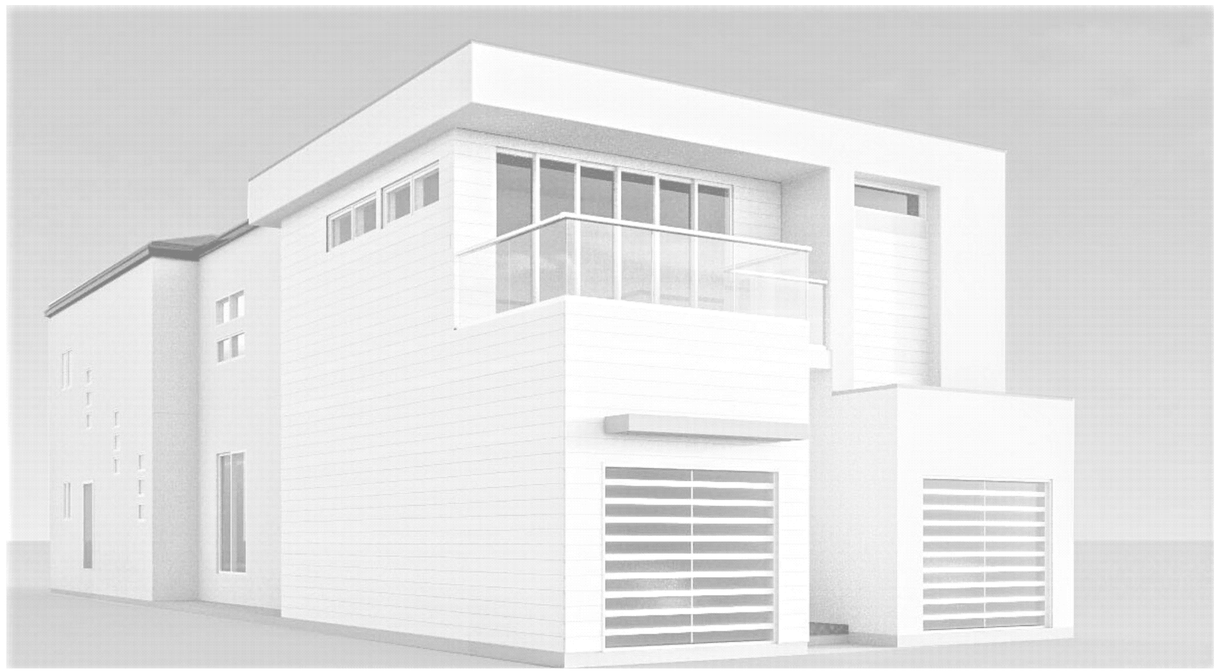
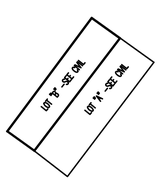
VAKILI DEVELOPMENT New Residential Construction Building "B" (lot 31)



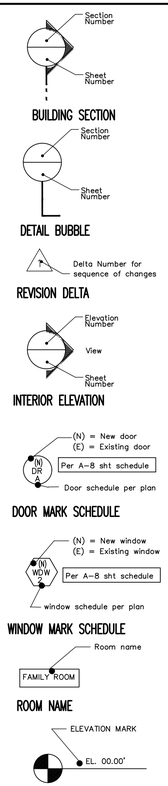
EXISTING AERIAL SITE VIEW



VICINITY MAP

Dana Point

STD SYMBOLS



ABBREVIATIONS

AB	ANCHOR BOLT	INT	INTERIOR
AC	ASPHALTIC CONCRETE	L	LONG (LENGTH)
ADJ	ADJUSTABLE	LAM	LAMINATE(D)
AFF	ABOVE FINISH FLOOR	LAV	LAVATORY
AL	ALUMINUM	LT	LIGHT
ANOD	ANODIZED	MAS	MASONRY
AP	ACCESS PANEL	MAX	MAXIMUM
ARCH	ARCHITECT	MB	MACHINE BOLT
BD	BOARD	MECH	MECHANIC(AL)
BEL	BELOW	MED	MEDIUM
BET	BETWEEN	MET	METAL
BLDG	BUILDING	MFR	MANUFACTURE(ER)
BLK(G)	BLOCK(ING)	MIN	MINIMUM
BM	BEAM	MISC	MISCELLANEOUS
B	BOTTOM	MO	MASONRY OPENING
BRG	BEARING	MTL	MATERIAL(S)
BS	BOTH SIDES	NAT	NATURAL
BUL	BULLETIN	(N)	NEW
BUR	BUILT UP ROOFING	NIC	NOT IN CONTRACT
CB	CATCH BASIN	NOM	NOMINAL
CEM	CEMENT	N	NORTH
CI	CAST IRON	NTS	NOT TO SCALE
CJ	CEILING JOIST	OC	ON CENTER(S)
CLG	CEILING	OD	OUTSIDE DIAMETER
CLR	CLEAR(ANCE	OPNG	OPENING
COL	COLUMN	OPP	OPPOSITE
CONC	CONCRETE	PLAS	PLASTER, PLASTIC
CONST	CONSTRUCTION	PLWOD	PLYWOOD
CONT	CONTINUOUS	PSF	POUNDS PER SF
CONTR	CONTRACT(OR)	PSI	POUNDS PER SI
D	DEEP (DEPTH)	PVC	POLYVINYL CHLORIDE
DD	DECK DRAIN	R	RISER
DIAG	DIAGONAL	(R)	REMODELED
DIAM	DIAMETER	RAD	RADIUS
DIM	DIMENSION	RD	ROOF DRAIN
DN	DOWN	REF	REFERENCE
DR	DOOR	REFL	REFLECT(ED),
DS	DOWNSPOUT	REINF	REINFORCE(D),
DTL	DETAIL	REQ	REQUIRE(D)
E	EAST	REV	REVISION(S)
EA	EACH	RM	ROOM
EL	ELEVATION	RO	ROUGH OPENING
ELEC	ELECTRIC(AL)	S	SOUTH
EMER	EMERGENCY	SC	SOLID CORE
EQ	EQUAL	SEC	SECTION
EX	EXHAUST	SF	SQUARE FOOT
(E)	EXISTING	SHT	SHEET
EXP	EXPOSED	SIM	SIMILAR
EXT	EXTERIOR	SPEC	SPECIFICATION(S)
FD	FLOOR DRAIN	SQ	SQUARE
FAU	FORCED AIR UNIT	SYM	SYMMETRY(ICAL)
FF	FINISH FLOOR	T	TREAD, TOP
FIN	FINISH(ED)	TEL	TELEPHONE
FJ	FLOOR JOIST	(T)	TEMPERED
FOC	FACE OF CONCRETE	T&G	TONGUE AND GROVE
FLR	FLOOR(ING)	THK	THICK(NESS)
FV	FIELD VERIFY	TOP	TOP OF PARAPET
FOM	FACE OF MASONRY	TOS	TOP OF SLAB
FOS	FACE OF STUDS	TS	TOP OF STEEL
FTG	FOOTING	TW	TOP OF WALL
GA	GAUGE	TYP	TYPICAL
GI	GALVANIZED IRON	UON	UNLESS OTHERWISE NOTED
GL	GLASS	VCT	VINYL COMPOSITION TILE
GLB	GLUE LAMINATED BEAM	VERT	VERTICAL
GYP	GYPSUM	VG	VERTICAL GRAIN
H	HIGH (HEIGHT)	VIN	VINYL
HB	HOSE BIBB	W	WEST, WIDTH,,
HC	HOLLOW CORE	WC	WATER CLOSET
HDR	HEADER	WD	WOOD
HDW	HARDWARE	WP	WATERPROOFING
HM	HOLLOW METAL	WR	WATER REPELLENT
HOR	HORIZONTAL	@	AT
HT	HEIGHT	O/	OVER
ID	INSIDE DIAMETER	O	ROUND
INCL	INCLUDE(D)	W/	WITH
		W/O	WITHOUT

PROJECT DATA "BUILDING "B" (lot 31)

OWNER
OWNER/SITE ADDRESS:
CONTACT: Arman Vakili
23342 S. Point Dr Suit K, Laguna Hills, CA 92653
949-289-1847 email: arman@acmbuilder.com

SITE/BUILDING DATA:
LOT 31 SIZE: 4,810 sf

PROPERTY ADDRESS
34456 Via Gomez, Dana Point, CA 92624

LEGAL DESCRIPTION
LOT 31 IN BLOCK 14 OF TRACT NO. 735 IN THE CITY OF DANA POINT COUNTY OF ORANGE, STATE OF CA, AS PER MAP RECORDED IN BOOK 22, PAGES 21 TO 28 INCLUSIVE OF MISC MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY

PLANNING DEPARTMENT (CONDITIONS/RESOLUTION)
REFER TO CITY DOCUMENTS
RESOLUTION #22-08-08-20 OUTLINE

PROPERTY ZONE: Single Family Residential 1 RD-14
Zoning District: Capistrano Bluffs By Sea (CB)

CONSTRUCTION TYPE:	VB SPRINKLERED
OCCUPANCY:	R-3/U1 SINGLE DETACHED FAMILY DWELLING
NUMBER OF FLOORS:	NEW 2-STORY W/ ATTACHED GARAGE
LANDSCAPE RATIO:	15% MIN REQUIRED (15% SHOWN ON PLANS)

CITY ORDINANCE SITE STANDARDS (SECTION 9.09.030)

RESIDENTIAL DEVELOPMENT STANDARD (BASED ON RD 14 RESIDENTIAL ZONING DISTRICTS

DEVELOPMENT STANDARDS (1)	RD14 Required	Proposed Development	Comments
(a) Minimum Lot Size: (2)	5,000 sf	4,810 sf	
(b) Minimum Lot Width – (2)			
Standard Lot:	45 ft	37 ft	
Cul-De-Sac Lot (at front setback line):	30 ft	N/A	
Flag Lot (for access extension):	25 ft	N/A	
(c) Minimum Lot Depth: (2)	100 ft	130 ft	
(d) Maximum Lot Coverage:	50%	49.01	
(e) Minimum Land Area Per Unit: (3)	2,500 sf	4,810 sf	
(f) Maximum Height:	28 ft @ 6:12 roof	36'–10"	
(2 stories)	(2 stories)		
(g) Minimum Front Yard Setback – (5)			
From Ultimate Public Street ROW line:	20 ft	28 ft	
Flag Lot (from connection with access extension):	15 ft	N/A	
(h) Minimum Side Yard Setback – (5)			
Right Side:	4 ft	4 ft	
Left Side:	4 ft	4 ft	
Flag Lot: (6)	4 ft	N/A	
(i) Minimum Rear Yard Setback – (5)			
Standard Lot:	15 ft	15 ft	
Flag Lot and Cul-De-Sac Lot:	15 ft	N/A	
Adjacent to Alley: (13)	10 ft	N/A	
(j) Minimum Open Space Private:			
Private:	20%	31%	
Common:	N/A	N/A	
(k) Minimum Landscape Coverage:	15%	15%	
(l) Minimum Building Separation (between primary & accessory buildings on the same lot)	10 ft	10ft	

AREA CALCULATIONS:

(TABULATED IN SQUARE FEET BELOW)

BUILDING AREA:	NEW	TOTAL
GARAGE (ATTACHED)	514	514
DWELLING 1st LEVEL	1,820.0	--
DWELLING 2nd LEVEL	1,592.0	--
TOTAL LIVING AREA:	--	3412.0

1st LEVEL CANOPY 46.0
2nd LEVEL DECK 121.0
ROOF DECK 300.0

SITE SUMMARY/HISTORY

BRIEF INTRO: In Capistrano bluffs by the sea the existing residential lot has an single detached house of 804 sf with an attached garage that will all be removed. The current home overlaps on the 2-split lots of lot 30 and 31,

PROJECT OUTLINE (BUILDING "B")

The new proposed work adds a new single detached home that sits on lot 31. Building "B" will be 2-story w/ 300 sf roof deck and 2-car attached garage. The 514 sf garage is attached to dwelling at Bldg "B". The total living space for Building "A" is 3,402 sf

NOTE: FOR PROJECT OUTLINE OF BUILDING "A": Refer to "A series sheets for building "A" (LOT 30) not shown in this package –separate submittal package as one sequence simultaneously for both buildings

BUILDING DEPARTMENT NOTES

A 1. ALL NEW CONSTRUCTION SHOWN ON THE PLANS SHALL CONFORM TO THE 2022 EDITION OF CALIFORNIA RESIDENTIAL (CRC), CALIFORNIA ELECTRICAL (CEC), CALIFORNIA MECHANICAL (CMC), CALIFORNIA PLUMBING (CPC) CODES. CALIFORNIA GREEN BUILDING STANDARDS CODE (CGC), THE CALIFORNIA BUILDING CODE (CBC), CALIFORNIA FIRE CODE (CFC) CALIFORNIA ENERGY CODE T-24 (i.e., 2021 IBC, UMC, UPC, and 2020 NEC, AS AMENDED BY THE STATE OF CALIFORNIA) AND LOCAL AMENDMENTS THROUGH CITY OF DANA POINT MUNICIPAL CODES.

2. SUBCONTRACTORS SHALL FAMILIARIZE WITH ALL EXISTING CONDITIONS AND HOW THE NEW CONSTRUCTION RELATES TO THE SITE CONDITION. ALL CONSTRUCTION AND INSTALLATION SHALL COMPLY WITH THE LATEST CONDITIONS (STATE/COUNTY/CITY) OF CODES AND ORDINANCES INCLUDING CAL OSHA AND FIRE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CODE COMPLIANCE OF WORK OF EVERY TRADE.

3. "THE DISCHARGE OF POLLUTANTS TO ANY STORM DRAINAGE SYSTEM IS PROHIBITED. NO SOLID WASTE, PETROLEUM BYPRODUCTS, SOIL PARTICULATE, CONSTRUCTION WASTE MATERIALS, OR WASTEWATER GENERATED FROM CONSTRUCTION SITES OR BY CONSTRUCTION ACTIVITIES SHALL BE PLACED, CONVEYED OR DISCHARGED INTO THE STREET, GUTTER OR STORM DRAIN SYSTEM."

4. CONTRACTOR TO EITHER PROVIDE A PORTABLE TOILET AND HAND WASH STATION PER OSHA REGULATIONS.

5. HOUSE ADDRESS NUMBER SHALL BE MOUNTED ON HOUSE & SHALL BE VISIBLE AND LEGIBLE FROM THE STREET IN A CONTRAST COLOR 4" TALL MINIMUM- SEE EXTERIOR ELEVATION FOR ACTUAL SPEC.

6. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO WORK. THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION. ACTUAL FIELD DIMENSION/CONDITIONS SHALL HAVE PRECEDENCE FROM PRINTED DIMENSIONS ON THESE DRAWINGS. REPORT TO ARCHITECT ANY DISCREPANCIES THAT INTERFERES WITH NEW RETROFIT WORK.

7. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO WORK. THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION. ACTUAL FIELD DIMENSION/CONDITIONS SHALL HAVE PRECEDENCE FROM PRINTED DIMENSIONS ON THESE DRAWINGS. REPORT TO ARCHITECT ANY DISCREPANCIES THAT INTERFERES WITH NEW RETROFIT WORK.

8. THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS AND SEQUENCE OF WORK THROUGH UTILIZING ARCHITECT'S DRAWINGS AS INSTRUMENTS FOR INSTRUCTION, NOT THE PRODUCT ITSELF. THE ARCHITECT WILL BE INSTRUMENTAL IN CLARIFYING DRAWING INTERPRETATIONS AND OTHER INQUIRIES DURING BID & CONSTRUCTION IN A TIMELY MANNER. THE ARCHITECT SHALL NOT HAVE CONTROL OVER OR CHARGE OF FIELD SAFETY, ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS AND ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY INCLUDING TIME SCHEDULES AND TRADE SEQUENCE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

A 9. DEFERRED SUBMITTALS (ITEMS REQ. SEPARATE PERMIT):
SHOP DRAWINGS OR OTHER DEFERRED ITEMS SHALL BEL SEPARATELY SECURED IN THE PERMITTING PROCESS. THE GC SHALL PROPERLY SEQUENCE ALL DISCIPLINES OF DEFERRED ITEMS BY SECURING WITH LOCAL AGENCIES PRIOR TO START OF EXECUTION OF WORK. MISCELLANEOUS DEFERRED ITEMS FOR SEPARATE PERMITS GENERATED FROM VENDORS/SUPPLIERS THAT NEED SEPARATELY SECURED/PERMITTED W/ CITY PRIOR TO FABRICATION OR INSTALLED WORK INCLUDE ITEMS BUT NOT LIMITED TO ARE: PHOTOVOLTAIC SYSTEM, FIRE SPRINKLERS, CIVIL, SITE RETAINING WALLS, FENCE AND LANDSCAPE.

10. DIG ALERT (811) HTTPS://WWW.DIGALERT.ORG/ IS TO BE CONTACTED AND THAT COMPLIANCE WITH EXCAVATION SAFETY IN ACCORDANCE WITH GOVERNMENT CODE 4216 WILL BE FOLLOWED PRIOR TO ANY EXCAVATION TAKING PLACE. PROVIDE AN ACKNOWLEDGMENT SIGNATURE SPACE AND PROVIDE SIGNATURE BY EITHER THE OWNER OR THE CONTRACTOR REPRESENTING THE OWNER 24 HOURS IN ADVANCE USING FORM FROM LINK HTTPS://WWW.DIGALERT.ORG/PDFS/DIGALERTPAD.PDF

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NOTE: IF THIS SET IS NOT 24" X 36" SIZE, IT IS NOT TO SCALE

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LANDSCAPING: index not listed (see below)
Deferred submittals are separate permit as per note #9 this page under "BUILDING DEPARTMENT NOTES" as contractor shall secure complete drawing list from owner for bids and construction

CIVIL: index not listed (see below)
DEFERRED SUBMITTALS ARE SEPARATE PERMIT AS PER NOTE #9 THIS PAGE UNDER "BUILDING DEPARTMENT NOTES CONTRACTOR TO SECURE COMPLETE DRAWING LIST FROM OWNER

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Contact: info@paassociates.com

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

NO./REVISION/DATE

4-24-23 intitial city submittal

A 9-4-23 city resubmittal

B 12-5-23 city resubmittal

JOHN A. SALAT ARCHITECTS
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2enarchitect.com

architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
cover page

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
949-289-1847 email: arman@acmbuilder.com

REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP. 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET
A-1
1 OF (REF TO INSERT) SHEETS

These documents are property of John A. Salat Architects and are registered/copy right protected from both reproduction and modification in protecting misuse. It is unlawful/punishable and taken to full extent of law from claims arising of legal expenses associated of misuse weather directly or indirectly related for these documents to this project. Drawings are not intended as record of actual installed construction, therefore wave responsibility for discrepancies

CONDITIONS OF APPROVAL (RESOLUTION)

All documents prepared by a registered-design-professional shall be wet-stamped & signed.

19. Fire sprinkler system is required or waiver from the Fire Chief. (All new residential.)

20. Fire Department review maybe required. Submit plans directly to the Orange County Fire Authority for their review.

21. Minimum roofing classification is Class "A".

22. Fire-rated Construction: Plans should clearly identify and detail the fire-rated construction for any construction due to close proximity to the property line.

23. Separate review, approval, and permits are required for separate structures.

24. Soils Report (1803): Submit a foundation and soils investigation report by a Registered Design Professional and conducted in conformance with CBC Section 1803.3 through 1803.5. The report shall comply with CBC Section 1803.6.

25. Undergrounding of all on-site utilities is required. An approved SDG&E Work Order and Undergrounding Plan are required prior to permit issuance.

26. Foundation system to provide for expansive soils and soils containing sulfates unless a soils report can justify otherwise. Use Type V cement, w/c ratio of 0.45, f'c of 4500 psi.

27. Green Building: Plans shall show compliance & indicate method of verification of compliance with all CAL Green requirements. Third party or other methods shall demonstrate satisfactory conformance with mandatory measures.

C. **Prior to the Issuance of a Grading Permit**

28. The applicant shall submit an application for a grading permit. The application shall include a grading plan, in compliance with City standards, for review and approval by the Director of Public Works. The applicant shall include all plans and documents in their submittal as required by the current Public Works Department's plan check policies, City of Dana Point Municipal Code and the City of Dana Point Grading Manual and City's Municipal Separate Storm Sewer Systems (MS4s) Permit requirements.

29. The applicant shall apply for a separate improvement permit for the construction of the proposed private drainage system. The application for an improvement permit shall per the current Public Works submittal requirements and all applicable standards. The proposed storm drain alignment, materials and details shall be subject to review and approval by the Director of Public Works/City Engineer.

30. The proposed storm drain shall be designed by a licensed civil engineer in the State of California per applicable standards, subject to review and approval by the Director of Public Works/City Engineer.

31. The applicant shall provide plans approved by all affected property owners for the proposed private drainage system and all associated grading activities. Written approval from all affected property owners shall be required prior to permit issuance.

32. The applicant shall submit a geotechnical report for review and approval by the Director of Public Works. This report shall, at a minimum, involve a discussion of the current development and an assessment of potential soil related constraints and geologic hazards such as slope instability, settlement, liquefaction, and/or related seismic impacts. The report shall also include an evaluation of potentially expansive soils and recommend construction procedures and/or design criteria to minimize the effect of these soils on the proposed development. All reports shall recommend appropriate mitigation measures and provide a statement of the feasibility or approval of the project from a geotechnical standpoint. All reports shall be completed in the manner specified by the City of Dana Point Municipal Code, the City of Dana Point Grading Manual, and Orange County Grading Manual.

33. The project shall meet all water quality requirements including Low Impact Development (LID) implementation.

34. A performance bond shall be required for the completion of all grading and other construction activities up to 100% of the proposed improvements. The grading and final improvements shall be constructed and approved by Director of Public Works, prior to the issuance of a Certificate of Occupancy.

35. A separate performance bond shall be required for all associated storm drainage improvements, valued at 100% of the cost of the improvements, in accordance with Public Works standards.

36. Separate submittal for review, approval and permits are required for project walls. Separate applications shall be made to the Community Development Department for all project walls. The submittals shall be in accordance with the latest Community Development requirements.

37. All walls required to be construction to facilitate the grading operations or establishment of the design PAD grades and rough grading certification shall be issued concurrently with the grading permit. This includes but not limited to temporary shoring walls, permanent shoring walls, property line masonry walls, or other structures as determined by the Director of Public Works.

38. A separate performance bond shall be required for the construction and continued maintenance of any temporary shoring or walls required to protect all neighboring property, improvements and/or structures. The performance bond may be to 100% of the proposed improvements and/or construction costs. The performance bond for shoring or temporary improvements shall be released by Director of Public Works, when protection of all neighboring improvements is no longer required due to grading or construction operations.

39. The Storm Drain system being constructed as part of this Project shall be privately owned and maintained, with the exception of a portion of the storm drain being constructed in City owned right-of-way on Via Gomez. A deed restriction, or other approved instrument, shall be processed and recorded on the properties prior to issuance of a grading permit, or soon thereafter subject to approval by the Director of Public Works/City Engineer. The deed restriction or other instrument shall clearly address ownership and maintenance obligations of the storm drain system for both planned owners (Lot 30 and Lot 31).

D. **Prior to the Issuance of a Building Permit or release on certain related inspections, the applicant shall meet the following conditions:**

40. The applicant shall obtain a grading permit and complete rough grading (establishment of building pads) in accordance with the approved grading plans and reports.

41. A Drainage Acceptance Agreement addressing the acceptance of public/private storm drainage shall be processed, approved and recorded prior to issuance of a Building Permit.

42. The applicant shall submit a rough grade certification from the Civil Engineer of Record for review and approval by the City Engineer by separate submittal. The rough grade certification by the civil engineer (the City's standard Civil Engineer's Certification Form for Rough Grading) shall approve the grading as being substantially completed in conformance with the approved grading plan and shall document all pad grades to the satisfaction of the City Engineer. The civil engineer and/or surveyor shall specifically certify that the elevation of the graded pad is in compliance with the vertical (grade) position approved for the project.

43. The applicant shall submit a certification from the Geotechnical Engineer of Record for the required temporary shoring or wall construction for grading operations. The certification shall be submitted for review and approval by the City Engineer by separate submittal. The temporary structure certification by the geotechnical engineer shall approve the construction of temporary structures as being substantially completed in conformance with the recommendation of the project geotechnical report, all field observations, and any field modifications or additional recommendations required. The certification shall state the temporary structures are approved and suitable from a geotechnical standpoint.

44. An as graded geotechnical report may be prepared by the project geotechnical consultant following grading of the subject site. The report should include the results of all field density testing, depth of reprocessing and recompaction, as well as a map depicting the limits of grading. Locations of all density testing, restricted use zones, settlement monuments, and geologic conditions exposed during grading. The report should include conclusions and recommendations regarding applicable setbacks, foundation recommendations, erosion control and any other relevant geotechnical aspects of the site. The report shall state that grading of the site, including associated appurtenances, as being completed in conformance with the recommendations of the preliminary geotechnical report.

45. A maintenance plan, in the form of a deed restriction or other instrument recorded on both Project lots (Lot 30 and 31), for the new storm drain system shall be developed by the applicant, submitted to the City and approved by the Director of Public Works/City Engineer prior to issuance of a building permit. The maintenance plan shall address required maintenance of the storm drain and associated structures, including the frequency of maintenance and cleaning.

46. Prior to the issuance of a building permit for any residence, the private drainage system shall be constructed to the satisfaction of the Director of Public Works.

47. Approvals are required from:
    - Planning Division
    - Public Works & Engineering Services
    - Obtain Orange County Fire Authority Approval
    - Obtain "*Will Serve*" letter from Water District.
    - Provide an SDG&E service work order for proposed service location

48. All applicable supplemental/development impact fees shall be paid prior to building permit issuance.

49. The applicant shall submit a drainage plan in compliance with all City of Dana Point standards for review and approval. The drainage plan shall show all drainage from proposed improvements being directed to an approved outlet.

50. A separate erosion control plan shall be included in the project plans. The erosion control plan shall address the potential erosion and sediment loss for the proposed hillside development.

51. Prior to commencement of framing, the applicant shall verify, by survey, that each structure will be constructed in compliance with the dimensions shown on plans approved by the City, including finish floor elevations and setbacks to property-lines included as part of this entitlement. The City's standard "Setback Certification" form shall be obtained from the Project Planner and be prepared by a licensed civil engineer/surveyor and shall be delivered to the City of Dana Point Building/Safety and Planning Divisions for review and approval.

52. Prior to a release of the roof sheathing inspection, the applicant shall certify by a survey or other appropriate method that the height of the structure complies with plans approved by the City. The City's standard "Height Certification" Form shall be obtained from the Project Planner, prepared by a licensed civil engineer/surveyor and be delivered to the City of Dana Point Building/Safety and Planning Divisions for review and approval before release of final roof sheathing is granted.

53. The applicant shall submit a final landscape and irrigation plan for review and approval by Public Works & Engineering Services and Community Development Department. The plan shall be prepared by a State licensed landscape architect and shall include all proposed and existing plant materials (location, type, size, quantity), an irrigation plan (if irrigation utilized), note wall/fence locations, a grading plan, an approved site plan and a copy of the entitlement conditions of approval. The plan shall be in substantial compliance with the applicable provisions of the Zoning Code, the preliminary plan approved by the Director of Community Development, and further, recognize the principles of drought tolerant landscaping. Landscape documentation shall also comply with Chapter 9.55 (Water Efficient Landscape Standards and Requirements) of the Dana Point Zoning Code as may be applicable and with the Submittal Requirements and Guidelines for Implementation of the Chapter 9.55 of the DPZC.

54. The landscape plan shall include appropriate landscape screening to mitigate visual impacts from any exposed portions of overheight retaining walls visible from Via Canon and the neighboring property.

E. **Prior to the issuance of a certificate of occupancy, the applicant shall meet**

the following:

55. The applicant shall submit a Landscape Plan, in compliance with City standards, for review and approval by the Director of Public Works. The Landscape plan shall include the bluff top setback area and be in accordance with the approved grading plan, City of Dana Point Municipal Code.

56. All landscaping and irrigation shall be installed per the approved final landscape and irrigation plan. A State licensed landscape architect shall provide the "Landscaper Installation Certificate of Completion" form to the Director of Community Development as required in the Submittal Requirements and Guidelines for Implementation of the Chapter 9.55 of the DPZC.

