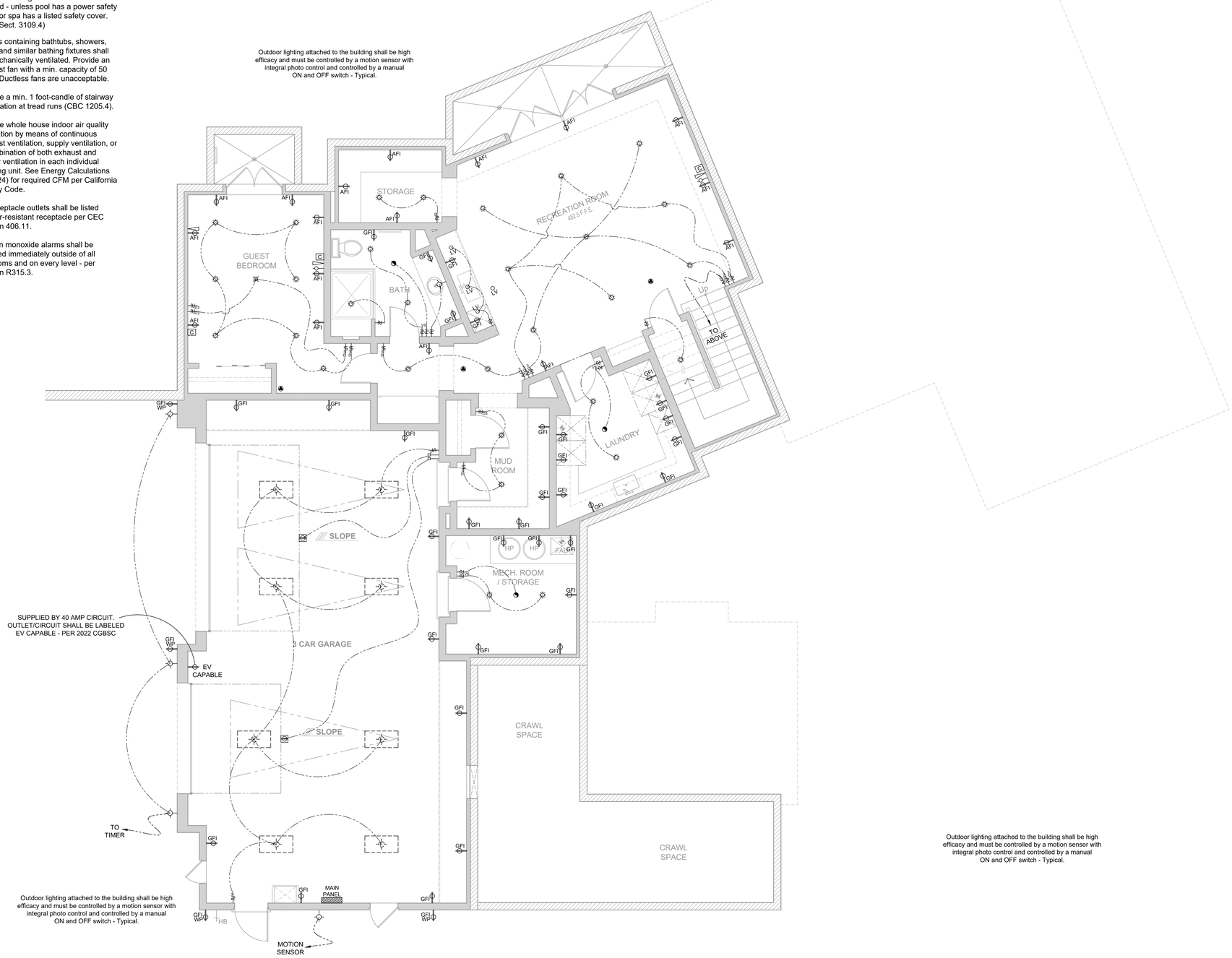
38 Carbon monoxide alarms shall be installed immediately outside of all bedrooms and on every level - per Section R315.3.

39 Carbon monoxide alarms shall receive their primary power from the building wiring, shall be equipped with a battery backup and interconnected - per Section R314.3, R314.4, and R315.1

40 Artificial light in the basement shall provide an average illumination of 10 footcandles over the area of the room at a height of 30 inches above the floor level.

41 Gas powered water heating system shall have: a 120V electrical receptacle that is within 3 feet from the water heater, a Category III or IV vent, or a type B-vent with straight pipe between the outside termination and the water heater space; a condensate drain that is no more than 2" higher than the base of the water heater. and a gas supply line with a capacity of at least 200,00 BTU/hr.

42 Indoor Air Quality and Exhaust - CGBSC 4.506
For bathrooms containing a bathtub, shower, or tub/shower combination, a mechanical exhaust fan which exhausts directly from the bathroom must be installed. Fans must be Energy Star compliant, the minimum mechanical ventilation rates shall be 50 CFM for intermittent ventilation and 25 CFM for continuous ventilation and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which shall be readily accessible. Humidistat controls shall be capable of adjustment between a relative humidity range of 50 to 80 percent



FIRST LEVEL ELECTRICAL PLAN

1/4" = 1'-0"

NORTH

DOUGLAS J. LEACH ARCHITECT
119 W. TORRANCE BLVD., SUITE 24
REDONDO BEACH, CALIFORNIA 90277
PHONE: (310) 372-3580
FAX: (310) 318-5801

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

REVISION
REVISED
PRINTED

2305

E1

OF

ELECTRICAL SYMBOLS

- LED Ceiling Light
- Halogen Ceiling Light
- LED Pendant Light
- LED Wall Light
- Fluorescent Wall Light
- Recessed Light
- LED Lamp
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13 Provide "home run" wiring typ. for telephone, T.V. & computer jacks.

14 Bundle "Category 5E" telephone data cabling & RG-6 quad cabling together in a structured format.

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16 Bathroom receptacles shall be served by a dedicated 20 amp circuit.

17 All branch circuits that supply 125 volt, single phase, 15 and 20 amp. receptacle outlets installed in bedrooms shall be protected by arc-fault circuit interrupter(s) - NEC Sect. 210-12(b)

18 LED High-efficacy light fixtures in the kitchen shall be switched separately

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21 Per the 2022 CEC, All Outdoor lighting must be high efficacy and must be controlled by a motion sensor with integral photo control

22 Electrical panel to be less than 200 Amperes. If more than 200 Amperes is required, contractor to submit plans under separate permit. Such plans will include but not limited to; wiring diagrams, load schedule, homeruns, wire sizes, location and size of service panels and subpanels, method of grounding of service. Further, provide a 3" diameter stub-out conduit.

23 Two 20-Amp small appliance branch circuits serving the kitchen counter receptacles shall have no other outlets per CEC Article 210.52(B)

24 All bedroom receptacles shall be protected by an arc-fault circuit interrupter listed to provide protection of the entire branch circuit per CEC Article 210.12(B)

25 All new plumbing fixtures shall be certified low flow fixtures

26 Receptacles in the kitchen counter shall be started within 24" of the wall or counter edge and spaced not more than 48" o.c. per CEC Article 210.52(B)3

27 An approved HERS provider and certified rater shall conduct the field verification and diagnostic testing.

28 Contractor shall provide a Certificate of Field Verification and Diagnostic Testing (CF-4R), signed and dated by the HERS rater to the Building Department prior to final inspection.

29 All new branch circuits shall comply with CEZ 2004 Articles 210-52 and 210-12

30 The CF-6R form shall be completed prior to final inspections

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36 Provide whole house indoor air quality ventilation by means of continuous exhaust ventilation, supply ventilation, or a combination of both exhaust and supply ventilation in each individual dwelling unit. See Energy Calculations (Title 24) for required CFM per California Energy Code.

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42 Indoor Air Quality and Exhaust - CGBSC 4.506
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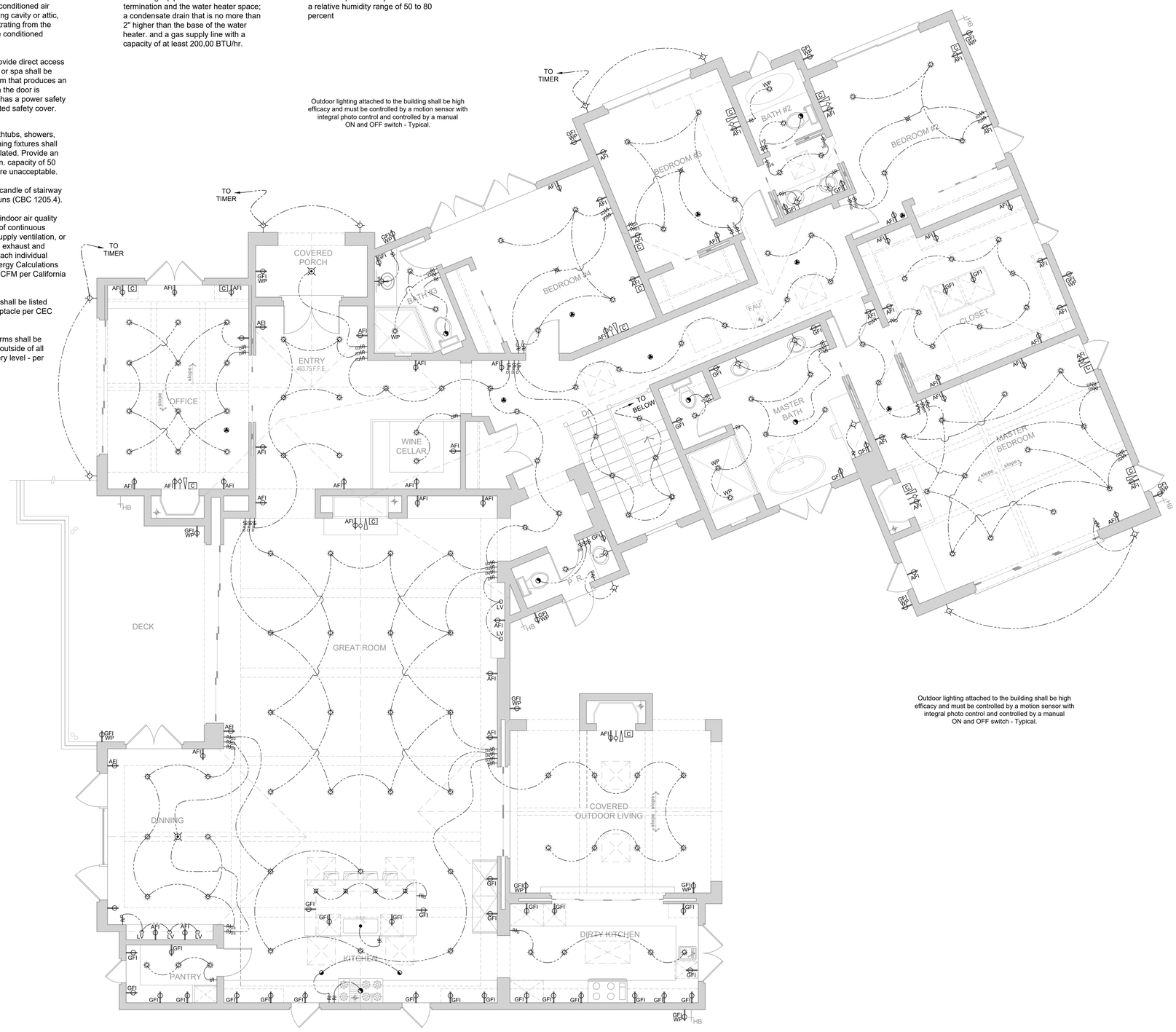
Outdoor lighting attached to the building shall be high efficacy and must be controlled by a motion sensor with integral photo control and controlled by a manual ON and OFF switch - Typical.



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Outdoor lighting attached to the building shall be high efficacy and must be controlled by a motion sensor with integral photo control and controlled by a manual ON and OFF switch - Typical.

SECOND LEVEL ELECTRICAL PLAN

1/4" = 1'-0"

NORTH

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9.7 INSPECTION is required for all interior and exterior lath and/or drywall before any plaster is applied or any joists and fasteners have been taped and finished.

9.8 All showers and tubs must be finished with waterproof CERAMIC TILE and grout to a minimum of 6' above the floor, or be of one-piece fiberglass construction.

9.9 Provide water-resistant DRYWALL FINISH BEHIND all fiberglass TUBS and/or showers. Where fire-resistive construction assemblies are required (i.e. at party walls), the proper drywall finish shall be installed continuously prior to the installation of the tub and/or shower unit. Contractor shall verify dimensions of all framing to ensure proper allowance for fixtures and finishes.

9.10 Proper FINISH shall be continuously applied BEHIND all other types of FIXTURES such as plumbing fixtures, cabinets, furred soffits, metal fireplace units, etc., where fire-resistive constructions are required.

9.11 One-Hour FLOOR/CEILING assemblies shall be installed with finishes per details at Plan prior to the construction of any ceiling soffits or furred areas. Furred ceilings shall be framed with fire-resistant treated lumber or metal joists in this case. Draft stops shall be installed according to the area limitations noted in the California Building Code.

9.12 DRAFT STOPS shall be installed in all attic areas and concealed spaces according to the requirements of the California Building Code.

9.13 CERAMIC TILE at the floor or wall surfaces shall be installed in accordance with ANSI specifications as described in the 'Ceramic Tile Manual,' published by the Building News Inc., P.O. Box 3031, Terminal Annex, Los Angeles, CA 90051.

9.14 Contractor shall provide minimum fire-resistive assemblies required for all CHUTES and SHAFTS noted on Plan.

9.15 All interior finish materials shall meet Class III Flame Spread classification.

DIVISION 10 - SPECIALTIES

10.1 HARD-WIRED SMOKE DETECTORS of a type approved by the local FIRE CHIEF shall be installed at locations noted on the Plan.

10.2 Contractor shall verify with the Owner the final locations of all COMMUNICATIONS OUTLETS such as telephone and television connections prior to final framing inspection.

DIVISION 11 - EQUIPMENT

11.1 Contractor shall consult with Owner regarding provisions for FUTURE EXTERIOR AMENITIES including stubbed-out gas lines for water, gas and electricity prior to any foundation work.

DIVISION 14 - CONVEYING SYSTEMS

14.1 Contractor shall provide Shop drawings for any DUMBWAITERS noted on Plan. The Architect shall be given ample time to coordinate construction details for this equipment.

C 'MONOKOTE': Machine applied, direct-to-steel fire-protective material according to ICBO RR #1578 and manufacturer's specifications (contact 'Zonolite' Sales Representative, or Architect).

7.13 Hot mop shower pan after lath and plaster. Provide drainage via 2 in. sq. weep holes or equivalent openings at minimum 32" o.c. to adjacent lower grade at all site retaining walls not adjacent to enclosed building areas. A perforated drain pipe as described in 2.9 may be used as an option.

7.14 Penetration or openings in the construction for piping electrical outlets and devices, recess cabinets, bathtubs, soffits and heating, ventilating and/or air conditioning intake and exhaust ducts and the like, shall be sealed, lined, insulated or otherwise treated to maintain the required rating and such treatment shall be approved by the building official (see acoustical details next sheet). All exterior joints, penetrations and openings in the building envelope shall be caulked and sealed.

7.15 Provide corrosion resistant weep screed and plaster stop at foundation sill plate to allow water to drain where exterior finish is plaster.

7.16 One Hour Construction required at all enclosed areas beneath wood-framed stairs. Minimum 1 layer 5/8" Type 'X' gypsum board applied according to California Building Code.

DIVISION 8 - DOORS AND WINDOWS

8.1 All SWINGING DOORS and WINDOWS exposed to ambient conditions or to unconditioned areas such as garages or attics shall be fully weather stripped, gasketed, or otherwise treated to limit infiltration. All MANUFACTURED WINDOWS and SLIDING GLASS DOORS shall meet the air infiltration standards of the 1972 ANSI (A 134.1, 134.2, 134.3) when tested in accordance with ASTM E 283-73 with a pressure differential of 1.57 #/sq. ft., and shall be certified and labeled by manufacturer.

8.2 Provide CAULKING or GASKETING at jambs and sill of all exterior-mounted fixed glass units, and other penetrations such as openings for pipes and wire conduits to limit air-filtration.

8.3 Exterior doors, doors between house and garage, windows and their hardware shall conform to the Security Provisions of California Building Code:

A Single swinging doors, active leaf of a pair of doors, and the bottom leaf of Dutch doors shall be equipped with a deadbolt and a latch. If a key-locking feature is incorporated in the latching mechanism, a dead latch shall be used. Deadbolt shall contain hardened inserts or equivalent, so as to repel cutting tool attack. The deadbolt locks shall be key operated from the exterior side of the door and engaged or disengaged from the interior side of the door by a device not requiring a key, tool or excessive force.

B Inactive leaf of a pair if doors or upper leaf of Dutch door shall have deadbolt as per paragraph "a" not key operated, or hardened deadbolt top and bottom with ½" embedment.

C Swinging wood door(s) shall be solid core not less than 1-3/8" thick.

D Panels of wood doors shall be fabricated of lumber not less than 1 3/8" thick, provided shaped portion of panels are not less than ¼" thick. Individual panels shall not exceed 300 square inches in area.

E Hollow-core doors or doors less than 1 3/8" in thickness either of which shall be covered on the inside face with 16-gauge sheet metal attached with screws at 6" maximum centers around the perimeter.

F Door hinge pins accessible from the outside shall be non-removable.

G Door stops of wood jambs of in-swinging doors shall be one piece construction or joined by a rabbet.

H Windows and door lights within 40" of the locking device of the door shall be fully tempered/approved burglary resistant/protected by bars, screens or grills.

I Overhead and sliding garage doors shall be secured with a cylinder lock, padlock with a hardened steel shackle, or equivalent when not otherwise locked by electric power operation. Jamb locks shall be on both jambs for door exceeding 9 feet in width.

J Sliding glass doors and sliding glass windows shall be capable of withstanding the tests set forth in Section 6706 and 6707 of the Los Angeles County Building Code and shall bear forced-entry-resistant labels.

8.4 All glass over 6 sq. ft. and within 18 in. of floors or walking surfaces to be minimum 3/16" fully TEMPERED.

8.5 Shower and TUB ENCLOSURES to be 7/32" shatterproof glass or approved type plastic. If door swings, it must swing out from shower/tub.

8.6 Fixed glass units shall be cut and placed in frames with proper allowance for EXPANSION.

8.7 All wood frames and stops to be back-primed prior to glazing to prevent warping.

8.8 Typical CAULKING compound to be flexible type latex suitable for gun application.

8.9 Wrap all jambs, heads and sills of window openings with approved building paper prior to installation of window and door units.

8.10 See window and door CALLOUTS at Floor Plans for size and type of fenestration.

8.11 Opening into attics, under floor areas, and other enclosed areas (other than living areas) shall be covered with minimum ⅛" to ¼" spaced corrosion-resistant WIRE MESH.

8.12 SKYLIGHTS shall be manufactured by "Vellux" w/ ICBO #NER-216 or ICBO approved equal, and shall be flat profile with 'bright-white' acrylic glazing at exterior light, unless otherwise noted in Plan. ICBO #2469. Skylight shall comply California Building Code.

8.13 All exterior openings shall comply with provisions of the California Building Security Code.

DIVISION 9 - FINISHES

9.1 All PLASTERING materials and methods to conform to the California Building Code.

9.2 Refer to exterior elevations for exterior plaster finish coat. Integral color to be approved by Architect or owner.

9.3 All interior DRYWALL shall be taped, sealed, filled, sanded and otherwise prepared for painting according to the Finish Schedule and according to the published Standards of the Gypsum Association.

9.4 All GALVANIZED METAL shall be neutralized and primed prior to application of paint.

9.5 Kitchens, bathrooms, service rooms and other areas exposed to damp conditions shall be painted with ENAMEL or other approved, washable product.

9.6 PLASTERED surfaces on walls, ceiling and roof soffits exposed to the weather shall have exterior lath and plaster conforming to the California Building Code.

6.11 BRACING of all walls shall conform to California Building Code. Bracing of all foundation cripple walls shall conform to California Building Code.

6.12 NOTCHING and BORING of all wood framing members shall not exceed limits outlined in California Building Code.

6.13 TYPICAL FRAMING CONNECTORS shall be 'Simpson' or equal.

6.14 Provide BLOCKING for all eave vents, skylight openings, garage vents, pluming penetrations; and backing for finish application as required by General Contractor.