57. The automatic fire sprinkler system shall be operational in a manner meeting the approval of the Fire Chief.

58. The applicant shall submit payment for any and all applicable development impact fees prior to issuance of a building permit.

59. A Final Geotechnical Report shall be prepared by the project geotechnical consultant in accordance with the City of Dana Point Grading Manual.

60. A written approval by the Civil Engineer of Record approving the grading as being in conformance with the approved grading plan and which specifically approves construction of line and grade for all engineered drainage devices and retaining walls.

61. All landscaping and/or structural best management practices (BMPs) shall be constructed and installed in conformance with approved plans and specifications.

62. An As-Built Grading Plan shall be prepared by the Civil Engineer of Record.

63. An As-Built Storm Drain Improvement Plan shall be prepared by the Civil Engineer of Record.

64. All permanent BMP's, including landscaping, shall be installed and approved by either the project Landscape Architect or the Civil Engineer of Record.

65. All necessary paperwork related to the storm drain construction, acceptance, maintenance and ownership shall be processed and finalized, subject to review and approval by the Director of Public Works/City Engineer.

66. Verification of all conditions of approval is required by all City Departments.

67. The applicant shall contact both the Planning Division and Public Works & Engineering Services to schedule a final inspection prior to final project sign-off by the Building Division.

68. All structural best management practices (BMPs) shall be constructed and installed in conformance with approved plans and specifications.

69. All approvals from outside Departments and Agencies (i.e. Fire Department) is/are required.

70. A written approval by the Geotechnical Engineer of Record approving the construction as being in conformance with the approved plan from a geotechnical standpoint.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the Planning Commission of the City of Dana Point, California, held on this 8th day of August 2022, by the following vote, to wit:

AYES: Gabbard, Nelson, Dohner, Dhingra
NOES:
ABSENT: Opel
ABSTAIN:

John Gabbard, Chair
Planning Commission

ATTEST:

Brenda Wisneski, Director
Community Development Department

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

REVISIONS NO.
4-24-23 intitial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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z e n a r c h i t e c t . c o m

architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
conditions of approval

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
949-289-1847 email: arman@acmbuilder.com

REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP. 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET
A GN-1
1 OF SHEETS

CONDITIONS OF APPROVAL (RESOLUTION)

All documents prepared by a registered-design-professional shall be wet-stamped & signed.

19. Fire sprinkler system is required or waiver from the Fire Chief. (All new residential.)

20. Fire Department review maybe required. Submit plans directly to the Orange County Fire Authority for their review.

21. Minimum roofing classification is Class "A".

22. Fire-rated Construction: Plans should clearly identify and detail the fire-rated construction for any construction due to close proximity to the property line.

23. Separate review, approval, and permits are required for separate structures.

24. Soils Report (1803): Submit a foundation and soils investigation report by a Registered Design Professional and conducted in conformance with CBC Section 1803.3 through 1803.5. The report shall comply with CBC Section 1803.6.

25. Undergrounding of all on-site utilities is required. An approved SDG&E Work Order and Undergrounding Plan are required prior to permit issuance.

26. Foundation system to provide for expansive soils and soils containing sulfates unless a soils report can justify otherwise. Use Type V cement, w/c ratio of 0.45, f'c of 4500 psi.

27. Green Building: Plans shall show compliance & indicate method of verification of compliance with all CAL Green requirements. Third party or other methods shall demonstrate satisfactory conformance with mandatory measures.

C. **Prior to the Issuance of a Grading Permit**

28. The applicant shall submit an application for a grading permit. The application shall include a grading plan, in compliance with City standards, for review and approval by the Director of Public Works. The applicant shall include all plans and documents in their submittal as required by the current Public Works Department's plan check policies, City of Dana Point Municipal Code and the City of Dana Point Grading Manual and City's Municipal Separate Storm Sewer Systems (MS4s) Permit requirements.

29. The applicant shall apply for a separate improvement permit for the construction of the proposed private drainage system. The application for an improvement permit shall per the current Public Works submittal requirements and all applicable standards. The proposed storm drain alignment, materials and details shall be subject to review and approval by the Director of Public Works/City Engineer.

30. The proposed storm drain shall be designed by a licensed civil engineer in the State of California per applicable standards, subject to review and approval by the Director of Public Works/City Engineer.

31. The applicant shall provide plans approved by all affected property owners for the proposed private drainage system and all associated grading activities. Written approval from all affected property owners shall be required prior to permit issuance.

32. The applicant shall submit a geotechnical report for review and approval by the Director of Public Works. This report shall, at a minimum, involve a discussion of the current development and an assessment of potential soil related constraints and geologic hazards such as slope instability, settlement, liquefaction, and/or related seismic impacts. The report shall also include an evaluation of potentially expansive soils and recommend construction procedures and/or design criteria to minimize the effect of these soils on the proposed development. All reports shall recommend appropriate mitigation measures and provide a statement of the feasibility or approval of the project from a geotechnical standpoint. All reports shall be completed in the manner specified by the City of Dana Point Municipal Code, the City of Dana Point Grading Manual, and Orange County Grading Manual.

33. The project shall meet all water quality requirements including Low Impact Development (LID) implementation.

34. A performance bond shall be required for the completion of all grading and other construction activities up to 100% of the proposed improvements. The grading and final improvements shall be constructed and approved by Director of Public Works, prior to the issuance of a Certificate of Occupancy.

35. A separate performance bond shall be required for all associated storm drainage improvements, valued at 100% of the cost of the improvements, in accordance with Public Works standards.

36. Separate submittal for review, approval and permits are required for project walls. Separate applications shall be made to the Community Development Department for all project walls. The submittals shall be in accordance with the latest Community Development requirements.

37. All walls required to be construction to facilitate the grading operations or establishment of the design PAD grades and rough grading certification shall be issued concurrently with the grading permit. This includes but not limited to temporary shoring walls, permanent shoring walls, property line masonry walls, or other structures as determined by the Director of Public Works.

38. A separate performance bond shall be required for the construction and continued maintenance of any temporary shoring or walls required to protect all neighboring property, improvements and/or structures. The performance bond may be to 100% of the proposed improvements and/or construction costs. The performance bond for shoring or temporary improvements shall be released by Director of Public Works, when protection of all neighboring improvements is no longer required due to grading or construction operations.

39. The Storm Drain system being constructed as part of this Project shall be privately owned and maintained, with the exception of a portion of the storm drain being constructed in City owned right-of-way on Via Gomez. A deed restriction, or other approved instrument, shall be processed and recorded on the properties prior to issuance of a grading permit, or soon thereafter subject to approval by the Director of Public Works/City Engineer. The deed restriction or other instrument shall clearly address ownership and maintenance obligations of the storm drain system for both planned owners (Lot 30 and Lot 31).

D. **Prior to the Issuance of a Building Permit or release on certain related inspections, the applicant shall meet the following conditions:**

40. The applicant shall obtain a grading permit and complete rough grading (establishment of building pads) in accordance with the approved grading plans and reports.

41. A Drainage Acceptance Agreement addressing the acceptance of public/private storm drainage shall be processed, approved and recorded prior to issuance of a Building Permit.

42. The applicant shall submit a rough grade certification from the Civil Engineer of Record for review and approval by the City Engineer by separate submittal. The rough grade certification by the civil engineer (the City's standard Civil Engineer's Certification Form for Rough Grading) shall approve the grading as being substantially completed in conformance with the approved grading plan and shall document all pad grades to the satisfaction of the City Engineer. The civil engineer and/or surveyor shall specifically certify that the elevation of the graded pad is in compliance with the vertical (grade) position approved for the project.

43. The applicant shall submit a certification from the Geotechnical Engineer of Record for the required temporary shoring or wall construction for grading operations. The certification shall be submitted for review and approval by the City Engineer by separate submittal. The temporary structure certification by the geotechnical engineer shall approve the construction of temporary structures as being substantially completed in conformance with the recommendation of the project geotechnical report, all field observations, and any field modifications or additional recommendations required. The certification shall state the temporary structures are approved and suitable from a geotechnical standpoint.

44. An as graded geotechnical report may be prepared by the project geotechnical consultant following grading of the subject site. The report should include the results of all field density testing, depth of reprocessing and recompaction, as well as a map depicting the limits of grading. Locations of all density testing, restricted use zones, settlement monuments, and geologic conditions exposed during grading. The report should include conclusions and recommendations regarding applicable setbacks, foundation recommendations, erosion control and any other relevant geotechnical aspects of the site. The report shall state that grading of the site, including associated appurtenances, as being completed in conformance with the recommendations of the preliminary geotechnical report.

45. A maintenance plan, in the form of a deed restriction or other instrument recorded on both Project lots (Lot 30 and 31), for the new storm drain system shall be developed by the applicant, submitted to the City and approved by the Director of Public Works/City Engineer prior to issuance of a building permit. The maintenance plan shall address required maintenance of the storm drain and associated structures, including the frequency of maintenance and cleaning.

46. Prior to the issuance of a building permit for any residence, the private drainage system shall be constructed to the satisfaction of the Director of Public Works.

47. Approvals are required from:
- Planning Division
- Public Works & Engineering Services
- Obtain Orange County Fire Authority Approval
- Obtain "*Will Serve*" letter from Water District.
- Provide an SDG&E service work order for proposed service location

48. All applicable supplemental/development impact fees shall be paid prior to building permit issuance.

49. The applicant shall submit a drainage plan in compliance with all City of Dana Point standards for review and approval. The drainage plan shall show all drainage from proposed improvements being directed to an approved outlet.

50. A separate erosion control plan shall be included in the project plans. The erosion control plan shall address the potential erosion and sediment loss for the proposed hillside development.

51. Prior to commencement of framing, the applicant shall verify, by survey, that each structure will be constructed in compliance with the dimensions shown on plans approved by the City, including finish floor elevations and setbacks to property-lines included as part of this entitlement. The City's standard "Setback Certification" form shall be obtained from the Project Planner and be prepared by a licensed civil engineer/surveyor and shall be delivered to the City of Dana Point Building/Safety and Planning Divisions for review and approval.

52. Prior to a release of the roof sheathing inspection, the applicant shall certify by a survey or other appropriate method that the height of the structure complies with plans approved by the City. The City's standard "Height Certification" Form shall be obtained from the Project Planner, prepared by a licensed civil engineer/surveyor and be delivered to the City of Dana Point Building/Safety and Planning Divisions for review and approval before release of final roof sheathing is granted.

53. The applicant shall submit a final landscape and irrigation plan for review and approval by Public Works & Engineering Services and Community Development Department. The plan shall be prepared by a State licensed landscape architect and shall include all proposed and existing plant materials (location, type, size, quantity), an irrigation plan (if irrigation utilized), note wall/fence locations, a grading plan, an approved site plan and a copy of the entitlement conditions of approval. The plan shall be in substantial compliance with the applicable provisions of the Zoning Code, the preliminary plan approved by the Director of Community Development, and further, recognize the principles of drought tolerant landscaping. Landscape documentation shall also comply with Chapter 9.55 (Water Efficient Landscape Standards and Requirements) of the Dana Point Zoning Code as may be applicable and with the Submittal Requirements and Guidelines for Implementation of the Chapter 9.55 of the DPZC.

54. The landscape plan shall include appropriate landscape screening to mitigate visual impacts from any exposed portions of overheight retaining walls visible from Via Canon and the neighboring property.

E. **Prior to the issuance of a certificate of occupancy, the applicant shall meet**

the following:

55. The applicant shall submit a Landscape Plan, in compliance with City standards, for review and approval by the Director of Public Works. The Landscape plan shall include the bluff top setback area and be in accordance with the approved grading plan, City of Dana Point Municipal Code.

56. All landscaping and irrigation shall be installed per the approved final landscape and irrigation plan. A State licensed landscape architect shall provide the "Landscaper Installation Certificate of Completion" form to the Director of Community Development as required in the Submittal Requirements and Guidelines for Implementation of the Chapter 9.55 of the DPZC.

57. The automatic fire sprinkler system shall be operational in a manner meeting the approval of the Fire Chief.

58. The applicant shall submit payment for any and all applicable development impact fees prior to issuance of a building permit.

59. A Final Geotechnical Report shall be prepared by the project geotechnical consultant in accordance with the City of Dana Point Grading Manual.

60. A written approval by the Civil Engineer of Record approving the grading as being in conformance with the approved grading plan and which specifically approves construction of line and grade for all engineered drainage devices and retaining walls.

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64. All permanent BMP's, including landscaping, shall be installed and approved by either the project Landscape Architect or the Civil Engineer of Record.

65. All necessary paperwork related to the storm drain construction, acceptance, maintenance and ownership shall be processed and finalized, subject to review and approval by the Director of Public Works/City Engineer.

66. Verification of all conditions of approval is required by all City Departments.

67. The applicant shall contact both the Planning Division and Public Works & Engineering Services to schedule a final inspection prior to final project sign-off by the Building Division.

68. All structural best management practices (BMPs) shall be constructed and installed in conformance with approved plans and specifications.

69. All approvals from outside Departments and Agencies (i.e. Fire Department) is/are required.

70. A written approval by the Geotechnical Engineer of Record approving the construction as being in conformance with the approved plan from a geotechnical standpoint.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the Planning Commission of the City of Dana Point, California, held on this 8th day of August 2022, by the following vote, to wit:

AYES: Gabbard, Nelson, Dohner, Dhingra
NOES:
ABSENT: Opel
ABSTAIN:

John Gabbard, Chair
Planning Commission

ATTEST:

Brenda Wisneski, Director
Community Development Department

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

REVISIONS NO.
4-24-23 intitial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
conditions of approval

OWNER / SITE ADDRESS:
Arman Vakili
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Dana Point, CA 92624
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REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP. 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET A GN-2
1 OF SHEETS

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DIVISION 1 – GENERAL REQUIREMENTS

A. SECTION 1-A ARCHITECTURAL ADMINISTRATIVE NOTES

1. THIS IS A BUILDER'S SET OF DRAWINGS PREPARED TO A LEVEL OF COMPLETION SATISFACTORY FOR BUILDING PERMIT PURPOSES AT THE TIME OF THEIR PREPARATION, AND FOR CONSTRUCTION BY A KNOWLEDGEABLE AND EXPERIENCED BUILDER FAMILIAR WITH THIS TYPE OF WORK. SUCH DOCUMENTS WILL REQUIRE PREPARATION AND SUPPLEMENTAL DETAILS, PRODUCT SPECIFICATIONS, AND ELABORATION AND INTERPRETATION BY EXPERIENCED CONTRACTORS, SUB-CONTRACTORS AND OWNER'S INDEPENDENT CONSULTANTS.

2. RULES AND REGULATIONS: ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST FEDERAL, STATE, COUNTY, CITY OR GOVERNING AGENCIES UNIFORM CODES, RULES, REGULATION OR AMENDMENTS. NOTHING IN THESE DRAWINGS OR NOTES SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

3. BUILDING ADDRESS NUMBERS TO BE PROVIDED AT THE FRONT OF ALL BUILDINGS AND SHALL BE VISIBLE AND LEGIBLE FROM THE STREET

B. SECTION 1-B ARCHITECTURAL GENERAL NOTES

CONTRACTOR SHALL ONLY UTILIZE APPLICABLE AS SOME ITEMS MAY NOT APPLY TYPICAL GENERAL NOTES. WHERE IN CONFLICT, MANUFACTURE INSTALLATION MATERIALS AND SPECS SHALL SUPERSEDE THIS PAGE AS INFORMATION NOTED MAY BE GENERIC OR DATED, CONTACT VENDORS TO SECURE INSTRUCTIONS AND NOTIFY THE ARCHITECT THE FINDINGS PRIOR TO WORK.

DIVISION 2 – SITE WORK

SECTION 2-A EARTHWORK:

SOIL REPORT: PERFORM ALL WORK IN THIS SECTION IN CONFORMANCE WITH WITH STRUCTURAL DRAWINGS AND SOILS REPORTS

DIVISION 3 – CONCRETE

SECTION 3-A CONCRETE WORK (CAST-IN-PLACE): SEE STRUCTURAL NOTES
SECTION 3-B REINFORCING STEEL: (SEE STRUCTURAL NOTES)

DIVISION 4 – MASONRY

SECTION 4-A BRICK MASONRY: (SEE STRUCTURAL NOTES)
SECTION 4-B CONCRETE UNIT MASONRY: (SEE STRUCTURAL NOTES)

DIVISION 5 – METALS

SECTION 5-A MISCELLANEOUS AND STRUCTURAL METALS: -SEE STRUCTURAL SPECS & WEATHERING STEEL SPEC. of DIVISION 7, ITEM 9 THIS PAGE

DIVISION 6 – WOODS & PLASTICS

SECTION 6-A ROUGH CARPENTRY: (SEE STRUCTURAL NOTES)

SECTION 6-B ROUGH CARPENTRY FIRE STOPPING:
PROVIDE FIRESTOPS AT ALL CONCEALED LOCATIONS. PROVIDE FIREBLOCKING AT 10'-0" ABOVE FLOOR.

SECTION 6-C FINISH CARPENTRY: REFER TO PLANS

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

1.
A. SECTION 7-A SHEET METAL AND FLASHING:

NOTE: CHAPTER 7A FIRE OUTLINED ON SHT GN-2 SHALL SUPERSEDE THESE SPECS

STANDARDS:

a. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) "THE NRCA ROOFING AND WATERPROOFING MANUAL"

b. SEALANT AND WATERPROOFERS INSTITUTE (SWI) AND WATERPROOFING CONTRACTORS ASSOCIATION.

2. MEASUREMENTS: VERIFY ALL DIMENSIONS SHOWN ON DRAWINGS BY TAKING FIELD MEASUREMENTS; PROPER FIT AND ATTACHMENT OF ALL PARTS IS REQUIRED.

3. STANDARDS: ALL WORK INCLUDED IN THIS SECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATION CONTAINED IN THE LATEST EDITION OF THE "ARCHITECTURAL SHEET METAL MANUAL" PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION. (SMACNA)

4. ZINC-COATED (GALVANIZED) STEEL: (CALLED "GALVANIZED IRON" HEREINAFTER AND ON DRAWINGS) SHALL CONFORM TO FEDERAL SPEC. QQ- S775A, TYPE I, CLASS 4: EITHER GALVANIZED OR BONDERIZED ASTM A- 93, COATING CLASS 1.50 OZ. PER SQ. FT. UNLESS OTHERWISE INDICATED, ALL METAL 26 GAUGE.

5. INSTALLATION: SHEET METAL FLASHING SHALL BE INSTALLED AT ALL LOCATIONS WHERE DIFFERENT MATERIALS INTERSECT SUCH AS ROOF TO WALL; ROOF TO ROOF, DECK/BALCONY/LANDING TO WALL, PENETRATIONS INTO WALLS. SHEET METAL FLASHING IS NOT LIMITED TO ABOVE MENTIONED ITEMS BUT SHALL ALSO INCLUDE ALL OTHER LOCATIONS RECOMMENDED IN THE "ARCHITECTURAL SHEET METAL MANUAL".

6. VALLEY FLASHING: 26 GAUGE GALVANIZED IRON, 18" WIDE FOR SHINGLES, 24" WIDE FOR SHAKES (1-1/2" HIGH) RAISED CENTER DIVERTER. THE CENTER OF ALL FLASHING FOR ALL THROUGH ROOF VENTS AND ALL ELECTRICAL SERVICE CONNECTIONS, SHALL NOT BE LESS THAN 16" FROM CENTER OF ANY VALLEY. SEE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS FOR MISSION TILE OR FLAT CONCRETE TILE.

7. WEATHER PROTECTION: A. DETAILS FOR WEATHER-RESISTIVE BARRIERS, FLASHING, COUNTER-FLASHING, ETC. PER CBC (1503)

8. DETAIL CORROSION-RESISTANT WEEP SCREED MINIMUM OF 4" ABOVE THE EARTH OR 2" ABOVE PAVED AREAS. (2512.1.2), SEE LASD DIVISION 9 FOR ADDITIONAL PLASTER WEATHERPROOFING INFORMATION

9. WEATHERING STEEL SHALL MEET ASTM SPECIFICATIONS A588, A242, A606-4, A847, A871-65 AND A709-50W. COR-TEN® OR EQ. THE CORROSION-RETARDING EFFECT SHALL MEET THE CONCENTRATION OF ALLOYING ELEMENTS WITHIN IT TO NATURALLY-DEVELOPED PATINA PROTECTING THE SURFACE REGENERATES CONTINUOUSLY WHEN SUBJECTED TO THE INFLUENCE OF THE WEATHER ALLOWING TO RUST IN ORDER TO FORM THE PROTECTIVE COATING THAT GUARDS AGAINST FUTURE CORROSION. (NOTE: CONTRACTOR MAY SUBSTITUTE CORTEN WITH FACTORY PAINTED STEEL PRODUCT MATCHING BROWN COLOR USING HARD SHELL SPECIALTY COATINGS

B. SECTION 7-B INSULATION:

1. INSULATION: SHALL BE PROVIDED AND INSTALLED PER TITLE 24, CALIFORNIA ADMINISTRATIVE CODE. PROVIDE THERMAL INSULATION IN ALL EXTERIOR STUD WALLS, EXTENDING FULL HEIGHT OF WALLS, FITTED TIGHTLY BETWEEN STUDS.

2. AFTER INSTALLING THE INSULATION, THE INSTALLER SHALL POST IN A CONSPICUOUS LOCATION IN THE BUILDING, AN INSULATION CERTIFICATE, SIGNED BY THE INSTALLER AND THE BUILDER, STATING THAT THE INSTALLATION CONFORMS WITH THE REQUIREMENTS OF TITLE 24, PART 2, CHAPTER 2-53 OF THE CALIFORNIA ADMINISTRATIVE CODE.

3. REFER TO DRAWINGS AND T-24 SHEETS TO SUPERSEDE HIGHER "R" RATINGS. FRAMING SHALL BE MINIMUM 2X ITS DEPTH TO FIT BATT INSULATION SO TO MAINTAIN 1" AIR GAP ABOVE. WHERE LESS THAN DEPTH FRAMING, PROVIDE COMPRESSED CEILING RIGID BOARD TO MAINTAIN THE 1" AIR GAP ABOVE. DWELLING UNITS SHALL RECEIVE A MINIMUM R-30 BLANKET INSULATION AT ROOFS, R19 AT WALLS AND R19 AT ALL FLOORS OVER UNHEATED SPACES UNLESS NOTED OTHERWISE

4. THE INSULATION SHALL CONFORM TO FLAME-SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF SECTION 2602 AND 707 OF THE LATEST UNIFORM BUILDING CODE. FOR RATTING

C. SECTION 7-C CAULKING & SEALANTS:

CODES AND STANDARDS:
A. SEALANT AND WATERPROOFERS INSTITUTE (SWI).
B. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) "ROOFING AND WATERPROOFING MANUAL."

INSTALLATION: INSTALL PER MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS.

SEALANT LOCATIONS:
A. NON-POROUS SURFACES SUCH AS GLASS, METAL, CERAMIC TILE AND PLASTIC.
B. POROUS SURFACES SUCH AS BLOCK AND CONCRETE.
C. LOCATIONS SUCH AS CERAMIC TILE, PLUMBING FIXTURES, AND OTHERS WHERE MILDEW RESISTANT SEALANT IS REQUIRED.
D. LOCATION WHERE HIGH DEGREE OF MOVEMENT IS ANTICIPATED.
E. JOINTS AND CRACKS AROUND WINDOWS, THRESHOLDS, DOOR FRAMES, WALL PENETRATIONS, CONNECTIONS AND OTHER JOINTS NECESSARY TO SEAL OFF BUILDING FROM OUTSIDE AIR AND MOISTURE.
F. ALL JOINTS NECESSARY TO MAKE THE BUILDING WATERTIGHT AND TO PREVENT THE PASSAGE OF DIRT, DUST, WIND, AIR OR WATER.

D. SECTION 7-D BUILDING PAPER:

2. PROVIDE 15 LB FELT MIN FEDERAL SPECIFICATION UU-B-790. INSTALL UNDER EXTERIOR SIDING AND TRIM AND CAREFULLY APPLY SO AS TO FORM A WATERTIGHT MEMBRANE. EACH COURSE OF PAPER SHALL OVERLAP THE COURSE BENEATH IT 6" MINIMUM. WHERE PAPER MEETS ANY OPENING THE PAPER SHALL BE CAREFULLY LAPPED OVER THE FRAME TO PREVENT THE PASSAGE OF WATER BEHIND THE FRAME. INSTALL SISALKRAFT PAPER AT EXTERIOR DOOR AND WINDOW FRAMES PER WINDOW & DOOR MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

SEE DIVISION "9" FOR ADDITIONAL INFORMATION ON WEATHERPROOFING

E. SECTION 7-E ROOFING AND MEMBRANES:

1. BUR ROOF
SEE ROOF PLAN FOR FULL SPEC

2. FLAT DECKS: WALKING DECKS
SEE ROOF PLAN FOR FULL SPEC

DIVISION 8 – DOORS & WINDOWS

A. SECTION 8-A DOORS & WINDOWS:

1. THE DOOR FROM GARAGE TO THE RESIDENCE TO BE SELF-CLOSING, TIGHT-FITTING, 1-3/8-INCH-THICK SOLID WOOD OR A 20-MINUTE RATED ASSEMBLY. (CBC 406.1)

2. PROVIDE NATURAL VENTILATION IN BATHROOMS AND TOILET COMPARTMENTS THROUGH OPENABLE EXTERIOR WALL OPENINGS WITH AN AREA NOT LESS THAN 5% OF ROOM FLOOR AREA WITH A MINIMUM OF 1'-1/2 SQUARE FEET (OR MECHANICAL VENTILATION OF 5 AIR CHANGES PER HOUR). (SEC 1203.3) . PROVIDE NATURAL VENTILATION, IN HABITABLE ROOMS, WITH AN AREA OF NOT LESS THAN 5 SQUARE FEET).

3. NATURAL LIGHT: THE MINIMUM NET GLAZED AREA SHALL NOT BE LESS THAN 8 PERCENT OF THE FLOOR AREA OF THE ROOM SERVED. (CBC 1205.2) 1205.2.1 ADJOINING SPACES. FOR THE PURPOSE OF NATURAL LIGHTING, ANY ROOM IS PERMITTED TO BE CONSIDERED AS A PORTION OF AN ADJOINING ROOM WHERE ONE-HALF OF THE AREA OF THE COMMON WALL IS OPEN AND UNOBSTRUCTED AND PROVIDES AN OPENING OF NOT LESS THAN ONE-TENTH OF THE FLOOR AREA OF THE INTERIOR ROOM OR 25 SQUARE FEET WHICHEVER IS GREATER EXCEPTION: OPENINGS REQUIRED FOR NATURAL LIGHT SHALL BE PERMITTED TO OPEN INTO A THERMALLY ISOLATED SUNROOM ADDITION OR PATIO COVER WHERE THE COMMON WALL PROVIDES A GLAZED AREA OF NOT LESS THAN ONE-TENTH OF THE FLOOR AREA OF THE INTERIOR ROOM OR 20 SQUARE FEET, WHICHEVER IS GREATER. (CBC 1205.2)

4. REQUIRED WINDOW AREA FOR LIGHT SHALL BE NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF THE ROOM SERVED. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA BEING VENTILATED

5. EVERY SLEEPING ROOM AND ANY BASEMENT MUST HAVE AT LEAST ONE OPENABLE WINDOW OR DOOR APPROVED FOR EMERGENCY RESCUE WITH A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET, EXCEPT THAT WINDOWS AT THE GRADE FLOOR SHALL HAVE A MINIMUM NET OPENING OF 5 SQUARE FEET. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24". THE MINIMUM NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20". THE BOTTOM OF THE CLEAR OPENING SHALL BE NO MORE THAN 44" FROM THE FLOOR

6. WINDOW WHERE THE OPENING OF THE SILL PORTION OF THE OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR SURFACE OF THE ROOM IN WHICH THE WINDOW IS LOCATED. GLAZING BETWEEN THE FLOOR AND A HEIGHT OF 24" SHALL BE FIXED OR HAVE OPENINGS SUCH THAT A 4" DIAMETER SPHERE MAY NOT PASS. (CBC 1405.12. 2)

8. DOORS AND WINDOWS EXPOSED TO OUTSIDE AIR SHALL BE FULLY WEATHERSTRIPPED.

9. SLIDING GLASS DOORS (PATIO TYPE) TO HAVE A MINIMUM CATEGORY CLASSIFICATION OF II PER LATEST EDITION CBC STD. 24-2, TABLE 24-2A.

10. SECURITY REQUIREMENTS:
A) PROVIDE PEEP HOLE OR VISION PANEL AT FRONT DOOR
B) PROVIDE STEEL PLATE AT THE DEAD BOLT STRIKER AT ALL EXTERIOR DOORS
C) WINDOWS SHALL CONFORM TO THE STANDARDS OF THE C.B.C.

11. OMIT

12. STANDARDS: ALL DOORS SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL WOOD WINDOW AND DOOR ASSOCIATION, WOODWORK INSTITUTE OF CALIFORNIA AND TITLE 24, CALIFORNIA ADMINISTRATIVE CODE.

B. SECTION 8-B GLAZING

1. FOR ALL SAFETY GLAZING IN HAZARDOUS LOCATIONS, SEE PLANS OR DOOR AND WINDOW SCHEDULES. (SEC 2406.4) STANDARDS: TITLE 24, CALIFORNIA ADMINISTRATIVE CODE; SAFETY STANDARD FOR ARCHITECTURAL GLAZING MATERIALS (16 CFR1201) ISSUED BY THE CONSUMER PRODUCT SAFETY COMMISSION.

2. SAFETY GLAZING OCCURRENCE/CONDITIONS PER CBC 2406.1 & 2406.5

a. GLAZING AT EXTERIOR DOORS OR WITHIN 40" OF ANY LOCKING MECHANISM SHALL BE FULLY TEMPERED GLASS, OR RATED BURGLARY RESISTANT GLAZING (S.C.M.C. 15.28.120)

b. GLAZING IN FIXED AND SLIDING PANELS OF SLIDING DOORS AND PANELS IN SWINGING DOORS.

c. GLAZING IN DOORS ENCLOSURES INCLUDING ALL WINDOWS ADJACENT TO SUCH AMENITIES FOR HOT TUBS, BATHTUBS, SHOWERS, STEAM ROOMS, SAUNAS, SWIMMING POOLS, ETC. WITHIN 5' VERTICAL STANDING SURFACE OR DRAIN INLET GLAZING WITHIN 2' VERTICAL EDGE OF CLOSED DOOR AND WITHIN 5' OF WALKING SURFACE

d. GLAZING IN RAILING AND STAIR LANDING AREAS

e. GLAZING IN WALLS AND FENCES USED AS THE BARRIER FOR SWIMMING POOLS AND SPAS OR GLAZING LESS THAN 18" ABOVE THE FLOOR

f. OPERABLE WINDOWS LOCATED MORE THAN 6 FEET ABOVE FINISHED GRADE OR OTHER SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE MINIMUM 24 INCHES ABOVE THE FINISHED FLOOR SURFACE OF THE ROOM IN WHICH THE WINDOW IS LOCATED. (CBC 1405.12.2)

g. GLAZING IN INGRESS AND EGRESS DOORS (INCLUDING WARDROBE DOORS) AND WITHIN 40" OF THE DOOR.

h. GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS TO HAVE A MINIMUM CATEGORY CLASSIFICATION OF II PER CBC STD. 24-2, TABLE 24-2A & CBC 1134A.6

3. GLAZING MATERIAL FOR SKYLIGHTS IF GLASS SHALL COMPLY WITH CBC CHAPTER 24. IF PLASTIC, SPECIFY MANUFACTURER AND ICC REPORT NUMBER NOTED PER PLANS. SKYLIGHT (CBC 2405.4) CURB ASSEMBLY W/ MINIMUM 4 HIGH CURB.

4. GLAZING IN DOORS AND FIXED GLAZED PANELS OF MORE THAN NINE SQUARE FEET TO HAVE A MINIMUM CATEGORY CLASSIFICATION OF II PER LATEST EDITION UBC STD. 24-2, TABLE 24-2A.

5. GLAZING IN DOORS AND FIXED GLAZED PANELS OF NINE SQ. FT. OR LESS TO HAVE A MINIMUM CATEGORY CLASSIFICATION OF I PER CBC STD. 24-2, TABLE 24-2 A.

6. GLAZED WARDROBE DOORS TO MEET IMPACT TEST PER CBC STD. 24-2, PART II. LAMINATED GLASS MUST ALSO MEET THE TEST REQUIREMENTS OF LATEST EDITION CBC STD. 24-2, PART II.

DIVISION 9 – FINISHES

A. SECTION 9-A LATHING AND PLASTERING:

1. ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING. SUCH BARRIER SHALL BE EQUAL TO THAT PROVIDED FOR IN UBC STANDARD 14-1 FOR KRAFT WATERPROOF BUILDING PAPER OR ASPHALT SATURATED RAG FELT, APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED 2 INCHES OVER THE LOWER LAYER, AND LAPPED 6 INCHES AT ALL VERTICAL JOINTS. (2007 CBC SECTION 1402.1)

2. PROVIDE ONE-HOUR FIRE-RESISTIVE CONSTRUCTION (5/8-INCH TYPE X GYPSUM WALLBOARD) ON THE GARAGE SIDE OF WALLS COMMON WITH THE RESIDENCE. WHEN THE GARAGE SUPPORTS A FLOOR ABOVE, THE CEILING, POSTS AND BEAMS IN THE GARAGE SHALL BE SIMILARLY PROTECTED. CBC 708, CBC 406.1.

3. VENEER: PROVIDE NOTES AND DETAILS OF VENEER ATTACHMENT FOR ADHERED VENEER, AND ANCHORED VENEER (1405). B. PROVIDE NON-COMBUSTIBLE SUPPORT FOR ANCHORED VENEER - LIMIT DEFLECTION AND DESIGN FOR REDUCED STRESSES.

4. COMBUSTIBLE EAVE OVERHANGS WITHIN 3 FEET OF PROPERTY LINE SHALL BE OF ONE-HOUR FIRE-RESISTIVE OR HEAVY TIMBER CONSTRUCTION CONFORMING TO CBC 602.4.5

5. COLOR OF PAINT OR PLASTER COLOR SHALL BE SELECTED BY OWNER -PROVIDE COLOR CHIPS FOR OWNERS REVIEW

6. RIB LATH: SHALL BE FLAT RIB, 1/8", 3.4 LBS. PER SQ. YARD, GALVANIZED. METAL LATH: SHALL BE STANDARD DIAMOND MESH, GALVANIZED WEIGHING THREE (3) POUNDS PER SQ. FT. WIRE MESH 1-1/2" MESH, SEVENTEEN GAUGE, GALVANIZED FORE OR AFTER WEAVING, OR APPROVED EQUAL. EXTERIOR LATH: PROVIDE TWO LAYERS OF GRADE D PAPER OVER ALL WOOD BASE SHEATHING. (CBC 2510.6) LATHING MATERIALS AND THEIR APPLICATION AND PLASTER MATERIALS AND THEIR APPLICATION SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE "HANDBOOK OF RECOMMENDED NOTES FOR LATHING, FURRING AND PLASTERING", OF THE NATIONAL FOUNDATION FOR LATHING AND PLASTERING INC. WATERPROOF PAPER: PLASTER KRAFT BUILDING PAPER, FEDERAL NOTES UU-B-790, OR EQUAL.

DIVISION 10 – SPECIALTIES

SECTION 10-A MISCELLANEOUS & SPECIALTIES:

INSTALLATION: ALL ITEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND ACCEPTED SHOP DRAWINGS. ADHESIVE INSTALLATION WILL NOT BE PERMITTED.

DIVISION 11 – EQUIPMENT

SECTION 11-A APPLIANCES AND SPECIAL EQUIPMENT:

MEASUREMENTS: VERIFY ALL DIMENSIONS SHOWN ON THE DRAWING BY TAKING FIELD MEASUREMENTS. PROPER FIT AND ATTACHMENT OF ALL PARTS IS REQUIRED.

DIVISION 12 – FURNISHINGS

NOT INCLUDED IN THESE NOTES.

DIVISION 13 – SPECIAL CONSTRUCTION

NOT INCLUDED IN THESE NOTES.

DIVISION 14 – CONVEYING EQUIPMENT

NOT INCLUDED IN THESE NOTES.

DIVISION 15 – MECHANICAL

1. SEE MECHANICAL SHEETS FOR SEPARATE SPECIFICATION LIST FOR ADDITIONAL DESCRIPTION NOT SHOWN ON THIS PAGE AS THIS SECTION COVERS ARCHITECTURAL OVERLAPS ONLY- REFER TO "M" SERIES AND T24 SERIES AS THOSE PAGES SHALL SUPERSEDE WHERE CONFLICTS MAY OCCUR.

2. ATTIC VENTS ARE 3 FT. ABOVE EAVE AND BALANCE ARE AT 2.5 PROVIDE ATTIC VENTILATION 1/150 OF ATTIC AREA, OR 1/300 IF 50 EAVE (CBC 1203.2). BAFFLES ARE REQUIRED AT VENTS FOR INSULATION.

3. VENTING TERMINALS SHALL TERMINATE NOT LESS THAN 4 FEET BELOW OR 4 FEET HORIZONTALLY FROM, AND NOT LESS THAN 1 FOOT ABOVE A DOOR, AN OPEN-ABLE WINDOW OR GRAVITY AIR INLET INTO A BUILDING. (CMC SEC 806.6) VENTING SYSTEMS SHALL TERMINATE AT LEAST 3 FEET ABOVE AN OUTSIDE OR MAKEUP-AIR INLET LOCATED WITHIN 10 FEET AND AT LEAST 4 FEET FROM A PROPERTY LINE, EXCEPT A PUBLIC WAY.

4. FUEL BURNING APPLIANCES: FUEL BURNING APPLIANCES SUCH AS WATER HEATERS AND FURNACES REQUIRE COMBUSTION AIR DUCTS AND EXHAUST VENTS THAT MUST EXTEND TO THE OUTSIDE. THOUGHT MUST BE GIVEN TO ROUTING. IT IS AVAILABLE TO LOCATE FUEL BURNING APPLIANCES ADJACENT TO AN OUTSIDE WALL FOR EASE IN PROVIDING COMBUSTION AIR. CONSULT THE 2007 CALIFORNIA MECHANICAL CODE AND 2007 CALIFORNIA ENERGY CODE.

5. ALL DUCTS R-3/U-1 OCCUPANCY SEPARATION OF PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING UNIT FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM 0.019-INCH SHEET STEEL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.

6. FOUNDATION VENTILATION OF DECKS, BALCONIES, GARAGE, STAIRS OR ANY ENCLOSED SPACE: UNDER-FLOOR AREAS SHALL BE VENTILATED BY APPROVED MECHANICAL MEANS OR BY OPENINGS IN EXTERIOR FOUNDATION WALLS. SUCH OPENINGS SHALL HAVE A NET AREA OF NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR AREA. OPENINGS SHALL BE LOCATED AS CLOSE TO CORNERS AS PRACTICAL AND SHALL PROVIDE CROSS VENTILATION. THE REQUIRED AREA OF SUCH OPENINGS SHALL BE APPROXIMATELY EQUALLY DISTRIBUTED ALONG THE LENGTH OF AT LEAST TWO OPPOSITE SIDES. THEY SHALL BE COVERED WITH CORROSION-RESISTANT WIRE MESH WITH MESH OPENINGS FOR EACH 150 SQ. FT. OF UNDER FLOOR AREA. LOCATE 6" X 14" VENTS FT. A 2.6 UNDER FLOOR VENTS: MM. 1.0 SQ. APPROXIMATELY 6' APART AROUND PERIMETER OF BUILDING. (VER BY INCH) WITH CORROSION RESISTANT WIRE MESH WITH AN OPENING SIZE OF TO X INCHES (CBC 1203.3).

7. APPLIANCES INSTALLED WITHIN A GARAGE ARE ENCLOSED IN A SEPARATE, APPROVED COMPARTMENT HAVING ACCESS ONLY FROM THE OUTSIDE OF THE GARAGE. SUCH APPLIANCES MAY BE INSTALLED AT FLOOR LEVEL. THE REQUIRED COMBUSTION AIR SHALL BE TAKEN FROM AND DISCHARGED TO THE EXTERIOR OF THE GARAGE (CMC SECTION 308.0 PARA-3) HEAT-PRODUCING APPLIANCES IN GARAGE WILL BE PROTECTED FROM AUTOMOBILE DAMAGE APPLIANCES WHICH GENERATE A GLOW, SPARK, OR FLAME (SUCH AS WATER HEATER AND FURNACE) SHALL BE 510.1) LOCATED A MINIMUM OF 18 INCHES ABOVE GARAGE FLOOR. (CMC SEC 308.0 PARA-2, CPC SECTION

8. PROVIDE FACTORY LISTED SPARK ARRESTERS AND SHROUDS AT CHIMNEY TERMINATIONS. CBC21 13.9.1

9. FACTORY BUILT METAL FIREPLACES SHALL HAVE A GLASS OR METAL DOORS B. GAS LOG INSTALLED IN FIREPLACE REQUIRE DAMPER TO BE PROVIDED WITH MECHANICAL STOP. DAMPER TO REMAIN IN THE OPEN POSITION. C. OUTSIDE COMBUSTION AIR (EXTERIOR WALL INSTALLATIONS) D. PROVIDE AND SHOW HEARTH AND CLEARANCE TO COMBUSTIBLE MATERIALS

DIVISION 15 – PLUMBING

1. SEE PLUMBING SHEETS FOR SEPARATE SPECIFICATION LIST FOR ADDITIONAL DESCRIPTION NOT SHOWN ON THIS PAGE AS THIS SECTION COVERS ARCHITECTURAL OVERLAPS ONLY- REFER TO "P" SERIES AND T24 SERIES AS THOSE PAGES SHALL SUPERSEDE WHERE CONFLICTS MAY OCCUR.

2. ROOF DRAIN: PROVIDE MINIMUM OF 1/4" PER FOOT SLOPE FOR HORIZONTAL DRAINAGE PIPE. CPC SECTION 718. REFER TO "P" SHEETS FOR ADDITIONAL SPECFICATIONS

3. TUB: BATHTUBS OR WHIRLPOOL BATHS REQUIRE ACCESS PANEL TO THE TRAP, OVERFLOW OR PUMP.

4. PROVIDE MINIMUM SHOWER AREA - 1024-SQ. INCHES, CAPABLE OF ENCOMPASSING A 30" CIRCLE. (414.7 CPC) SEE PLANS FOR SIZE.

5. WATER CLOSET SHALL BE LOCATED IN A SPACE NOT LESS THAN 30" IN WIDTH, WITH 24" MIN. CLEARANCE IN FRONT (CPC 407.6).

6. SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH SHOWER HEADS INSTALLED SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT OF NOT LESS THAN 70" ABOVE THE DRAIN OUTLET. (CBC 1210.3)

7. WATER HEATER/DRYER/FURNACE IN GARAGE WILL BE PROTECTED FROM AUTOMOBILE DAMAGE (BY ELEVATING THE APPLIANCES OR INSTALLING VEHICLE BARRIERS AS WHEEL BLOCKS ARE NOT SUFFICIENT). IF LOCATED IN GARAGE PROVIDE A 3" DIAMETER STEEL PIPE X 36" EMBEDDED IN CONCRETE SLAB FOR PROTECTION OF WATER HEATER. (CPC SEC 510.3, CMC SEC 308.0 CPC 508.14(2). HEAT ELEMENTS OF APPLIANCES WHICH CREATE A GLOW, SPARK, OR FLAME SHALL BE LOCATED A MINIMUM OF 18" ABOVE GARAGE FLOOR. CMC 308.1

8. SPRINKLER SYSTEM: AWARDED FIRE SPRINKLER CONTRACTOR TO SECURE SEPARATE PERMIT FOR FIRE SPRINKLER SYSTEM PER NOTE #5 OF "CVR" SHT

DIVISION 16 – ELECTRICAL

1. SEE ELETRICAL SHEETS FOR SEPARATE SPECIFICATION LIST FOR ADDITIONAL DESCRIPTION NOT SHOWN ON THIS PAGE AS THIS SECTION COVERS ARCHITECTURAL OVERLAPS ONLY- REFER TO "E" SERIES AS THOSE PAGES SHALL SUPERSEDE WHERE CONFLICTS MAY OCCUR.

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Contractor shall exercise the responsibility with architect in ensuring latest approved drwgs. prior to actually executing work

REVISIONS NO.

4-24-23 initial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)

general specs & notes

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
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REGISTERED PROFESSIONAL ARCHITECT
JOHN A. SALAT
NO. C-24445
CVHP 10-29-25
STATE OF CALIFORNIA

DRAWN
JS

CHECKED
JS

DATE
SEE REVISION BOX ABOVE FOR DATE

SCALE
AS NOTED ON PLANS

JOB NO.

SHEET
GN-3

1 OF SHEETS

AIA California 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".

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.

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 COMPILES 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

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.

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

REVISIONS NO.
4-24-23 initial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP. 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET
GN-4
1 OF SHEETS

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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.

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

REVISIONS NO.
4-24-23 initial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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New Residential Construction
34456 Via Gomez
Building "B" (lot 31)

cal green code

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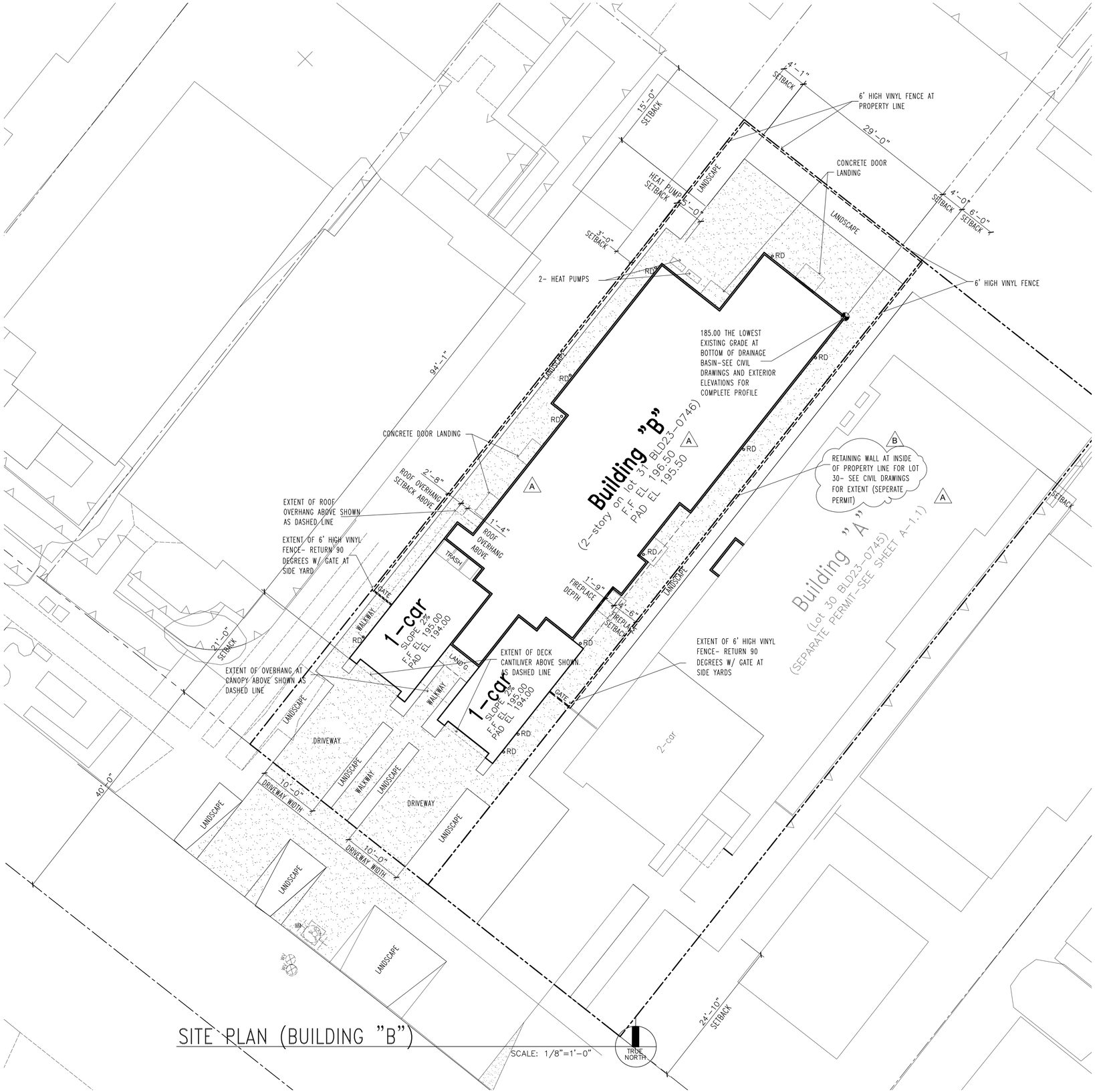

SITE PLAN (BUILDING "B")

SCALE: 1/8"=1'-0"

SITE PLAN NOTES

1. THIS SITE PLAN IS FOR GENERAL INFORMATION ONLY, SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS PAGE
2. SEE COVER PAGE FOR SITE DATA NOT SHOWN INCLUDING THE BUILDING OVERALL HEIGHT(S)
3. REFER TO COVER PAGE FOR THE LANDSCAPE TABULATIONS PERCENTAGE OF THE 15% MINIMUM LANDSCAPE AREA. REFER TO "CONDITIONS OF APPROVAL" FOR REQUIREMENTS IN LANDSCAPED AREAS WITHIN THE SITE BOUNDARIES TO FURTHER EXPAND PLANTING MATERIALS AS HEDGES SHALL NOT EXCEED 6' AND TREES SHALL NOT EXCEED 15' HEIGHT IN ITS MATURE GROWTH.
4. PURSUANT TO DPZC SECTION 9.05.120 (FENCES, WALLS, AND HEDGES), THE MAXIMUM HEIGHT OF ANY FENCE, WALL, OR HEDGE WITH THE REQUIRED SIDE AND REAR YARD WHICH FACES AN ADJACENT PROPERTY SHALL BE SIX (6) FEET AS MEASURED FROM THE FINISHED GRADE AT THE BASE OF THE FENCE, WALL, OR HEDGE TO THE TOP OF THE FENCE WALL OF HEDGE
5. ON-SITE DEVELOPMENT STANDARDS FOR THIS PROJECT MAY BE SUBJECT TO THE CHAPTER 9.55 OF WATER EFFICIENT LANDSCAPE STANDARDS AND REQUIREMENTS OF THE DANA POINT ZONING CODE (DPZC), THAT COULD INCLUDE OFF-SITE AREAS TYPICALLY IRRIGATED USING THE SAME IRRIGATION SYSTEM - REFER TO "CONDITIONS OF APPROVAL" FOR COMMENTS
6. THE SETBACKS OF PROPOSED DECKS TO THE PROPERTY LINES. PURSUANT TO DPZC SECTION 9.05.080 (MAXIMUM PROJECTIONS INTO THE REQUIRED YARD SETBACKS), DECKS THIRTY (30) INCHES ABOVE GRADE SHALL PROJECT A MAXIMUM OF SIX (6) INCHES INTO REAR YARD SETBACK, AND TWO (2) FEET SIX (6) INCHES IN THE SIDE YARD SETBACK

A 7. LANDSCAPE EXCEEDS 500 SF THUS REQUIRE SEPARATE PERMIT

SITE LEGEND

- PAVING SURFACE
- PROPERTY LINE
- ROOF OVERHANG OR SECOND STORY
- 6' HIGH VINYL FENCE
- BUILDING FOOTPRINT
- GARAGE FOOTPRINT

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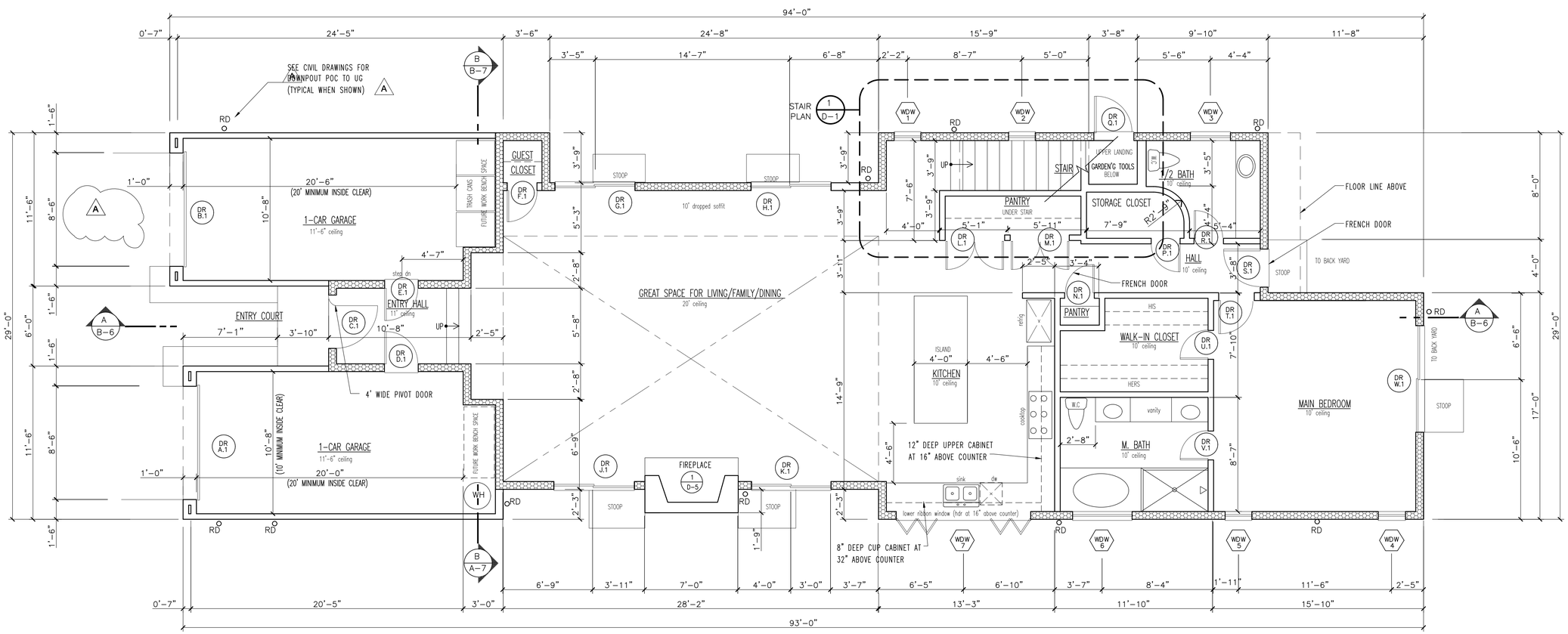
TYPICAL PLAN NOTES

1. REFER TO COVER SHEET FOR ADDITIONAL INFORMATION NOT SHOWN
2. ALL INTERIOR PAINT FINISHES AND TEXTURES PER INTERIOR CONSULTANTS INSTRUCTIONS- PROVIDE 3/4" RADIUS CORNERS AT GYP BOARD WALLS
3. VERIFY ALL ALL FLOOR AND CEILING FINISHES W/ OWNER PRIOR TO WORK
4. FOR DOOR AND WINDOW CALL-OUT KEYING PLAN, SEE PLAN, SCHEDULE TYPES AND NOTES OF SHEET A-8 FOR LOCATING TEMPERED OR RATED ASSEMBLIES
5. LANDINGS OR FINISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1½" LOWER THAN THE TOP OF THE THRESHOLD. THE EXTERIOR LANDING OR FINISHED FLOOR SHALL NOT BE MORE THAN 7-3/4" BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LOWER LANDING OR FLOOR. R311.3.1
6. LANDING LENGTHS AT ALL EXTERIOR DOORS SHALL BE A MINIMUM OF 36" in THE DIRECTION OF TRAVEL. R311.3
7. REFER TO ELECTRICAL, PLUMBING AND HVAC WITH FRAMING CONTRACTOR TO PROVIDE PRE-CONSTRUCTION MEETING FOR DUCT/PIPES ROUTES AND POSSIBLE DROPPED FRAMED SOFFITS WHERE DUCT CHASE WAYS MAY NOT BE ACCESSIBLE TO REACH GRILLS FROM UNIT
8. BEDROOMS, BASEMENTS OR ROOMS USED FOR SLEEPING SHALL HAVE EMERGENCY WINDOWS OR DOORS THAT MUST MEET CODE SECTION 310.4 FOR FIRE ESCAPE OR RESCUE NET DIMENSIONS AS WINDOW CONTROL OPENING DEVICE SHALL NOT REDUCE THE REQUIRED NET CLEAR OPENING AREA OF THE WINDOW. R 312.2.2. AS MIN 20" WIDE X 24" HIGH SIZE FOR OPERATIVE CLEARANCE SIZE OF A MINIMUM OF 5.7. S.F. (GRADE FLOOR OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5 SQUARE FEET) W/ SILL AT 44" MAX FROM FINISH FLOOR PER CRC R310.2. SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR, TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY. YARD OR COURT MUST COMPLY WITH THE DEFINITION: "AN OPEN SPACE, UNOBSTRUCTED FROM THE GROUND TO THE SKY, THEREFORE, INGRESS/EGRESS OPENINGS WHICH OPEN UNDER OR ONTO DECKS, ROOFS, OR COVERED PATIOS ARE NOT ACCEPTABLE. R310.1 -REFER TO WINDOW SCHEDULE OF SHT A-11 UNDER "REMARKS" COLUMN AND ALSO DOOR/WINDOW TYPES FOR COMMENTS THAT IDENTIFY THE LOCATIONS KEYED ON THIS PLAN
9. THE FOLLOWING APPLIES FOR ATTACHED GARAGE FOR ONE HOUR ENVELOPE PROTECTION SECTION R302.4:
   - A. PROVIDE 1-HR FIRE RESISTANCE CONSTRUCTION ON THE GARAGE SIDE FOR WALLS, CEILING, POST, AND BEAMS OF GARAGE WITH MINIMUM OF 5/8" TYPE "X" GYPSUM BOARD @ 2X FRAMING SECTION R302.6 OR 2-LAYERS OF 5/8" TYPE "X" GYPSUM BOARD @ MANUFACTURED TRUSS WHERE OCCURS PER CBC 302.4 AND TABLE 3-B.
   - B. ALL ELEMENTS INSIDE OF GARAGE SUPPORTING STORIES SHALL HAVE 1-HR FIRE RESISTANCE PROTECTION (CBC 302.4)
   - C. DOORS OPEN TO DWELLING SHALL BE 1-3/8" SOLID CORE OR MINIMUM 20-MINUTE FIRE-RATED DOOR (FOR NON-SPRINKLERED DWELLINGS) AND SELF-CLOSING AND SELF-LATCHING
   - D. DOORS FROM GARAGE NOT PERMITTED TO OPEN INTO ROOM USED FOR SLEEPING (CBC 312.4)
   - E. PROVIDE 26 GAGE STEEL DUCT IN GARAGE, IF IT PENETRATES 1-HR SEPARATION (CBC 302.4)
   - F. R302.4 DWELLING UNIT RATED PENETRATIONS. PENETRATIONS OF WALL OR FLOOR AND CEILING ASSEMBLIES REQUIRED TO BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH SECTION R302.2 OR R302.3 AND SHALL BE PROTECTED IN ACCORDANCE WITH SECTION. R302.4.1 FOR THROUGH PENETRATIONS. THROUGH PENETRATIONS OF FIRE RESISTANCE RATED WALL OR FLOOR ASSEMBLIES SHALL COMPLY WITH SECTION R302.4.1.1 OR 302.4.1.2. THE NOMINAL DIAMETER OF THE PENETRATING ITEM IS A MAXIMUM OF 6 INCHES AND 1.2. THE AREA OF THE OPENING THROUGH THE WALL DOES NOT EXCEED 144 SQUARE INCHES. 2. THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTM E 119 OR UL 263 TIME TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (3 PA) AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIP VALIANT TO THE FIRE-RESISTANCE RATING OF THE CONSTRUCTION PENETRATED. R302.4.1.1 FIRE-RESISTANCE-RATED ASSEMBLY. PENETRATIONS SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY.