6.15 Contractor shall depress or make other appropriate allowances for all finishes noted on plan such as: concrete topping, tile and grout, required slopes for deck and roof surfaces, etc.

6.16 Where required to achieve minimum roof or deck slopes, provide 2x rippings over flat-framed joists. Attach rippings with minimum 16d @ 10" o.c. faced nailed to joists below where rippings are less than 2 ½" deep. Otherwise, attach rippings with minimum Simpson A35 (or equal nailing clips) @ 48" o.c. maximum to joists below.

6.17 Provide CANT STRIPS and CRICKETS at all roof areas to ensure proper drainage, and to ease bends in built-up roofing to less than maximum of 45 degree bend. Provide nailing boards and blocks as required for proper attachment of sheet-metal flashing and drainage.

6.18 Solid block all panel edges or use T&G at floor sheathing.

6.19 Contractor shall verify Plan dimensions relating to all plumbing fixture installation (check for allowance at one-piece shower/tub + finish behind), and sash installations.

6.20 All furred ceilings and soffits installed below required One-Hour floor/ceilings shall be constructed with fire-retardant treated wood or metal joist.

6.21 Contractor shall provide support for all draft stops in concealed areas and attics. Party walls shall extend continuously to the Roof sheathing according to details included at the Plan.

6.22 Glue all plywood sub-floor panel edges continuously to floor joists and blocking.

6.23 Plywood roof panels to be bonded with exterior glue and be of exterior type where exposed to the weather. All roofing plywood to be T&G or applied with staggered edges along the long axis.

6.24 Provide minimum of two caulking beads under all exterior sill plates at slabs where sill is adjacent to heated rooms.

6.25 Submit Certification of Fabrication for Glu-lam beams to Building Department prior to installation.

6.26 Glu-lam beams to be Douglas Fir/Larch Combination 24F with shop camber unless otherwise noted at Plan.

DIVISION 7 - THERMAL, MOISTURE AND ACOUSTIC PROTECTION

7.1 Provide minimum 1 layer 15# felt or equivalent VAPOR BARRIER under all exterior wall finishes. 2 layers of 15# felt is required over all exterior wall plywood (shear walls).

7.2 Where one-piece fiberglass tub/showers are not used, provide cement plaster-backed TILE WALL FINISH to a minimum of 6' above floor level. Provide properly waterproofed tiled jamb and sill @ all window sections adjacent to showers and tubs below 6' height.

7.3 All roof FLASHING, saddles, gutters, and downspouts to be minimum 26 ga. G.I. painted out to match mounting surface where exposed.

7.4 Provide insulation between roof rafters or ceiling joists over all heated areas per the energy calculations and building sections.

7.5 Provide insulation between studs in all exterior walls, in walls separating heated and non-heated areas, party-walls, and between joists over garage areas per the energy calculations and building sections.

7.6 Sloped ROOF AREAS pitched < 4:12 to be roof with minimum 300# / square ravel over 2 layers 30# felt hot-mopped over, under and between with 25# asphalt, over 1 layer 15# felt dry sheet attached with sprinkle-nailing @ maximum 18" o.c. to plywood sheathing. Roofing to be rated as Class -fire-retardant construction.

7.7 See Division 8 below for SKYLIGHTS.

7.8 INSULATION used shall comply with CEC Quality Standards. After installing the insulation, the installer shall post in a conspicuous location in the building a CERTIFICATE signed by the installer and the builder, which states that the installation conforms with the requirements of installed conform with the requirements of Title 20, Chapter 2, Subchapter 4, Article 3 of the California Code. The certificate shall state the manufacturer's value, and (in applications of loose fill installation) the minimum installed weight per sq. ft. consistent with the manufacturer's labeled density for the desired 'R' value.

7.9 All ROOF DRAINS at near-flat roof area to have raised screening devices to prevent drain stoppage due to accumulated debris. See Roof Plan for location of overflow devices, downspouts and drain lines.

7.10 Provide cant stripe or rippings as required to drain and ease all bends in felt built-up roofing.

7.11 At garage side of all walls separating garage from dwelling, and at ceiling of garage, provide finishes which comply to the requirements for ONE-HOUR construction.

7.12 See Plan for all fire-protection requirements at structural steel framing. The following notes define basic options for compliance with these requirements:

COLUMNS

A GYPSUM WALLBOARD: Base layer ½" regular gypsum wallboard or veneer base tied to column with 18 gauge wire @ 15" o.c. or attached to 2X furring which has been securely fastened to steel surface with approved fasteners. Face layer of ½" regular gypsum wallboard or veneer base applied with laminating compound over entire contact surface.

B PLASTER: 7/8" 1:3 gypsum-sand plaster applied to 3.4# metal lath wrapped and wire tied to column with 18 gauge wire ties @ 6" o.c.

C 'MONOKOTE': Machine-applied direct-to-steel fire protective material according to ICBO RR #1578 and manufacturer's specifications (consult with Architect).

BEAMS

A GYPSUM WALLBOARD: Attach 2X furring members at maximum 16" o.c. to flanges and/or web of steel base with approved connectors. Apply continuous layer of 5/8" type 'X' gypsum board to furring at sides, bottom, and top (where applicable) with 5d cooler nails or approved equivalent connector. Protect outside corners with 20 gauge corner bead.

B PLASTER: Portland cement plaster on metal lath attached to ¾" cold-rolled channels with #18 gauge wire ties spaced 3" to 6" o.c. Plaster mixed 1:2½ by volume, cement to sand.em

3.3 The Contractor shall verify all DIMENSIONS of foundations at the job prior to any framework, and again prior to placement of concrete.

3.4 Provide a wood float finish unless otherwise noted on Plans broom finish at all interior parking slabs, and all exterior pedestrian slabs, unless otherwise noted on Plans.

3.5 Before any concrete is placed, the Contractor shall coordinate and check with all trades to ensure the proper placement of all OPENINGS, SLEEVES, INSERTS, CURBS, DEPRESSIONS, etc. relating to the project requirements.

3.6 The Contractor shall use adequate methods to ensure that all CONCRETE placed CONSISTENTLY FILLS all formed areas, especially around reinforcement, embedded fixtures, and at corners and offsets in framework. Wet all forms prior to the placement of concrete.

3.7 The Contractor shall remove or otherwise alter all form ties and other protrusions from the concrete surface which will interfere with the finish noted on the Plan.

3.8 Thoroughly compact base, wetting as required for optimum results, before pouring concrete slabs. Cure with polyethylene sheet or keep wet by sprinkling with water. See plan for required finish.

DIVISION 4 - MASONRY

4.1 Notes included in the STRUCTURAL ENGINEER'S SPECIFICATIONS, or elsewhere on the Structural Plan SUPERSEDE all notes below. Where no specific requirement is noted on the Plan, use the following notes to set minimum standards.

4.2 All MASONRY CONSTRUCTION shall conform to standards or the California Building Code.

4.3 Where LIFTS EXCEED 4 FEET, provide inspection holes at bottom of every cell containing a vertical reinforcing bar. Mortar droppings to be cleaned out of cell before steel are placed.

4.4 All masonry units shall be sufficiently moist at the time of laying to prevent DEHYDRATION of mortar and grout.

4.5 All REINFORCING STEEL, in masonry construction shall conform to standards noted above in Division 3 of these Specifications.

4.6 Consult plan notes, details, & schedules for masonry which the engineer has determined to require special inspection.

DIVISION 5 - METALS

5.1 Notes included in the STRUCTURAL ENGINEER'S SPECIFICATIONS, or elsewhere on the Structural Plan SUPERSEDE all notes below. Where no specific requirement is noted on the Plan, use the following notes to set minimum standards.

5.2 'The American Welding Society Code for Fusion Welding of Buildings and Bridges' shall be used to determine standard WELDING PRACTICE. Where SHOP-WELDING is to be performed, a certificate of for welding from a fabricator approved by the City is required prior to framing inspection. All FIELD-WELDING is to be performed under the supervision of an inspector approved by the local City Department of Building and Safety.

5.3 'STRUCTURAL WELDS' refer to any welds performed on steel beams, columns, and their connections, and miscellaneous custom connectors which are integral to the support of building.

5.4 Steel fabricator to provide for attachment of WOOD NAILER PLATES to all structural steel members as required by Plan by including staggered ½" clear drilled holes at 48" o.c. maximum at beam webs, and ½" diameter machine bolt studs welded to the top and bottom flanges at 48" o.c. maximum (using minimum 1/8" fillet weld all around). Similar fasteners are to be provided on all vertical steel members. Explosive driven ['Ramset'] fasteners may be used with the specific permission of the Project Engineer.

5.5 Steel fabricator to provide SHOP DRAWINGS of all steel members and connectors for approval by General Contractor and Designer minimum 2 weeks prior to any shop fabrication.

5.6 Steel fabricator to verify all FIELD DIMENSIONS affecting his work prior to finalizing shop drawings.

5.7 Steel fabricator to provide TEMPLATES which accurately locate all anchor bolts required to connect steel columns, beams or other miscellaneous connectors to masonry or concrete footings, walls, and similar support points.

5.8 All welds on ORNAMENTAL IRON to be ground smooth.

5.9 All steel to be shop PRIMED prior to delivery to site.

5.10 Where shop welding is to be performed, a certificate of welding from an approved fabricator is required prior to framing inspection.

DIVISION 6 - WOOD AND PLASTICS

6.1 Notes included in the STRUCTURAL ENGINEER'S SPECIFICATIONS, or elsewhere on the Structural Plan SUPERSEDE all notes below. Where no specific requirement is noted on the Plan, use the following notes to set minimum standards.

6.2 All WOOD SILLS on concrete shall be foundation grade redwood or pressure-treated Douglas Fir. Provide 2 caulking beads or approved rubber gasketing under all exterior sill plates at slabs where sill lies directly between heated and non-heated spaces.

6.3 FIRE-BLOCKING and FIRE STOPS shall be installed in all walls, floor/ceiling, soffits, concealed spaces, attics, and other areas according to the requirements of the California Building Code. Special care shall be taken to correctly block all fire-rated walls. Consult plan for typical conditions, and notify Architect immediately when alternate details are required.

6.4 SOLID BLOCKING for structural purposes shall also be included at all joists and rafter support points, and at 8' intervals where horizontal or vertical spans exceed those allowed in the California Building Code.

6.5 Double TOP PLATE in bearing partitions shall be lapped minimum 4' at all breaks. Provide framing straps according to the requirements of the Framing Plan.

6.6 All typical framing connections shall conform to the minimum nailing standards noted in the California Building Code.

6.7 See Schedule at Framing Plan for all PLYWOOD required at SHEAR PANELS.

6.8 Provide DOUBLE FLOOR JOISTS under all parallel partitions, and solid blocking under all perpendicular bearing partitions.

6.9 Normally, provide RAFTER TIES @ minimum 48" o.c. immediately above ceiling joists where ceiling joists are not parallel to roof rafters.

6.10 Studs in 'raked' walls shall extend from the floor to the plate at the horizontal diaphragm above WITHOUT INTERMEDIATE PLATES unless the intermediate plates have been specifically engineered to span horizontally. Maximum heights for 2x4 and 2x6 = 10' for bearing walls (without special engineering), and 20' for 2x6 at non-bearing walls

DIVISION 1 - GENERAL REQUIREMENTS

1.1 If any ERRORS, DISCREPANCIES, or OMISSIONS appear in the drawings, specifications or other contract documents, the contractor shall notify the Architect in writing of such error or omission. In the event the contractor fails to give such notice before construction and/or fabrication of the work, the contractor will be held responsible to the result of any such errors, discrepancies, or omissions and the cost of rectifying the same.

1.2 This project shall comply with the requirements of the 2007 C.B.C. In addition, contractor and subcontractors shall conform to all local codes and requirements which supersede all notes and specifications in these plans.

1.3 All improvements required in the CITY RIGHT-OF-WAY shall be performed according to procedures and construction techniques approved by the governing City.

1.4 The Contractor shall take special care to provide adequate SHORING or protection for all existing or adjacent site structures prior to any subsequent construction activity. All shoring constructions shall be approved by the department of Building and Safety. Provide adequate shoring for all vertical cuts exceeding five (5) feet and all cuts at property line, especially those areas adjacent to existing structures and vegetation.

1.5 The Contractor shall submit to the City Department of Building and Safety evidence of all appropriate INSURANCES and LICENSES prior to obtaining all construction Permits.

1.6 The Contractor shall SCHEDULE all work according to direct agreements with the Owner, and according to all local governmental scheduling requirements.

1.7 Prior to construction, the Contractor shall verify all SITE SERVICE REQUIREMENTS such as connections for sewer system, fresh water, fire-system, gas, electrical system, phone system, and cable television. The Contractor shall make a specific agreement with the Owner regarding payment of all costs relating to these items. The Contractor shall notify the Designer of any further plan modifications required to accommodate these items.

1.8 Contractor shall install House Numbers and other POSTAL EQUIPMENT according to the Standards of the local Postal Authorities

1.9 All dimensions on Plan views of the building are set to either face of stud or centerline of stud at framed walls, face of masonry or centerline of masonry, face of concrete or centerline of concrete - unless otherwise noted. All dimensions on Section and Elevation views are set to plate line or top of finish floor unless otherwise noted.

1.10 Written dimensions shall have precedence over scaled dimensions on the drawings. The contractor and all subcontractors shall verify all dimensions and conditions at job site and report any discrepancies to the Architect before proceeding with work.

1.11 Equipment and material not installed but supplied by contractor or subcontractor will be the responsibility of that contractor due to loss from fire, theft, etc. Each subcontractor will clean up his waste material and rubbish and deposit same at an on-site dump area provided by the contractor. Contractor shall leave the entire building and premises "broom clean," all glass brushed clean and free from stains and discoloration.

1.12 Contractor shall be responsible for supervising all work and for construction means, methods, sequence and procedure. Contractor shall provide measures necessary to project structure during construction. Observation visits to the site by the designer or engineer or their representatives shall not include inspection of these project measures. Any support services performed by the Architect or his representative during construction shall be for the purpose of assisting in quality control and in achieving conformance with contractor's performance and shall not be construed as supervision of construction.

1.13 These drawings and specifications are the property of Douglas J. Leach, Architect, Inc. and as such shall not be copied in part or whole without permission.

DIVISION 2 - SITE WORK

2.1 If a soils report is performed for the site, all design and construction provisions included in the SOILS REPORT and subsequent addendums are hereby incorporated in this Plan.

2.2 Contractor shall keep the construction area sufficiently DAMPENED to control dust caused by grading and construction contractor shall at all times provide reasonable control of dust caused by wind.

2.3 No BACKFILL shall be placed against constructions in grade until all work has passed inspection. Backfilling must be thoroughly tamped to prevent further settling. See other provisions within these specifications for drainage and waterproofing requirements. IMPORTANT: NO BACKFILLING PRIOR TO PLACEMENT OF CONCRETE DECK SLAB, IF APPLICABLE, AND PROPER CURING AND INSPECTION PROCESS.

2.4 Contractor shall provide temporary TOILETS during construction.

2.5 Contractor shall consult with local City engineers regarding requirements for all existing and future PLANTING within CITY RIGHT-OF-WAY.

2.6 All construction WASTE and DEBRIS shall be kept in an enclosed container in accordance with local Fire Department Standards.

2.7 Unless otherwise noted at Plan, all foundation bearing surfaces for the proposed building shall penetrate COMPETENT BEARING SOIL minimum 24". Competent bearing soil shall be defined by the Project Soils Report, or by accepted parameters approved by the governing Building & Safety Department.

2.8 See Specific notes at FOUNDATION PLAN for further, more specific foundation requirements.

2.9 Contractor to provide a minimum 4" diameter perforated plastic drain line at the base of all retaining walls. This drain line should be placed in minimum 16" x 16" continuous gravel pocket, and be sloped to drain by gravity to a site outlet.

2.10 Contractor shall verify depth of building sewer lateral in field prior to the start of construction.

2.11 All utilities shall be underground.

2.12 Consult city engineer regarding street tree ordinance including regulations for the planting, pruning and removal of trees and shrubs on City property.

2.13 All excavations to be kept wet while in progress.

2.14 All yard drains to be minimum 4" P.V.C. or A.B.S. with minimum 1% slope to outlet.

2.15 Drain line from catch basin to be minimum 6" P.V.C. or A.B.S. with 1% slope to outlet.

2.16 Provide minimum 42" guardrail at change in grade over 30".

DIVISION 3 - CONCRETE

3.1 Notes included in the STRUCTURAL ENGINEER'S SPECIFICATIONS, or elsewhere on the Structural Plan SUPERSEDE all notes below. Where no specific requirement is noted on the Plan, use the following notes to set minimum standards.

3.2 All REINFORCING BARS shall be secured in position prior to placing of concrete.

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DIVISION 15 - MECHANICAL

15.1 See Project ENERGY CALCULATIONS for size and code justification of all Central Heating and Cooling equipment. Provide zoned heating and cooling.

15.2 Electrical RESISTANCE HEATING systems are NOT TO BE USED in this project.

15.3 All transverse DUCTS, plenum, and joints shall be SEALED with pressure-sensitive tape or mastic to prevent air loss (T20-1405c 1, CEC) and be installed according to the Uniform Mechanical Code, and the minimum Standards of the CEC. Check the Energy Calculations and the notes at the Plan for specific greater insulation requirements at the ducting.

15.4 Insulate all RECIRCULATING HOT-WATER PIPING in the attic, garages, crawlspaces or other unheated spaces to provide a maximum heat loss of 50 Btu/hr per lineal foot of piping where pipes are sized up to 2" in diameter. 100 Btu/hr per lineal foot is allowed in piping sized larger than 2" in diameter. (T20-1406d CEC). The five feet of pipe closest to the water heater, if the water heater is located outside the conditioned envelope of the building shall be insulated with a minimum of R-4.

15.5 Mechanical VENTILATION in bathrooms and other enclosed rooms to provide a minimum of 1 air change per 12 minutes. All fans and blower systems exhausting air from the building envelope shall be fitted with BACKDRAFT DAMPERS per T20-1403 d2 CEC.

15.6 All PLUMING VENTS within a radius of 15 feet shall be looped and brought through the roof at one point, and concealed from view wherever possible.

15.7 Provide ELECTRONIC IGNITION devices for all gas-fired appliances except cooking equipment and water-heaters.

15.8 Typical water-service plumbing within the building to be COPPER. Contractor to verify with local City Department of Building and Safety conditions of approval for all PLASTIC WASTE and VENT plumbing. Contractor shall also check minimum standards where plumbing lines penetrate fire-resistive assemblies (i.e. party walls, party floors).

15.9 Minimum 100 sq. in. of COMBUSTION AIR intake is required for gas-fired water and air heaters. Provide a minimum of 2 openings of 50 sq. in. each, one within 12" of the floor, and the other within 12" of the ceiling.

15.10 Circulating AIR-SUPPLY OPENINGS or ducts must be sized a minimum of 200 sq. in. or 2 sq. in./Kbtu, whichever is the larger.

15.11 SHOWER-HEADS and FAUCETS shall be equipped with flow restrictors as outlined in the Appliance Efficiency Standards and shall be certified by the CEC.

15.12 Contractor shall contact project Structural Engineer prior to any substantial alteration of STRUCTURAL MEMBERS is performed in order to accommodate plumbing lines.

15.13 Contractor shall consult with Designer prior to determining location, attachment, or design of any equipment not noted on plan, including SOLAR SYSTEM components.

15.14 All permanent mechanical equipment such as motors, compressors, pumps, and compactors which may be a source of structural vibration or STRUCTURE-BORN NOUSE, shall be mounted with inertia blocks or bases and/or vibration isolators in a manner approved by the local City Department of Building and Safety.

15.15 Plumbing contractor shall normally furnish a water line to the REFRIGERATOR.

15.16 All GAS-FIRED STORAGE WATER HEATING equipment shall comply to CEC T20-1406. Specifically, all water heating equipment shall meet the CEC Standards for minimum recovery efficiencies and maximum standby energy losses. Storage type water heaters, and storage (and backup) tanks for solar systems shall be externally wrapped with R-12 insulation or greater.