A 10. R-36 FLOOR OR ROOF INSULATION: CLOSED CELL FOR LIMITED OR NARROW CAVITY CONDITIONS ONLY. ROOF RAFTERS OR FLOOR JOIST THAT CANNOT BE TRADITIONALLY VENTED SHALL HAVE INSTEAD BETWEEN THE 2 X WOOD FRAMING R-36 CLOSED CELL INSULATION FOAM SO THAT ALL CAVITIES BETWEEN THE FRAMING ARE COMPLETELY SEALED SUCH THAT AIR AND MOISTURE ARE UNABLE TO PENETRATE INSIDE PER CRC R806.5 – SEE STRUCTURAL DRAWINGS FOR FRAMING DEPTHS TO ASSURE ALL SYSTEMS COMPLY AS CLOSED CELL FORMULA IS 1" FOR EVERY R-5 (8" THICK OVERALL DEPTH)



A ARCHITECTURAL SYMBOLS

2X6 STUD WALLS @ 16" O.C W/ R-15 BATT INSULATION @ EXTERIOR WALLS

2X6 STUD PLUMBING WALLS @ 16" O.C

2X4 STUD INTERIOR WALLS @ 16" O.C

Plan "B" 1st LEVEL FLOOR PLAN

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

TRUE NORTH

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1st level floor plan

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5. LANDINGS OR FINISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1½" LOWER THAN THE TOP OF THE THRESHOLD. THE EXTERIOR LANDING OR FINISHED FLOOR SHALL NOT BE MORE THAN 7-3/4" BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LOWER LANDING OR FLOOR. R311.3.1
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8. BEDROOMS, BASEMENTS OR ROOMS USED FOR SLEEPING SHALL HAVE EMERGENCY WINDOWS OR DOORS THAT MUST MEET CODE SECTION 310.4 FOR FIRE ESCAPE OR RESCUE NET DIMENSIONS AS WINDOW CONTROL OPENING DEVICE SHALL NOT REDUCE THE REQUIRED NET CLEAR OPENING AREA OF THE WINDOW. R 312.2.2. AS MIN 20" WIDE X 24" HIGH SIZE FOR OPERATIVE CLEARANCE SIZE OF A MINIMUM OF 5.7. S.F. (GRADE FLOOR OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5 SQUARE FEET) W/ SILL AT 44" MAX FROM FINISH FLOOR PER CRC R310.2. SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR, TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY. YARD OR COURT MUST COMPLY WITH THE DEFINITION: 'AN OPEN SPACE, UNOBSTRUCTED FROM THE GROUND TO THE SKY, THEREFORE, INGRESS/EGRESS OPENINGS WHICH OPEN UNDER OR ONTO DECKS, ROOFS, OR COVERED PATIOS ARE NOT ACCEPTABLE. R310.1
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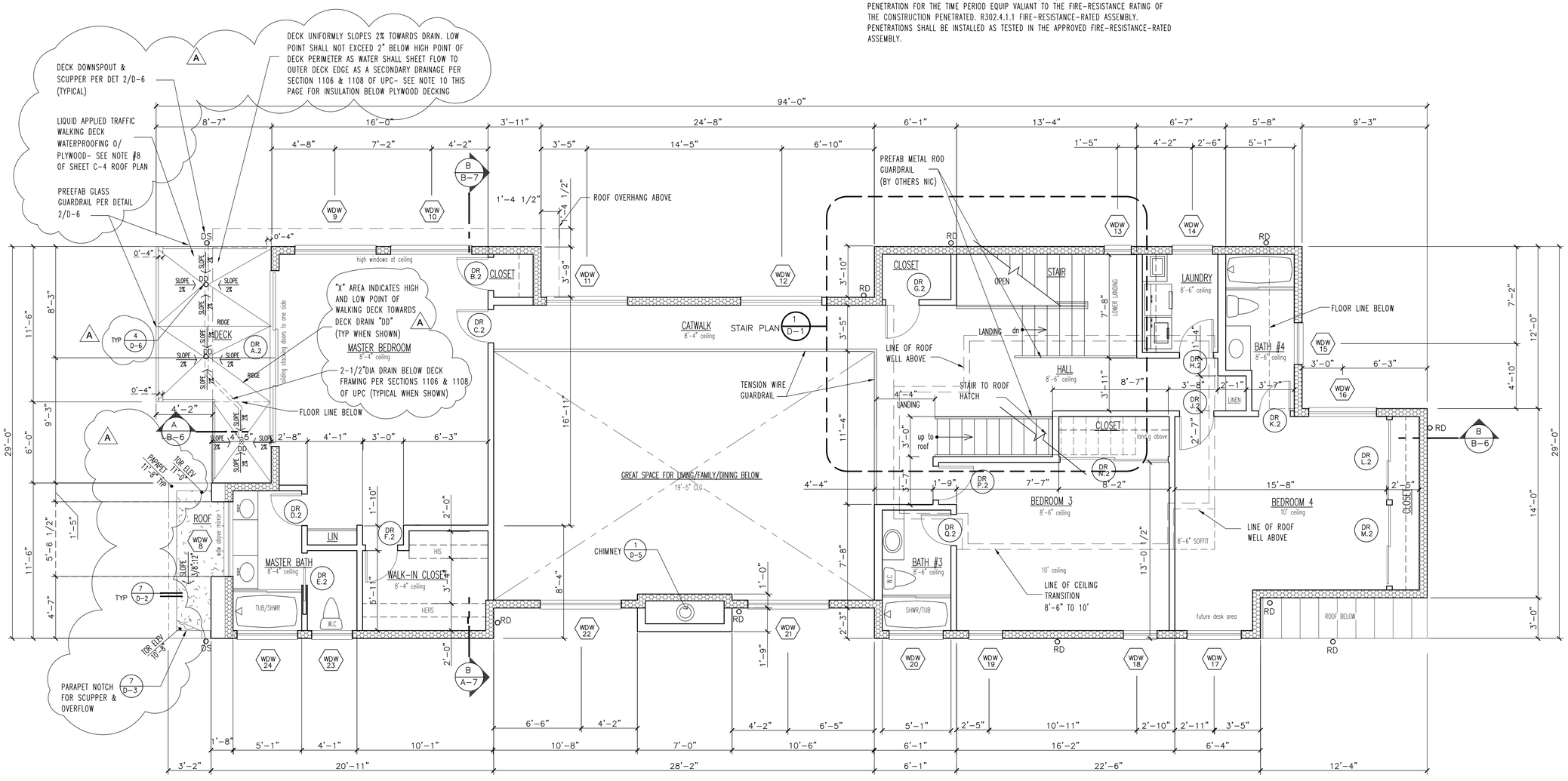
   B. ALL ELEMENTS INSIDE OF GARAGE SUPPORTING STORIES SHALL HAVE 1-HR FIRE RESISTANCE PROTECTION (CBC 302.4)
   C. DOORS OPEN TO DWELLING SHALL BE 1-3/8" SOLID CORE OR MINIMUM 20-MINUTE FIRE-RATED DOOR (FOR NON-SPRINKLERED DWELLINGS) AND SELF-CLOSING AND SELF-LATCHING
   D. DOORS FROM GARAGE NOT PERMITTED TO OPEN INTO ROOM USED FOR SLEEPING (CBC 312.4)
   E. PROVIDE 26 GAGE STEEL DUCT IN GARAGE, IF IT PENETRATES 1-HR SEPARATION (CBC 302.4)
   F. R302.4 DWELLING UNIT RATED PENETRATIONS. PENETRATIONS OF WALL OR FLOOR AND CEILING ASSEMBLIES REQUIRED TO BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH SECTION R302.2 OR R302.3 AND SHALL BE PROTECTED IN ACCORDANCE WITH SECTION. R302.4.1 FOR THROUGH PENETRATIONS. THROUGH PENETRATIONS OF FIRE RESISTANCE RATED WALL OR FLOOR ASSEMBLIES SHALL COMPLY WITH SECTION R302.4.1.1 OR 302.4.1.2. THE NOMINAL DIAMETER OF THE PENETRATING ITEM IS A MAXIMUM OF 6 INCHES AND 1.2. THE AREA OF THE OPENING THROUGH THE WALL DOES NOT EXCEED 144 SQUARE INCHES. 2. THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTM E 119 OR UL 263 TIME TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (3 PA) AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIP VALIANT TO THE FIRE-RESISTANCE RATING OF THE CONSTRUCTION PENETRATED. R302.4.1.1 FIRE-RESISTANCE-RATED ASSEMBLY. PENETRATIONS SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY.
10. (A) R-36 FLOOR OR ROOF INSULATION: CLOSED CELL FOR LIMITED OR NARROW CAVITY CONDITIONS ONLY. ROOF RAFTERS OR FLOOR JOIST THAT CANNOT BE TRADITIONALLY VENTED SHALL HAVE INSTEAD BETWEEN THE 2 X WOOD FRAMING R-36 CLOSED CELL INSULATION FOAM SO THAT ALL CAVITIES BETWEEN THE FRAMING ARE COMPLETELY SEALED SUCH THAT AIR AND MOISTURE ARE UNABLE TO PENETRATE INSIDE PER CRC R806.5 - SEE STRUCTURAL DRAWINGS FOR FRAMING DEPTHS TO ASSURE ALL SYSTEMS COMPLY AS CLOSED CELL FORMULA IS 1" FOR EVERY R-5 (8" THICK OVERALL DEPTH)



Plan"B" 2nd LEVEL FLOOR PLAN

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

TRUE NORTH

(A) ARCHITECTURAL SYMBOLS

- 2X6 STUD WALLS @ 16" O.C W/ R-15 BATT INSULATION @ EXTERIOR WALLS
- 2X6 STUD PLUMBING WALLS @ 16" O.C
- 2X4 STUD INTERIOR WALLS @ 16" O.C

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2nd level floor plan

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REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP 10-29-25 STATE OF CALIFORNIA

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SHEET
A-3
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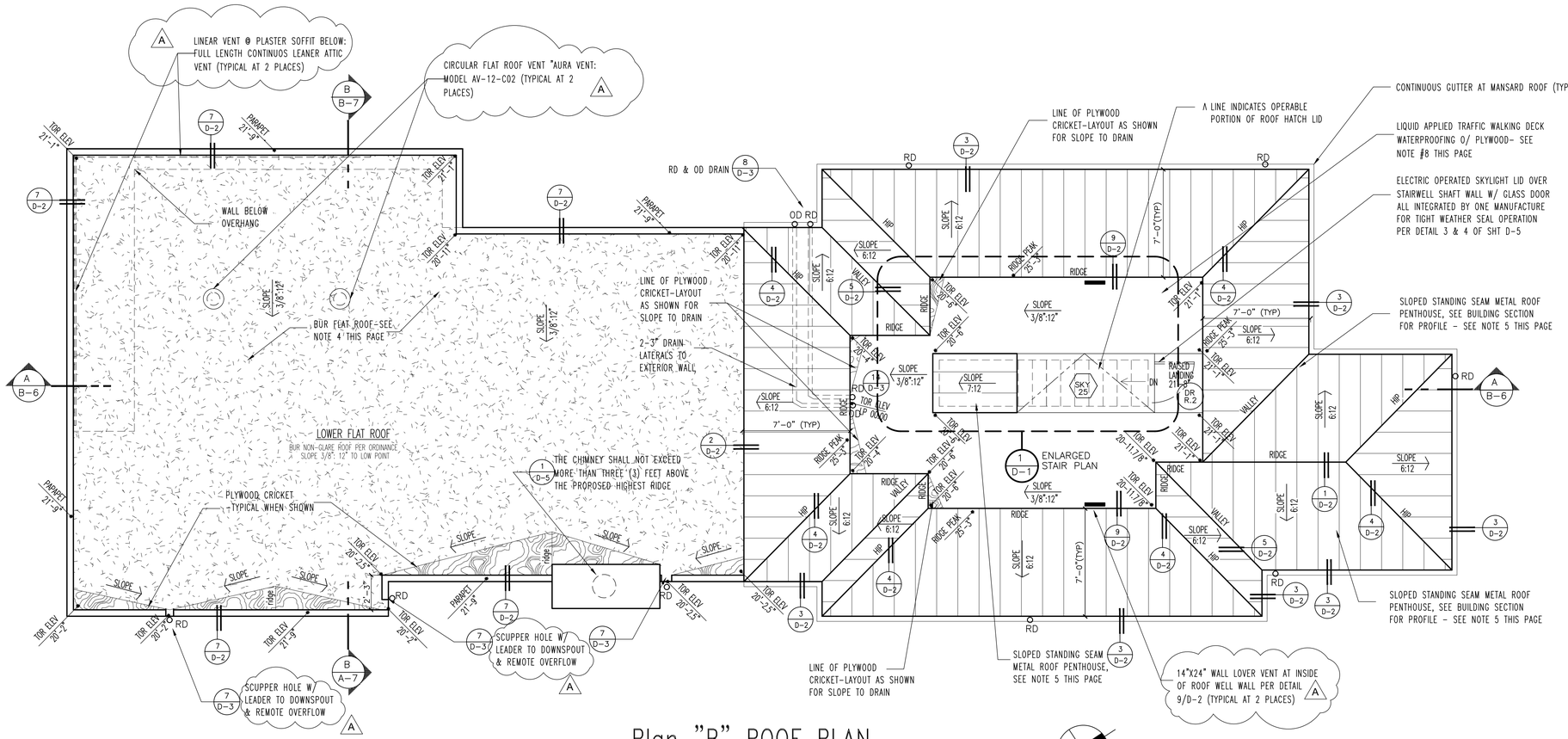
ROOF NOTES

1. ROOF DECK CANNOT BE MORE THAN 25% OF THE AREA OF THE STORY BELOW- SEE AREA CALCULATIONS OF SHT A-1 UNDER "ROOF DECK" COLUMN.
2. CHIMNEY MAY NOT EXCEED MORE THAN THREE (3) FEET ABOVE THE PROPOSED HIGHEST RIDGE HEIGHT.
3. PURSUANT TO DANA POINT ZONING CODE (DPZC) SECTION 9.05.110 (MEASUREMENT OF BUILDING HEIGHTS), BUILDING HEIGHT DEFINED FROM THE VERTICAL DISTANCE, BY WHICH THE UPPERMOST PORTION OF THE ROOF OF A STRUCTURE EXTENDS ABOVE THE EXISTING GRADE (185.00 THE LOWEST EXISTING GRADE AT BOTTOM OF DRAINAGE BASIN-SEE ALSO BUILDING SECTION AND CIVIL DRAWINGS ADDITIONAL INFORMATION NOT SHOWN ON THIS PAGE ON HEIGHT PROFILES MENTIONED ABOVE
4. FLAT ROOF SYSTEM (BUR NON-WALKING DECK)
   232 POUNDS PER SQUARE TOTAL (BREAKDOWN BELOW)
   BASE: GAFGLAS #75 BASE SHEET. @ 22.2 PER SQ,
   SMOOTH: APPEX 4S @ 100 LBS PER SQ
   TORCH ROOF: POLYFRESKO (COOL ROOF) @ 110 LBS PER SQ)
5. METAL ROOF SHALL COMPLY WITH R905.10.2 W/ CLICKLOCK STANDING SEAM SYSTEM OF MINIMUM 24 GAUGE W/ PVDF COATINGS BAKED-ON PROTECTIVE PRIMER AND A KYNAR 500 OR HYLAR 5000 SYSTEM.
6. STANDING SEAM METAL ROOF WEIGHTS: (MANSARD CONDITIONS) METAL ROOF ASSEMBLY WEIGHT @ 125 LBS PER SQ UNDERLAYMENT @ 25 LBS
7. UNDERLAYEMNT AT STANDING SEAM: SYNTHETIC UNDERLAYMENT UNDER METAL ROOF SYSTEM SHALL BE OWENS CORNING PROARMOR SYNTHETIC ROOF UNDERLAYMENT WITH FUSION BACK COATING TECHNOLOGY™ : ASTM D226 ASTM D4869, ICC-ES AC188, ASTM E108/UL 790, CLASS A FIRE RESISTANCE OR APPROVED EQUAL.
8. WALKING DECK SYSTEM: ICC-ES REPORT #ESR-1757
   WEIGHT @ 2.2 LBS PER SF
   LIQUID APPLY URETHANE W/ COLOR FROM MANUFACTURER COLOR PALETTE MADE BY DEX-O-TEXT SERIES "Weatherwear" ROOFING MEMBRANE SYSTEM #606: 1/4" BEIGE COLOR O/ DEX-O-TEX TRAFFIC TOPPING O/ DEX-O-TEX WATERPROOF MEMBRANE O/ A-81 FILLER O/DEX-O-TEX SLIP SHT AT ALL BALCONIES, SLOPE UNIFORMLY WALKING DECK SURFACE AT 2% MINIMAL TOWARDS DRAINS (3" PER 12" SLOPE WHERE INTERSECTING SADDLE COND) AS NOTED ON PLANS BY ARROWS -PROVIDE THROUGH WALL SCUPPER DRAIN WITH OVERFLOW KIT BOTH PIPED SEPARATELY W/ 2" HIGHER OVERFLOW THAN ROOF DRAIN PER R903.4.1.
9. REFER TO SOLAR PHOTOVOLTAIC SYSTEM DRAWINGS INSTALLATION NOT SHOWN ON THIS DRAWING PACKAGE AND SHALL COMPLY WITH CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND CRC R331. -REFER TO VENDORS SHOP DRAWINGS
10. EXPOSED ROOF PIPES, VENTS, AND FLASHING TO MATCH ROOF COLOR.
11. ROOF VENTILATION SHALL BE AREA RATIO OF 1/150 FOR ATTIC AREA OR 1/300 OF ATTIC AREA IF HALF THE VENT AREA LOCATED MORE THAN 3 FEET ABOVE EAVE VENTS W/ A BALANCE OF THE REQUIRED VENTILATION PROVIDED BY THE EAVE VENTS OPENINGS SHALL HAVE 1/4" INCHES CORROSION RESISTANT METAL MESH COVERING. PER SECTION 1505.3 DORMER VENTS SHALL BE SIZED ABOVE FREE AREA REQUIREMENT PER MANUFACTURE SPECIFICATIONS PER SECTION 1505.3 AND EACH VENT SHALL NOT EXCEED 144" SQ INCHES- SEE RIDGE VENT DETAIL 1/D-2 AND EAVE VENTS 7/D-2 FOR STANDARDS



Plan "B" ROOF PLAN

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

ROOF LEGEND AND SYMBOLS

TOR ELEV 21'-1" / OD OD / LP LOW POINT = TOP OF ROOF SPOT ELEV. AT PLYWOOD SUBTRATE FROM F.F. @ 1st LEVEL AS 0.0' REF. (LESS CRICKET/SADDLES)

RD = ROOF DRAIN OR DOWN SPOUT AS SHOWN ON PLANS
OD = OVERFLOW DRAIN, 1" EXTEND SPOUT FROM EXT WALL FACE
TOL = TOP OF EXTERIOR LANDING AT ROOF DECK

= STANDING SEAM METAL ROOF PER NOTES #5 AND #6 THIS PAGE

= BUR; FLAT ROOF PER NOTE #4 THIS PAGE

= LIQUID APPLY WALKING DECK PR NOTE#8 THIS PAGE

= PLYWOOD CRICKET OR SADDLE W/ BUR OR SINGLE PLY LIQUID ROOFING AS NOTED PER PLAN

FIBERGLASS BAT UNSULATION PER SHEET A-7

CLOSED CELL INSULATION FOR LIMITED OR NARROW CAVITY CONDITIONS

AREA WITHOUT INSULATION (NA)

VENT CODE R806.1 & R806.2

A

MINIMUM VENT AREA (R806.2)
THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.
EXCEPTION:
THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED ONE OR MORE OF THE FOLLOWING CONDITIONS ARE MET: NOT LESS THAN 40% AND NOT MORE THAN 50% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENT ATORS SHALL BE LOCATED NO MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

VENT SCREEN: PROVIDE AT LEAST DIMENSION OF 1/16 INCH MINIMUM & 1/4 INCH MAXIMUM AND SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR.

UNEVEN EXCEPTIONS: WHERE UNVENTED ENCLOSED RAFTERS AND DECKS ARE NOT POSSIBLE, THOSE CONDITIONS SHALL COMPLY WITH CRC SECTION R806.5 UTILIZING CLOSED CELL FOAM INSULATION FULLY INSIDE THE CAVITY OF ALL FRAMING -REFER TO BUILDING SECTIONS OF SHEET A-7 FOR ACTUAL LOCATIONS/CONDITIONS FOR PRODUCTS USED

ROOF VENTILATION AREA (MANSARD ATTIC)

VENT SYMBOL ▬ = 14"X24" WALL LOUVER AS LOCATED ON PLAN AT ROOF WELL (7/D-6)

AREAS CALCULATED BASED ON FREE AREA W/ OFFSET BY HIGH/LOW VENT LAYOUT PER PLAN
600 S.F. AREA/300 =2 FREE S.F. X 144 VENTILATION REQ'D = 288.00 GROSS SQ IN

GABLE END WALL VENT

14 WIDE X 24 INCHES HIGH GABLE END LOUVER VENT WALL FLUSH MOUNT W/ NET FREE AREA 147 SQ IN @ EACH BY GIBRALTAR BUILDING PRODUCTS
NET FREE VENTILATION AREA (147 X 2 UNITS =294 SQ. IN NET FREE TOTAL)

MINIMUM TOTAL VENTILATION REQUIRED	288.00
TOTAL VENTILATION PROVIDED	294.00

ROOF VENTILATION AREA (ABOVE MASTER BED & OVERHANG)

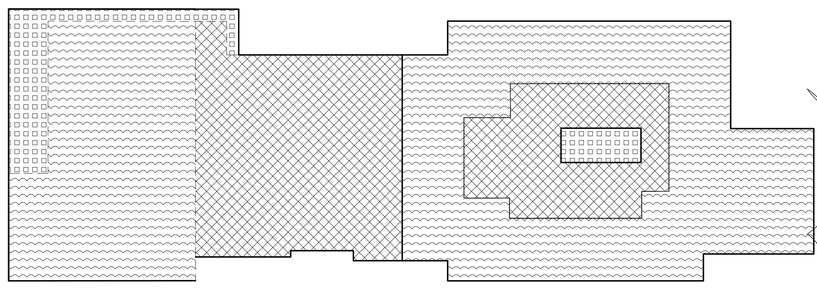
VENT SYMBOL ◯ CIRCULAR FLAT ROOF VENT MODEL #KV-12 KEEPA ROOF JACK (8/D-6)

AREAS CALCULATED BASED ON FREE AREA W/ OFFSET BY HIGH/LOW VENT LAYOUT PER PLAN
603 S.F. AREA/300 = 2.01 FREE S.F. X 144 VENTILATION REQ'D = 289.44 GROSS SQ IN

VENT SYMBOL ═ ═ ═ LINEAR SOFFIT VENT "BRAND "X" METAL "3 WIDE (5" FREE AREA PER LN FT) 5 X 36' = 180 SQ (7/D-6)

LOWER VENT SOFFIT: 36' LONG X 3" WIDE LINEAR VENT SOFFIT FLUSH MOUNT W/ NET FREE AREA 180 SQ.
UPPER VENT ROOF TOP: CIRCULAR ROOF MOUNT VENTS (2) UNITS 113 SQ NET FREE AIR SPACE =226 SQ
NET FREE VENTILATION AREA (147 X 2 UNITS =294 SQ. IN NET FREE TOTAL)

MINIMUM TOTAL VENTILATION REQUIRED	289.00
TOTAL VENTILATION PROVIDED	406.00



"B" INSULATION KEY PLAN

SCALE: 1/8"=1'-0"

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

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architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)

roof plan

OWNER / SITE ADDRESS:
Arman Vakili
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949-289-1847 email: arman@acmbuilder.com

REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP. 10-29-25 STATE OF CALIFORNIA