15.17 See floor plan for metal fireplace call-outs. ALL FIREPLACES to be equipped with tight-fitting metal or glass doors covering the entire opening of the firebox; a combustion air intake equipped with a readily accessible, operable, and tight fitting damper to draw air from the outside of the building; and a tight fitting flue damper with a readily accessible control.

15.18 HVAC EQUIPMENT suppliers shall provide all necessary maintenance and performance data to establish that the equipment has been manufactured and will operate according to the Appliance Efficiency Standards and shall be certified by the CEC. The equipment manufacturer shall furnish the owner with full operation and maintenance information required the CEC prior to occupancy permit.

15.19 A TWO-STAGE THERMOSTAT, which controls the supplementary heat on its second stage, shall be provided for heat pumps. Thermostats shall be equipped with an automatic SETBACK, which the building occupant can program to automatically set back the thermostat twice in 24 hours.

15.20 Plumbing and Mechanical Contractors shall provide SHOP DRAWINGS or equivalent drawings and specifications to the satisfaction of the local Building Department and the Owner, which illustrate the location and design and all proposed system components prior to mechanical or plumbing permits.

15.21 Pressure temperature relief valve required on all water heaters. Secure water heater for overturn if flex connectors are used.

15.22 Gas appliance having standing pilots are prohibited, effective July 8, 1978. All gas appliances in garage areas shall be mounted on platform min. 18" above floor.

15.23 Insulation of ducts shall conform to the provisions of section 604 f the Uniform Mechanical Code.

15.24 All fan or blower systems that exhaust air from the conditioned building envelope to the outside shall be provided with backdraft dampers.

15.25 Consult building engineer or Architect prior placement of any equipment loads on structure. Equipment to be placed within ¼ span of end supports of roof joists unless there support is provided for in plans.

15.26 All service hot water heating equipment shall be manufactured and installed according to CEDR div. 7 and ASHRAE standard 90-75. Provide T&P value @ water heater. Water heater shall be certified by C.E.C.

15.27 Gas vents and noncombustible piping passing through 3 floors or less shall be effectively draft stopped at each floor or ceiling.

DIVISION 16 - ELECTRICAL

16.1 GROUND-FAULT-INTERRUPTER is required for all circuits serving baths, kitchens, laundry rooms, exterior outlets, and temporary construction panels.

16.2 Contractor shall contact local Electric, Telephone, and Cable Television UTILITIES to verify their requirements for service to the site buildings, including location and design of underground conduit and pull boxes, meters, and service terminals.

16.3 FIXTURES used for general lighting in kitchens and bathrooms shall have an EFFICIENCY of not less than 40 lumens/watt.

16.4 All fluorescent fixtures shown on plan to be lamped with rapid-start warm-white LAMPS unless otherwise noted.

16.5 TEMPORARY ELECTRICAL PANELS are to be structurally braced prior to inspection for approval.

16.6 Electric system ground to be provided per N.E.C. article 210-8.

16.7 Provide gaskets @ electrical plates on perimeter walls.

16.8 Gas cooking appliances shall have intermittent ignition device.

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OF

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

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y | N/A | RESPON. PARTY

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

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

301.1.1 Additions and alterations. [HCD] 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.

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.

Note: 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.

Note: 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.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] 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.

SECTION 302 MIXED OCCUPANCY BUILDINGS

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

Exceptions:

1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
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.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

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

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

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

FRENCH DRAIN. 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.

WATTLES. 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.

4.106 SITE DEVELOPMENT

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.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. 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.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. 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.
3. Compliance with a lawfully enacted storm water management ordinance.

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.

(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 manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

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

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. 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 *California Electrical Code,* Article 625.

Exceptions:

1. 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:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   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.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each 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.

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 *California Electrical Code*.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

Y | N/A | RESPON. PARTY

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.
When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.

2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.

Notes:

a.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show locations of future EV spaces.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3.

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.
The charging spaces shall be designed to comply with the following:

1.The minimum length of each EV space shall be 18 feet (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.2.1.3 Accessible EV spaces.
In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

4.106.4.2.3 EV space requirements.
1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated 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 enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

Y | N/A | RESPON. PARTY

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.4 Identification.
The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.2.5 Electric Vehicle Ready Space Signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.
When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

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

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced 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.

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

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

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

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

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

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

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

NOTE:
THIS TABLE COMPLES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

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 a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. 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 available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

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 openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 CONSTRUCTION WASTE MANAGEMENT. 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 management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably 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.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as 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, 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 bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the 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.

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

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR). Projects that generate a total combined 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

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. 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 requirement in Section 4.408.1

4.408.5 DOCUMENTATION. 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..

Notes:

1. 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.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

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:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. 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.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 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.
10. A copy of all special inspections verifications required by the enforcing agency or this code.
11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
12. Information and/or drawings identifying the location of grab bar reinforcements.

4.410.2 RECYCLING BY OCCUPANTS. 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 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.

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 cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

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

DIRECT-VENT APPLIANCE. 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.

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OF

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

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

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

4.503 FIREPLACES
4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL
4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

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

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

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

(Less Water and Less Exempt Compounds in Grams per Liter)

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

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

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

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

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

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

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

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

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

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL 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.

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

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)
4.504.3 CARPET SYSTEMS. 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 California Specification 01350)

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.

4.504.3.1 Carpet cushion. 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)

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.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

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)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL
4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

4.505.2 CONCRETE SLAB FOUNDATIONS. 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 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.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

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 moisture content. Moisture content shall be verified in compliance with the following:

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 found in Section 101.8 of this code.
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.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation 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 recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST
4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   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.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.

4.507 ENVIRONMENTAL COMFORT
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:

1. 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.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS
702 QUALIFICATIONS
702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

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

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

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

Notes:

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.
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).

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

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

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

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2024-02-07T15:08:48-08:00 — (Page 1 of 15)

Calculation Description: Title 24 Analysis — **Input File Name:** R24-1213.ribd22x

GENERAL INFORMATION					
01	Project Name	SINGLE HOUSE			
02	Run Title	Title 24 Analysis			
03	Project Location	2812 VIA CAMPESINA			
04	City	PALOS VERDES ESTATES	05	Standards Version	2022
06	Zip code	90274	07	Software Version	EnergyPro 9.2
08	Climate Zone	6	09	Front Orientation (deg/ Cardinal)	90
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	5
14	Addition Cond. Floor Area (ft²)	0	15	Number of Stories	2
16	Existing Cond. Floor Area (ft²)	n/a	17	Fenestration Average U-factor	0.31
18	Total Cond. Floor Area (ft²)	5917	19	Glazing Percentage (%)	22.04%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Units	No

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

Registration Number: 424-P010023085A-000-000-0000000-0000 — Registration Date/Time: 02/07/2024 15:11 — HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance — Report Version: 2022.0.000 — Schema Version: rev 20220901 — Report Generated: 2024-02-07 15:09:40

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2024-02-07T15:08:48-08:00 — (Page 2 of 15)

Calculation Description: Title 24 Analysis — **Input File Name:** R24-1213.ribd22x

ENERGY DESIGN RATINGS	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)
Standard Design	38.5	53.3	28.8			
Proposed Design	28.4	40.6	23.4	10.1	12.7	5.4
RESULT[3]: PASS						

[1]Efficiency EDR includes improvements like a better building envelope and more efficient equipment

[2]Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries

[3]Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 3.42 kWdc
- PV System resized to 3.42 kWdc (a factor of 3.418) to achieve Standard Design PV PV scaling

Registration Number: 424-P010023085A-000-000-0000000-0000 — Registration Date/Time: 02/07/2024 15:11 — HERS Provider: CHEERS

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Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2024-02-07T15:08:48-08:00 — (Page 3 of 15)

Calculation Description: Title 24 Analysis — **Input File Name:** R24-1213.ribd22x

ENERGY USE SUMMARY	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTDV/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	2.71	12.25	1.36	9.83	1.35	2.42
Space Cooling	0.09	5.44	0.04	2.75	0.05	2.69
IAQ Ventilation	0.27	2.85	0.27	2.85	0	0
Water Heating	0.55	5.92	0.4	4.76	0.15	1.16
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	**3.62**	**26.46**	**2.07**	**20.19**	**1.55**	**6.27**
Photovoltaics	-0.65	-17.89	-0.65	-17.95		
Battery			0	0		
Flexibility						
Indoor Lighting	0.44	4.4	0.44	4.4		
Appl. & Cooking	1.11	7.18	1.11	7.16		
Plug Loads	1.24	12.96	1.24	12.96		
Outdoor Lighting	0.13	1.17	0.13	1.17		
TOTAL COMPLIANCE	**5.89**	**34.28**	**4.34**	**27.93**		

Registration Number: 424-P010023085A-000-000-0000000-0000 — Registration Date/Time: 02/07/2024 15:11 — HERS Provider: CHEERS

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Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2024-02-07T15:08:48-08:00 — (Page 4 of 15)

Calculation Description: Title 24 Analysis — **Input File Name:** R24-1213.ribd22x

ENERGY USE INTENSITY	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Compliance Margin (kBtu/ft² - yr)	Margin Percentage
Gross EUI[1]	7.97	5.78	2.19	27.48
Net EUI[2]	4.64	2.46	2.18	46.98

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
3.42	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

REQUIRED SPECIAL FEATURES
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
• Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

Registration Number: 424-P010023085A-000-000-0000000-0000 — Registration Date/Time: 02/07/2024 15:11 — HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance — Report Version: 2022.0.000 — Schema Version: rev 20220901 — Report Generated: 2024-02-07 15:09:40

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2024-02-07T15:08:48-08:00 — (Page 5 of 15)

Calculation Description: Title 24 Analysis — **Input File Name:** R24-1213.ribd22x

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

- Quality insulation installation (QII)
- Indoor air quality ventilation
- Kitchen range hood
- Minimum Airflow
- Verified EER/EER2
- Verified SEER/SEER2
- Verified Refrigerant Charge
- Fan Efficacy Watts/CFM
- Verified HSPF
- Verified heat pump rated heating capacity
- Duct leakage testing
- Verified Duct Design

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
SINGLE HOUSE	5917	1	5	2	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
1ST FLOOR PLAN	Conditioned	1ST FLOOR AREA1	1430	10	DHW Sys 1	New
2ND FLOOR PLAN	Conditioned	2ND FLOOR AREA2	4487	12	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
NORTHEAST WALL-1	1ST FLOOR PLAN	8 Concrete Wall w/R-15	45	n/a	213	50	90

Registration Number: 424-P010023085A-000-000-0000000-0000 — Registration Date/Time: 02/07/2024 15:11 — HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance — Report Version: 2022.0.000 — Schema Version: rev 20220901 — Report Generated: 2024-02-07 15:09:40

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — **Calculation Date/Time:** 2024-02-07T15:08:48-08:00 — (Page 6 of 15)

Calculation Description: Title 24 Analysis — **Input File Name:** R24-1213.ribd22x

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
SOUTHWEST WALL-1	1ST FLOOR PLAN	8 Concrete Wall w/R-15	225	n/a	230	0	90
SOUTHEAST WALL-1	1ST FLOOR PLAN	8 Concrete Wall w/R-15	135	n/a	356	0	90
WEST WALL	1ST FLOOR PLAN	R-19 Wall	270	Back	398	0	90
EAST WALL	1ST FLOOR PLAN	R-19 Wall	90	Front	10	0	90
EAST WALL-1	1ST FLOOR PLAN	8 Concrete Wall w/R-15	90	Front	249	25	90
NORTH WALL	1ST FLOOR PLAN	R-19 Wall	0	Right	235	0	90
NORTH WALL-1	1ST FLOOR PLAN	8 Concrete Wall w/R-15	0	Right	235	0	90
SOUTH WALL-1	1ST FLOOR PLAN	8 Concrete Wall w/R-15	180	Left	15	0	90
NORTHEAST WALL	2ND FLOOR PLAN	R-19 Wall	45	n/a	670.8	210.4	90
SOUTHWEST WALL	2ND FLOOR PLAN	R-19 Wall	225	n/a	691.2	183.2	90
NORTHWEST WALL	2ND FLOOR PLAN	R-19 Wall	315	n/a	231.6	18.3	90
SOUTHEAST WALL	2ND FLOOR PLAN	R-19 Wall	135	n/a	660	61.8	90
WEST WALL 2	2ND FLOOR PLAN	R-19 Wall	270	Back	768	36.5	90
EAST WALL 2	2ND FLOOR PLAN	R-19 Wall	90	Front	621.6	123	90
NORTH WALL 2	2ND FLOOR PLAN	R-19 Wall	0	Right	835.2	419	90
SOUTH WALL	2ND FLOOR PLAN	R-19 Wall	180	Left	432	108.9	90
R-30 Roof 2	1ST FLOOR PLAN	R-30 Roof Attic	n/a	n/a	181	n/a	n/a
R-30 Roof 3	2ND FLOOR PLAN	R-30 Roof Attic	n/a	n/a	4413.7	n/a	n/a
Raised Floor	2ND FLOOR PLAN	R-19 Floor W/O Crawlspace	n/a	n/a	1219	n/a	n/a
Raised Floor-1	2ND FLOOR PLAN	R-19 Floor W/ Crawlspace	n/a	n/a	481	n/a	n/a
Interior Surface	2ND FLOOR PLAN	Default Floor No Crawlspa	n/a	n/a	1249	n/a	n/a

Registration Number: 424-P010023085A-000-000-0000000-0000 — Registration Date/Time: 02/07/2024 15:11 — HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2022 Residential Compliance — Report Version: 2022.0.000 — Schema Version: rev 20220901 — Report Generated: 2024-02-07 15:09:40

REGISTERED PROFESSIONAL ENGINEER — No. M-27635 — EXPIRES 10-25 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS	BY

PERFECT DESIGN & MANAGEMENT INC.
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Air-Conditioning, Plumbing, Fire Sprinkler System,
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PHONE: (310) 372-5580
FAX: (310) 318-5801

JOB ADDRESS: **2812 VIA CAMPESINA, PALOS VERDES ESTATES**

SINGLE HOUSE
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

Date 2/7/2024
Scale
Drawn
Job # R24-1213
Sheet 1
RESIDENTIAL T24 SHEET
Of 4 Sheets

REVISION
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OF

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00 — (Page 7 of 15)

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
R-30 Roof	2ND FLOOR PLAN	R-30 Roof Attic1	0	Right	68.4	68.3	4	0.1	0.85	No

ATTIC

01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic 1ST FLOOR PLAN	Attic Roof1ST FLOOR PLAN	Ventilated	4	0.1	0.85	Yes	No
Attic 2ND FLOOR PLAN	Attic Roof2ND FLOOR PLAN	Ventilated	4	0.1	0.85	Yes	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
WINDOWS	Window	NORTHEAST WALL-1		45			1	50	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 2	Window	EAST WALL-1	Front	90			1	25	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 3	Window	NORTHEAST WALL		45			1	210.4	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 4	Window	SOUTHWEST WALL		225			1	183.2	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 5	Window	NORTHWEST WALL		315			1	18.3	0.3	NFRC	0.23	NFRC	Bug Screen

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00 — (Page 8 of 15)

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
WINDOWS 6	Window	SOUTHEAST WALL		135			1	51.8	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 7	Window	WEST WALL 2	Back	270			1	36.5	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 8	Window	EAST WALL 2	Front	90			1	173	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 9	Window	NORTH WALL 2	Right	0			1	419	0.3	NFRC	0.23	NFRC	Bug Screen
WINDOWS 10	Window	SOUTH WALL	Left	180			1	108.9	0.3	NFRC	0.23	NFRC	Bug Screen
Skylight	Skylight	R-30 Roof	Right	0			1	68.3	0.51	NFRC	0.26	NFRC	

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Covered Slab	1ST FLOOR PLAN	1430	192.1	none	0	80%	No
Covered Slab 2	2ND FLOOR PLAN	1538	140.5	none	0	80%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
8 Concrete Wall w/R-15	Exterior Walls	Concrete / ICF / Brick	None	n/a	15 / None	0.067	Inside Finish: Gypsum Board Insulation/Furring: R-15 / 4 in. wd Mass Layer: 8 in. Concrete Exterior Finish: 3 Coat Stucco

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00 — (Page 9 of 15)

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	None / None	0.074	Inside Finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Exterior Finish: 3 Coat Stucco
R-30 Roof Attic1	Cathedral Ceilings	Wood Framed Ceiling	2x8 @ 16 in. O. C.	R-30	None / None	0.035	Roofing: 10 PSF (RoofTileAirGap) Tile Gap: present Roof Deck: Wood Siding/sheathing/decking Radiant Barrier Cavity / Frame: R-30 / 2x8 Inside Finish: Gypsum Board
Attic Roof1ST FLOOR PLAN	Attic Roofs	Wood Framed Ceiling	2x6 @ 24 in. O. C.	R-0	None / 0	0.397	Roofing: 10 PSF (RoofTileAirGap) Tile Gap: present Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x6
Attic Roof2ND FLOOR PLAN	Attic Roofs	Wood Framed Ceiling	2x6 @ 24 in. O. C.	R-0	None / 0	0.397	Roofing: 10 PSF (RoofTileAirGap) Tile Gap: present Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x6
R-19 Floor W/ Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x6 @ 16 in. O. C.	R-19	None / None	0.05	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x8 @ 16 in. O. C.	R-30	None / None	0.033	Over Ceiling Joists: R-11.2 insul. Cavity / Frame: R-18.9 / 2x8 Inside Finish: Gypsum Board

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00 — (Page 10 of 15)

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Floor W/O Crawlspace	Exterior Floors	Wood Framed Floor	2x6 @ 16 in. O. C.	R-19	None / None	0.052	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6
Default Floor No Crawlspa	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.196	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Required	Not Required	N/A	n/a	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	2	n/a	None	n/a	DHW Heater 1 (2)

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00 — (Page 11 of 15)

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

WATER HEATERS - NEEA HEAT PUMP

01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	2	80	Rheem	XE80T10H45U0 (80 gal, JA13)	Outside	2ND FLOOR PLAN	2ND FLOOR PLAN

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/2	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
1ST FLOOR AREA1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	HVAC Fan 1	Air Distribution System 1	Setback
2ND FLOOR AREA2	Heat pump heating cooling	Heat Pump System 2	2	Heat Pump System 2	2	HVAC Fan 2	Air Distribution System 2	Setback

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating				Cooling					
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HSPF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 1	Central split HP	1	HSPF	8.7	35400	24600	EERSEER	15	12.5	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00 — (Page 12 of 15)

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HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating				Cooling					
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HSPF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 2	Central split HP	2	HSPF	9.1	59000	38600	EERSEER	15.5	11.6	Not Zonal	Single Speed	Heat Pump System 2-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Required	350	Required	Not Required	Yes	No	Yes	Yes
Heat Pump System 2-hers-htpump	Required	350	Not Required	Required	Yes	Yes	Yes	Yes

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
			Duct Ins. R-value		Duct Location		Surface Area				
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification
Air Distribution System 1	Unconditioned attic	Verified Design	See duct design	See duct design	Attic	Attic	2.46	0	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist
Air Distribution System 2	Unconditioned attic	Verified Design	See duct design	See duct design	Attic	Attic	2.46	0	No Bypass Duct	Sealed and Tested	Air Distribution System 2-hers-dist

REGISTERED PROFESSIONAL ENGINEER — MECHANICAL — STATE OF CALIFORNIA

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PERFECT DESIGN & MANAGEMENT INC.
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Air-Conditioning, Plumbing, Fire Sprinkler System, Electrical, Title 24 Energy Calculation.
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E-Mail:perfectaaa2@gmail.com

SINGLE HOUSE
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

Date 2/7/2024
Scale
Drawn
Job # R24-1213
Sheet 2 RESIDENTIAL T24 SHEET
Of 4 Sheets

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E (Page 13 of 15)

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Not Required	Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 2-hers-dist	Yes	5.0	Not Required	Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1-hers-fan
HVAC Fan 2	HVAC Fan	0.45	HVAC Fan 2-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.45
HVAC Fan 2-hers-fan	Required	0.45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E (Page 14 of 15)

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

INDOOR AIR QUALITY (IAQ) FANS

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRpt	204	0.35	Exhaust	No	n/a / n/a	No	Yes	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD — CF1R-PRF-01E (Page 15 of 15)

Project Name: SINGLE HOUSE — Calculation Date/Time: 2024-02-07T15:08:48-08:00

Calculation Description: Title 24 Analysis — Input File Name: R24-1213.ribd22x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Raymond Zhong	Documentation Author Signature: Raymond Zhong
Company: Perfect Design	Signature Date: 02/07/2024
Address: 2416 W. Valley Boulevard	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: Alhambra, CA 91803	Phone: 626-289-8808

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone:

REGISTERED PROFESSIONAL ENGINEER — RAYMOND MENG ZHONG — No. M27635 — EXP. 09-30-25 — MECHANICAL — STATE OF CALIFORNIA

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name: SINGLE HOUSE	Building Type: ☒ Single Family ☐ Addition Alone ☐ Multi Family ☐ Existing+ Addition/Alteration		Date: 2/7/2024
Project Address: 2812 VIA CAMPESINA PALOS VERDES	California Energy Climate Zone: CA Climate Zone 06	Total Cond. Floor Area: 5,917 / Addition: n/a	# of Units: 1

INSULATION

Construction	Type	Cavity	Area (ft²)	Special Features	Status
Roof	Wood Framed Attic	R 30	4,600		New
Wall	Solid Unit Masonry	- no insulation	1,223	Add=R-15.0	New
Wall	Wood Framed	R 19	4,392		New
Slab	Unheated Slab-on-Grade	- no insulation	2,968	Perim = 333'	New
Demising	Wood Framed w/o Crawl Space	- no insulation	1,249		New
Floor	Wood Framed w/Crawl Space	R 19	481		New
Floor	Wood Framed w/o Crawl Space	R 19	1,219		New

FENESTRATION — Total Area: 1,304 — Glazing Percentage: 22.0% — New/Altered Average U-Factor: 0.31

Orientation	Area(ft²)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Right (NE)	260.4	0.300	0.23	none	none	N/A	New
Front (E)	148.0	0.300	0.23	none	none	N/A	New
Skylight	68.3	0.510	0.26	none	none	N/A	New
Left (SW)	183.2	0.300	0.23	none	none	N/A	New
Rear (NW)	18.3	0.300	0.23	none	none	N/A	New
Front (SE)	61.8	0.300	0.23	none	none	N/A	New
Rear (W)	36.5	0.300	0.23	none	none	N/A	New
Right (N)	419.0	0.300	0.23	none	none	N/A	New
Left (S)	108.9	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Electric Heat Pump	8.70 HSPF	Split Heat Pump	15.0 SEER	Setback	New
2	Electric Heat Pump	9.10 HSPF	Split Heat Pump	15.5 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
1ST FLOOR AREA	Ducted	Ducted	Attic	6.0	New
2ND FLOOR AREA	Ducted	Ducted	Attic	6.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
2	Heat Pump	60	3.20	Standard	New

2022 Single-Family Residential Mandatory Requirements Summary

2022 Single-Family Residential Mandatory Requirements Summary

2022 Single-Family Residential Mandatory Requirements Summary

REVISIONS	BY

PERFECT DESIGN & MANAGEMENT INC.
·Design & Consulting
·Air-Conditioning, Plumbing, Fire Sprinkler System, Electrical, Title 24 Energy Calculation.
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Alhambra, CA 91803 Tel: (626) 289-8808
E-Mail:perfectaaa2@gmail.com Fax: (626) 289-4913

SINGLE HOUSE
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

Date	2/7/2024
Scale	
Drawn	
Job #	R24-1213
Sheet	3
RESIDENTIAL T24 SHEET	
Of	4 Sheets

DOUGLAS J. LEACH
ARCHITECT
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REDONDO BEACH, CALIFORNIA 90277
PHONE: (310) 372-5580
FAX: (310) 318-5801

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

REVISION

REVISED

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OF

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

5/6/22

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: SINGLE HOUSE — Date: 2/7/2024
System Name: 1ST FLOOR AREA — Floor Area: 1,430

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	35,400
Total Output (Btuh)	35,400
Output (Btuh/sqft)	24.8
Cooling System	
Output per System	34,800
Total Output (Btuh)	34,800
Total Output (Tons)	2.9
Total Output (Btuh/sqft)	24.3
Total Output (sqft/Ton)	493.1
Air System	
CFM per System	1,200
Airflow (cfm)	1,200
Airflow (cfm/sqft)	0.84
Airflow (cfm/Ton)	413.8
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

Note: values above given at ARI conditions

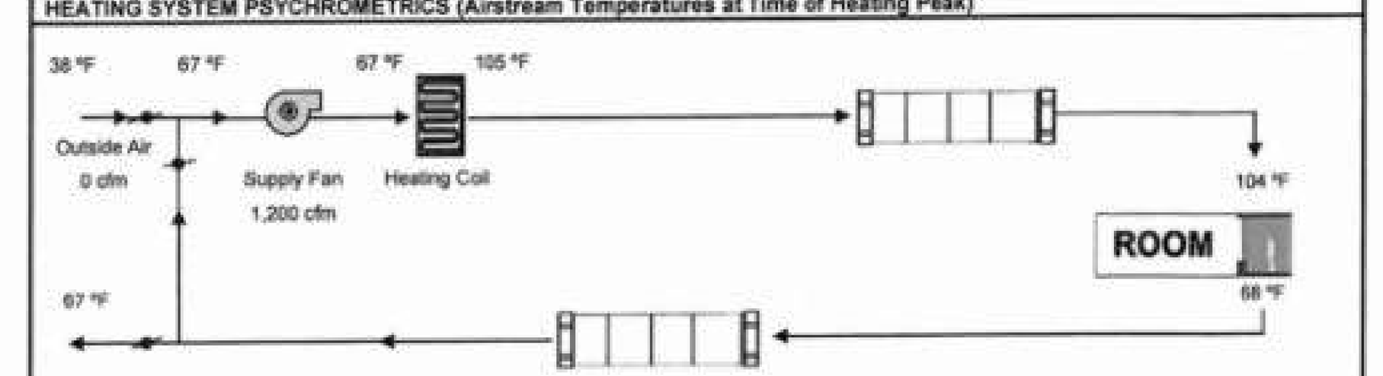
SYSTEM LOAD

	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	868	16,026	981	752	28,857
Return Vented Lighting		0			
Return Air Ducts		790			1,520
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		790			1,520
TOTAL SYSTEM LOAD		17,605	981		31,897

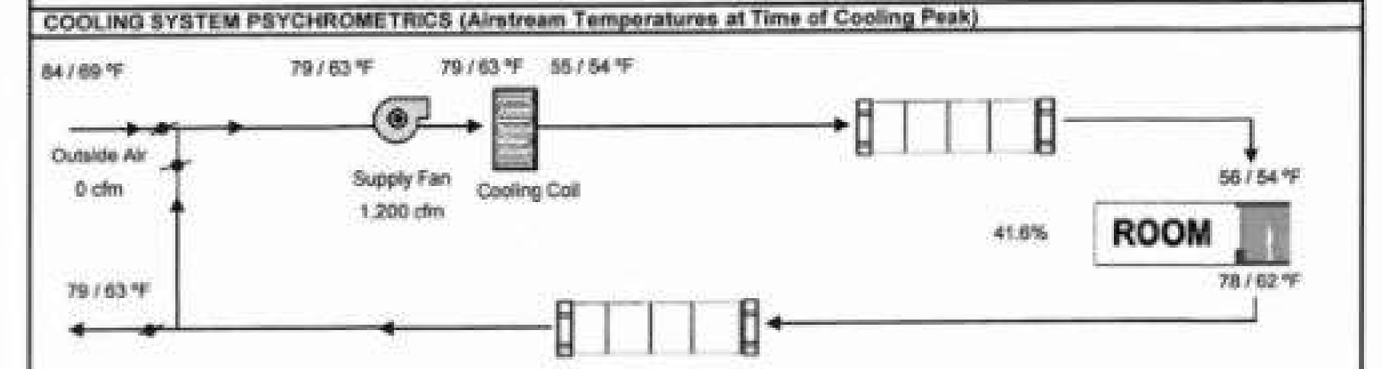
HVAC EQUIPMENT SELECTION

	Sensible	Latent	Sensible
CARRIER 25HBC536/"1ST CO," 38HXC(3 TON)	27,994	6,252	29,634
Total Adjusted System Output (Adjusted for Peak Design conditions)	27,994	6,252	29,634
TIME OF SYSTEM PEAK	Aug 3 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: SINGLE HOUSE — Date: 2/7/2024
System Name: 2ND FLOOR AREA — Floor Area: 4,487

ENGINEERING CHECKS

Number of Systems	2
Heating System	
Output per System	59,000
Total Output (Btuh)	118,000
Output (Btuh/sqft)	26.3
Cooling System	
Output per System	57,500
Total Output (Btuh)	115,000
Total Output (Tons)	9.6
Total Output (Btuh/sqft)	25.6
Total Output (sqft/Ton)	468.2
Air System	
CFM per System	2,000
Airflow (cfm)	4,000
Airflow (cfm/sqft)	0.89
Airflow (cfm/Ton)	417.4
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

Note: values above given at ARI conditions

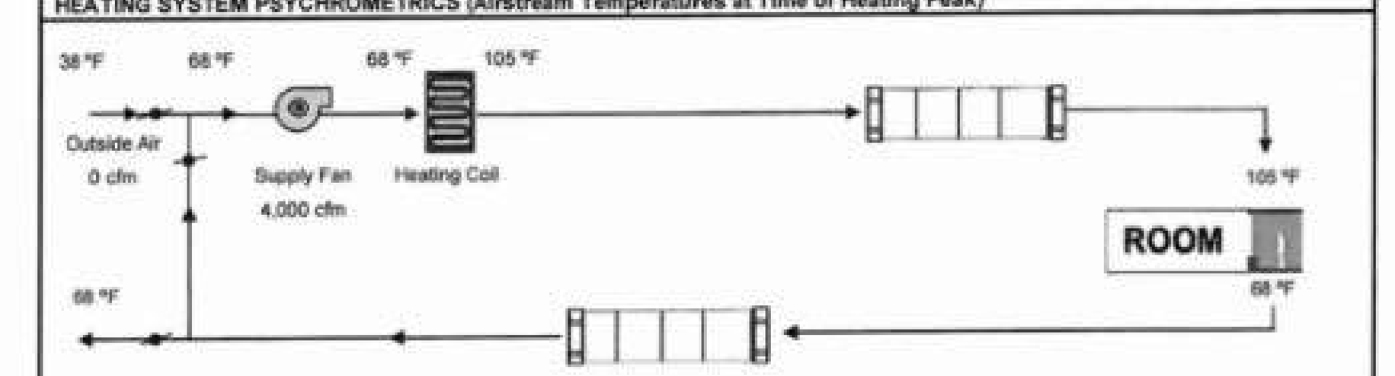
SYSTEM LOAD

	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,610	38,914	4,022	965	37,780
Return Vented Lighting		0			
Return Air Ducts		1,918			1,990
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		1,918			1,990
TOTAL SYSTEM LOAD		42,749	4,022		41,761

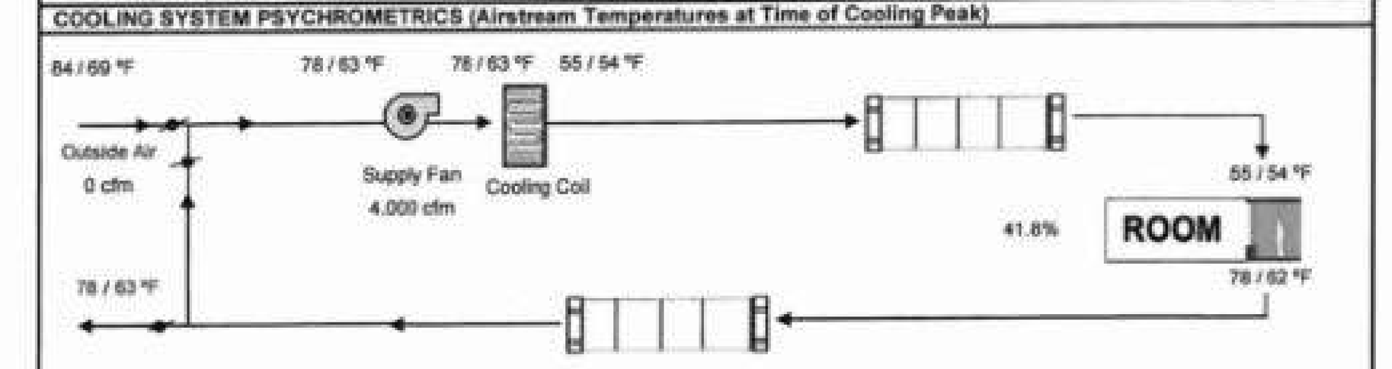
HVAC EQUIPMENT SELECTION

	Sensible	Latent	Sensible
CARRIER 25HNA960/FE4ANB006 (5 TON)	98,277	14,928	98,780
Total Adjusted System Output (Adjusted for Peak Design conditions)	98,277	14,928	98,780
TIME OF SYSTEM PEAK	Aug 3 PM		Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



REGISTERED PROFESSIONAL ENGINEER — MECHANICAL — STATE OF CALIFORNIA

REVISIONS | BY

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SINGLE HOUSE
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

Date: 2/7/2024
Scale
Drawn
Job #: R24-1213
Sheet: 4
RESIDENTIAL T24 SHEET
Of 4 Sheets

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

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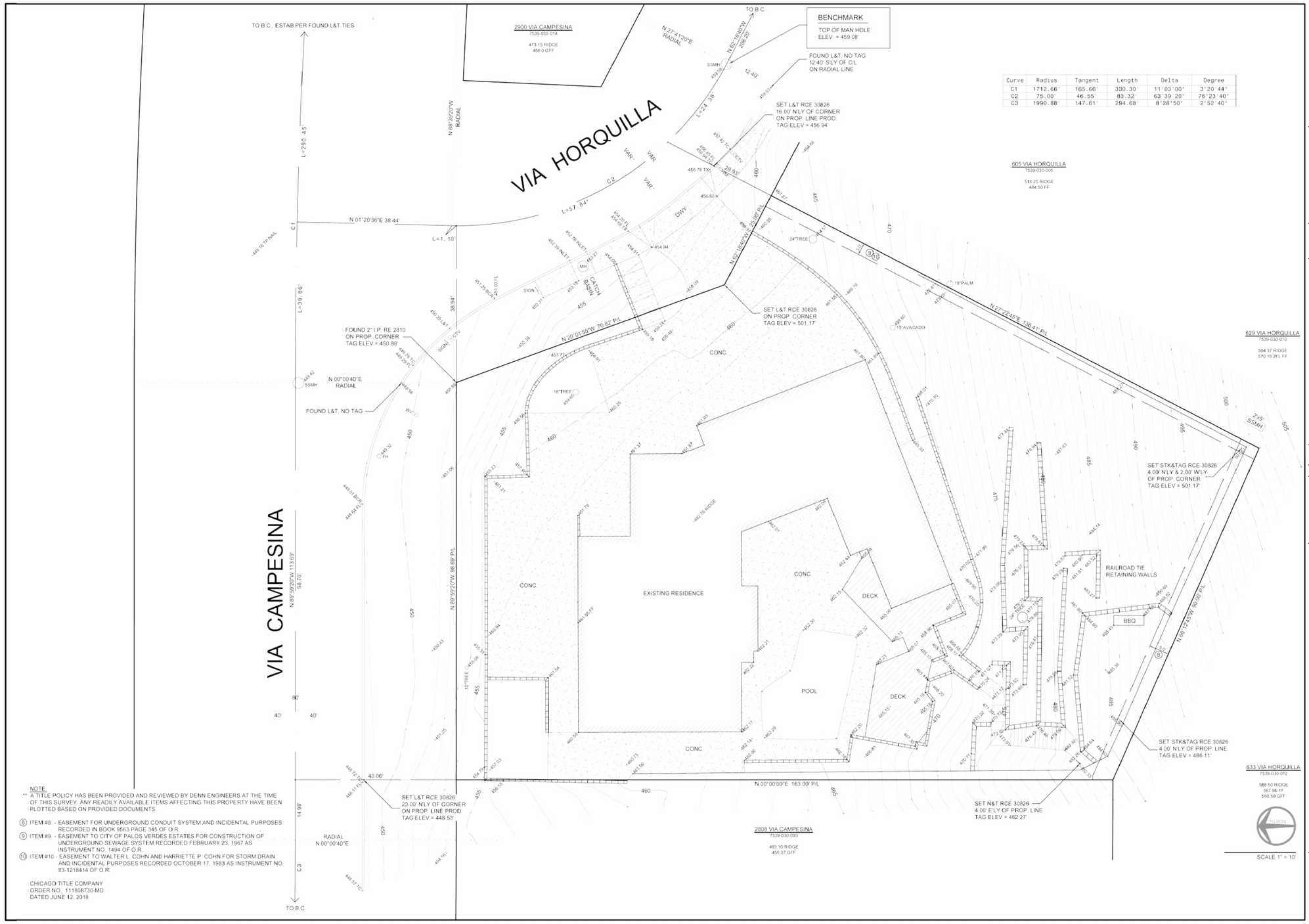

Curve	Radius	Tangent	Length	Delta	Degree
C1	1712.66'	165.66'	330.30'	11°03'00"	3°20'44"
C2	75.00'	46.55'	83.32'	63°39'20"	76°23'40"
C3	1990.88'	147.61'	294.68'	8°28'50"	2°52'40"

DENN ENGINEERS
3914 DEL AMO BLVD, SUITE 921
TORRANCE, CA 90503 (310) 542-9433

SURVEY AND TOPOGRAPHY

FOR
MEGAN & STEVE SELIG
2812 VIA CAMPESINA
PALOS VERDES ESTATES,
CA 90274

JOB ADDRESS
2812 VIA CAMPESINA
PALOS VERDES ESTATES, CA 90274

LEGAL DESCRIPTION
LOT 4, BLOCK 1830
TRACT NO. 7540
M.B. 104-56-59
APN 7539-030-004

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF PROFESSIONAL LAND SURVEYORS' ACT

REGISTERED PROFESSIONAL ENGINEER GARY J. ROEHL No. 30826 CIVIL STATE OF CALIFORNIA

GARY J. ROEHL R.C.E. 30826

DRAWN BY: KW CHECK BY: TS

DRAWN ON MAY 24, 2019

REVISIONS
04/19/22 - UPDATED NEIGHBORHOOD COMPATABILITY

LEGEND

EXISTING BUILDING; BRICK; CONCRETE; WOOD DECK

+106.76	EXISTING ELEVATION
106	EXISTING CONTOUR
	BLOCK WALL
X	EXISTING FENCE
BCR	BEGINNING OF CURB RETURN
CL	CENTERLINE
C.L.F	CHAIN LINK
ELY	EASTERLY
EM	ELECTRIC METER
FD	FOUND
FE	FENCE
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
GFF	GARAGE FINISH FLOOR
GM	GAS METER
GW	GUY WIRE
L&T	LEAD AND TAG
MH	MANHOLE
NLY	NORTHERLY
PC	PROPERTY CORNER / PROP. CORNER
PL P/L	PROPERTY LINE / PROP. LINE
PP	POWER POLE
PPT	PARAPET
S&W	SPIKE AND WASHER
SLY	SOUTHERLY
SPK	SPIKE
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
STK	STAKE
STLT	STREET LIGHT
TC	TOP OF CURB
TW	TOP OF WALL x T.O.W.
TX	TOP OF DRIVEWAY APRON
WLY	WESTERLY
WM	WATER METER

NOTE: ALL SETBACK DIMENSIONS SHOWN ARE MEASURED TO EXTERIOR SURFACE OF BUILDINGS UNLESS OTHERWISE NOTED.

BOUNDARY MONUMENTS ARE NOT NECESSARILY SET ON PROPERTY CORNERS. PLEASE REFER TO THE NOTATION ON THE PLANS FOR OFFSET DISTANCES. IF THERE ARE ANY QUESTIONS, PLEASE DO NOT HESITATE TO CONTACT DENN ENGINEERS FOR CLARIFICATION AT (310) 542-9433, M-F 8:00 AM TO 5:00 PM.