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A-4

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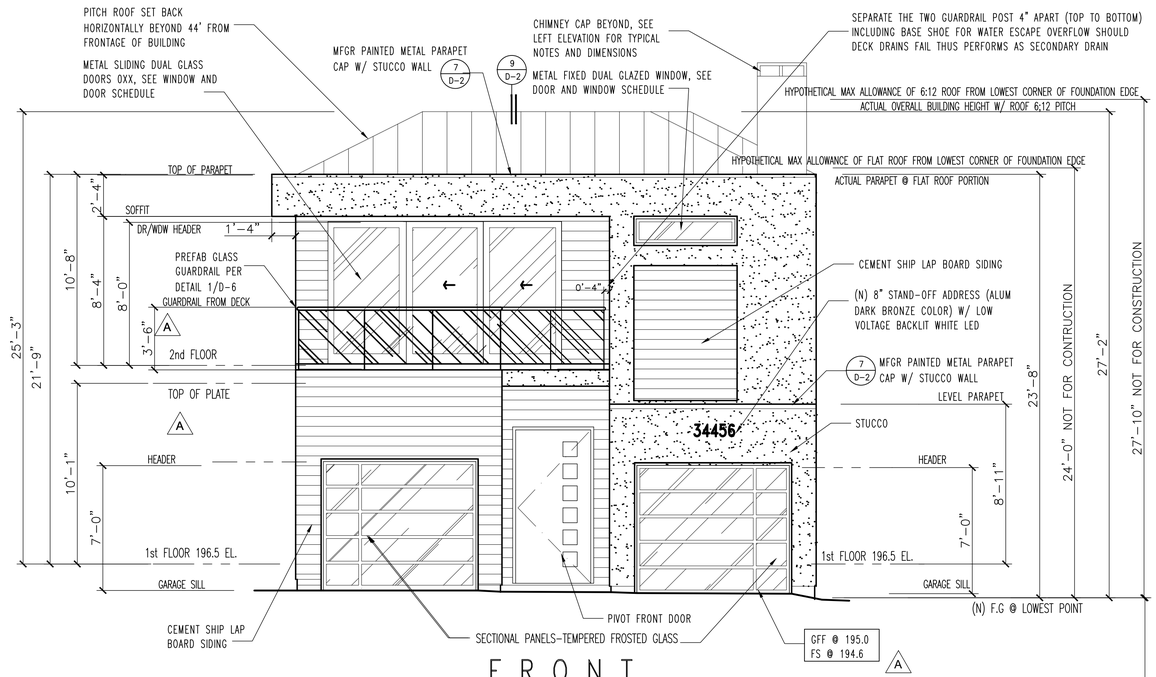
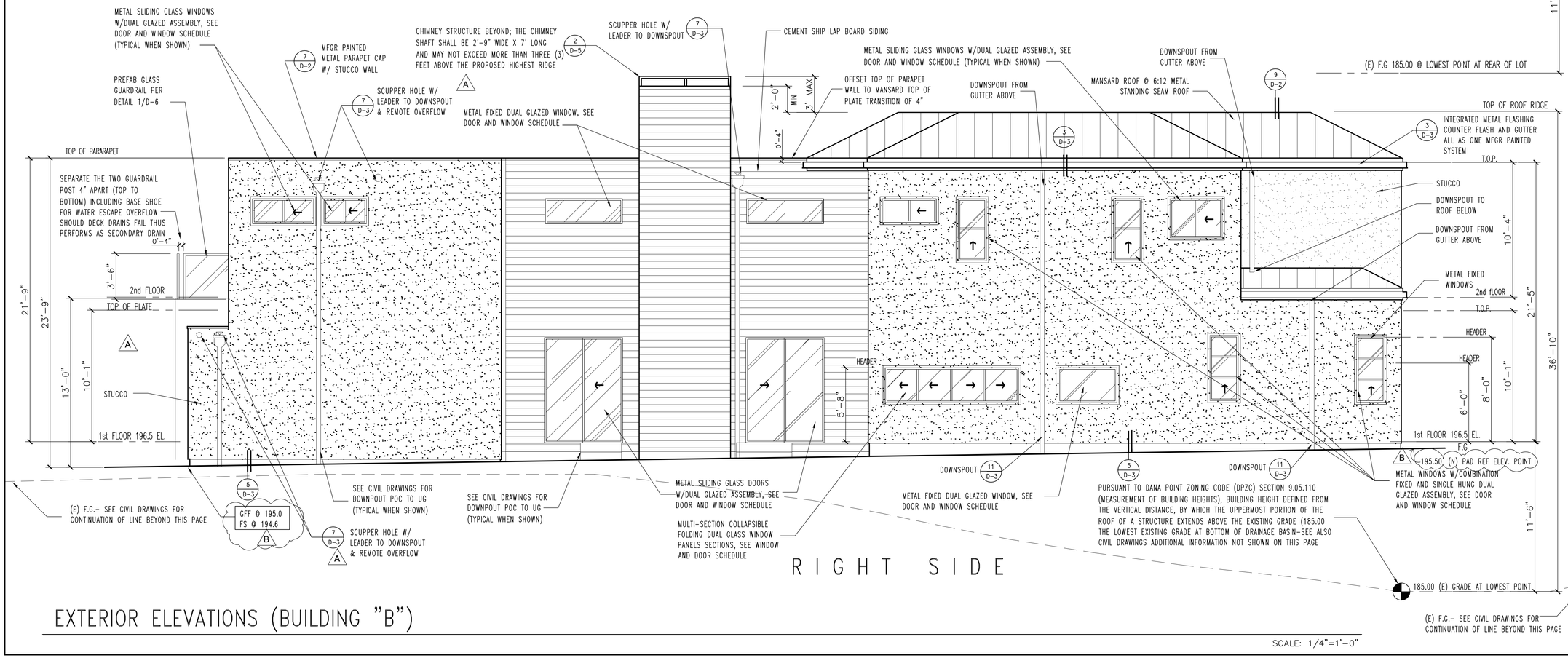
EXTERIOR ELEVATION NOTES

1) REFER TO ARCHITECTS PRODUCT LITERATURE PAMPHLET FOR INFO OF COLORS AND MATERIALS FOR PALETTE AND COMPOSITION AA DRAWINGS ARE SHOWN GENERICALLY

2) FOR ACTUAL CEILING HEIGHT DIMENSIONS REFER TO SECTIONS AND FLOOR PLANS AS PLATE HEIGHTS ARE FOR EXTERIOR WALLS JUNCTURES ONLY





EXTERIOR ELEVATIONS (BUILDING "B")

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

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architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
exterior elevations

OWNER / SITE ADDRESS:
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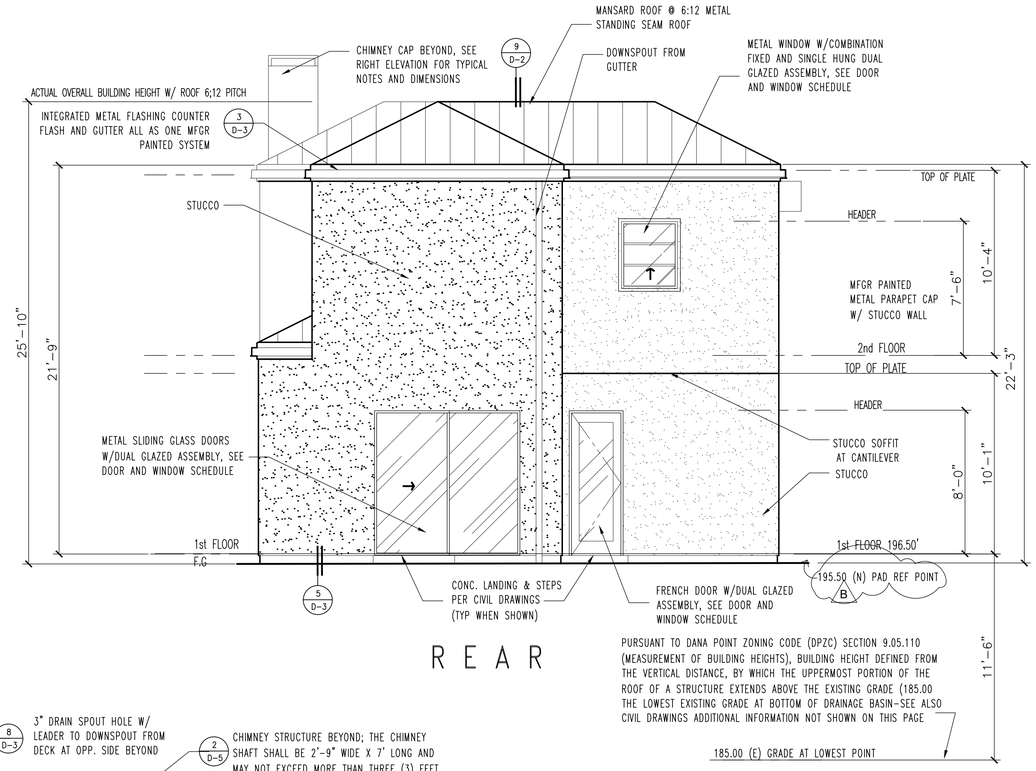
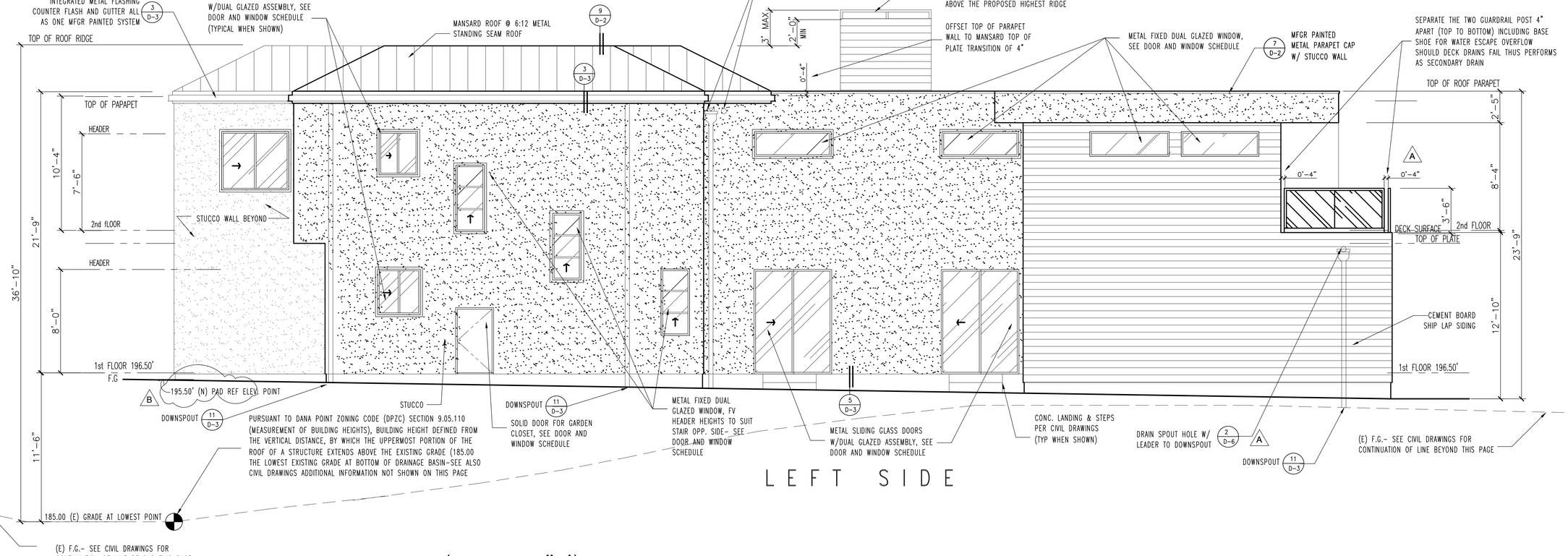


REAR



LEFT SIDE

EXTERIOR ELEVATIONS (BUILDING "B')

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

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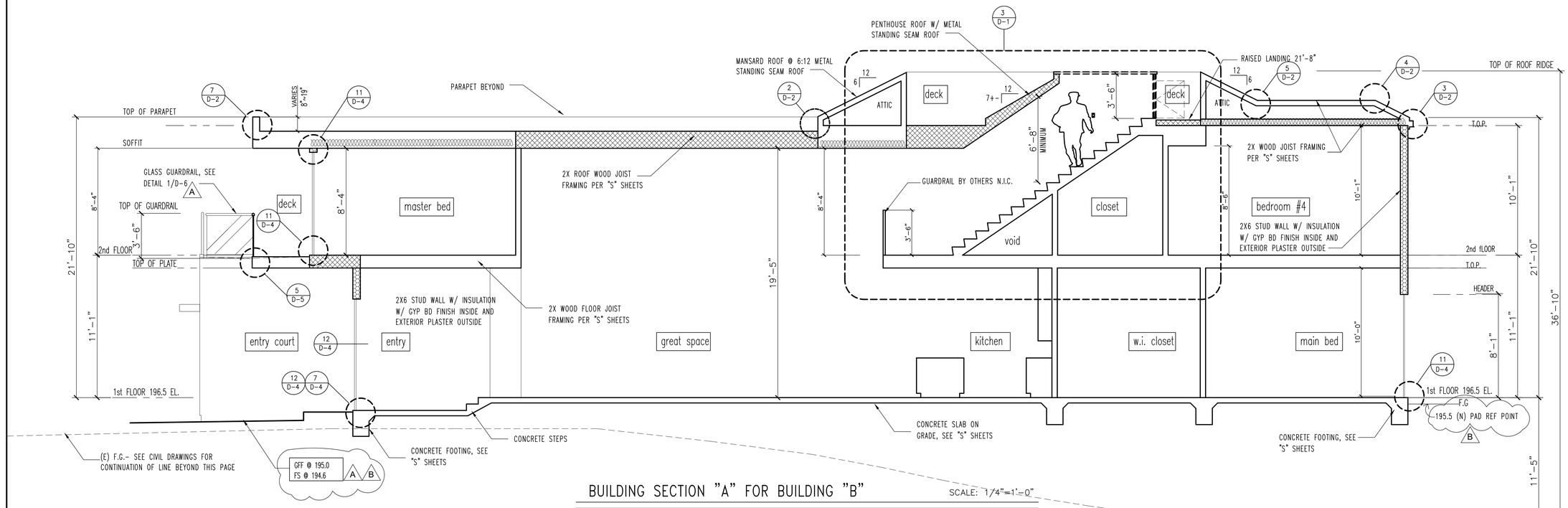


BUILDING SECTION "A" FOR BUILDING "B"

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

GENERAL NOTES

1. TYPICAL EXTERIOR WALL ASSEMBLY: 7/8" 3 COAT EXTERIOR STUCCO SYSTEM O/ (2) LAYERS OF 60 MIN. BUILDING PAPER (WEATHER RESISTIVE BARRIER PER CRC 703) O/ SHEAR PLYWOOD SHEATHING O/ 2 X 6 WOOD STUDS @ 16" O.C. W/ R-15 BAT INSULATION AND 5/8" GYP. BOARD INTERIOR. – SEE STRUCTURAL DRAWINGS WHERE IN CONFLICT FOR FRAMING INFORMATION NOT SHOWN

A 2. ROOF RAFTERS JOIST AT DWELLING PORTIONS TO BE 2 X WOOD FRAMING R-38 INSULATION TYPE SHOWN PER SECTION W/ 5/8" GYPSUM BOARD CEILING INTERIOR FINISH AT VAULTED CEILING PORTIONS– SEE INSULATION LEGEND THIS PAGE AND STRUCTURAL FRAMING PLANS FOR CLARITY OF TRANSITIONS OF SYSTEMS

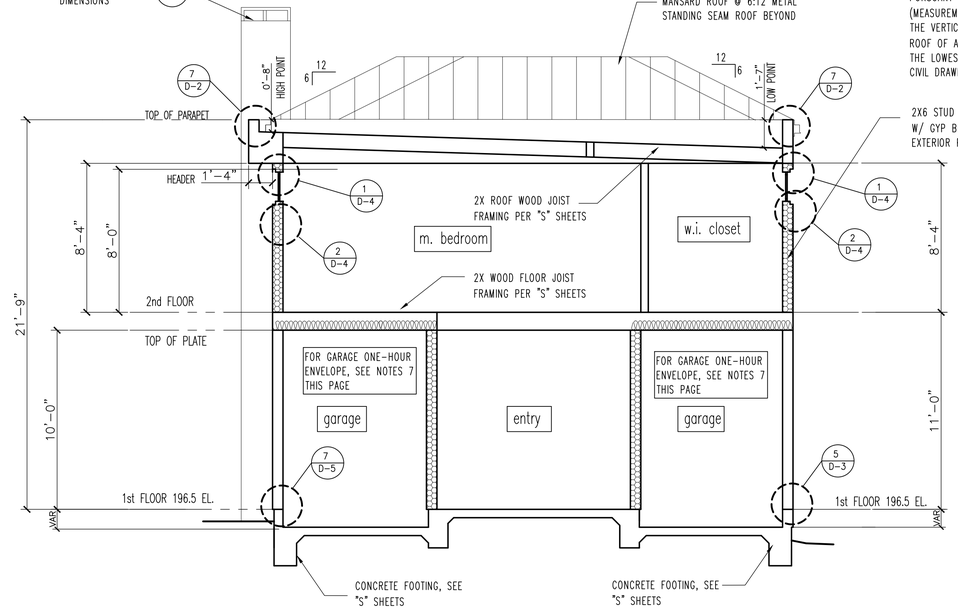
3. FLAT CEILING JOIST TO BE 2 X WOOD FRAMING CEILING LID WITH R-38 INSULATION W/ 5/8" GYPSUM BOARD, SEE INSULATION LEGEND THIS PAGE AND STRUCTURAL FRAMING PLANS FOR CLARITY OF TRANSITIONS OF SYSTEMS

4. PROVIDE ATTIC VENTS AS CONTRACTOR SHALL INSTALL ADEQUATE ATTIC VENTILATION BY MEANS OF SOFFIT VENTS AND WALL VENTS AS SHOWN PER PLANS AND PER CBC SECTIONS 705A THROUGH 706A

5. REFER TO STRUCTURAL FOR DETAILED INFORMATION FOR SLAB AND GRADE PREP. SOILS AND DETAILS THAT MAY SUPERSEDE THESE DRAWINGS WHERE IN CONFLICT

6. SEE MEP SHTS FOR POSSIBLE DUCT CLEARANCE REQ. IMPACTING FRAMING SUCH AS WALLS, ROOF RAFTERS OR FLOOR JOIST BY ORCHESTRATING A FIELD MEETING WITH FRAMER AND HVAC CONTRACTOR IN ADVANCE PRIOR TO EXECUTING WORK.

7. THE FOLLOWING APPLIES FOR ATTACHED GARAGE FOR ONE HOUR ENVELOPE PROTECTION SECTION R302.4:
   - A. PROVIDE 1-HR FIRE RESISTANCE CONSTRUCTION ON THE GARAGE SIDE FOR WALLS, CEILING, POST, AND BEAMS OF GARAGE WITH MINIMUM OF 5/8" TYPE "X" GYPSUM BOARD @ 2X FRAMING OR 2-LAYERS OF 5/8" TYPE "X" GYPSUM BOARD @ MANUFACTURED TRUSS WHERE OCCURS OR 2-LAYERS OF 5/8" TYPE "X" GYPSUM BOARD @ MANUFACTURED TRUSS WHERE OCCURS
   - B. ALL ELEMENTS INSIDE OF GARAGE SUPPORTING STORIES SHALL HAVE 1-HR FIRE RESISTANCE ALL ELEMENTS INSIDE OF GARAGE SUPPORTING STORIES SHALL HAVE 1-HR FIRE RESISTANCE PROTECTION (CBC 302.4)
   - C. SELF-CLOSING TIGHT FITTING, SOLID WOOD 1-3/8" THICK DOOR OR A 20 MINUTE DOOR AT OPENING TO DWELLING (CBC 302.4)
   - D. DOORS FROM GARAGE NOT PERMITTED TO OPEN INTO ROOM USED FOR SLEEPING (CBC 312.4)
   - E. PROVIDE 26 GAGE STEEL DUCT IN GARAGE, IF IT PENETRATES 1-HR SEPARATION (CBC 302.4)
   - F. R302.4 DWELLING UNIT RATED PENETRATIONS. PENETRATIONS OF WALL OR FLOOR AND CEILING ASSEMBLIES REQUIRED TO BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH SECTION R302.2 OR R302.3 SHALL BE PROTECTED IN ACCORDANCE WITH THIS SECTION. R302.4.1 THROUGH PENETRATIONS. THROUGH PENETRATIONS OF FIRE-RESISTANCE-RATED WALL OR FLOOR ASSEMBLIES SHALL COMPLY WITH SECTION R302.4.1.1 OR 302.4.1.2. EXCEPTION: WHERE THE PENETRATING ITEMS ARE STEEL, FERROUS OR COPPER PIPES, TUBES OR CONDUITS, THE ANNULAR SPACE SHALL BE PROTECTED AS FOLLOWS: IN CONCRETE OR MASONRY WALL OR FLOOR ASSEMBLIES, CONCRETE, GROUT OR MORTAR SHALL BE PERMITTED WHERE INSTALLED TO THE FULL THICKNESS OF THE WALL OR FLOOR ASSEMBLY OR THE THICKNESS REQUIRED TO MAINTAIN THE FIRE-RESISTANCE RATING, PROVIDED: THE NOMINAL DIAMETER OF THE PENETRATING ITEM IS A MAXIMUM OF 6 INCHES AND THE AREA OF THE OPENING THROUGH THE WALL DOES NOT EXCEED 144 SQUARE INCHES. AND THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTM E 119 OR UL 263 TIME TEMPERATURE FIRE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (3 PA) AT THE LOCATION OF THE CONSTRUCTION PENETRATED. R302.4.1.1 FIRE-RESISTANCE-RATED ASSEMBLY. PENETRATIONS SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE RESISTANCE-RATED ASSEMBLY.



BUILDING SECTION "B" FOR BUILDING "B"

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

185.00 (E) GRADE AT LOWEST POINT

PURSUANT TO DANA POINT ZONING CODE (DPZC) SECTION 9.05.110 (MEASUREMENT OF BUILDING HEIGHTS), BUILDING HEIGHT DEFINED FROM THE VERTICAL DISTANCE, BY WHICH THE UPPERMOST PORTION OF THE ROOF OF A STRUCTURE EXTENDS ABOVE THE EXISTING GRADE (185.00 THE LOWEST EXISTING GRADE AT BOTTOM OF DRAINAGE BASIN-SEE ALSO CIVIL DRAWINGS ADDITIONAL INFORMATION NOT SHOWN ON THIS PAGE

(E) F.G.- SEE CIVIL DRAWINGS FOR CONTINUATION OF LINE BEYOND THIS PAGE

INSULATION LEGEND

NOTE: WHERE IN CONFLICT T-24 SHALL SUPERCEEDS

- = R-36 FLOOR OR ROOF INSULATION: CLOSED CELL FOR LIMITED OR NARROW CAVITY CONDITIONS ONLY. ROOF RAFTERS OR FLOOR JOIST THAT CANNOT BE TRADITIONALLY VENTED SHALL HAVE INSTEAD BETWEEN THE 2 X WOOD FRAMING R-36 CLOSED CELL INSULATION FOAM SO THAT ALL CAVITIES BETWEEN THE FRAMING ARE COMPLETELY SEALED SUCH THAT AIR AND MOISTURE ARE UNABLE TO PENETRATE INSIDE PER CRC R806.5 - SEE STRUCTURAL DRAWINGS FOR FRAMING DEPTHS TO ASSURE ALL SYSTEMS COMPLY AS CLOSED CELL FORMULA IS 1" FOR EVERY R-5 (8" THICK OVERALL DEPTH)
- = R-38 BATT INSULATION AT EITHER FLOOR OR VENTED ATTIC LOCATIONS- SEE BUILDING SECTION FOR TERMINATION OF INSULATION TRANSITIONS AND STRUCTURAL DRAWINGS FOR FRAMING DEPTHS TO ASSURE ALL SYSTEMS COMPLY
- = R-15 WALL INSULATION: BATT INSULATION AT ALL PERIMITER CONDITIONED AREAS- SEE FLOOR PLAN FOR TERMINATIONS

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

REVISIONS NO.
4-24-23 initial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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z e n a r c h i t e c t . c o m

architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
building sections

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
949-289-1847 email: arman@acmbuilder.com

REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET
A-7
1 OF SHEETS

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WINDOW SCHEDULE

WDW NO.	SIZE W	SIZE H	ELEV.	TYPE	FRAME MAT'L	FRAME FINISH	TINT	GLAZING THICK	GLAZING DBL	GLAZING TEMP	T-24 NOTE #	REMARKS
FIRST LEVEL												
WDW 1	2'-0"	5'-0"	2W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	YES	10	
WDW 2	2'-0"	5'-0"	2W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	YES	10	
WDW 3	3'-0"	3'-6"	3W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	PRIVACY PATTERN OR DIFFUSED GLASS (INTERIOR SIDE)
WDW 4	2'-0"	5'-0"	2W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 5 A	2'-0"	5'-0"	2W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	YES	10	
WDW 6	2'-6"	4'-6"	5W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	PRIVACY PATTERN OR DIFFUSED GLASS (INTERIOR SIDE)
WDW 7 A	10'-0"	2'-6"	4W	STACKABLE	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	STACKABLE SPLIT 2 SIDES OPERATION (F.V. HEIGHT TO COUNTER)
SECOND LEVEL												
WDW 8 A	5'-6"	1'-6"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 9	6'-0"	1'-6"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 10	6'-0"	1'-6"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 11	6'-0"	1'-6"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 12	6'-0"	1'-6"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 13	2'-0"	5'-0"	2W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	YES	10	
WDW 14	3'-0"	3'-0"	11W	SLIDING	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 15	3'-0"	3'-6"	14W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	YES A	10	PRIVACY PATTERN OR DIFFUSED GLASS (INTERIOR SIDE)
WDW 16	5'-0"	4'-0"	8W	SLIDING	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	FIRE ESCAPE/RESCUE PER NOTE #7 THIS PAGE FOR CLEARANCES
WDW 17	4'-8"	3'-0"	9W	SLIDING	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	FIRE ESCAPE/RESCUE PER NOTE #7 THIS PAGE FOR CLEARANCES
WDW 18 A	2'-0"	4'-6"	7W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	FIRE ESCAPE/RESCUE PER NOTE #7 THIS PAGE FOR CLEARANCES
WDW 19	2'-0"	4'-6"	7W	SH/FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	FIRE ESCAPE/RESCUE PER NOTE #7 THIS PAGE FOR CLEARANCES
WDW 20	4'-0"	1'-6"	6W	SLIDING	MTL	BLACK	LOW-E	7/8"	YES	YES	10	PRIVACY PATTERN OR DIFFUSED GLASS (INTERIOR SIDE)
WDW 21	6'-0"	2'-0"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 22	6'-0"	2'-0"	10W	FIX	MTL	BLACK	LOW-E	7/8"	YES	N/A	10	
WDW 23	3'-0"	2'-0"	13W	SLIDING	MTL	BLACK	LOW-E	7/8"	YES	YES	10	PRIVACY PATTERN OR DIFFUSED GLASS (INTERIOR SIDE)
WDW 24	4'-6"	2'-0"	12W	SLIDING	MTL	BLACK	LOW-E	7/8"	YES	YES	10	PRIVACY PATTERN OR DIFFUSED GLASS (INTERIOR SIDE)
ROOF LEVEL												
SKY 25	3'-6"	8'-0"	–	SKYLIGHT	ALUM	BLACK	LOW-E	7/8"	YES	YES	10	SKYLIGHT (SWING OPERABLE ROOF ACCESS HATCH– SEE NOTE 12 THIS SHEET) A