SHEET 1 OF 1

JOB NO. 19-222

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FAX: (310) 318-5801

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

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OF

GRADING PLAN NOTES

- GRADING PERMIT APPLICATION NO. ______.
- EARTHWORK VOLUMES: CUT 1,785 (CY), FILL 201 (CY)

  OVER EXCAVATION / ALLUVIAL REMOVAL & COMPACTION: 425 (CY)
  EXPORT: 1,584 (CY)
- TOTAL DISTURBED AREA: 0.487 (ACRES)
- TOTAL PROPOSED LANDSCAPE AREA: 3,707 (SQUARE FEET)
- PRE-DEVELOPMENT IMPERVIOUS AREA: 0.226 (ACRES)
- POST-DEVELOPMENT IMPERVIOUS AREA: 0.263 (ACRES)
- WASTE DISCHARGE IDENTIFICATION NUMBER (WDID#) N/A (DISTURB AREA LESS THAN 1 ACRE) .
- CONSTRUCTION & DEMOLITION DEBRIS RECYCLING AND REUSE PLAN (RPP ID): TO BE PROVIDED AT PRE-GRADE MEETING BY CONTRACTOR.
- POST-CONSTRUCTION BMP FEATURE(S) GPS COORDINATES: X N/A , Y N/A .
- PROPERTY ADDRESS: 3624 VIA PALOMINO, PALOS VERDES ESTATES, CA 90274 .
- TRACT / PARCEL MAP NO. 6887 .
- LOT NO. 7 & PART OF 6. BLOCK ______.
- PROPERTY OWNER: PALOS VERDES ENGINEERING .
- ASSESSORS ID NUMBER(S): 86/28-32.

GENERAL NOTES

1. ALL GRADING AND CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 AND THE STATE MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE UNLESS SPECIFICALLY NOTED ON THESE PLANS.
2. ANY MODIFICATIONS OF OR CHANGES TO APPROVED GRADING PLANS MUST BE APPROVED BY THE BUILDING OFFICIAL.
3. NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE BUILDING OFFICIAL. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORE THE START OF THE GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, COUNTY GRADING INSPECTORS OR THEIR REPRESENTATIVES, AND WHEN REQUIRED THE ARCHEOLOGIST OR OTHER JURISDICTIONAL AGENCIES. PERMITTEE OR HIS AGENT ARE RESPONSIBLE FOR ARRANGING PRE-GRADE MEETING AND MUST NOTIFY THE BUILDING OFFICIAL AT LEAST TWO BUSINESS DAYS PRIOR TO PROPOSED PRE-GRADE MEETING.
4. APPROVAL OF THESE PLANS REFLECT SOLELY THE REVIEW OF PLANS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE 2019 AND DOES NOT REFLECT ANY POSITION BY THE CITY OF PALOS VERDES OR THE DEPARTMENT OF PUBLIC WORKS REGARDING THE STATUS OF ANY TITLE ISSUES RELATING TO THE LAND ON WHICH THE IMPROVEMENTS MAY BE CONSTRUCTED. ANY DISPUTES RELATING TO TITLE ARE SOLELY A PRIVATE MATTER NOT INVOLVING THE CITY OF PALOS VERDES OR THE DEPARTMENT OF PUBLIC WORKS.
5. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE CITY OF PALOS VERDES ESTATES MUNICIPAL CODE, CHAPTER 8, SECTION 28.030: 7:00 AM TO 7:00 PM MONDAY TO THURSDAY AND 7:00 AM TO 5:30 PM ON FRIDAY. CONTROL AND RESTRICT NOISE FROM THE USE OF CONSTRUCTION AND GRADING EQUIPMENT AFTER THESE HOURS. (MORE RESTRICTIVE CONSTRUCTION ACTIVITY TIMES MAY GOVERN, AS REQUIRED BY THE DEPARTMENT OF REGIONAL PLANNING AND SHOULD BE SHOWN ON THE GRADING PLANS WHEN APPLICABLE.)
6. CALIFORNIA PUBLIC RESOURCES CODE (SECTION 5097.98) AND HEALTH AND SAFETY CODE (SECTION 7050.5) ADDRESS THE DISCOVERY AND DISPOSITION OF HUMAN REMAINS. IN THE EVENT OF DISCOVERY OR RECOGNITION OF ANY HUMAN REMAINS IN ANY LOCATION OTHER THAN A DEDICATED CEMETERY, THE LAW REQUIRES THAT GRADING IMMEDIATELY STOPS AND NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE, OR ANY NEARBY AREA WHERE HUMAN REMAINS MAY BE LOCATED, OCCUR UNTIL THE FOLLOWING HAS BEEN MEASURES HAVE BEEN TAKEN:
   A. THE COUNTY CORONER HAS BEEN INFORMED AND HAS DETERMINED THAT NO INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED, AND
   B. IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE DESCENDANTS FROM THE DECEASED NATIVE AMERICANS HAVE MADE A RECOMMENDATION FOR THE MEANS OF TREATING OR DISPOSING, WITH APPROPRIATE DIGNITY, OF THE HUMAN REMAINS AND ANY ASSOCIATED GRAVE GOODS.
7. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
8. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.
9. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.
10. SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY FIELD ENGINEER OR LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE BUILDING OFFICIAL, ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.
11. THE STANDARD RETAINING WALL DETAILS SHOWN ON THE GRADING PLANS ARE FOR REFERENCE ONLY. STANDARD RETAINING WALLS ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL STANDARD RETAINING WALLS.

    NOTE: THIS NOTE ONLY APPLIES TO STANDARD RETAINING WALLS. GEOGRID FABRIC AND SEGMENTAL RETAINING WALLS DO NOT REQUIRE A SEPARATE RETAINING WALL PERMIT. DETAILS AND CONSTRUCTION NOTES FOR ALL GEOGRID WALLS MUST BE ON THE GRADING PLAN.
12. A PREVENTIVE PROGRAM TO PROTECT THE SLOPES FROM POTENTIAL DAMAGE FROM BURROWING RODENTS IS REQUIRED. OWNER IS TO INSPECT SLOPES PERIODICALLY FOR EVIDENCE OF BURROWING RODENTS AND A FIRST EVIDENCE OF THEIR EXISTENCE SHALL EMPLOY AN EXTERMINATOR FOR THEIR REMOVAL.
13. TRANSFER OF RESPONSIBILITY: IF THE FIELD ENGINEER, THE SOILS ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED DURING GRADING, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT HAS AGREED IN WRITING TO ACCEPT THEIR RESPONSIBILITY WITHIN THE AREA OF TECHNICAL COMPETENCE FOR APPROVAL UPON COMPLETION OF THE WORK. IT SHALL BE THE DUTY OF THE PERMITTEE TO NOTIFY THE BUILDING OFFICIAL IN WRITING OF SUCH CHANGE PRIOR TO THE RECOMMENCEMENT OF SUCH GRADING.

INSPECTION NOTES

14. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL AT LEAST ONE WORKING DAY IN ADVANCE
    OF REQUIRED INSPECTIONS AT FOLLOWING STAGES OF THE WORK.

(A) A PRE-DEMO/GRADING MEETING SHALL BE HELD PRIOR TO COMMENCEMENT OF GRADING. THIS MEETING SHALL BE ATTENDED BY THE GRADING CONTRACTOR, SOILS OR GEOLOGIC ENGINEER, CITY INSPECTOR AND THE GENERAL CONTRACTOR OR OWNER'S REPRESENTATIVE AND SHALL BE HELD AT THE SITE OF THE GRADING.

(B) INITIAL –WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED FILL HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. FILL SHALL NOT BE PLACED PRIOR TO THIS INSPECTION. NOTE: PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING GRADING, ALL STORM WATER POLLUTION PREVENTION MEASURES INCLUDING EROSION CONTROL DEVICES WHICH CONTAIN SEDIMENTS MUST BE INSTALLED.

(C) ROUGH –WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED; DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPE; AND THE STATEMENTS REQUIRED IN THIS SECTION HAVE BEEN RECEIVED.

(D) FINAL – WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES INSTALLED; SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE AS-BUILT PLANS, REQUIRED STATEMENTS, AND REPORTS HAVE BEEN SUBMITTED AND APPROVED.

15. IN ADDITION TO THE INSPECTION REQUIRED BY THE BUILDING OFFICIAL FOR GRADING, REPORTS AND STATEMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IN ACCORDANCE WITH SECTION J105 OF THE CITY OF PALOS VERDES ESTATES MUNICIPAL CODE.
16. UNLESS OTHERWISE DIRECTED BY THE BUILDING OFFICIAL, THE FIELD ENGINEER FOR ALL ENGINEERED GRADING PROJECTS SHALL PREPARE ROUTINE INSPECTION REPORTS AS REQUIRED UNDER SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE. THESE REPORTS, KNOWN AS "REPORT OF GRADING ACTIVITIES", SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS FOLLOWS:
    A. BI-WEEKLY DURING ALL TIMES WHEN GRADING OF 400 CUBIC YARDS OR MORE PER WEEK IS OCCURRING ON THE SITE;
    B. MONTHLY, AT ALL OTHER TIMES; AND
    C. AT ANY TIME WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL. SUCH "REPORT OF GRADING ACTIVITIES" SHALL CERTIFY TO THE BUILDING OFFICIAL THAT THE FIELD ENGINEER HAS INSPECTED THE GRADING SITE AND RELATED ACTIVITIES AND HAS FOUND THEM IN COMPLIANCE WITH THE APPROVED GRADING PLANS AND SPECIFICATIONS, THE BUILDING CODE, ALL GRADING PERMIT CONDITIONS, AND ALL OTHER APPLICABLE ORDINANCES AND REQUIREMENTS.
17. ALL GRADED SITES MUST HAVE DRAINAGE SWALES, BERMS, AND OTHER DRAINAGE DEVICES INSTALLED PRIOR TO ROUGH GRADING APPROVAL.
18. THE GRADING CONTRACTOR SHALL SUBMIT THE STATEMENT TO THE GRADING INSPECTOR AT THE COMPLETION OF ROUGH GRADING.

FINAL GRADING MUST BE APPROVED BEFORE OCCUPANCY OF BUILDINGS WILL BE ALLOWED.

FINAL AS-GRADED REPORT SHALL INCLUDE THE FOLLOWING:
   A. FILL COMPACTION AND SHEAR TEST DATA.
   B. LOCATION OF THE COMPACTION AND SHEAR TEST DATA PLOTTED ON A COPY OF THE GRADING PLAN.
   C. AMOUNT OF NATURAL OR EXISTING FILL REMOVAL IF UNSATISFACTORY MATERIALS HAVE BEEN ENCOUNTERED.
   D. VERIFICATION BY THE GEOTECHNICAL ENGINEER THAT THE FILL MATERIAL SHEAR VALUES MEET OR EXCEEDED DESIGN VALUES UTILIZED IN THE GEOTECHNICAL REPORT.
   E. ITEMS REQUIRED AS PART OF THE CONDITIONS OF GRADING PLAN APPROVAL.
   F. ANY CHANGED SUBSURFACE CONDITIONS REQUIRING DESIGN CHANGES.
   G. ANALYSES DEMONSTRATING THAT, BASED ON ANY CHANGED DESIGN, THE SITE WILL BE SAFE FOR THE INTENDED USE AND WILL BE IN CONFORMANCE WITH STATE AND COUNTY CODES.
   H. THE FINAL AS-GRADED REPORT MUST CONTAIN ALL THE ABOVE DATA AND AN AS-GRADED PLAN SHOWING ORIGINAL AND FINAL TOPOGRAPHIC CONTOUR LINES.

THIS REPORT MUST ALSO BE COORDINATED WITH THE GEOLOGY FINAL REPORT AND WILL BE KEPT AS PERMANENT RECORD.

DRAINAGE NOTES

19. ROOF DRAINAGE MUST BE DIVERTED FROM GRADED SLOPES.
20. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.
21. ALL CONSTRUCTION AND GRADING WITHIN A STORM DRAIN EASEMENT ARE TO BE DONE PER PRIVATE DRAIN PD NO. N/A OR MISCELLANEOUS TRANSFER DRAIN MTD NO. N/A.
22. ALL STORM DRAIN WORK IS TO BE DONE UNDER CONTINUOUS INSPECTION BY THE FIELD ENGINEER. STATUS REPORTS REQUIRED SHALL INCLUDE INSPECTION INFORMATION AND REPORTS ON THE STORM DRAIN INSTALLATION.

AGENCY NOTES

23. AN ENCROACHMENT PERMIT FROM THE CITY OF IS REQUIRED FOR ALL WORK WITHIN OR AFFECTING ROAD RIGHT OF WAY. ALL WORK WITHIN ROAD RIGHT OF WAY SHALL CONFORM TO CITY OF PALOS VERDES ESTATES ENCROACHMENT PERMIT.
24. AN ENCROACHMENT PERMIT /CONNECTION PERMIT IS REQUIRED FROM THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT FOR ALL WORK WITHIN THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT RIGHT OF WAY. ALL WORK SHALL CONFORM TO CONDITIONS SET BY THE PERMIT.
25. PERMISSION TO OPERATE IN VERY HIGH FIRE HAZARD SEVERITY ZONE MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU OR THE LOCAL FIRE STATION PRIOR TO COMMENCING WORK.
26. ALL WORK WITHIN THE STREAMBED AND AREAS OUTLINED ON GRADING PLANS SHALL CONFORM TO:
    -ARMY CORP 404 PERMIT NUMBER: N/A.
    -CALIFORNIA FISH &WILDLIFE PERMIT NO.: N/A.
27. ALL CONSTRUCTION/DEMOLITION, GRADING, AND STORAGE OF BULK MATERIALS MUST COMPLY WITH THE LOCAL AQMD RULE 403 I FOR FUGITIVE DUST. INFORMATION ON RULE 403 IS AVAILABLE AT AQMD'S WEBSITE HTTP://WWW.AVAGMD.COM.

GENERAL GEOTECHNICAL NOTES

28. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANTS REPORTS) AND THE APPROVED GRADING PLANS AND SPECIFICATIONS.
29. GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC INSPECTIONS BY THE GEOTECHNICAL CONSULTANTS WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE CITY ENGINEER AND BUILDING OFFICIAL.
30. THE SOIL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS.
31. ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOLOGY AND SOILS ENGINEERING REPORT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS. THE FINAL REPORTS MUST BE SUBMITTED TO THE CITY ENGINEER AND BUILDING OFFICIAL FOR REVIEW AND APPROVAL.
32. FOUNDATION, WALL AND POOL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOIL ENGINEER, PRIOR TO THE PLACING OF STEEL OR CONCRETE.
33. BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER-EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

FILL NOTES

34. ALL FILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM RELATIVE COMPACTION CRITERIA:
    A. 90 PERCENT OF MAXIMUM DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE.
    B. 93 PERCENT OF MAXIMUM DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY) IS JUSTIFIED BY THE GEOTECHNICAL ENGINEER. THE RELATIVE COMPACTION SHALL BE DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557-91 WHERE APPLICABLE: WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE USED.
    C. 95 PERCENT OF MAXIMUM DRY DENSITY IS REQUIRED FOR ALL FIRE LANES UNLESS OTHERWISE APPROVED BY THE FIRE DEPARTMENT.
33. FIELD DENSITY SHALL BE DETERMINED BY A METHOD ACCEPTABLE TO THE BUILDING OFFICIAL AND TO BE DONE PER SOILS ENGINEER'S REPORT. HOWEVER, NOT LESS THAN 10% OF THE REQUIRED DENSITY TEST, UNIFORMLY DISTRIBUTED, AND SHALL BE OBTAINED BY THE SAND CONE METHOD.
34. SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE SOIL ENGINEER INCLUDING SOIL TYPES, SHEAR STRENGTHS PARAMETERS AN CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
    A. PRIOR AND SUBSEQUENT TO PLACEMENT OF THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.
    B. SHEAR TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST MEET OR EXCEED THE DESIGN VALUES USED IN THE GEOTECHNICAL REPORT TO DETERMINE SLOPE STABILITY REQUIREMENTS. OTHERWISE, THE SLOPE MUST BE REEVALUATED USING THE ACTUAL SHEAR TEST VALUE OF THE FILL MATERIAL THAT IS IN PLACE.
    C. FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.
35. FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE SOIL ENGINEER. THE BUILDING OFFICIAL MAY REQUIRE A "STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS" ASTM D-2974-87 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDED THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNER THAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND THE SOILS ENGINEER APPROVES THE USE OF SUCH MATERIAL.
36. ROCK OR SIMILAR MATERIAL GREATER THAN 12 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL. LOCATION, EXTENT, AND ELEVATION OF ROCK DISPOSAL AREAS MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
37. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE A DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2:1.
38. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL SUBDRAIN INSTALLATION.
39. ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. SUBDRAIN INFORMATION MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
40. FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE PROPOSED FINISH SLOPE TO ALLOW COMPACTION EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT.

PLANTING AND IRRIGATION NOTES

41. PLANTING AND IRRIGATION ON GRADED SLOPES MUST COMPLY WITH THE FOLLOWING MINIMUM GUIDELINES:
    A. THE SURFACE OF ALL CUT SLOPES MORE THAN 5 FEET IN HEIGHT AND FILL SLOPES MORE THAN 3 FEET IN HEIGHT SHALL BE PROTECTED AGAINST DAMAGE BY EROSION BY PLANTING WITH GRASS OR GROUNDCOVER PLANTS. SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL ALSO BE PLANTED WITH SHRUBS, SPACED AT NOT TO EXCEED 10 FEET ON CENTERS; OR TREES, SPACED AT NOT TO EXCEED 20 FEET ON CENTERS, OR A COMBINATION OF SHRUBS AND TREES AT EQUIVALENT SPACING, IN ADDITION TO THE GRASS OR GROUNDCOVER PLANTS. THE PLANTS SELECTED AND PLANTING METHODS USED SHALL BE SUITABLE FOR THE SOIL AND CLIMATIC CONDITIONS OF THE SITE. PLANT MATERIAL SHALL BE SELECTED WHICH WILL PRODUCE A COVERAGE OF PERMANENT PLANTING EFFECTIVELY CONTROLLING EROSION CONSIDERATION SHALL BE GIVEN TO DEEP-ROOTED PLANTING MATERIAL NEEDING LIMITED WATERING, MAINTENANCE, HIGH ROOT TO SHOOT RATIO, WIND SUSCEPTIBILITY AND FIRE-RETARDANT CHARACTERISTICS. ALL PLANT MATERIALS MUST BE APPROVED BY THE BUILDING OFFICIAL.

       NOTE: PLANTING MAY BE MODIFIED FOR THE SITE IF SPECIFIC RECOMMENDATIONS ARE PROVIDED BY BOTH THE SOILS ENGINEER AND A LANDSCAPE ARCHITECT. SPECIFIC RECOMMENDATIONS MUST CONSIDER SOILS AND CLIMATIC CONDITIONS, IRRIGATION REQUIREMENTS, PLANTING METHODS, FIRE RETARDANT CHARACTERISTICS, WATER EFFICIENCY, MAINTENANCE NEEDS, AND OTHER REGULATORY REQUIREMENTS. RECOMMENDATIONS MUST INCLUDE A FINDING THAT THE ALTERNATIVE PLANTING WILL PROVIDE A PERMANENT AND EFFECTIVE METHOD OF EROSION CONTROL. MODIFICATIONS TO PLANTING MUST BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION.
    B. SLOPES REQUIRED TO BE PLANTED BY SECTION J110.3 SHALL BE PROVIDED WITH AN APPROVED SYSTEM OF IRRIGATION THAT IS DESIGNED TO COVER ALL PORTIONS OF THE SLOPE. IRRIGATION SYSTEM PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION. A FUNCTIONAL TEST OF THE SYSTEM MAY BE REQUIRED. FOR SLOPES LESS THAN 20 FEET IN VERTICAL HEIGHT, HOSE BIBS TO PERMIT HAND WATERING WILL BE ACCEPTABLE IF SUCH HOSE BIBS ARE INSTALLED AT CONVENIENTLY ACCESSIBLE LOCATIONS WHERE A HOSE NO LONGER THAN 50 FEET IS NECESSARY FOR IRRIGATION. THE REQUIREMENTS FOR PERMANENT IRRIGATION SYSTEMS MAY BE MODIFIED UPON SPECIFIC RECOMMENDATION OF A LANDSCAPE ARCHITECT OR EQUIVALENT AUTHORITY THAT, BECAUSE OF THE TYPE OF PLANTS SELECTED, THE PLANTING METHODS USED AND THE SOIL AND CLIMATIC CONDITIONS AT THE SITE, IRRIGATION WILL NOT BE NECESSARY FOR THE MAINTENANCE OF THE SLOPE PLANTING.
    C. OTHER GOVERNMENTAL AGENCIES MAY HAVE ADDITIONAL REQUIREMENTS FOR LANDSCAPING AND IRRIGATION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE WITH OTHER AGENCIES TO MEET THEIR REQUIREMENTS WHILE MAINTAINING COMPLIANCE WITH PALOS VERDES MUNICIPAL CODE.
41. THE PLANTING AND IRRIGATION SYSTEMS SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER ROUGH GRADING. PRIOR TO FINAL GRADING APPROVAL ALL REQUIRED SLOPE PLANTING MUST BE WELL ESTABLISHED.
42. LANDSCAPE IRRIGATION SYSTEM SHALL BE DESIGNED AND MAINTAINED TO PREVENT SPRAY ON STRUCTURES.
43. PRIOR TO ROUGH GRADE APPROVAL THIS PROJECT REQUIRES A LANDSCAPE PERMIT. LANDSCAPE PLANS IN COMPLIANCE WITH THE "MODEL WATER EFFICIENT LANDSCAPE ORDINANCE" TITLE 23, CHAPTER 2.7 OF CALIFORNIA CODE OF REGULATIONS (AB 1881) MUST BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS, LAND DEVELOPMENT DIVISION. (900 S. FREMONT AVE, ALHAMBRA – 3RD FLOOR, CA 91803 (626) 458-4921). TO OBTAIN LANDSCAPE PERMIT APPROVED PLANS AND WATER PURVEYOR ACKNOWLEDGMENT FORM MUST BE SUBMITTED TO THE LOCAL BUILDING AND SAFETY OFFICE.

SURVEY

DENN ENGINEERS
3914 DEL AMO BLVD., SUITE 921
TORRANCE, CA 90503
PH: (310) 542-9433

SOILS ENGINEER'S INFORMATION:

T.I.N. ENGINEERING COMPANY
17834 BAILEY DRIVE
TORRANCE, CA 90504
PH: (310) 371-7045
tinsoilsheep@gmail.com

ARCHITECT'S INFORMATION:

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119 W. TORRANCE BLVD., SUITE 24
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DRAWING INDEX:

SHEET NUMBER	SHEET TITLE
C-1	TITLE SHEET
EC-1	EROSION CONTROL PLAN
EC-2	EC DETAILS
C-2	DRAINAGE AND GRADING PLAN
C-2A	SUBDRAIN DRAINAGE PLAN
C-3	DETAILS
C-4	SECTIONS

CITY OF PALOS VERDES ESTATES STANDARD: PLAN NOTES:

1. ALL WORK SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE, 2019 CALIFORNIA RESIDENTIAL CODE, 2019 CALIFORNIA PLUMBING CODE, 2019 CALIFORNIA MECHANICAL CODE, AND THE 2019 CALIFORNIA ELECTRICAL CODE, THE CURRENT REQUIREMENTS OF THE ENERGY AND COUNTY OF LOS ANGELES FIRE CODE.
2. ALL GENERAL CONTRACTORS, SUB-CONTRACTORS, ARCHITECTS, & ENGINEERS CONDUCTING BUSINESS WITHIN THE CITY OF PALOS VERDES ESTATES ARE REQUIRED TO MAINTAIN A CURRENT CITY BUSINESS LICENSE AS DESCRIBED IN THE MUNICIPAL CODE ORDINANCE NO. 092-559 AND RESOLUTION NO. R92-72.
3. PER LOCAL REQUIREMENTS, THE WORKING HOURS ARE BETWEEN 7:00 AM TO 7:00 PM MONDAY THROUGH THURSDAY; 7:00 AM TO 5:30 PM ON FRIDAY AND 9:00 AM TO 5:30 PM ON SATURDAY.
4. A RE-INSPECTION FEE MAY BE CHARGED FOR AN INSPECTION WHICH IS NOT ACCESSIBLE, OR APPROVED PLANS ARE NOT ON SITE, OR JOB IS NOT READY.
5. ALL SPECIAL INSPECTORS SHALL BE REGISTERED WITH THE CITY OF PALOS VERDES ESTATES PRIOR TO PERFORMING ANY INSPECTIONS AND SHALL ALSO NOTIFY THE BUILDING OFFICIAL OF EACH JOB LOCATION THEREAFTER.
6. THE YARD DRAINAGE IMPROVEMENTS SHALL BE INSPECTED AND CERTIFIED BY THE ENGINEER OF RECORD PRIOR TO FINAL APPROVAL.
7. ANY AND ALL DEVIATIONS FROM THE PLANNING COMMISSION APPROVED PLANS REQUIRE THAT REVISED PLANS BE SUBMITTED TO THE PLANNING DEPARTMENT FOR REVIEW AND APPROVAL.
8. REQUIRED SWIMMING POOL FENCING MUST BE MAINTAINED DURING CONSTRUCTION OR THE POOL SHALL BE EMPTIED. (AS APPLICABLE)
9. GENERAL CONTRACTOR SHALL PROVIDE A HAUL ROUTE AND THE SIZE OF EQUIPMENT TO THE BUILDING OFFICIAL FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A BUILDING PERMIT.
10. ALL CONSTRUCTION WASTE AND DEBRIS MUST BE CONTAINERIZED AT ALL TIMES & MUST BE ATHENS DUMPSTERS ONLY (CALL 1-888-336-6100).
11. DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
12. ALL NAILING SHALL BE PER CRC TABLE 602.3(1) UNLESS OTHERWISE NOTED.
13. STEEL NAIL PLATES (18-GAUGE MIN.) ARE TO BE INSTALLED WHERE PLASTIC AND/OR COPPER PIPING MATERIAL IS WITHIN 1"OF THE EXPOSED FRAMING (CPC 312.9)
14. PENETRATIONS THROUGH THE ROOF OR EXTERIOR WALL ASSEMBLIES BY DUCTS, PIPES AND/OR OTHER APPURTENANCES SHALL BE MADE WATER TIGHT (CPC 312.8)
15. AS OF MARCH 9, 2009, STATE AGENCY (AQMD) HAS PASSED A LAW THAT SOLID FUEL BURNING FIREPLACES (WOOD BURNING) ARE NO LONGER LEGAL. CONSTRUCTION OF SUCH APPLIANCES OR MASONRY UNITS MAY STILL BE CONSTRUCTED AS SUCH WITH THE REQUIREMENTS THAT A COMPLETE GAS BURNING ASSEMBLY BE PERMANENTLY SECURED/ATTACHED IN THE FIRE BOX AT FINAL INSPECTION.

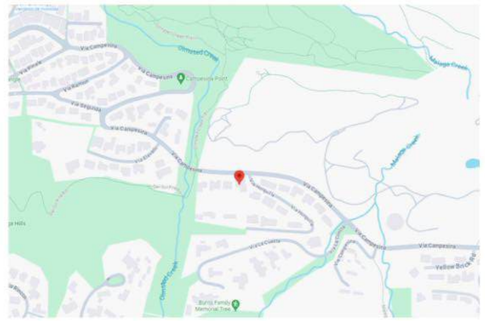
BENCHMARK:

SET STK&TAG RCE 30826
4.00' N'LY & 2.00' W'LY
OF PROP. CORNER
TAG ELEV = 501.17'

SEE KEYNOTE ⑩ ON C-2.

LEGAL DESCRIPTION:

LOT 4, BLOCK 1830
TRACT NO. 7540
M.B. 104-56-59
APN 7539-030-004



VICINITY MAP

NOT TO SCALE

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PC JOB #: 23160

CHRISTIAN J. PEREZ
No. C80680
CIVIL

ISSUE DESCRIPTION	ISSUE DATE
1ST SUBMITTAL	02/20/2024

Engineer: Christian Perez
Scale: AS NOTED
DATE: 20 Feb 2024
File Name: Civil23160.dwg

Sheet Title:
TITLE SHEET

Sheet No.: C-1

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REVISION

REVISED

PRINTED

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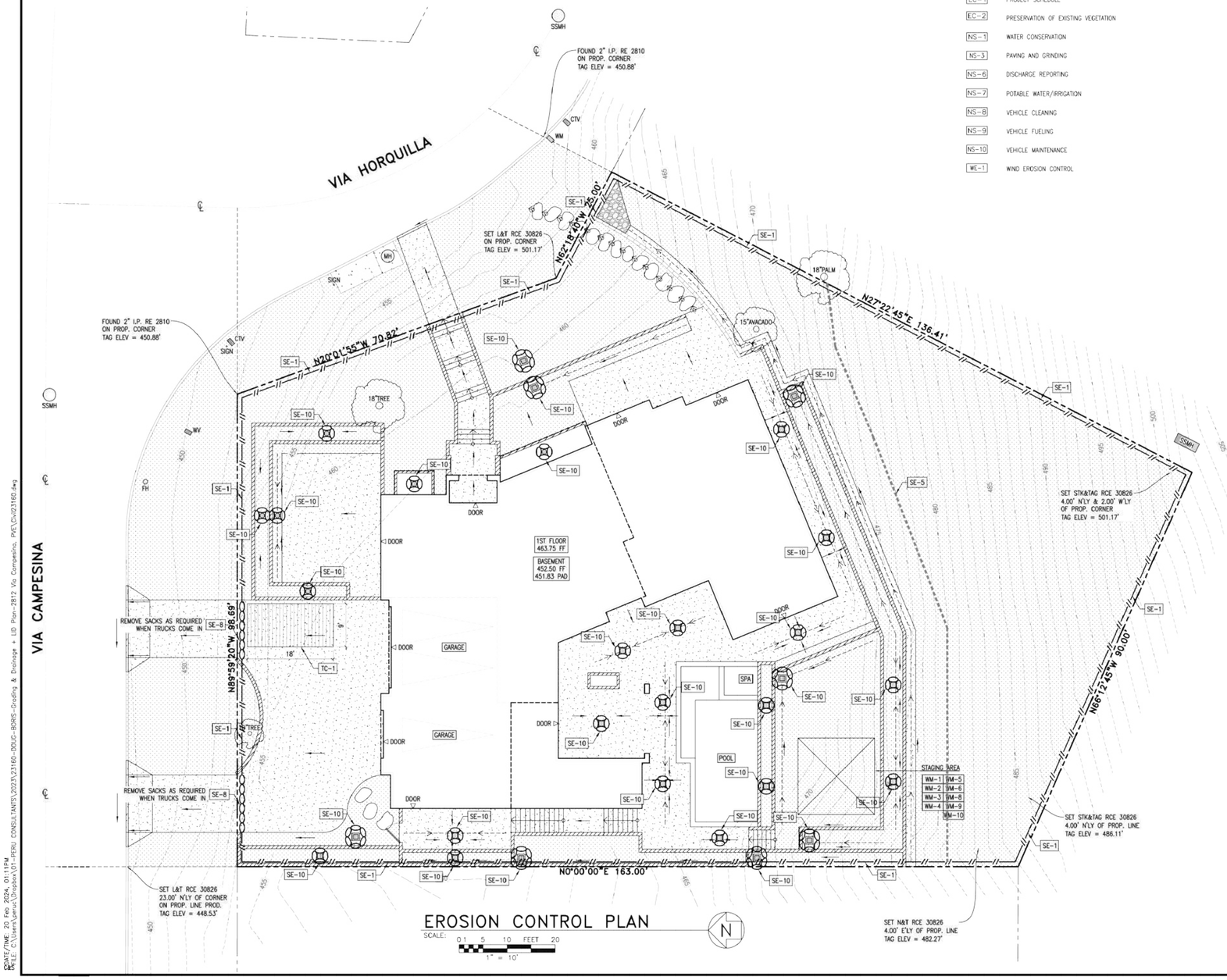
OF

DATE/TIME: 20 Feb 2024, 01:10PM
FILE: C:\Users\peruc\Dropbox\01-PERU CONSULTANTS\2023\23160-DOUG-BORIS-Grading & Drainage + LID Plan-2812 Via Campesina, PVE\Civil23160.dwg



EROSION CONTROL PLAN

SCALE: 0 1 5 10 FEET 20
1" = 10'

BMP SELECTION AND LEGEND:

THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE LATEST EDITION OF THE CASQA CONSTRUCTION BMP ONLINE HANDBOOK OR CALTRANS STORM WATER QUALITY HANDBOOK (CONSTRUCTION SITE BMP MANUAL), MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR BUILDING OFFICIAL).

EC-1	PROJECT SCHEDULE
EC-2	PRESERVATION OF EXISTING VEGETATION
NS-1	WATER CONSERVATION
NS-3	PAVING AND GRINDING
NS-6	DISCHARGE REPORTING
NS-7	POTABLE WATER/IRRIGATION
NS-8	VEHICLE CLEANING
NS-9	VEHICLE FUELING
NS-10	VEHICLE MAINTENANCE
WE-1	WIND EROSION CONTROL

THE FOLLOWING BMP'S ARE SPECIFIED ON THIS PLAN:

TC-1	STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-3	ENTRANCE/OUTLET TIE WASH
SE-10	STORM DRAIN INLET PROTECTION
SE-8	SANDBAG BARRIER
SE-1	SILT FENCE

THE FOLLOWING BMP'S SHALL BE USED IN THE CONTRACTOR STAGING AREA:

WM-1	MATERIAL STORAGE
WM-2	MATERIAL USAGE
WM-3	STORAGE MANAGEMENT
WM-4	SPILL PREVENTION KIT
WM-5	SOLID WASTE (TRASH)
WM-6	HAZARDOUS WASTE MANAGEMENT
WM-8	CONCRETE WASTE (WASHOUT)
WM-9	SEPTIC/SANITARY FACILITIES
WM-10	LIQUID WASTE MANAGEMENT

24 HOUR EMERGENCY CONTACT:

STEVE & MEGAN SELIG
(310) 872-6163

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PC JOB #: 23160

REGISTERED PROFESSIONAL ENGINEER
CHRISTIAN J. PEREZ
No. C80680
CIVIL
STATE OF CALIFORNIA

ISSUE DESCRIPTION	ISSUE DATE
1ST SUBMITTAL	02/20/2024

Engineer: Christian Perez
Scale: AS NOTED
DATE: 20 Feb 2024
File Name: Civil23160.dwg

Sheet Title:
EROSION CONTROL PLAN

Sheet No.: EC-1

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OF

DATE/TIME: 20 Feb 2024, 01:11PM
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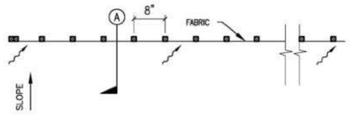


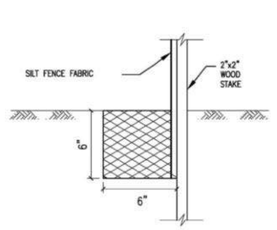
PLAN SILT FENCE

LEGEND

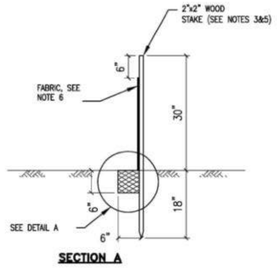
- TAMPED BACKFILL
- SLOPE DIRECTION
- DIRECTION OF FLOW

NOTES:

1. STAKE DIMENSIONS ARE NOMINAL.
2. DIMENSION MAY VARY TO FIT FIELD CONDITION.
3. STAKES SHALL BE SPACED AT 8'-0" MAXIMUM AND SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
4. STAKES TO OVERLAP AND FENCE FABRIC TO FOLD AROUND EACH STAKE ONE FULL TURN. SECURE FABRIC TO STAKE WITH 4 STAPLES.
5. STAKES SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT OF JOINT. THE TOPS OF THE STAKES SHALL BE SECURED WITH WIRE.
6. FOR END STAKE, FENCE FABRIC SHALL BE FOLDED AROUND TWO STAKES ONE FULL TURN AND SECURED WITH 4 STAPLES.
7. MINIMUM 4 STAPLES PER STAKE. DIMENSIONS SHOWN ARE TYPICAL.
8. JOINING SECTIONS SHALL NOT BE PLACED AT SUMP LOCATIONS.



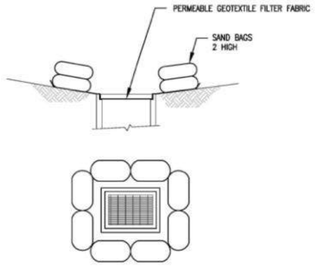
DETAIL A



SECTION A

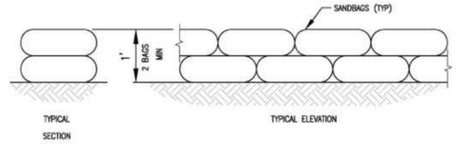
SILT FENCE

NOT TO SCALE — SE-1



STORM DRAIN INLET PROTECTION

NOT TO SCALE — SE-10



SAND BAG BARRIER

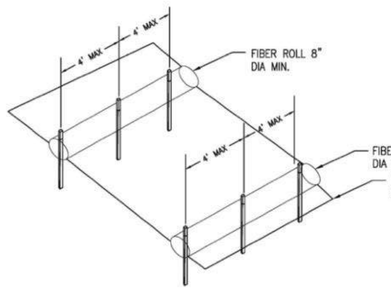
NOT TO SCALE — SE-8

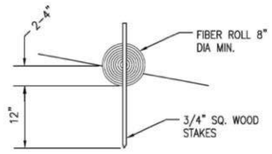
BEST MANAGEMENT PRACTICE NOTES (BMP NOTES):

1. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORM WATER FROM THE PROJECT SITES AT ALL TIMES.
2. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOILS AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
5. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
6. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
9. "I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH THE SYSTEM DESIGNED TO ENSURE THAT A QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/ OR INACCURATE INFORMATION, FAILING TO UPDATE THE ESCP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE ESCP MAY RESULT IN REVOCATION OF GRADING AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW."

RAVI SREERAMA (424) 407-5195 — DATE
OWNER OR AUTHORIZED REPRESENTATIVE (PERMITTEE)

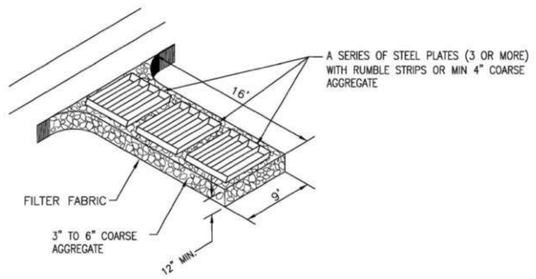
FOR BMP LOCATION, SEE EC-1.





SE-5 FIBER ROLL

NOT TO SCALE — SE-5



TC-1 CONSTRUCTION ENTRANCE

NOT TO SCALE — TC-1

BMP: DUST CONTROLS

GENERAL DESCRIPTION

DUST CONTROL MEASURES ARE USED TO STABILIZE SOIL FROM WIND EROSION, AND REDUCE DUST GENERATED BY CONSTRUCTION ACTIVITIES

SUITABLE APPLICATIONS

- CLEARING AND GRADING ACTIVITIES
- CONSTRUCTION VEHICLE TRAFFIC ON UNPAVED ROADS
- DRILLING AND BLASTING ACTIVITIES
- SEDIMENT TRACKING ONTO PAVED ROADS
- SOIL AND DEBRIS STORAGE PILES
- BATCH DROP FROM FRONT END LOADERS
- AREAS WITH UNSTABILIZED SOIL
- FINAL GRADING/SITE STABILIZATION IS USUALLY SUFFICIENT TO CONTROL POST-CONSTRUCTION DUST SOURCES

INSTALLATION/APPLICATION CRITERIA

- SCHEDULE CONSTRUCTION ACTIVITIES TO MINIMIZE EXPOSED AREA QUICKLY STABILIZE EXPOSED SOILS USING VEGETATION, MULCHING, SPRAY-ON ADHESIVES, CALCIUM CHLORIDE, AND SPRINKLING.
- IDENTIFY AND STABILIZE KEY ACCESS POINTS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- MINIMIZING THE IMPACT OF DUST BY ANTICIPATION THE DIRECTION OF PREVAILING WINDS. DIRECT MOST CONSTRUCTION TRAFFIC TO STABILIZED ROADWAYS WITHIN THE PROJECT SITE.

REQUIREMENTS

1.) MAINTENANCE –
MOST DUST CONTROL MEASURE REQUIRE FREQUENT, OFTEN DAILY, ATTENTION.