DOOR SCHEDULE

DR NO.	DOOR W	DOOR H	DOOR T	ELEV.	TYPE	MAT'L	FINISH	TEMP	FRAME MAT'L	FRAME FINISH	FRAME THRESHOLD	T-24 NOTE #	REMARKS
FIRST LEVEL													
DR A.1	8'-6"	7'-0"	–	1D	SECTIONAL	MTL/GL	FACTORY	YES	METAL	BLACK	N/A	10	GARAGE DOOR OPENER WITH BATTERY BACKUP PER CODE SB-969
DR B.1	8'-6"	7'-0"	–	1D	SECTIONAL	MTL/GL	FACTORY	YES	METAL	BLACK	N/A	10	GARAGE DOOR OPENER WITH BATTERY BACKUP PER CODE SB-969
DR C.1	4'-6"	8'-6"	1 7/8"	3D	PIVOT	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	LOCATE HARDWARE AT SLAB/HEADER FOR CONCEALED FLUSH PIVOT ASSEMBLY
DR D.1	2'-6"	7'-0"	1 5/8"	7D	SWING	SC	FACTORY	N/A	WOOD	FP	FACTORY	10	20 MINUTE FIRE ASSEMBLY W/ SELF CLOSURE HARDWARE FOR OCCUPANCY SEPARATION TO GARAGE
DR E.1	2'-6"	7'-0"	1 5/8"	7D	SWING	SC	FACTORY	N/A	WOOD	FP	FACTORY	10	20 MINUTE FIRE ASSEMBLY W/ SELF CLOSURE HARDWARE FOR OCCUPANCY SEPARATION TO GARAGE
DR F.1	2'-6"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR G.1	6'-0"	8'-0"	–	4D	SLIDER	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	PATIO GLASS DOOR
DR H.1	6'-0"	8'-0"	–	4D	SLIDER	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	PATIO GLASS DOOR
DR J.1	6'-0"	8'-0"	–	4D	SLIDER	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	PATIO GLASS DOOR
DR K.1	6'-0"	8'-0"	–	4D	SLIDER	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	PATIO GLASS DOOR
DR L.1	4'-6" PR	7'-0"	1 3/8"	9D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR M.1	4'-6" PR	7'-0"	1 3/8"	9D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR N.1	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR P.1	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR Q.1	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR R.1	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR S.1	2'-10"	7'-0"	1 3/8"	6D	SWING	MTL/GL	FACTORY	YES	METAL	BLACK	FACTORY	10	FRENCH DOOR
DR T.1	2'-6"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR U.1	2'-6"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR V.1	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR W.1	8'-0"	8'-0"	–	8D	SLIDER	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	PATIO GLASS DOOR
SECOND LEVEL													
DR A.2	13'-0"	7'-6"	–	3D	SLIDER	MTL/GL	LOW-E TINT	YES	METAL	BLACK	FACTORY	10	3 SECTION MULTIPLE SLIDER ASSEMBLY
DR B.2	2'-4"	7'-6"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	FACTORY	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR C.2	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	FACTORY	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR D.2	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR E.2	2'-4"	7'-0"	1 3/8"	10D	POCKET	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR F.2	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR G.2	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR H.2	2'-8"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR J.2	2'-6"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR K.2	2'-4"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR L.2	6'-0"	7'-0"	1 3/8"	8D	SLIDER	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	WARDROBE INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR M.2	6'-0"	7'-0"	1 3/8"	8D	SLIDER	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	WARDROBE INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR N.2	8'-0"	7'-0"	1 3/8"	8D	SLIDER	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	WARDROBE INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR P.2	2'-6"	7'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
DR Q.2	2'-4"	4'-0"	1 3/8"	7D	SWING	HC	FACTORY	N/A	WOOD	FP	N/A	N/A	INTERIOR DOOR (CONTEMP FLUSH SMOOTH PVC COATED PANEL W/ HORIZONTAL LINES AS SHOWN)
ROOF LEVEL													
DR N.2	2'-6"	3'-0"+-	1 7/8"	11D	SWING	MTL/GL	FACTORY	YES	METAL	BLACK	FACTORY	10	SWING DOOR INTEGRATED/OPERABLE SKYLIGHT PACKAGED BY SAME VENDOR FOR AIR/WATER TIGHT INTEGRITY SYSTEMS PER NOTE #12 THIS SHEET A

GENERAL NOTES FOR DOORS AND WINDOWS

1. ALL WINDOWS AND DOORS TO BE FACTORY FINISH AS SELECT INSIDE AND OUTSIDE COLORS AND HARDWARE PER INTERIOR DESIGNERS INSTRUCTIONS. REFER TO EXTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
2. ALL DOUBLE GLAZE AND TINT PER T-24 ENERGY REQUIREMENTS
3. ALL DIMENSION ARE FOR T-24 CALCULATIONS AND NOT NECESSARILY FOR SIZING OF INSTALLATION FOR WINDOW AND DOOR. VENDOR SHALL FIELD VERIFY FEILD DOOR AND WINDOW OPENINGS FOR EXACT FIT BETWEEN ROUGH AND FINISH FIELD OPENINGS PRIOR TO ORDERS/INSTALLATION
4. "TEMP" OR "T" INDICATES TEMPERED GLASS PER CBC.
5. COORDINATE INTERIOR HARDWARE FINISH WITH OWNER OR INTERIOR DESIGNER AS SUBMIT LOCK SPECIFICATIONS, ELEV AND FUNCTION TO OWNER FOR THEIR REVIEW PRIOR TO INSTALLATION
6. ALL FENESTRATION MUST HAVE TEMPORARY AND PERMANENT LABELS
7. FOR WINDOWS WHICH SERVE ALL BEDROOMS MUST MEET CODE SECTION 310.4 FOR FIRE ESCAPE OR RESCUE NET DIMENSIONS: MIN 20" WIDE X 24" HIGH SIZE FOR OPERATIVE CLEARANCE SIZE OF 5.7. S.F. W/ SILL AT 44" MAX FROM FINISH FLOOR
8. WINDOW AND DOOR MFGR: TO BE DETERMINED (TBD) ASSUMED FLEETWOOD OR EQUAL) DUAL LOW-E GLAZING SYSTEM W/ BLACK PAINTED OR ANODIZED ALUMINUM FRAME
   - -SLIDING PATIO DOOR SYSTEM: "TBD SERIES
   - -SLIDING WINDOW: "TBD SERIES"
   - -PICTURE WINDOW (FIXED): "TBD SERIES"
   - -SINGLE HUNG WINDOW: "TBD SERIES"
9. SKYLIGHT: OPERABLE SKYLIGHT SOLAR INNOVATIONS MODEL #SI6400
   HTTPS://SOLARINNOVATIONS.COM/
   31 ROBERTS ROAD,PINE GROVE, PENNSYLVANIA 17963
   REP: LAUREN M. STUMP <LSTUMP@SOLARINNOVATIONS.COM>
   PH 570-915-1736
10. FOR SHG AND U FACTOR PERFORMANCE LIMITATIONS OF DOORS AND WINDOWS, REFER TO T-24 SHEETS
11. ALL WINDOWS AND DOORS TO BE COORDINATED FOR HARDWARE KEYING SPECIFICATIONS AND FUNCTIONS WITH OWNER AS PRIVACY OR SECURITY AT NEEDED LOCATIONS PRIOR TO INSTALLATIONS
12. A TERRACE SWING DOOR & OPERABLE SKYLIGHT PACKAGED BY SAME VENDOR FOR AIR/WATER TIGHT INTEGRITY SYSTEMS PER SPEC NOTES AND DETAIL "A" OF THIS SHEET

ABBREVIATIONS

WDW =WINDOW
DR =DOOR
SC =SOLID CORE
SKY =SKYLIGHT
GL/DBL = 7/8" THICK DOUBLE GLAZING SYSTEM
BL= BLACK FRAME KYNAR MFGR PAINT (BOTH INSIDE AND OUT)
HC =HOLLOW CORE
N/A =NOT APPLICABLE
FP =FEILD PAINT TRIM OR DOOR
PAT/DBL = DUAL GLAZING SYSTEM (PATTERN GLASS)
MTL =METAL (ALUMINUM FRAME)
SH/FIX =SINGLE HUNG/FIXED (COMBINED WINDOW UNIT)
LOW-E =GLASS SPEC EMISSIVITY/EMITTANCE COATING PER T-24 LIMATATIONS
TBV = TO BE VERIFIED
PR = PAIR OF DOOR LEAFS
T = TEMPERED GLASS PER CODE

OPERABLE SKYLIGHT/TERRACE DR SPECS

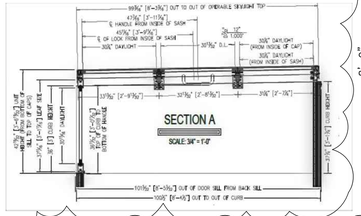
A

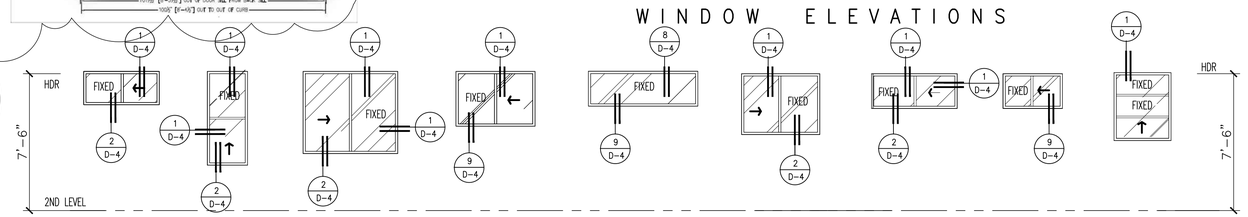
Solar Innovations
31 Roberts Road, Pine Grove, Pennsylvania 17963
Ph: 800-618-0669 Email: Lauren M. Stump <lstump@solarinnovations.com>

SKYLIGHT: By Solar Innovations (Designed and Manufactured in the U.S.A.)
Air & Structure Impact Testing: Series Type: G2 80"-90"
Air Infiltration at 1.57psf (25mph) 0.05 L/s/m²
Aluminum 2-Lite 72"H x 120"W
Water Penetration 15psf, Design Pressure ±40psf, Uniform Load ±80psf
Water performance up to 15psf
Structural tested up to a design pressure of 40psf
Designer finishes: AAMA 2603: Black

INTEGRATED TERRACE DOOR:
By Solar Innovations (Designed and Manufactured in the U.S.A.)
Series SI2000 G2 Terrace Door, Outswing
Aluminum frame widths: 3-3/8" x frame depths: 3"
PERFORMANCE: Thermally enhanced utilizing Iso-bar thermal break w/ dual insulated glazing panel infill of 1"

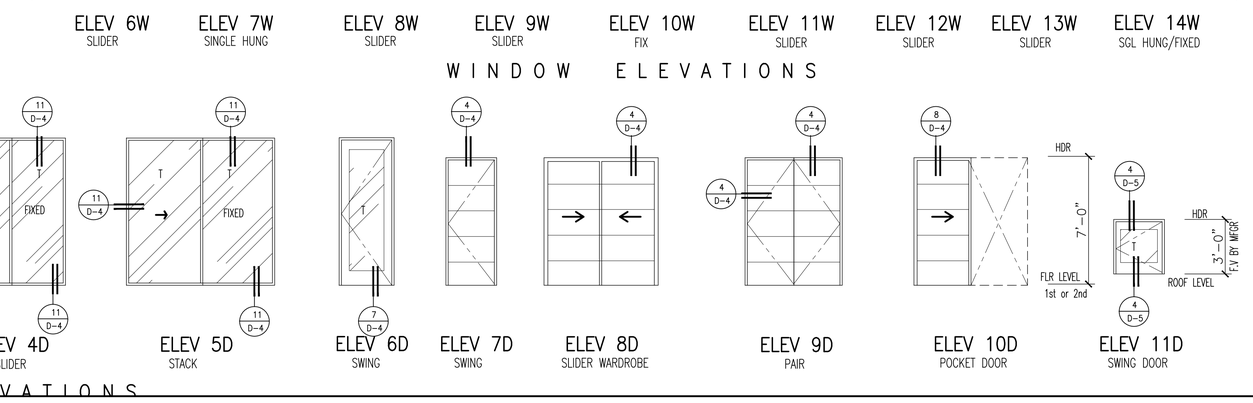
DETAIL "A" SKYLIGHT/TERRACE DR





ELEV 1W SLIDER | ELEV 2W SGL HUNG/FIXED | ELEV 3W SLIDER | ELEV 4W STACKABLE SPLIT | ELEV 5W FIX

WINDOW ELEVATIONS



ELEV 6W SLIDER | ELEV 7W SINGLE HUNG | ELEV 8W SLIDER | ELEV 9W SLIDER | ELEV 10W FIX | ELEV 11W SLIDER | ELEV 12W SLIDER | ELEV 13W SLIDER | ELEV 14W SGL HUNG/FIXED

WINDOW ELEVATIONS

ELEV 1D SECTIONAL | ELEV 2D FRONT PIVOT DOOR | ELEV 3D SLIDER | ELEV 4D SLIDER | ELEV 5D STACK | ELEV 6D SWING | ELEV 7D SWING | ELEV 8D SLIDER WARDROBE | ELEV 9D PAIR | ELEV 10D POCKET DOOR | ELEV 11D SWING DOOR

DOOR ELEVATIONS

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

NO./REVISION/DATE

4-24-23 intitial city submittal
A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)

DOOR/WDW SCHEDULE

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
949-289-1847 email: arman@ecmbuilder.com

REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 REN. 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET
A-8
1 OF (REF TO INSIDE) SHEETS

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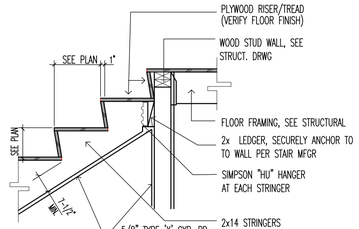
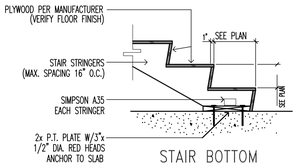
1. STRUCTURAL DRAWINGS SHALL SUPERSEDE DETAILS ON THIS PAGE
2. SEE GENERAL NOTES ON THIS PAGE FOR STANDARD RISER/TREAD CODE NOTES
3. VERIFY WITH OWNER STAIR TREAD/RISER FINISH AS THE SHAPE OF NOSING AND STAIR CONSTRUCTION MAY CHANGE TO MEET THE SUBSTRATE REQUIREMENTS



NOTES:
1. STRUCTURAL DRAWINGS SHALL SUPERSEDE DETAILS ON THIS PAGE
2. SEE GENERAL NOTES 1/D-3 ON THIS PAGE FOR STD RISER/TREAD CODE NOTES



5 | STAIR TOP/BOT SECTION | 4

GENERAL STAIR NOTES

SEE PLANS AND SECTIONS FOR ACTUAL RISERS & RUN LAYOUT

1. THE FOLLOWING APPLIES TO STAIR SECTION AND MEET THE MINIMAL AS FOLLOWS:
   A. MAXIMUM RISE OF 7-3/4" AND MINIMUM RUN (TREAD) OF 10" PER R311.7.5
   B. PROVIDE A NOSING BETWEEN 0.75" AND 1.25" ON STAIRWAYS WITH SOLID RISERS WHERE TREAD DEPTH IS LESS THAN 11". R311.7.5.3 AND EXCEPTION 1
   C. MINIMUM CLEAR WIDTH OF 36". R311.7.1
   D. MINIMUM HEADROOM OF 6'-8". R311.7.2
   E. ALTERNATING TREAD DEVICES AND SHIP LADDERS SHALL NOT BE USED AS AN ELEMENT OF A MEANS OF EGRESS. R311.7.11 AND R311.7.12
2. HANDRAILS SHALL MEET THE MINIMAL AS FOLLOWS:
   A. PROVIDE A MINIMUM OF ONE CONTINUOUS HANDRAIL ON STAIRWAYS WITH 4 OR MORE RISERS AND AT ALL OPEN SIDES. R311.7.8
   B. HANDRAIL HEIGHT SHALL BE 34" TO 38" ABOVE THE NOSING OF TREADS. R311.7.8.1
   C. HANDRAIL WITH CIRCULAR CROSS-SECTIONS SHALL HAVE A DIAMETER OF 1-1/4" TO 2". R311.7.8.5 ITEM 1.
   D. HANDRAILS WITH OTHER THAN CIRCULAR CROSS-SECTIONS SHALL HAVE A PERIMETER OF 4" TO 6¼" WITH A MAXIMUM CROSS-SECTION DIMENSION OF 2¼". R311.7.8.5 ITEM 1
   E. HANDRAILS WITH A PERIMETER GREATER THAN 6¼" SHALL COMPLY WITH R311.7.8.5 ITEM 2.
   F. HANDRAIL SHALL BE CONTINUOUS WITHOUT INTERRUPTION BY NEW POST OR OTHER OBSTRUCTION, EXCEPT AT THE LANDING, VOLUTE, OR TURNOUT ON LOWEST TREAD. R311.7.8.4, EXCEPTION 1 & 2.
   G. CLEAR SPACE BETWEEN HANDRAIL AND WALL SHALL BE 1½" MINIMUM. R311.7.8.3
3. GUARDS (GUARDRAILS) SHALL MEET THE MINIMAL AS FOLLOWS:
   A. PROVIDE GUARDS WHERE THE OPEN SIDE IS MORE THAN 30" MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36" HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. R312.1.1
   B. GUARD HEIGHT SHALL BE A MINIMUM OF 42". R312.1.2
   C. OPENINGS BETWEEN INTERMEDIATE BALUSTERS SHALL PRECLUDE THE PASSAGE OF A 4" DIAMETER SPHERE. R312.1.3
   D. THE TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD, AND BOTTOM RAIL SHALL PRECLUDE THE PASSAGE OF A 6" DIAMETER SPHERE. R312.1.3, EXCEPTION 1.
   E. OPENINGS BETWEEN INTERMEDIATE BALUSTERS ON THE OPEN SIDE OF STAIRS SHALL PRECLUDE THE PASSAGE OF A 4-3/8" DIAMETER SPHERE. 312.1.3, EXCEPTION 2.

   REFER TO STRUCTRAL DRAWINGS AND CONNECTION CALCULATIONS FOR DETAILS:
4. ALL GUARDRAILS TO WITHSTAND A 200-LB FORCE AT TOP OF THE RAILING ACTING IN ANY DIRECTION, AND MIN 50-LB PER LINEAR FOOT FOR INTERMEDIATE GUARD COMPONENTS. THE LOADS ARE NOT REQUIRED TO BE CUMULATIVE.

A 5. REFER TO DETAILS 1, 3 AND 4 OF SHEET D-6 FOR RAILING, GUARDRAIL, AND HANDRAIL DETAILS AND SPECS

6. ENCLOSED USABLE CONSTRUCTION UNDER STAIRWAY REQUIRES TO FIRE BE 1-HR RESISTIVE CONSTRUCTION ON ENCLOSED SIDE

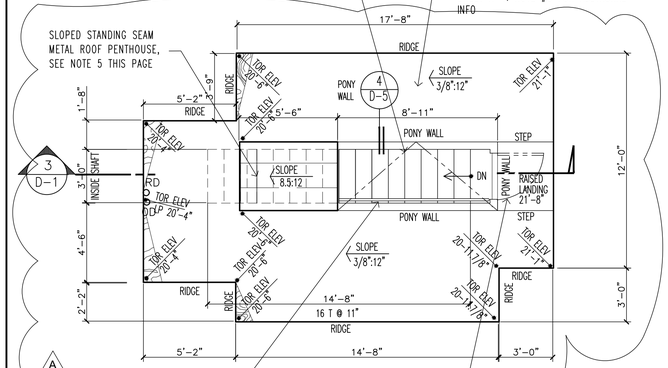
7. THE LARGEST RISE OR RUN IN A FLIGHT OF STAIRS MAY NOT EXCEED THE SMALLEST BY 3/8".

8. HEADROOM IN STAIRWAY SHALL BE A MINIMUM OF 6 FEET 8 INCHES FROM THE VERTICAL MEASUREMENT SHALL BE TAKEN FROM THE SLOPED LINE CONNECTING THE TREAD NOSING PER CRC R311. 7.2

A 9. THE SWITCH FOR THE ELECTRIC OPERATED SKYLIGHT IS TOM BE LOCATED AT MID-STAIR HEIGHT PRIOR TO REACHING THE 6'-8" HEAD CLEARANCE.

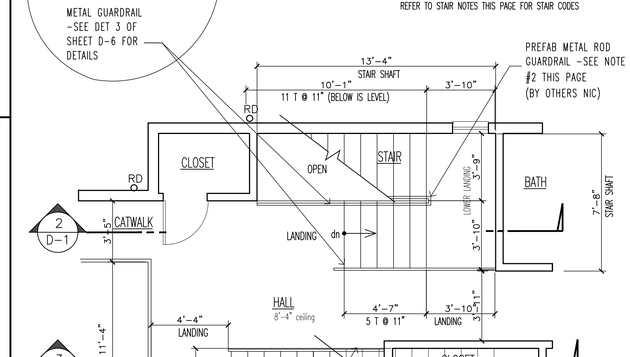
A LINE INDICATES OPERABLE PORTION OF ROOF HATCH LID: ELECTRIC OPERATED SKYLIGHT OVER STAIRWELL SHAFT -ALL INTEGRATED BY MANUFACTURE FOR TIGHT WEATHER SEAL OPERATION PER DETAIL 3 & 4 OF SHT D-5

LIQUID APPLIED TRAFFIC WALKING DECK WATERPROOFING O/ PLYWOOD- SEE SHEET A-4, NOTE #8 FOR ADDITIONAL INFO



ROOF DECK LEVEL

REFER TO STAIR NOTES THIS PAGE FOR STAIR CODES



2ND LEVEL

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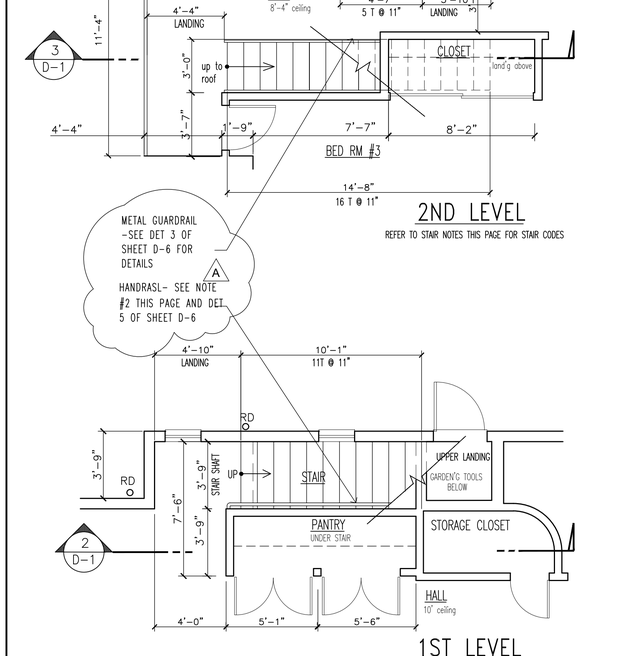
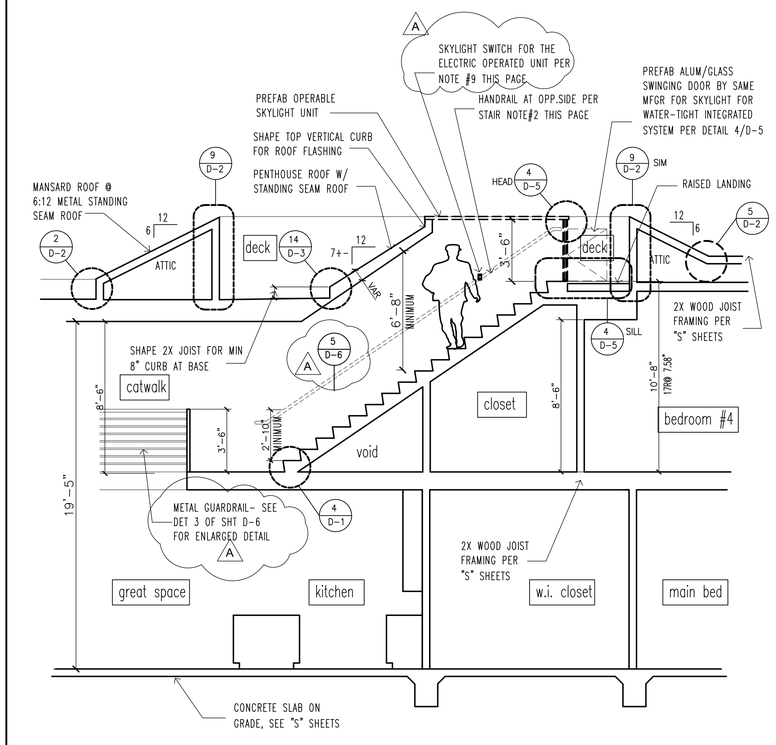


1ST LEVEL

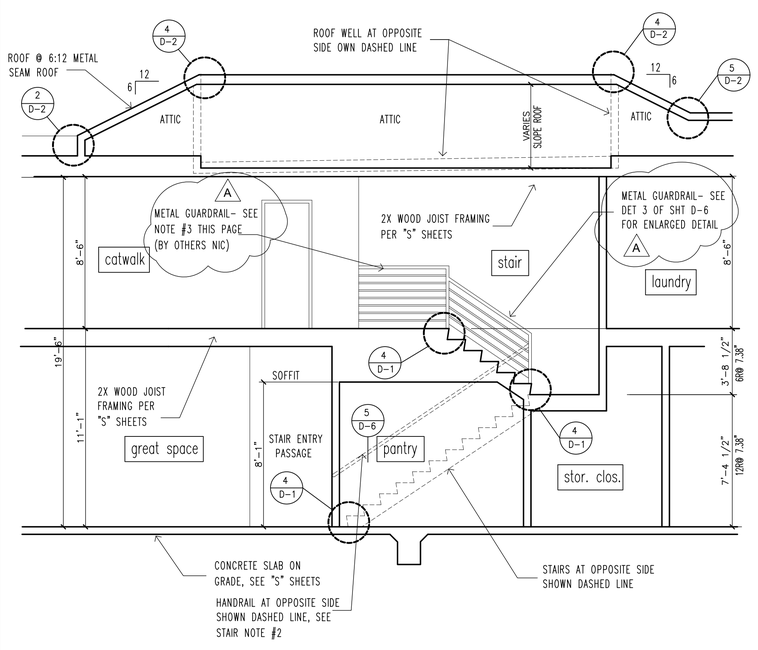
REFER TO STAIR NOTES THIS PAGE FOR STAIR CODES



STAIR SECTION

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

3



STAIR SECTION

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

2

ENLARGE STAIR PLANS

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

1

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

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A 9-4-23 city resubmittal
B 12-5-23 city resubmittal

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architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
stair plans and details

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
949-289-1847 email: arman@acmbuilder.com

REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP. 10-29-25 STATE OF CALIFORNIA

DRAWN JS
CHECKED JS
DATE SEE REVISION BOX ABOVE FOR DATE
SCALE AS NOTED ON PLANS
JOB NO.
SHEET
D-1
1 OF SHEETS

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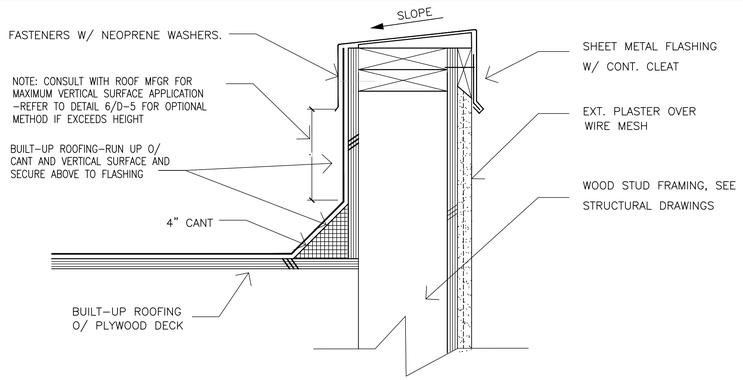
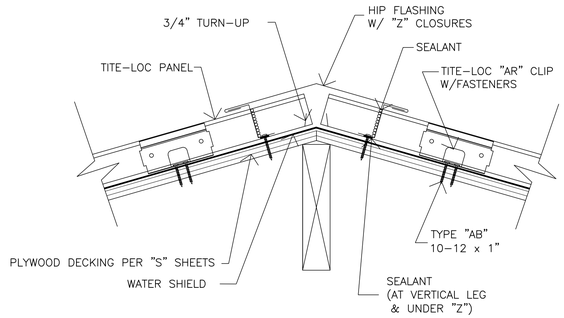
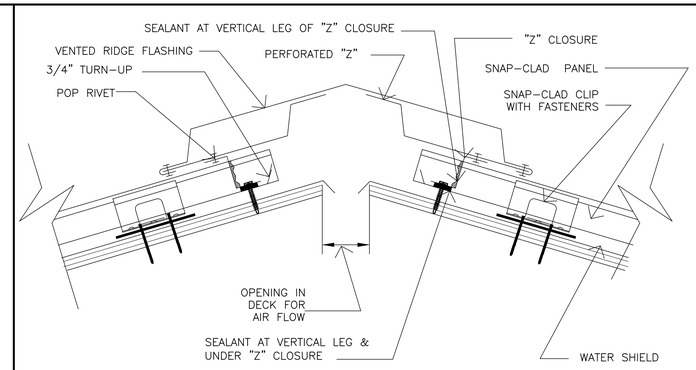