2.) COST –
INSTALLATION COSTS FOR WATER/CHEMICAL DUST SUPPRESSION ARE LOW, BUT ANNUAL COSTS MAY BE QUITE HIGH SINCE THESE MEASURES ARE EFFECTIVE FOR ONLY A FEW HOURS TO A FEW DAYS.

LIMITATIONS

- WATERING PREVENTS DUST ONLY FOR A SHORT PERIOD AND SHOULD BE APPLIED DAILY (OR MORE OFTEN) TO BE EFFECTIVE
- OVER-WATERING MAY CAUSE EROSION
- OIL SHOULD NOT BE USED FOR DUST CONTROL BECAUSE THE OIL MAY MIGRATE INTO DRAINAGE-WAY AND/OR SEEP INTO THE SOIL.
- TREATED SUBGRADES MAY MAKE SOIL WATER REPELLANT, INCREASING RUNOFF

DUST CONTROL PRACTICES

DUST CONTROL BMP'S GENERALLY STABILIZE EXPOSED SURFACES AND MINIMIZE ACTIVITIES THAT SUSPEND OR TRACK DUST PARTICLES. FOR HEAVILY TRAVELED AND DISTURBED AREA, WET SUPPRESSION (WATERING), CHEMICAL DUST SUPPRESSION, GRAVEL OR ASPHALT SURFACING, TEMPORARY GRAVEL CONSTRUCTION ENTRANCES, EQUIPMENT WASH-OUT AREA, AND HAUL TRUCK COVERS CAN BE EMPLOYED AS DUST CONTROL APPLICANTS. PERMANENT OR TEMPORARY VEGETATION AND MULCHING AND SAND FENCES CAN BE EMPLOYED FOR AREA OF OCCASIONAL OR NO CONSTRUCTION TRAFFIC. PREVENTIVE MEASURES WOULD INCLUDE MINIMIZING SURFACE AREAS TO BE DISTURBED, LIMITING ON-SITE VEHICLE TRAFFIC TO 15 MILES PER HOUR, AND CONTROLLING THE NUMBER AND ACTIVITY OF VEHICLES ON A SITE AT ANY GIVEN TIME.

MANY OF THE REASONABLY AVAILABLE CONTROL MEASURES FOR CONTROLLING DUST FROM CONSTRUCTION SITES CAN ALSO BE IMPLEMENTED AS BMP'S FOR STORM WATER POLLUTION PREVENTION. THOSE BMP'S INCLUDE:

- PAVE, VEGETATE, OR CHEMICALLY STABILIZE ACCESS POINTS WHERE UNPAVED TRAFFIC SURFACES ADJOIN PAVED ROADS
- PROVIDE COVERS FOR HAUL TRUCKS TRANSPORTING MATERIALS THAT CONTRIBUTE TO DUST
- PROVIDE FOR WET SUPPRESSION OR CHEMICAL STABILIZATION OF EXPOSED SOILS
- PROVIDE FOR RAPID CLEAN UP OF SEDIMENTS DEPOSITED ON PAVED ROADS. FURNISH STABILIZED CONSTRUCTION ROAD ENTRANCES
- IMPLEMENT DUST CONTROOL MEASURES FOR MATERIAL STOCKPILES
- PREVENT DRAINAGE OF SEDIMENT LADEN STORM WATER ONTO PAVED SURFACES
- STABILIZE ABANDONED CONSTRUCTION SITES USING VEGETATION OR CHEMICAL STABILIZATION METHODS
- LIMIT THE AMOUNT OF AREA DISTURBED BY CLEARING AND EARTH MOVING OPERATIONS BY SCHEDULING THESE ACTIVITIES IN PHASES.

FOR THE CHEMICAL STABILIZATION, THERE ARE MANY PRODUCTS AVAILABLE FOR CHEMICALLY STABILIZING GRAVEL ROADWAYS AND STOCKPILES.

IN ADDITION, THERE ARE MANY OTHER BMP'S IDENTIFIED IN THIS HANDBOOK THAT PROVIDE DUST CONTROL INCLUDING:

- SEEDING AND PLANTING
- MULCHING
- CONSTRUCTION ROAD STABILIZATION
- STABILIZED CONSTRUCTION ENTRANCES

DATE/TIME: 20 Feb 2024, 01:11PM
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REGISTERED PROFESSIONAL ENGINEER
CHRISTIAN J. PEREZ
No. C80689
CIVIL
STATE OF CALIFORNIA

ISSUE DESCRIPTION	ISSUE DATE
1ST SUBMITTAL	02/20/2024

Engineer:	Scale:
Christian Perez	AS NOTED
DATE: 20 Feb 2024	File Name: Civil23160.dwg

Sheet Title:

EC DETAILS

Sheet No.: EC-2

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

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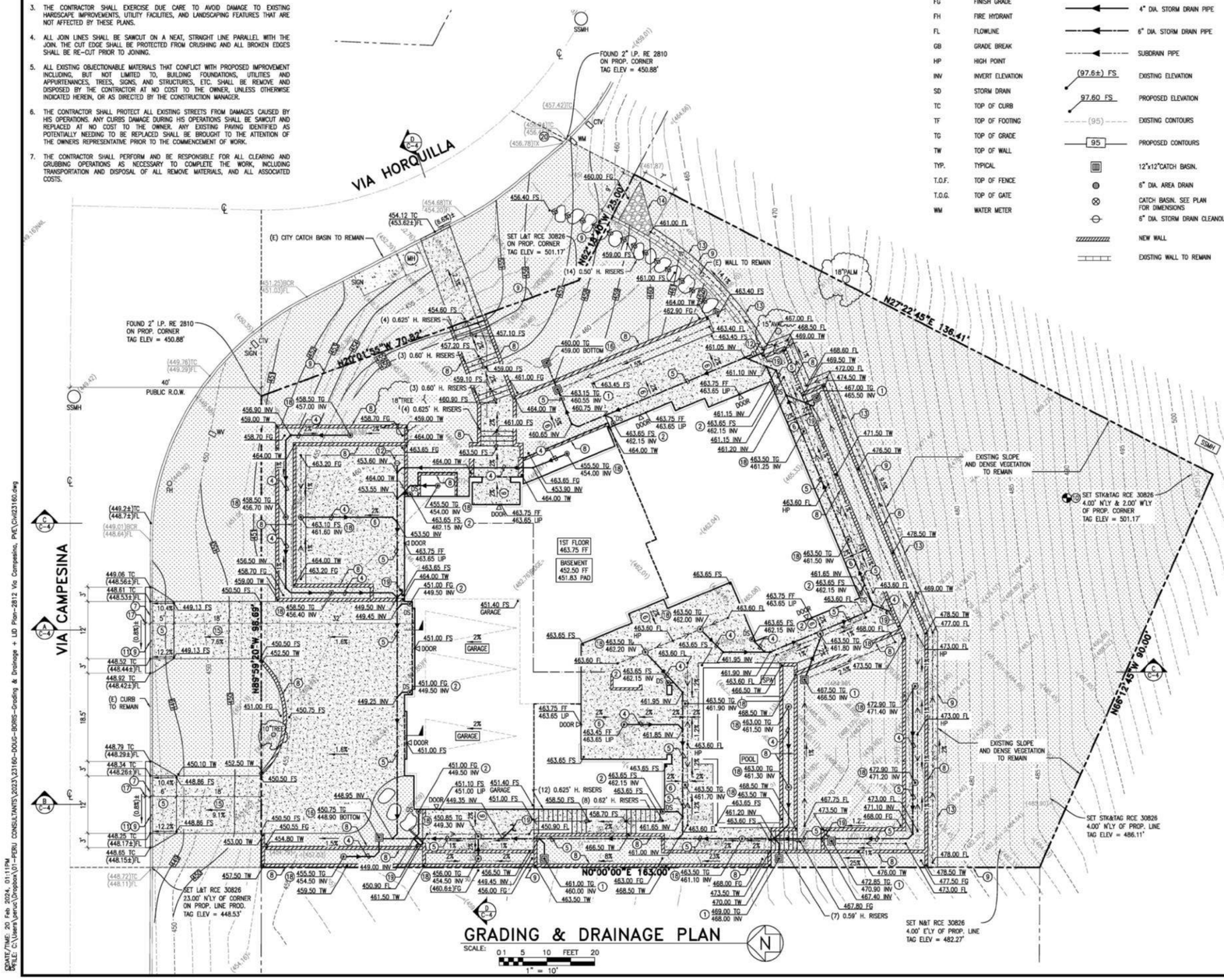
EC-2
OF

DEMOLITION GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK OR POTHOLE TO DETERMINE THE EXACT LOCATIONS OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OR PROTECTION OF ALL EXISTING UTILITY LINES.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION OF THE SITE AND SHALL REMOVE AND DISPOSE OF ALL STRUCTURES ABOVE AND OR BELOW GROUND UNLESS OTHERWISE NOTED. ANY HAZARDOUS MATERIALS ENCOUNTERED SHALL BE HANDLED AND REMOVE AS REQUIRED BY LOCAL AND/OR STATE LAWS AT NO COST TO THE OWNER.
3. THE CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DAMAGE TO EXISTING HARDSCAPE IMPROVEMENTS, UTILITY FACILITIES, AND LANDSCAPING FEATURES THAT ARE NOT AFFECTED BY THESE PLANS.
4. ALL JOIN LINES SHALL BE SAWCUT ON A NEAT, STRAIGHT LINE PARALLEL WITH THE JOIN. THE CUT EDGE SHALL BE PROTECTED FROM CRUSHING AND ALL BROKEN EDGES SHALL BE RE-CUT PRIOR TO JOINING.
5. ALL EXISTING OBJECTIONABLE MATERIALS THAT CONFLICT WITH PROPOSED IMPROVEMENT INCLUDING, BUT NOT LIMITED TO, BUILDING FOUNDATIONS, UTILITIES AND APPURTENANCES, TREES, SIGNS, AND STRUCTURES, ETC. SHALL BE REMOVE AND DISPOSED BY THE CONTRACTOR AT NO COST TO THE OWNER, UNLESS OTHERWISE INDICATED HEREIN, OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING STREETS FROM DAMAGES CAUSED BY HIS OPERATIONS. ANY CURBS DAMAGE DURING HIS OPERATIONS SHALL BE SAWCUT AND REPLACED AT NO COST TO THE OWNER. ANY EXISTING PAVING IDENTIFIED AS POTENTIALLY NEEDING TO BE REPLACED SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK.
7. THE CONTRACTOR SHALL PERFORM AND BE RESPONSIBLE FOR ALL CLEARING AND GRUBBING OPERATIONS AS NECESSARY TO COMPLETE THE WORK, INCLUDING TRANSPORTATION AND DISPOSAL OF ALL REMOVE MATERIALS, AND ALL ASSOCIATED COSTS.



GRADING & DRAINAGE PLAN

SCALE: 1" = 10' (0 1 5 10 FEET 20)

ABBREVIATIONS:

DWY APP	DRIVEWAY APPROACH
(E)	EXISTING
ELE.	ELEVATION
FF	FINISH FLOOR
FS	FINISH SURFACE
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
GB	GRADE BREAK
HP	HIGH POINT
INV	INVERT ELEVATION
SD	STORM DRAIN
TC	TOP OF CURB
TF	TOP OF FOOTING
TG	TOP OF GRADE
TW	TOP OF WALL
TYP.	TYPICAL
T.O.F.	TOP OF FENCE
T.O.G.	TOP OF GATE
WM	WATER METER

LEGEND:

- NEW CONCRETE PAVING
- NEW PLAYGROUND/GRASS
- FLOWLINE
- 4" DIA. STORM DRAIN PIPE
- 6" DIA. STORM DRAIN PIPE
- SUBDRAIN PIPE
- (97.6±) FS — EXISTING ELEVATION
- 97.60 FS — PROPOSED ELEVATION
- (95) — EXISTING CONTOURS
- 95 — PROPOSED CONTOURS
- 12"x12"CATCH BASIN.
- 6" DIA. AREA DRAIN
- CATCH BASIN. SEE PLAN FOR DIMENSIONS
- 6" DIA. STORM DRAIN CLEANOUT
- NEW WALL
- EXISTING WALL TO REMAIN

BASIS OF VERTICAL CONTROL:

BASIS OF VERTICAL CONTROL TO BE STK&TAG RCE 30826 4.00' N'LY & 2.00' W'LY OF PROP. CORNER TAG ELEV = 501.17'

SEE KEYNOTE (10).

BMP NOTES:

1. GUTTERS, DOWNSPOUTS AND FILTERS SHALL BE INSPECTED PRIOR TO THE START OF THE RAINY SEASON.
2. THE DRIVEWAY SHALL BE SWEPT AT LEAST ONCE A MONTH.
3. ALL ONSITE DRAINS SHALL BE STENCILED WITH "NO DUMPING TO THE OCEAN" LOGO. STENCIL TO BE LEGIBLE.

GRADING NOTES:

GRADING SHALL BE IN ACCORDANCE WITH THE SOILS REPORT.

NOTES:

SEE ARCHITECTURAL SITE PLAN A1. FOR SETBACKS, SURFACE TYPE, ETC.

DRAINAGE NOTE:

1. PROJECT MUST COMPLY WITH THE CITY'S MUNICIPAL NPDES PERMIT AND REQUIREMENTS SET FORTH IN MUNICIPAL CODE 13.08.060.
2. 5% MIN. SLOPE 10' AWAY FROM BUILDING FOR UNPAVED/LANDSCAPE ADJACENT TO BUILDING; 2% MIN. SLOPE 10' AWAY FROM BUILDING FOR PAVEMENT ADJACENT TO BUILDING; AND 1% MIN. SLOPE IN STORM DRAIN PIPES.

LID NOTES:

1. THE STORM DRAIN FROM ROOF AND IMPERVIOUS PAVING IS DIRECTED BY GRAVITY TO GRASS/LANDSCAPE AREAS, THEN TO THE RIP RAP OUTLET AT THE REAR OF THE PROPERTY. (TWO LOCATIONS).
2. THE EXISTING DRAINAGE PATTERN RUNS TO THE REAR. WE ARE PROPOSING TO KEEP THE SAME DRAINAGE PATTERN.
3. THE PROPOSED LID BMP IS REROUTING ROOF DRAINAGE ONTO GRASS/LANDSCAPE AREAS (ABOVE GROUND DOWNSPOUTS). THE REMAINING FLOW IS TREATED BY THE HYDRODYNAMIC SEPARATORS LOCATED ONE BEFORE EACH DISCHARGE. SEE KEYNOTE (15)

KEYNOTES:

1. CONSTRUCT AREA DRAIN, OPEN BOTTOM WITH CARBON FILTER INSERT FG-M1212. BASIN GRATES SHALL BE A MINIMUM OF 12"X12" WITH 50% OPENING. (1/C-2)
2. DOWNSPOUTS CONNECTED UNDERGROUND. (2/C-2)
3. 4"ø PVC SDR 35 STORM DRAIN PIPE. SEE LEGEND.
4. 6"ø PVC SDR 35 STORM DRAIN PIPE. SEE LEGEND.
5. CONSTRUCT DRIVEWAY APPROACH PER CITY STANDARD PLAN No ST-10.
6. 5% MIN. SLOPE 10' AWAY FROM BUILDING FOR UNPAVED/LANDSCAPE ADJACENT TO BUILDING; 2% MIN. SLOPE 10' AWAY FROM BUILDING FOR PAVEMENT ADJACENT TO BUILDING; AND 1% MIN. SLOPE IN STORM DRAIN PIPES.
7. CONSTRUCT NEW CURB PER CITY STANDARD PLAN 120-1.
8. NEW RETAINING WALL PER SEPARATE PERMIT. TOP OF FOOTING TO BE 1' BELOW THE LOWEST GRADE AND TOP OF WALL TO BE 6. 2" MIN. ABOVE THE HIGHEST GRADE.
9. LIMIT OF GRADING. SEE PLAN.
10. BENCHMARK SET STK&TAG RCE 30826 4.00' N'LY & 2.00' W'LY OF PROP. CORNER TAG ELEV = 501.17'
11. JOIN TO MATCH EXISTING GRADE.
12. 6" DIA. STORM DRAIN CLEANOUT.
13. 2' WIDE CONCRETE SWALE. (3/C-2)
14. RIPRAP. SEE PLANS FOR DIMENSIONS. (6/C-2)
15. CONSTRUCT 6" THICK CONCRETE DRIVEWAY WITH #3 @12" O.C. EACH WAY.
16. 12"x12" BUBBLER CATCH BASIN. (5/C-2)
17. 12" WIDE FULL DEPTH AC PATCH BACK.
18. 6" DIA. AREA DRAIN (4/C-2)
19. SEE BASEMENT PLAN C-3A, FOR BASEMENT SUBDRAIN PIPES AND POINT OF CONNECTION TO STORM DRAIN.
20. ABANDON EXISTING CURB CORE TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR.

CERTIFICATION NOTE:

IF THE CITY REQUIRES GRADING AND/OR DRAINAGE CERTIFICATIONS, IT IS RECOMMENDED THAT SITE INSPECTIONS BE PERFORMED BY A REPRESENTATIVE OF THIS FIRM DURING ALL DRAINAGE INSTALLATION (OPEN TRENCH) AND GRADING OF THE DEVELOPMENT TO VERIFY THE SITE IS CONSTRUCTED PER THE RECOMMENDATIONS DOCUMENTED ON THESE PLANS.

TO SCHEDULE A SITE INSPECTION, CONTACT OUR OFFICE AT (310) 270-0811 OR PERUCONSULTANTS@LIVE.COM.

PERU CONSULTANTS IS NOT RESPONSIBLE OF SIGNING DRAINAGE AND/OR GRADING CERTIFICATIONS IF SITE INSPECTIONS WERE NOT CONDUCTED DURING CONSTRUCTION.