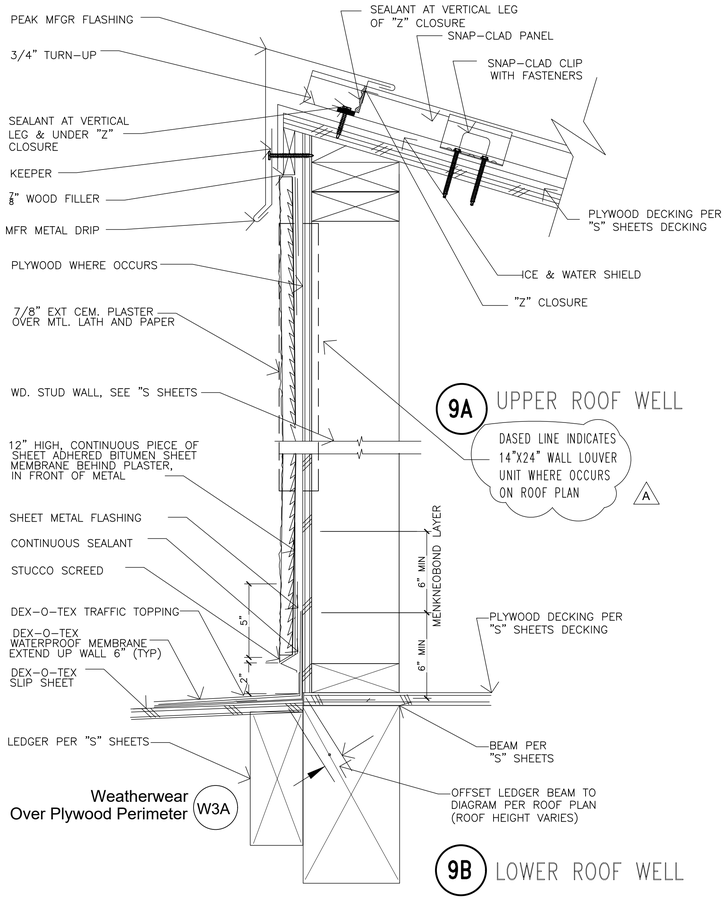
PARAPET AT FLAT ROOF — NO SCALE — 7



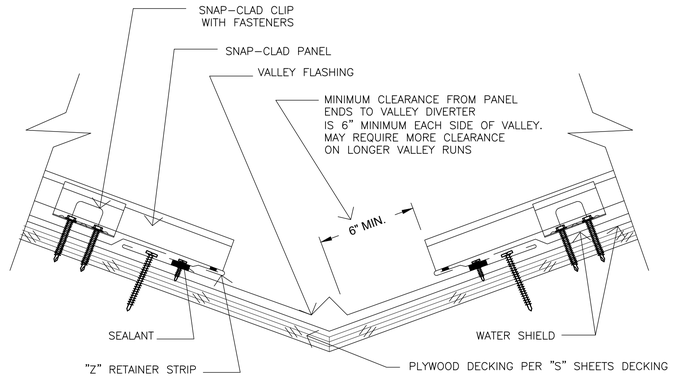
HIP AT ROOF — NO SCALE — 4



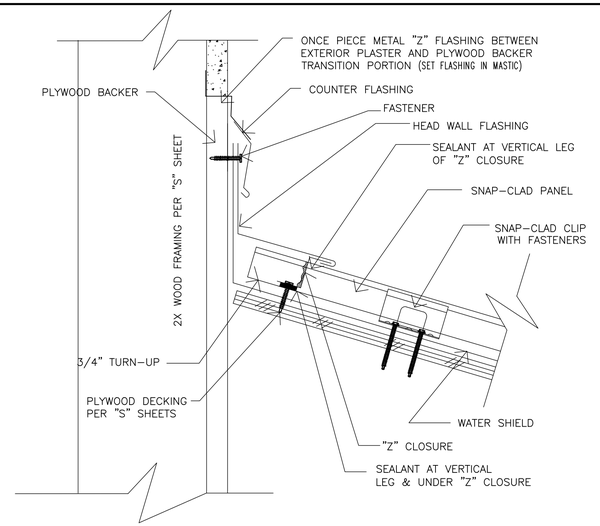
RIDGE AT ROOF — NO SCALE — 1



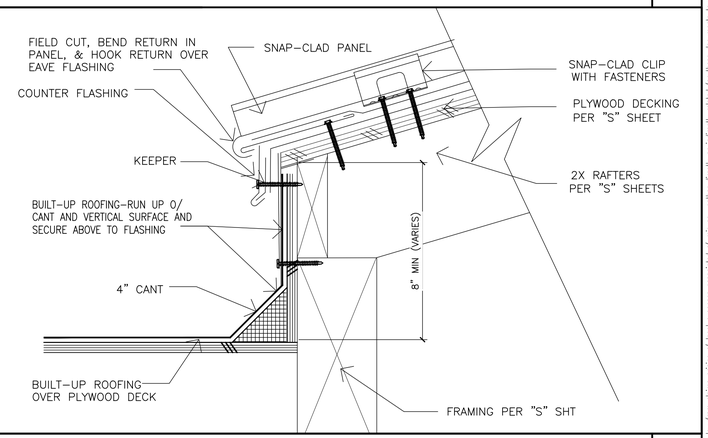
MANSARD TO ROOF WELL (WALKING DECK) — NO SCALE — 9



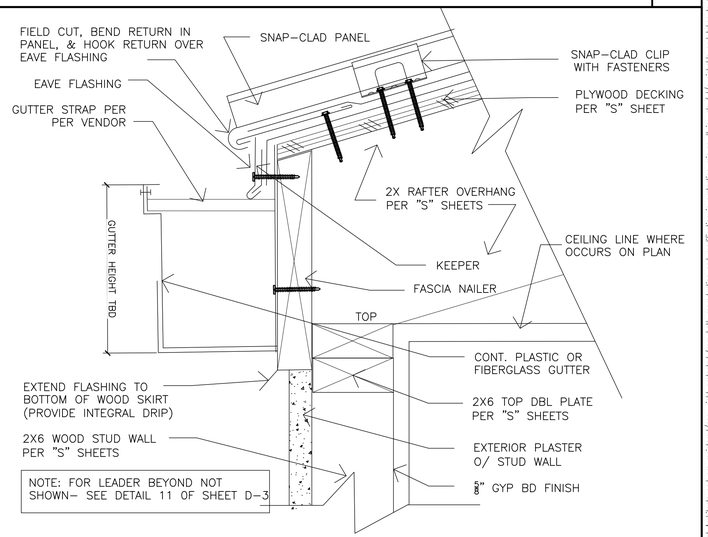
VALLEY TRANSITION — NO SCALE — 5



WALL TO METAL ROOF — NO SCALE — 6



MANSARD TO FLAT ROOF TRANSITION — NO SCALE — 2



ROOF TO GUTTER — NO SCALE — 3

ROOF DETAILS

NOTES:
1) DETAILS ARE DRAWN DIAGRAMMATIC – INSTALL PER ROOF MANUFACTURER'S REQUIREMENTS
2) REFER TO SOLAR PANEL SHOP DRAWINGS FOR ADDITIONAL INFO NOT SHOWN ON MOUNTING
3) ALL SHEET METAL INCLUDING CLOSURES, GUTTERS AND EXPOSED METAL ACCESSORIES TO MATCH METAL ROOF COLOR

Contractor shall exercise the responsibility with architect in securing latest approved drwgs. prior to actually executing work

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1 OF (REF TO INDEX) SHEETS

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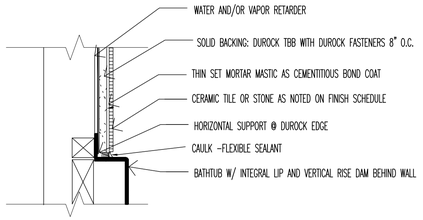
NOTES:

SHOWER FLOORS AND WALLS ABOVE SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A HEIGHT OF FULL HT OF 8' ABOVE THE FLOOR. (R307.2 CRC) CEMENT, FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT, GLASS MAT GYPSUM OR FIBER-REINFORCED GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS. (R702.4.2 CRC)



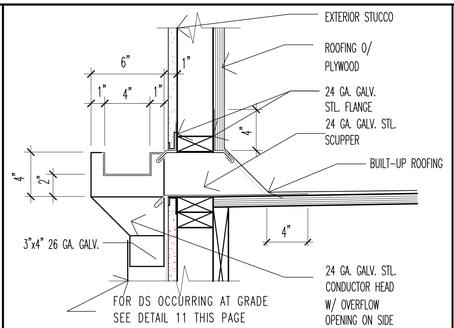
SHOWER WALL / TUB | 13

NOTE: GUTTER, DOWNSPOUT AND LEADER SHALL CONFORM TO SECTION CBC 4710.1.4, CBC 1507, CBC 1503.4, CPC 1101.11.2.1 AND SHALL DISPENSE AT GRADE TO UG PIPE PER CIVIL DRAWING

SHEET METAL CONTRACTOR IS RESPONSIBLE FOR MEANS & METHODS FOR ENTIRE INTEGRITY FOR THE DESIGN AND FABRICATION OF ENTIRE GUTTER CONSTRUCTION. PROVIDE SHOP DRAWINGS FOR METHODS OF INTERNAL SLOPED GUTTER AND TIES. DESIGN SO THAT THE TIES ARE SPACED AND SECURELY ANCHORED TO STRUCTURE TO WITHSTAND 8 LBS PER L.F. INSTALL SHEET METAL GUTTER AFTER ALL OTHER WATER PROOF BACKING HAS BEEN SEALED FOR WATER TIGHT INTEGRITY SHOULD THE GUTTER FAIL FOR LEAKS.

NOTES APPLIES TO DETAILS 7, 8 & 11 THIS PAGE

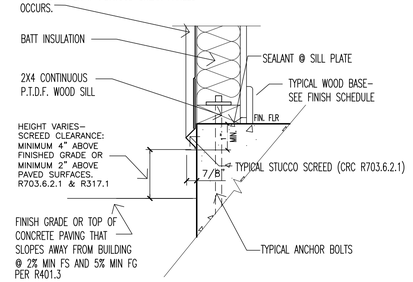
DS/SCUPPER SHT METAL NOTES | 10



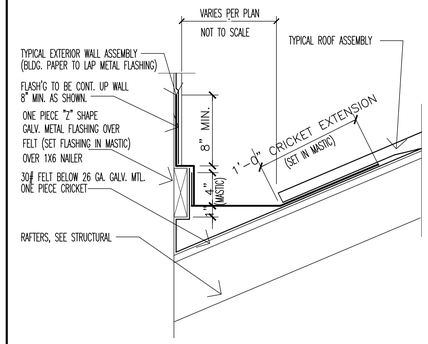
NOTE: SECONDARY (EMERGENCY OVERFLOW) IS PROVIDED AT SCUPPERS. WHERE ROOF DRAINS ARE REQUIRED, SECONDARY (EMERGENCY OVERFLOW) WHERE THE ROOF PERIMETER CONSTRUCTION EXTENDS ABOVE THE ROOF IN SUCH A MANNER THAT WATER WILL BE ENTRAPPED IF THE PRIMARY DRAINS ALLOW BUILDUP FOR ANY REASON. THE INSTALLATION AND SIZING OF SECONDARY EMERGENCY OVERFLOW DRAINS, LEADERS AND CONDUCTORS SHALL COMPLY WITH SECTIONS 1106 AND 1108, AS APPLICABLE, OF THE INTERNATIONAL PLUMBING CODE.

SCUPPER/LEADER/DOWN SPOUT | 7

TYPICAL EXTERIOR WALL ASSEMBLY: 7/8" EXTERIOR STUCCO SYSTEM O/ 2 X WOOD STUDS @ 16" O.C. W/R- 13 BATT. INSULATION AND 5/8" GYP. BOARD AT INTERIOR. PROVIDE (2) LAYERS OF #60 MIN. BUILDING PAPER IF PLYWOOD SHEAR PANELS OCCURS.



FOUNDATION SCREED | 4



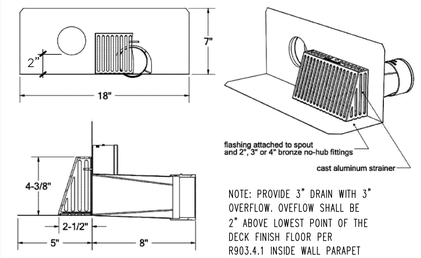
CHIMNEY SADDLE | 1

THUNDERBIRD PRODUCTS
1895 Gillespie Way, El Cajon, CA 92020
tel: (619) 448-3567
fax: (619) 448-9072 thinkos.com

THROUGH-WALL PARAPET DRAIN WITH OVERFLOW

ICC ES PMG

16 oz copper, 316 grade stainless steel, or TPO/PVC-clad stainless steel flange. Includes aluminum dome strainer. Available in 2", 3" and 4" outlet.

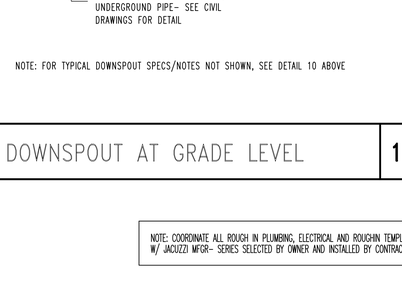


NOTE: PROVIDE 3" DRAIN WITH 3" OVERFLOW. OVEFLOW SHALL BE 2" ABOVE LOWEST POINT OF THE DECK FINISH FLOOR PER R903.4.1 INSIDE WALL PARAPET DRAIN WITH OVERFLOW BY THUNDERBIRD (800) 658-2473 (COORDINATE W/ DEX-O-TEXT MFGR WP INTERFACE)

INSTALL PER MFGR REQ'T

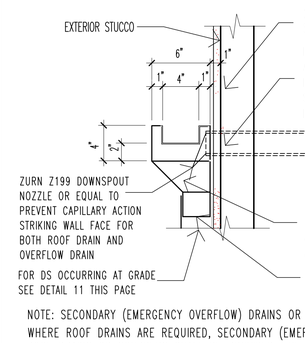
ROOF DRAIN @ LIQUIDE DECK | 14

NOTE: FOR CONDITIONS ABOVE, SEE DETAILS 7 OR 8 AS LOCATED ON DRAWINGS



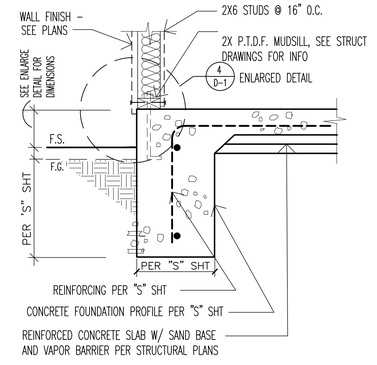
NOTE: FOR TYPICAL DOWNSPOUT SPECS/NOTES NOT SHOWN, SEE DETAIL 10 ABOVE

DOWNSPOUT AT GRADE LEVEL | 11

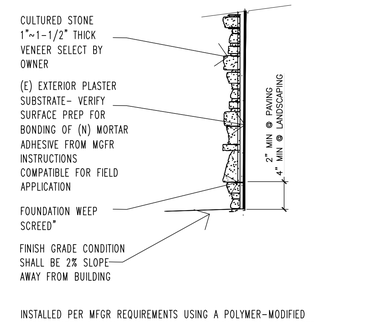


NOTE: SECONDARY (EMERGENCY OVERFLOW) DRAINS OR SCUPPERS. WHERE ROOF DRAINS ARE REQUIRED, SECONDARY (EMERGENCY OVERFLOW) ROOF DRAINS OR SCUPPERS SHALL BE PROVIDED. THE INSTALLATION AND SIZING OF SECONDARY EMERGENCY OVERFLOW DRAINS, LEADERS AND CONDUCTORS SHALL COMPLY WITH SECTIONS 1106 AND 1108, AS APPLICABLE, OF THE INTERNATIONAL PLUMBING CODE. SEE ROOF PLAN AND EXTERIOR ELEVATIONS FOR PLACEMENT OF 2 PIPES

OD & RD PIPE @ LEADER | 8

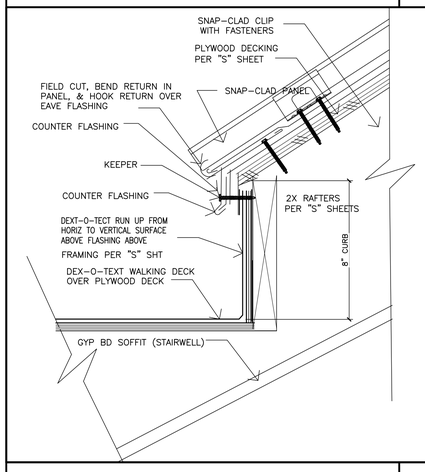


FOUNDATION EDGE | 5



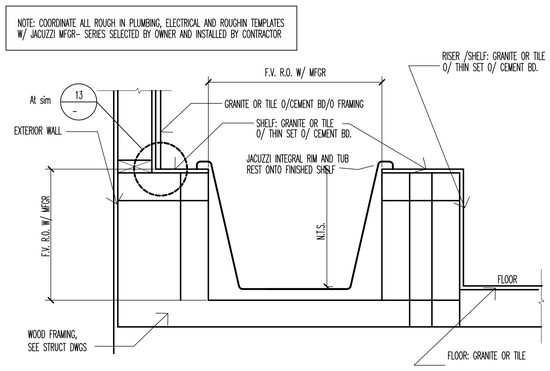
INSTALLED PER MFGR REQUIREMENTS USING A POLYMER-MODIFIED MORTAR MEETING ANSI A118.4, ANSI 118.15, ICC AC 38 FOR WATER RESISTIVE BARRIERS AND ICC ESR 2598 FOR CULTURED STONE PRODUCTS

STONE WALL VENEER | 2



CURB (DECK TO METAL ROOF) | 14

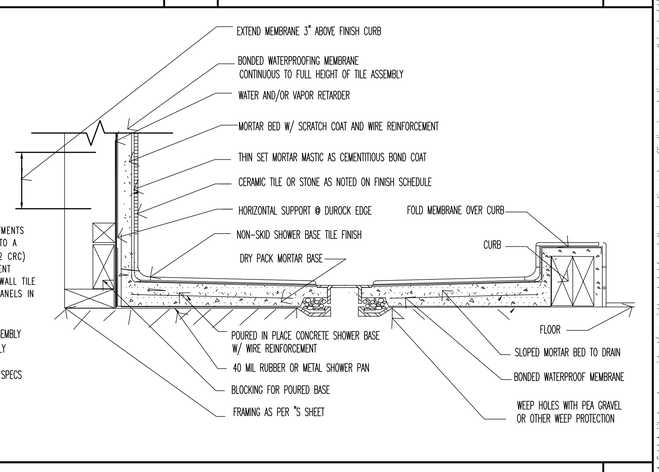
NOTE: COORDINATE ALL ROUGH IN PLUMBING, ELECTRICAL AND ROUGHIN TEMPLATES W/ JACUZZI MFGR- SERIES SELECTED BY OWNER AND INSTALLED BY CONTRACTOR



CUSTOM BATHTUB | 9

NOTES:

1. SHOWER FLOORS AND WALLS ABOVE SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A HEIGHT OF FULL HT OF 8' ABOVE THE FLOOR. (R307.2 CRC) CEMENT, FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT BACKER SUBSTRATE SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS. (R702.4.2 CRC)
2. MEMBRANE TO BE CONTINUOUS TO FULL HEIGHT OF TILE ASSEMBLY SHOWER RECEPTORS, CURBS, SEATS, ETC. MUST BE PROPERLY WATERPROOFED AND INSTALLED TO AVOID WATER DAMAGE TO ADJACENT BUILDING MATERIALS. SEE TCNA COMMON SHOWER SPECS



SHOWER STALL WALL/FLOOR | 3

MISCELLANEOUS DETAILS

NO SCALE

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REVISIONS NO.

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22386 Woodgrove Road, Lake Forest, CA 92630
PH 949-235-4847 email: freeingminds@earthlink.net
z e n a r c h i t e c t . c o m

architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)
miscellaneous details

OWNER / SITE ADDRESS:
Arman Vakili
34456 Via Gomez
Dana Point, CA 92624
949-289-1847 email: arman@acmbuilder.com

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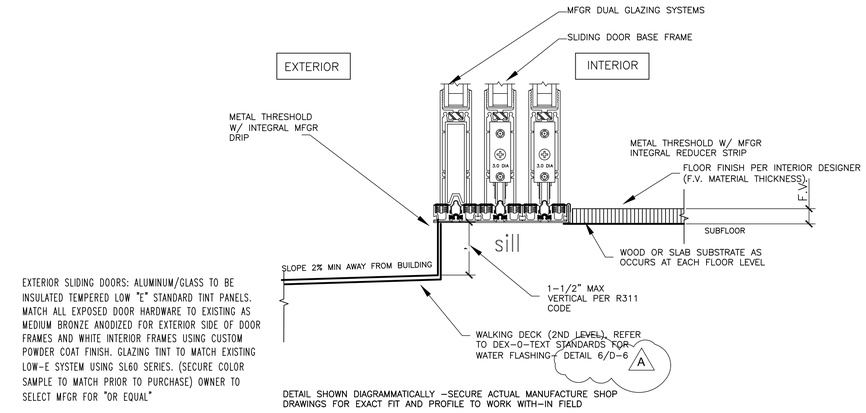
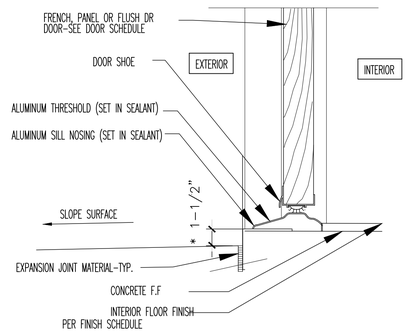
SLIDING DOORS (SILL) — 10



EXTERIOR SLIDING DOORS: ALUMINUM/GLASS TO BE INSULATED TEMPERED LOW "E" STANDARD TINT PANELS. MATCH ALL EXPOSED DOOR HARDWARE TO EXISTING AS MEDIUM BRONZE ANODIZED FOR EXTERIOR SIDE OF DOOR FRAMES AND WHITE INTERIOR FRAMES USING CUSTOM POWDER COAT FINISH. GLAZING TINT TO MATCH EXISTING LOW-E SYSTEM USING SL60 SERIES. (SECURE COLOR SAMPLE TO MATCH PRIOR TO PURCHASE) OWNER TO SELECT MFGR FOR "OR EQUAL"

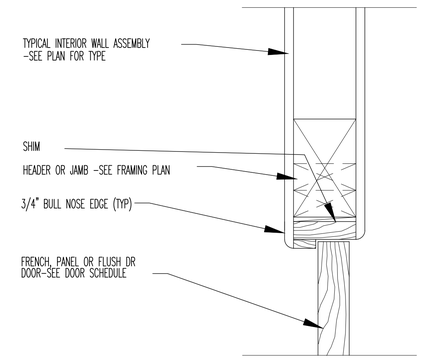
DETAIL SHOWN DIAGRAMMATICALLY -SECURE ACTUAL MANUFACTURE SHOP DRAWINGS FOR EXACT FIT AND PROFILE TO WORK WITH-IN FIELD

DOOR SILL (EXTERIOR) — 7

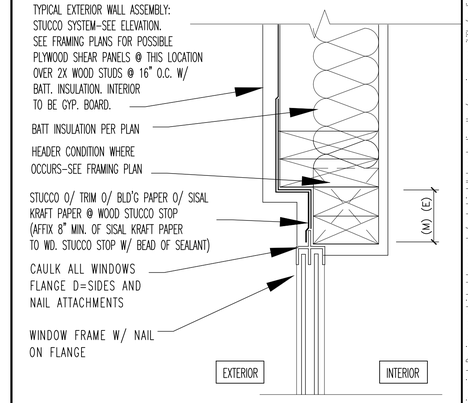


* NOTE: OUTSWINGING DOORS THAY SWING OVER LANDINGS SHALL NOT EXCEED 1/2" OVER THRESHOLD PER CODE SECTION CBC 1008.1.4 AND 1008.1.6

INTERIOR DOOR HEAD/JAMB — 4

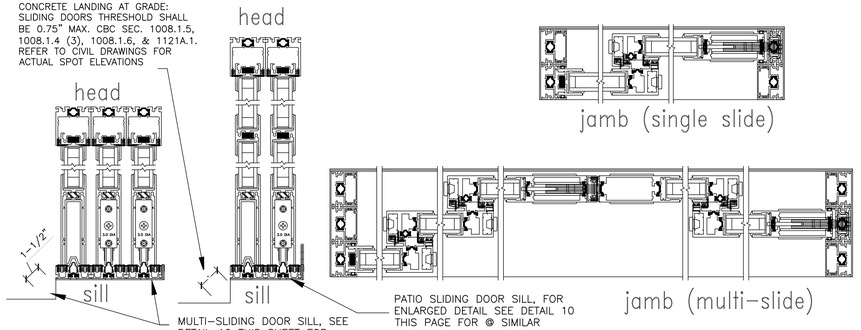


STD WINDOW JAMB (HEAD SIM) — 1



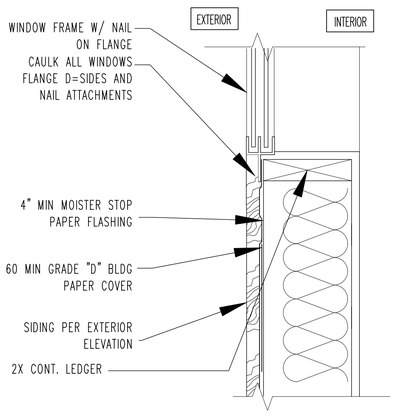
MULTI-SLIDE DOOR (SLIDING PATIO DOOR SIMILAR) — 11

CONCRETE LANDING AT GRADE: SLIDING DOORS THRESHOLD SHALL BE 0.75" MAX. CBC SEC. 1008.1.5, 1008.1.4 (3), 1008.1.6, & 1121A.1. REFER TO CIVIL DRAWINGS FOR ACTUAL SPOT ELEVATIONS

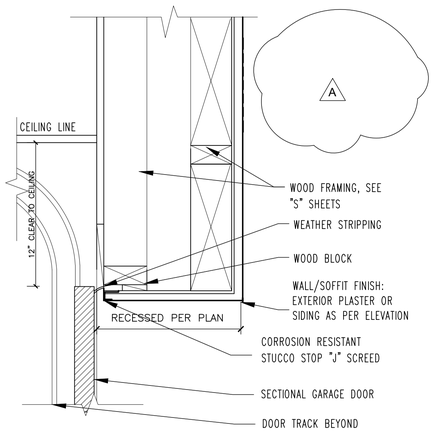


DETAIL SHOWN DIAGRAMMATICALLY -SECURE ACTUAL MANUFACTURE SHOP DRAWINGS FOR EXACT FIT AND PROFILE TO WORK WITH-IN FIELD FOR JAMBS, SILL AND HEAD CONDITIONS NOT SHOWN ON DRAWINGS

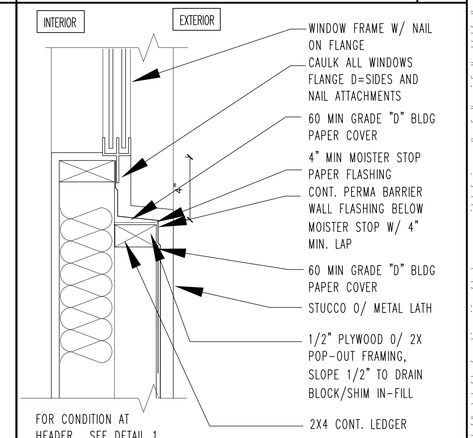
WINDOW JAMB/HEAD (SIDING) — 8



GARAGE DOOR HEAD — 5



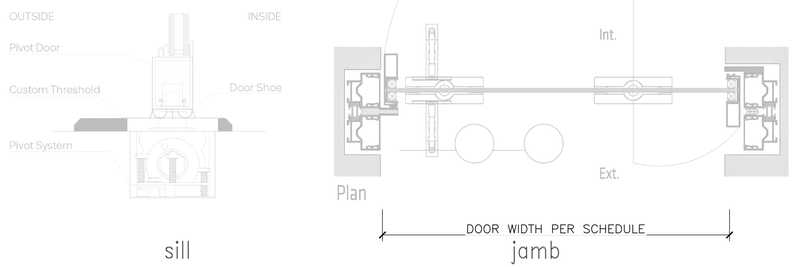
STD WINDOW SILL — 2



PIVOT DOOR JAMBS (HEAD SIMILAR) — 12

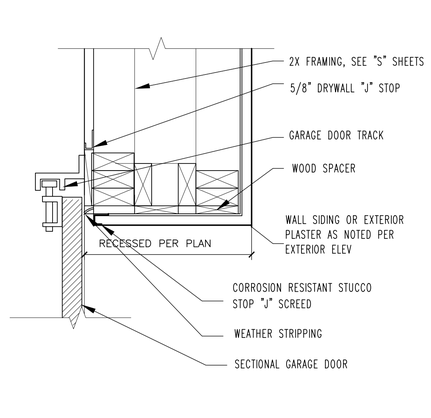
PIVOT DOORS' HINGES ARE MOUNTED ON THE TOP AND BOTTOM SIDE OF THE DOOR RATHER THE SIDE TO HAVE THE DOOR ROTATE ON A VERTICAL AXIS (OFFSET FROM 5 TO 7" FROM JAMB) TO CREATE THE PIVOT DOOR'S TAIL AS SHOWN PER DETAIL.