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PC JOB #: 23160

ISSUE DESCRIPTION	ISSUE DATE
1ST SUBMITTAL	02/20/2024

Engineer: Christian Perez
Scale: AS NOTED
DATE: 20 Feb 2024
File Name: Civil23160.dwg

Sheet Title:
GRADING & DRAINAGE PLAN

Sheet No.: C-2

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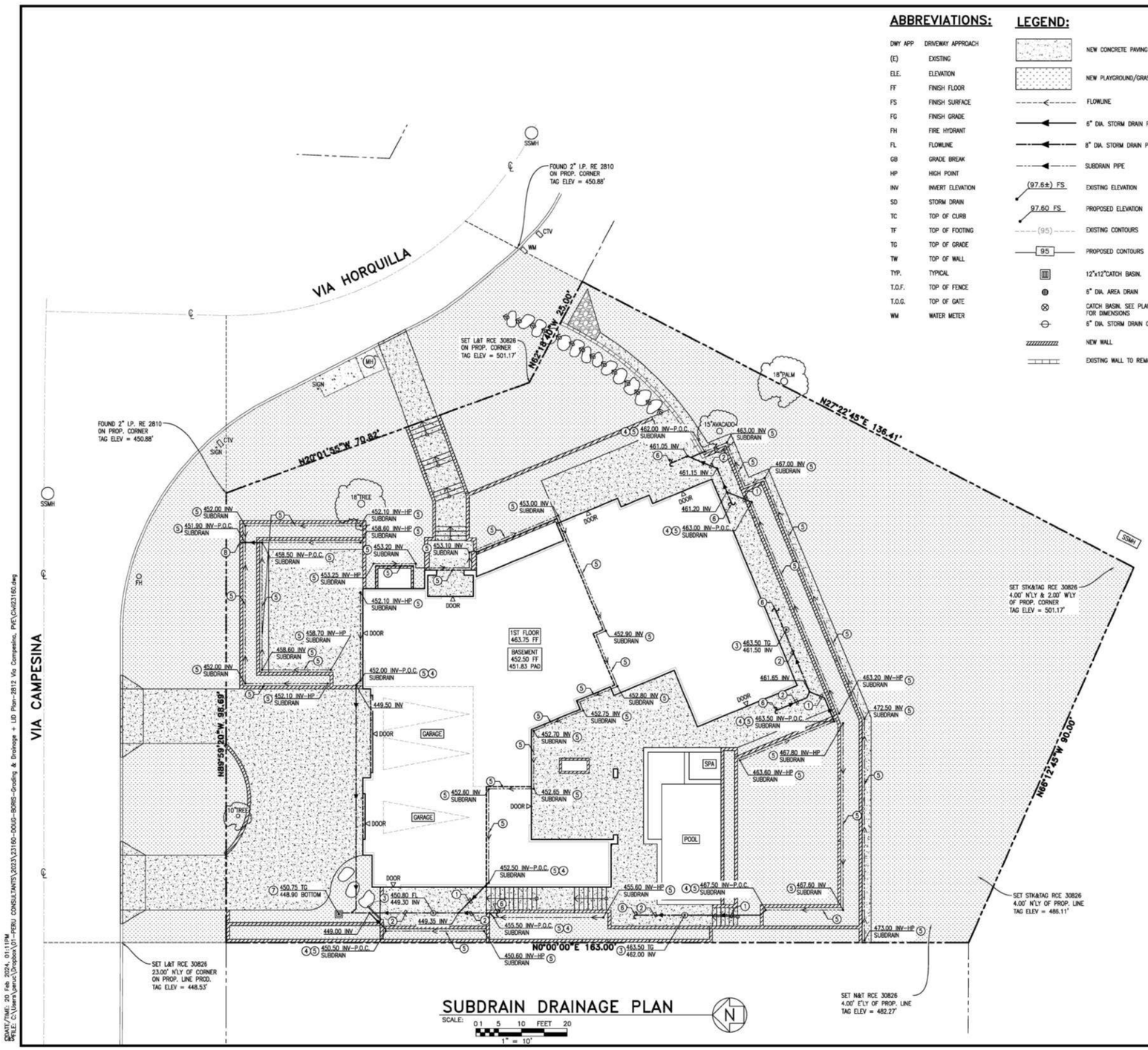

SUBDRAIN DRAINAGE PLAN

SCALE: 0 1 5 10 FEET 20
1" = 10'

N

ABBREVIATIONS:

DWY APP	DRIVEWAY APPROACH
(E)	EXISTING
ELE.	ELEVATION
FF	FINISH FLOOR
FS	FINISH SURFACE
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
GB	GRADE BREAK
HP	HIGH POINT
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SD	STORM DRAIN
TC	TOP OF CURB
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TG	TOP OF GRADE
TW	TOP OF WALL
TYP.	TYPICAL
T.O.F.	TOP OF FENCE
T.O.G.	TOP OF GATE
WM	WATER METER

LEGEND:

- NEW CONCRETE PAVING
- NEW PLAYGROUND/GRASS
- FLOWLINE
- 6" DIA. STORM DRAIN PIPE
- 8" DIA. STORM DRAIN PIPE
- SUBDRAIN PIPE
- (97.6±) FS — EXISTING ELEVATION
- 97.60 FS — PROPOSED ELEVATION
- (95) — EXISTING CONTOURS
- 95 — PROPOSED CONTOURS
- 12"x12"CATCH BASIN.
- 6" DIA. AREA DRAIN
- CATCH BASIN. SEE PLAN FOR DIMENSIONS
- 6" DIA. STORM DRAIN CLEANOUT
- NEW WALL
- EXISTING WALL TO REMAIN

BASIS OF VERTICAL CONTROL:

BASIS OF VERTICAL CONTROL TO BE STK&TAG RCE 30826 4.00' N'LY & 2.00' W'LY OF PROP. CORNER TAG ELEV = 501.17'

SEE KEYNOTE (10) ON C-2.

KEYNOTES:

1. 4"ø PVC SDR 35 STORM DRAIN PIPE. SEE LEGEND.
2. 6"ø PVC SDR 35 STORM DRAIN PIPE. SEE LEGEND.
3. 6" DIA. AREA DRAIN (4/C-2)
4. CHECK VALVE.
5. INSTALL SUBDRAIN PIPES PER SOILS ENGINEER RECOMMENDATIONS AND/OR STRUCTURAL DETAILS. DRAIN TO NEW STORM DRAIN SYSTEM WITH A MINIMUM SLOPE OF 1%. INSTALL A CHECK VALVE AT POINT OF CONNECTION (P.O.C.)
6. FOR CONTINUATION, SEE C-2.
7. 12"x12" BUBBLER CATCH BASIN. (5/C-2)
8. 4" DIA. WEEPHOLE.

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PC JOB #: 23160

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No. C80680
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ISSUE DESCRIPTION	ISSUE DATE
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Engineer: Christian Perez	Scale: AS NOTED
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Sheet Title:

SUBDRAIN
DRAINAGE PLAN

Sheet No.: C-2A

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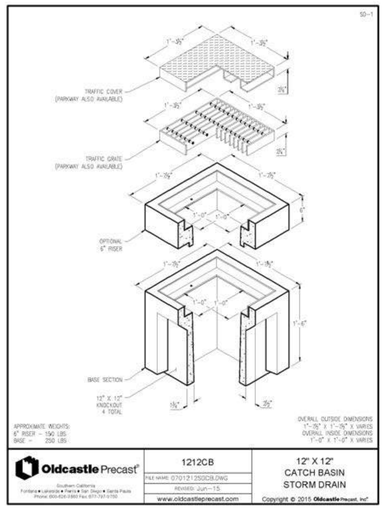
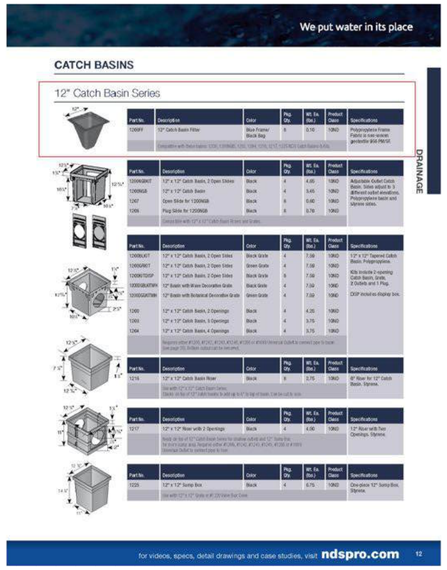
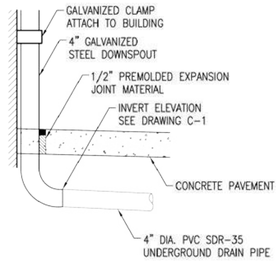
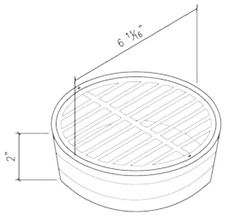
DATE/TIME: 20 Feb 2024, 01:11PM
FILE: C:\Users\jarus\Dropbox\01-PERU CONSULTANTS\2023\23160-DOUG-BORS-Grading & Drainage + LID Plan-2812 Via Campesina, PVE\Civil23160.dwg







DOWNSPOUT
NOT TO SCALE — 2 / C-3

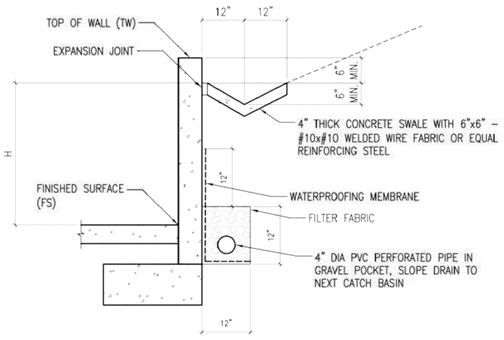


⅜" GRATE OPENING

FITS: USE WITH SPEE-D BASIN, 6" SEWER AND DRAIN FITTINGS, 6" CLASS 100 PIPE
OPENING: 13.15 IN² OPEN SPACE
WILL ACCOMMODATE 40.07 GALLONS PER MINUTE WITH ½" OF HEAD

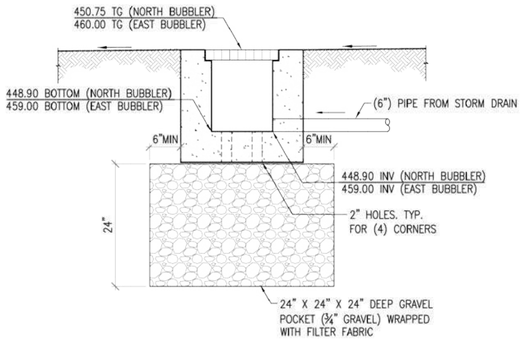
AREA DRAIN
NOT TO SCALE — 3 / C-3

CATCH BASIN FILTER INSERT
NOT TO SCALE — 1 / C-3

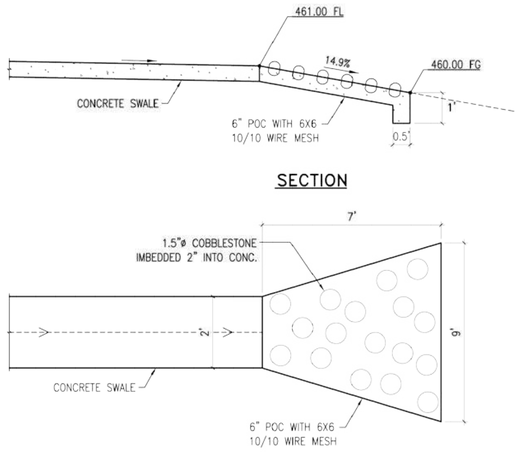


NOTE:
IF H < 24", SUBDRAIN PIPE IS NOT REQUIRED .
IF H >= 24", SUBDRAIN PIPE IS REQUIRED.

CONCRETE SWALE & SUBDRAIN PIPE
NOT TO SCALE — 4 / C-3



BUBBLER CATCH BASIN DETAIL
NOT TO SCALE — 5 / C-3



SECTION

PLAN

RIP RAP DETAIL
NOT TO SCALE — 6 / C-3

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CIVIL ENGINEERING & DRAFTING SERVICES
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DOUGLAS J. LEACH
ARCHITECT

ADDRESS:
2812 VIA CAMPESINA
PALOS VERDES ESTATES,
CA 90274

PC JOB #: 23160

REGISTERED PROFESSIONAL ENGINEER — CHRISTIAN J. PEREZ — No. C80680 — CIVIL — STATE OF CALIFORNIA

ISSUE DESCRIPTION	ISSUE DATE
1ST SUBMITTAL	02/20/2024

Engineer: Christian Perez
Scale: AS NOTED
DATE: 20 Feb 2024
File Name: Civil23160.dwg

Sheet Title:
DETAILS

Sheet No.: C-3

JOB ADDRESS: 2812 VIA CAMPESINA, PALOS VERDES ESTATES

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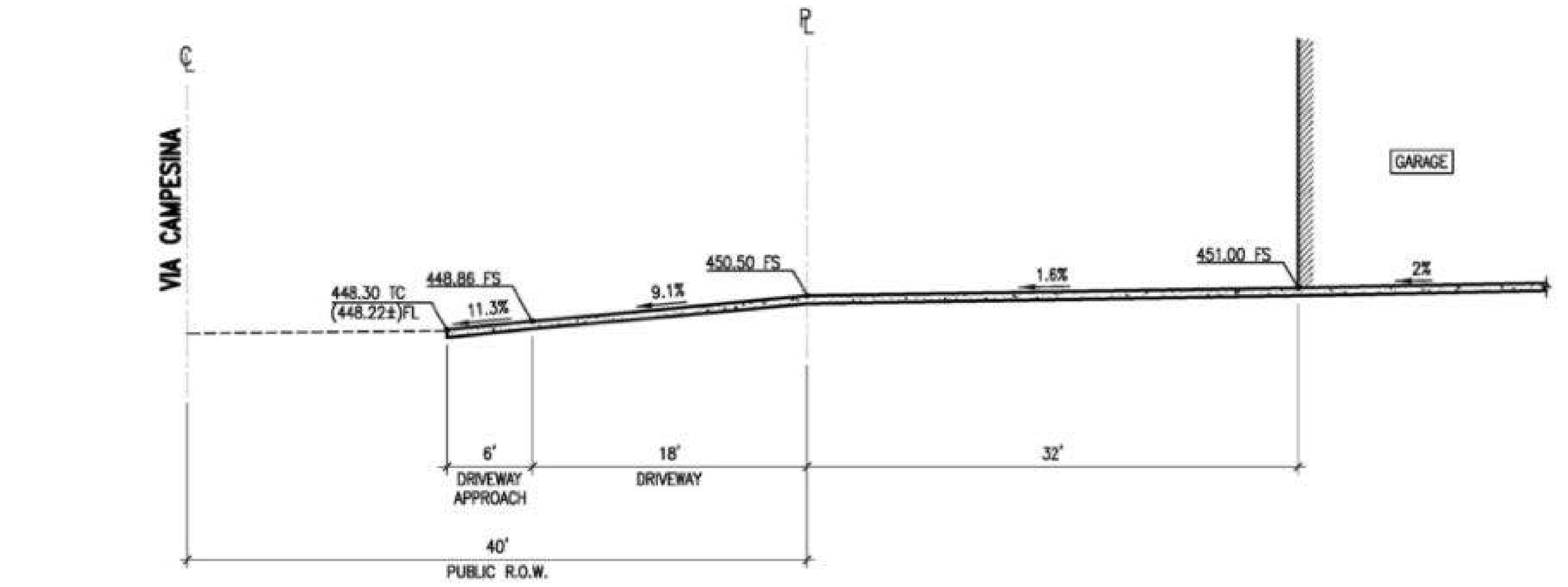
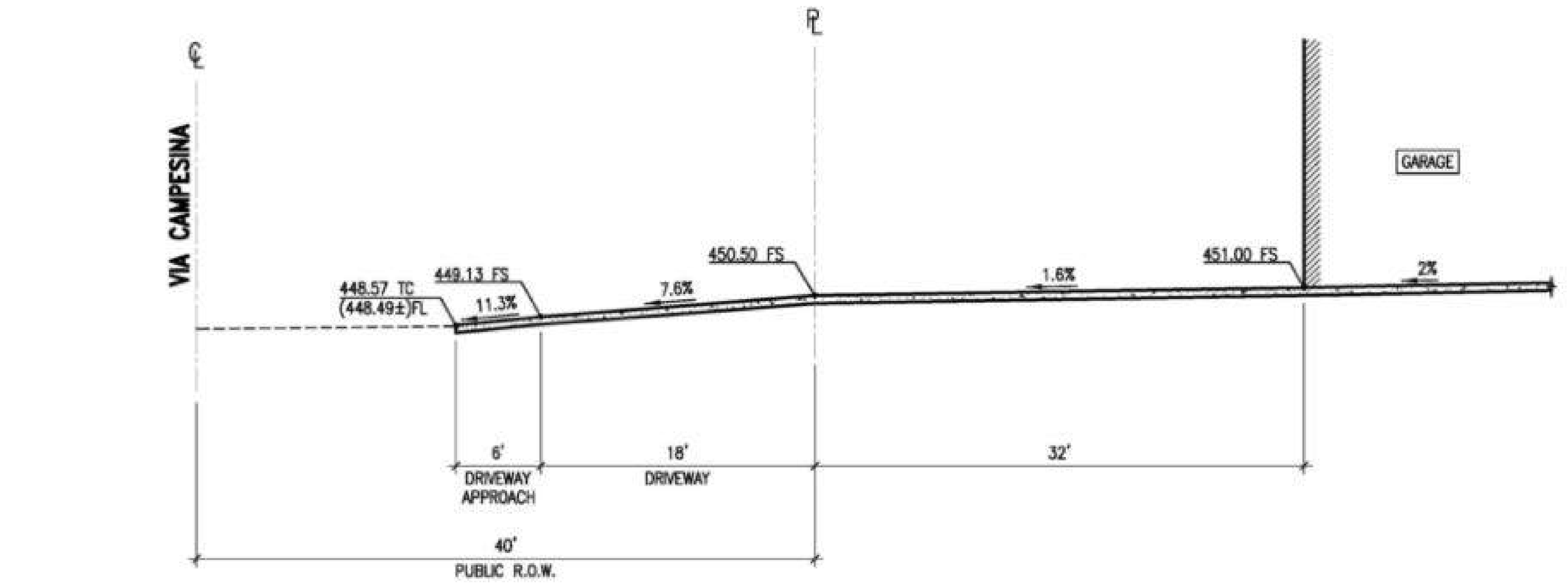


DRIVEWAY PROFILE (A / C-4)

SCALE 0 4 8 FEET 16
1/8" = 1'-0"

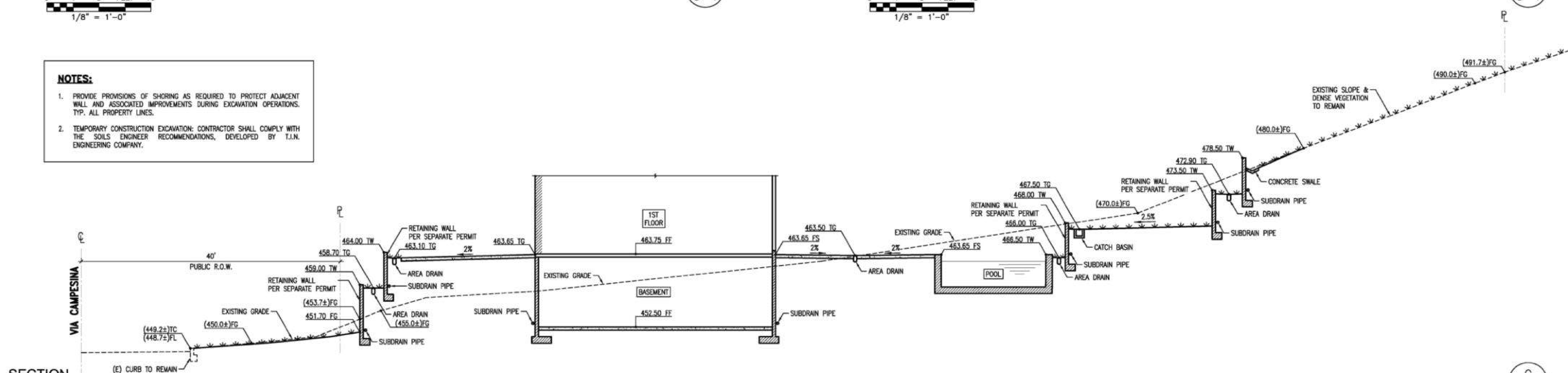


DRIVEWAY PROFILE (B / C-4)

SCALE 0 4 8 FEET 16
1/8" = 1'-0"

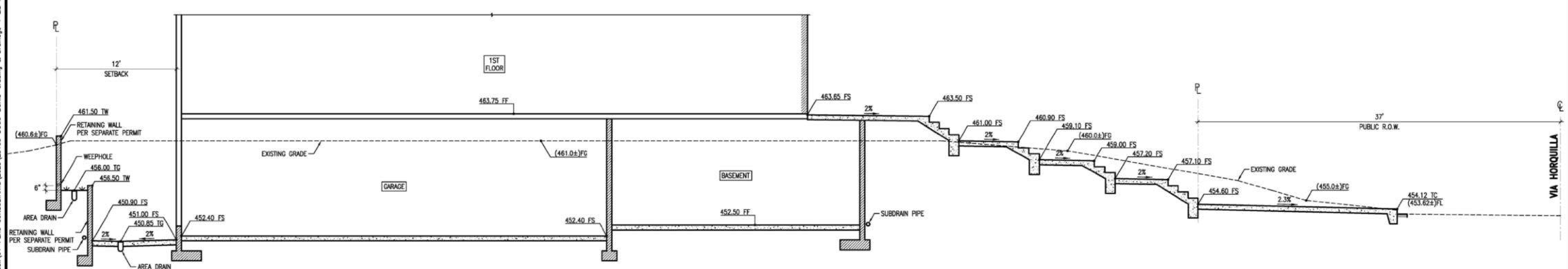
NOTES:

1. PROVIDE PROVISIONS OF SHORING AS REQUIRED TO PROTECT ADJACENT WALL AND ASSOCIATED IMPROVEMENTS DURING EXCAVATION OPERATIONS. TYP. ALL PROPERTY LINES.
2. TEMPORARY CONSTRUCTION EXCAVATION: CONTRACTOR SHALL COMPLY WITH THE SOILS ENGINEER RECOMMENDATIONS, DEVELOPED BY T.I.N. ENGINEERING COMPANY.



SECTION (C / C-4)

SCALE 0 4 8 FEET 16
1/8" = 1'-0"



SECTION (D / C-4)

SCALE 0 1 3 5 FEET 10
1" = 5'

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DRIVEWAY PROFILES & SECTIONS

Sheet No.: C-4

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