DETAIL SHOWN DIAGRAMMATICALLY. SECURE SHOP DRAWINGS FROM DOOR MFGR FOR EXACT PLACEMENT LOCATIONS OF HARDWARE FOR BOTH OVERHEAD AND FLOOR SLAB DEPRESSION BLOCK-OUT PROVISIONS.

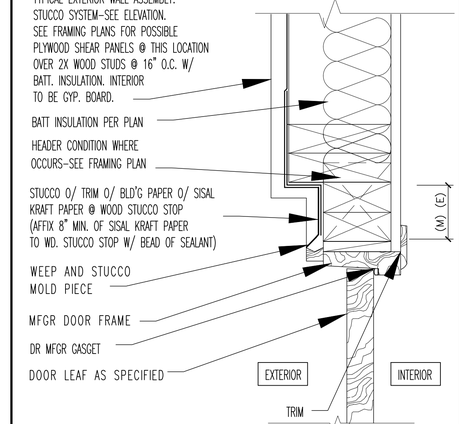


STD WINDOW SILL (SIDING) — 9

GARAGE DOOR JAMB — 6



STD DOOR HEAD (JAMB SIM) — 3



MISCELLANEOUS DETAILS

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zenarchitect.com

architect

VAKILI DEVELOPMENT
New Residential Construction
34456 Via Gomez
Building "B" (lot 31)

door/window details

OWNER / SITE ADDRESS:
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REGISTERED PROFESSIONAL ARCHITECT JOHN A. SALAT NO. C-24445 EXP 10-29-25 STATE OF CALIFORNIA

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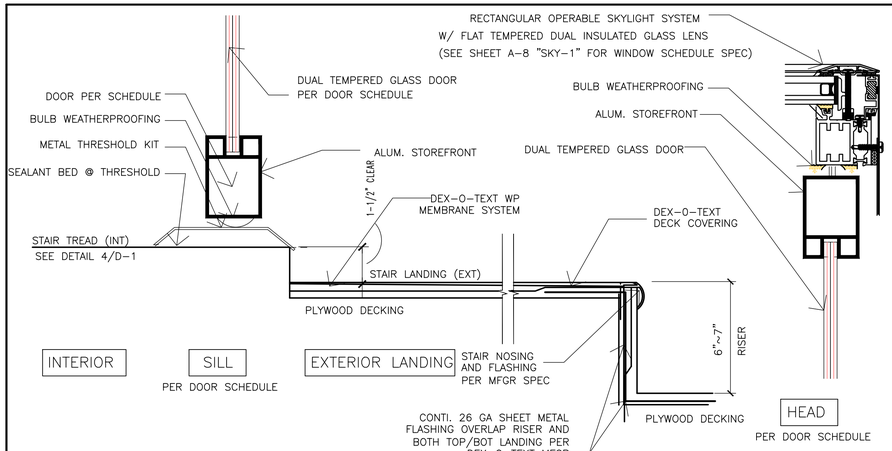
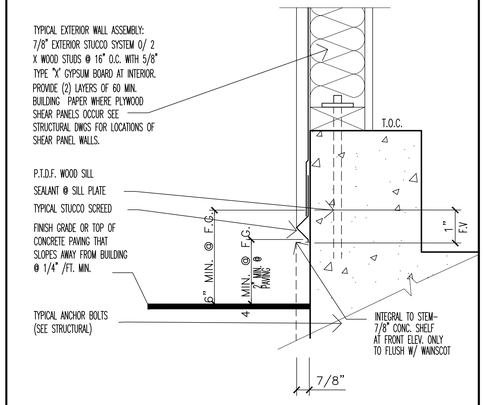
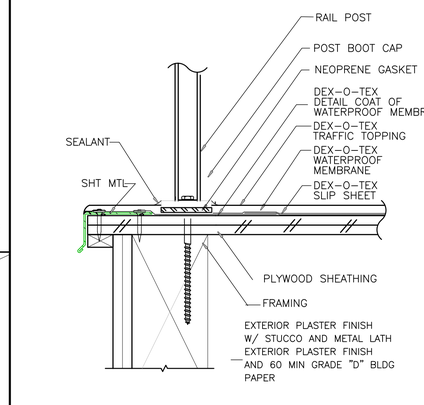


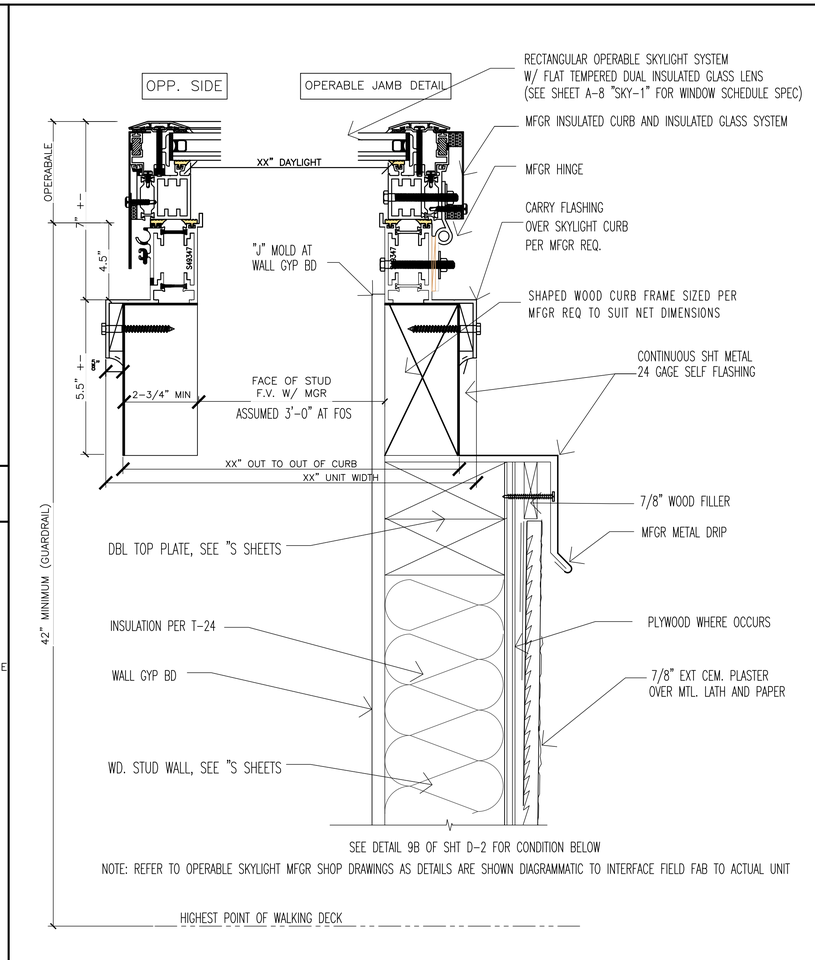
DOOR DETAIL AT SKYLIGHT LID TRANSITION | 4



RAISED CURB AT GARAGE | 7

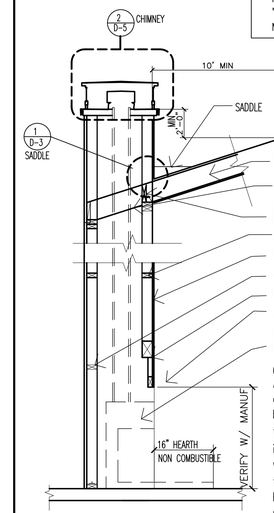


DECK EDGE | 5



OPERABLE SKYLIGHT HATCH DETAIL | 3

NOTE: FRAMING IS SHOWN DIAGRAMMATIC- SEE "S" SHEETS FRAMING PLAN FOR CONNECTIONS NOT SHOWN



FIRE PLACE WALL SECTION

DIRECT VENT GAS APPLIANCE FIREPLACE: a. Direct vent sealed-combustion gas appliance fireplace must comply with the Cal Green code requirements and must comply with ANSI Z21.50. (Cal Green 4.503.1)

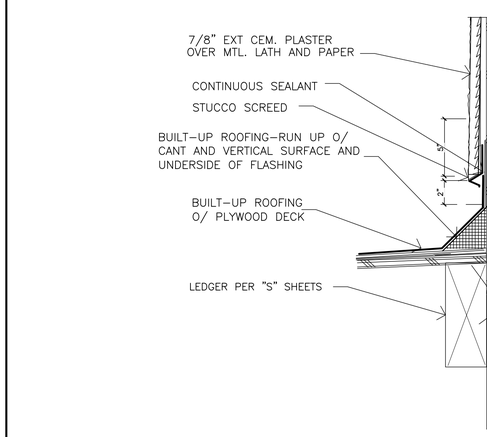
(N) PREFAB GAS FIREPLACE NAPOLEON VECTOR 50 LV50N-2 SERIES W/ PREFAB METAL FIRE BOX. OR "APPROVED EQUAL" CONNECT TO (N) METAL FLUE OVERHEAD SYSTEM PER MFGR REQUIREMENTS AND CODE R1003. DIRECT VENT INSET GAS FIREPLACE W/ ACCESSORY OPTIONS PER DESIGNERS SPECS (949) 650-2640 FOR LOCAL REP FOR ROUGH-IN INSTALLATION SPECS
Type: Direct Vent
Style: Contemporary
Fuel Type: Propane | Natural Gas
Certification: CSA | ANSI Z21.50
Unit Overall Dim: H:41.19" x W:65.31" x D:19.89"
Fire Viewing Are: 52.75" x 18.625"
Maximum Heat Output: 36,000 BTU

Fireplace lab test performed by Intertek #G102876742. Installed per National Fuel Gas Code, ANSI Z223.1 / NFPA 54 & ANSI / NFPA 70 National Electric Code

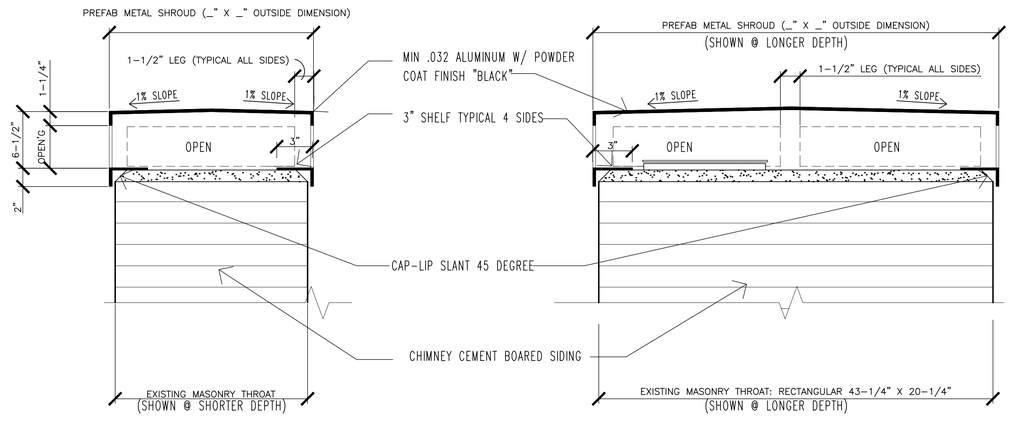
GENERAL NOTES:
All fireplaces: a. Factory-built fireplaces, chimneys and all of their components shall be listed and installed in accordance with their listing and manufacturer's installation instructions. (CRC R1004.1) b. Factory built wood burning fireplaces shall be qualified at the U.S. EPA's Voluntary Fireplace Program Phase 2 emissions level. c. Decorative shrouds shall not be installed at the termination of factory-built chimneys except where such shrouds are listed and labeled for use with the specific factory-built chimney system and are installed in accordance with manufacturer's installation instructions. (CRC R1005.2 & CMC 802.5.2.4) d. Horizontal openings are not allowed, for exhaust vents, in walls closer than 3 feet to a property line. (Tables R302.1(1)&(2)). Horizontal vent caps shall be 2 feet clear from property lines. e. Exhaust openings shall not be directed onto walkways. (R303.5.2)

SOLID FUEL BURNING FIREPLACE: a. Provide a permanently anchored gaseous fuel burning pan to the firebox of a solid fuel burning fireplace. b. Solid fuel burning fireplace must comply with the California Energy Standards mandatory measures. c. Chimney shall extend at least 2 ft. higher than any portion of the building within 10 ft., but shall not be less than 3 ft. above the highest point where the chimney passes through the roof. (CRC R1003.9) d. Liquid fueled or wood burning fireplaces are not allowed.

FIRE PLACE | 1



ROOF TO PLASTER WALL | 6



1) ALL FASTENERS TO BE NON-CORROSIVE STAINLESS STEEL
2) PREPARE ENTIRE SHROUD ALUM SURFACES WITH COARSE/THEN FINE-GRIT SANDPAPER. LET DRY,THEN SAND AGAIN.(CLEAN SURFACE AGAIN) APPLY POWDER COAT PAINT PER PAINT MFGR
3) FOR CHIMNEY CAP ARRESTER/SCREEN/CAP NOPT SHOWN, SHALL BE APPROVED BY FIREPLACE MFGR. AND INSTALL PER FIREPLACE MFGR INSTRUCTIONS.
4) PROVIDE UL LISTED SPACER BRACKETS W/ 1" AIRSPACE ALL AROUND- LOCATE SPACER BETWEEN WOOD AND CAP FLASHING
5) REFER TOO DETAIL 2 THIS PAGE FOR ADDITIONAL CODES, NOTES, SPECS & DETAIL NOT SHOWN

CUSTOM METAL CHIMNEY CAP (SHROUD) DETAILS | 2

MISCELLANEOUS DETAILS NO SCALE

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z e n a r c h i t e c t . c o m

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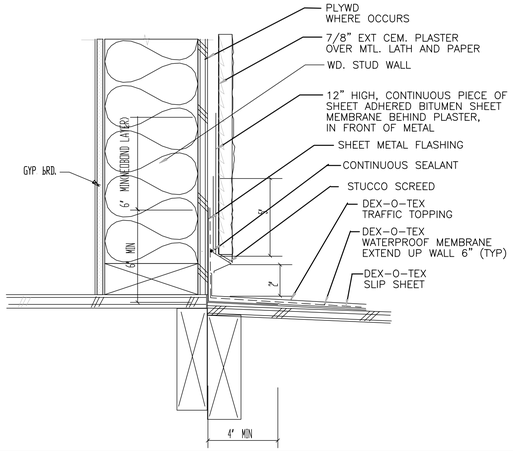
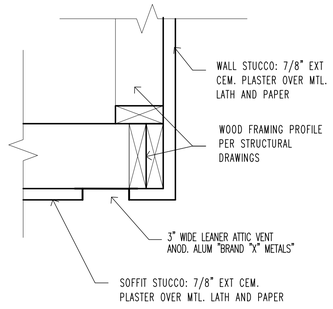
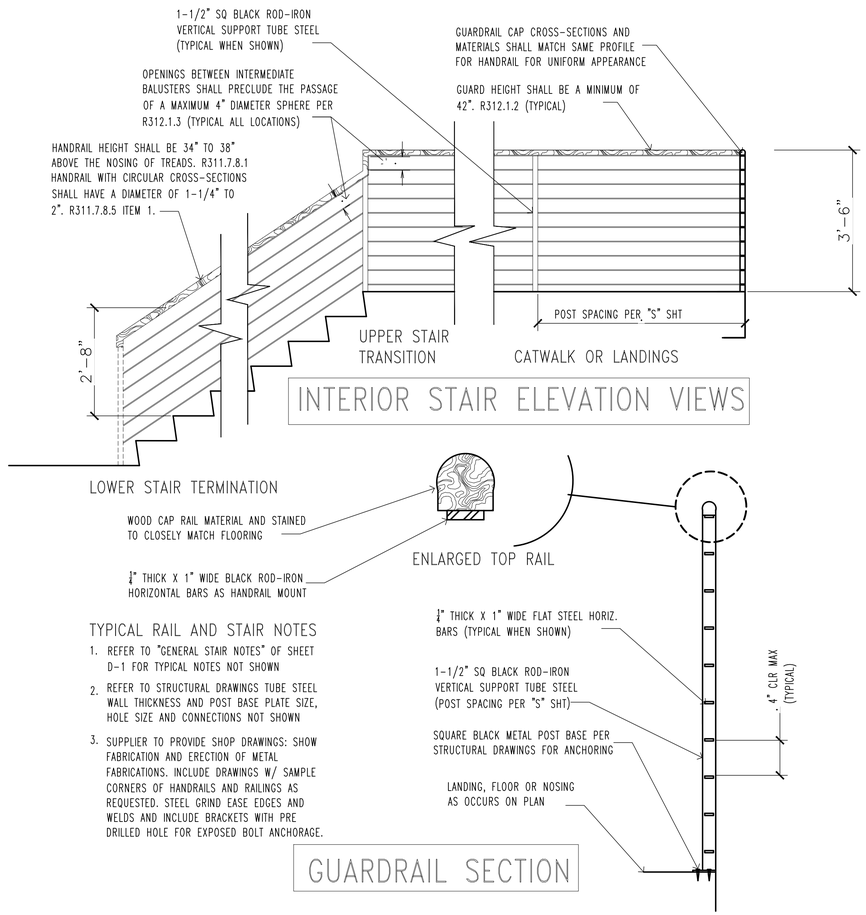


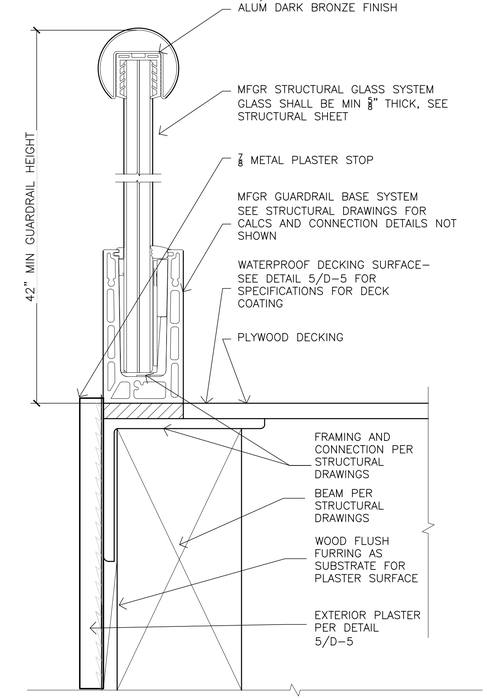
DECK TO WALL 2 PIECE FLASHING DETAIL — 6



SOFFIT LINEAR ATTIC VENT — 7



STAIR RAILING AND GUARDRAIL — 3



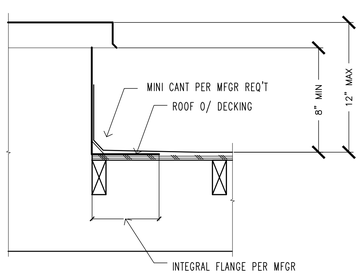
TAPER-LOC®XA BY C.R. LAURENCE MANUFACTURING.
PH (800) 421-6144

END VIEW OF GLASS PANEL WITH 'XA' TAPER SETS INSTALLED IN OUR B5S ALUMINUM BASE SHOE FOR 1/2" (12MM) GLASS. THE GLASS HAS SETTING STRIPS ADHERED TO BOTH LOWER EDGES, AND RESTS ON THE SETTING BASE INSTALLED WITHIN THE BASE SHOE. ROLL-IN TOP GASKET COMPLETES THE INSTALLATION AFTER THE TAPER SETS HAVE BEEN TIGHTENED TO LOCK THE PANEL IN PLACE.

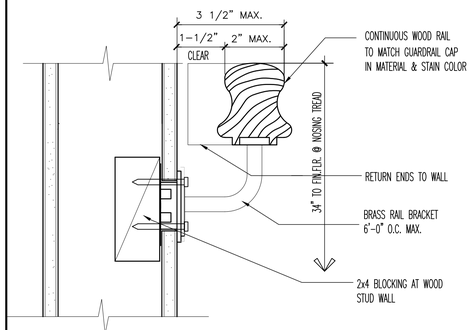
REFER TO STRUCTURAL DRAWINGS AND MFGR SHOP DRAWINGS FOR ADDITIONAL, INMFORMATION NOT SHOWN

DECK GUARDRAIL — 1

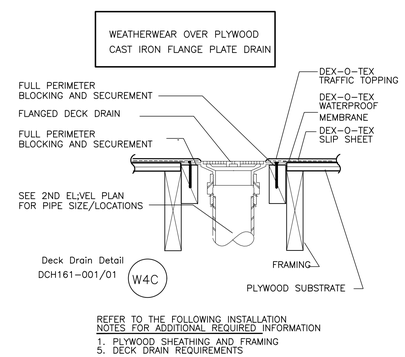
12" ROUND SHAFT PREFAB ALUM ROOF VENT: MODEL KV-12 KEEPA ROOF JACK (WHITE FACTORY FINISH W/ INSECT SCREEN FOR VENTALATION COMPLETYE WITH VENT CAP AND COUNTER BASE FLASH. FEILD VERFY HEIGHTS AS MODIFY SHAFT HEIGHT AS SHOWN NCE
NET FREE AIR SPACE, 50 SQ. IN. (0.35 SQ. FT.)
PITCH CAPACITY: 0/12 TO 2/12
1/8TH IN. OPENING BETWEEN THE LOUVER BLADES AND ALL ALUMINUM (NON-COMBUSTIBLE) MATERIAL MEETS THE REQUIREMENTS OF CALIFORNIA BUILDING CODE 706A.2 VENTS TO RESIST THE INTRUSION OF BURNING EMBERS AND FLAME THROUGH VENTILATION OPENINGS



FLAT ROOF ATTIC VENT — 8

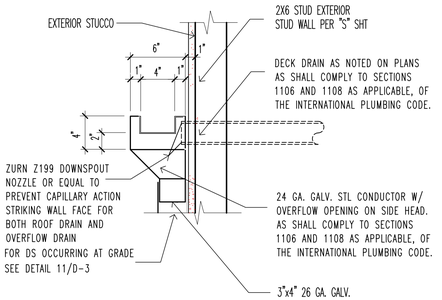


WALL BRACKET HANDRAIL — 5



REFER TO THE FOLLOWING INSTALLATION NOTES FOR ADDITIONAL REQUIRED INFORMATION
1. PLYWOOD SHEATHING AND FRAMING
5. DECK DRAIN REQUIREMENTS

PATIO DECK DRAIN — 4



NOTE: SECONDARY (EMERGENCY OVERFLOW) DRAIN/SCUPPER IS NOT REQUIRED AS THE PATIO DECK IS DESIGN TO SHEET FLOW AT EXTERIOR PERIMETER DECK EDGE AS LOW POINT SHALL NOT EXCEED 2". SEE 2ND LEVEL DECK PLAN PLUS EXTERIOR ELEVATIONS FOR WATER SHEET FLOW DIRECTIONS AND OUTLETS

SCUPPER @ 2ND LEVEL DECK — 2

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1 OF (REF TO INDEX) SHEETS

ELECTRICAL GENERAL NOTES

1. SHOULD A CONFLICT OCCUR BETWEEN OR WITH THE SPECIFICATIONS AND/OR DRAWINGS, CODES, STANDARDS, REQUIREMENTS, MANUFACTURER'S INSTRUCTIONS, OR RECOMMENDATIONS, THE MORE STRINGENT AND/OR RESTRICTIVE CONDITION SHALL HAVE PRECEDENCE, AS DETERMINED BY THE CONTRACTING OFFICER.

2. THE DRAWINGS REPRESENT THE FINISHED PROJECT UNLESS OTHERWISE NOTED , THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND SEQUENCES.

3. ALL DIMENSIONS, EXISTING JOB SITE CONDITIONS, AND SERVICE REQUIREMENTS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.

4. CONTRACTOR SHALL COORDINATE WORK BETWEEN ALL TRADES AND WORKMEN TO CLOSE , PATCH , AND REPAIR ALL HOLES WHERE ITEMS ARE REMOVED AND PROVIDED OPENINGS AS NECESSARY FOR NEW WORK.

5. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH CALIFORNIA LOCAL CODES APPLYING TO THE PROPOSED CONSTRUCTION. IN THE EVENT OF CONFLICT BETWEEN THE ABOVE AND THESE PLANS AND SPECIFICATIONS, THE MOST RESTRICTIVE SHALL GOVERN.

6. CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO SERVICE BY THE UTILITIES AND SHALL INCLUDE THE COST OF ALL WORK BY OR FOR THEM IN HIS BID.

7. ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM, EXCEPT THAT THE PROVISIONS FOR OWNER–SUPPLIED EQUIPMENT SHALL ONLY BE COMPLETED TO THE POINT INDICATED ELSEWHERE ON THE DRAWINGS.

8. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONFORMITY TO ALL LOCAL CODES AND ORDINANCES, THE STATE OF CALIFORNIA ELECTRICAL SAFETY ORDERS, THE N.E.C. AND ANY ADDITIONAL JURISDICTION RELATING TO THE WORK.

9. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS AND/OR SPECIFICATIONS OR WITH CODE REQUIREMENTS, THE NOTES, SPECIFICATIONS, OR CODES WHICH ESTABLISH AND PRESCRIBE THE MORE COMPLETE OR THE HIGHER STANDARD SHALL PREVAIL.

10. EXACT ROUTING OF ALL CONDUITS WITHIN THE EXISTING BUILDING SHALL BE DETERMINED BY THE CONTRACTOR . ANY COST REQUIRED TO ROUTE CONDUITS DIFFERENTLY THAN IS SHOWN ON THESE DRAWINGS SHALL BE INCURRED BY THE ELECTRICAL CONTRACTOR.

11. 11.ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE NEW. IN THEIR ORIGINAL UNBROKEN PACKAGES BEARING APPROVAL BY U.L., NEMA, NBFU,OR OTHER APPROPRIATE AGENCY , AND INSTALLED PER THEIR GUIDELINES.

12. CONTRACTOR SHALL PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM MEETING THE INTENT OF THESE PLANS AND SPECIFICATIONS. ALL SYSTEMS SHALL BE IN FOR INSPECTION.

13. ELECTRICAL CONTRACTOR SHALL MAINTAIN GROUND CONTINUITY TO EVERY OUTLET PER C.E.C 2022 TABLE 250–112.

14. ALL WIRES AND CABLES SHALL BE COPPER , 600 VOLT , #12 AWG MINIMUM.EXCEPT CONTROL WIRING WHICH SHALL BE #18 THWN. TYPE OF INSULATION AS NOTED ON DRAWINGS AND AS FOLLOWS:
    - THHN/THWN INSULATION FOR #4 AWG AND SMALLER.
    - THW OR THHN/THWN INSULATION FOR #2 AWG AND LARGER.
    - THW USED FOR ALL PANEL FEEDERS AND SERVICE CONDUCTORS.
    - THHN INSULATION TYPE SHALL BE USED WHERE CONDUCTORS ARE INSTALLED IN CONDUITS EXPOSED TO THE WEATHER.

15. ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED FOR SEISMIC LOADING TO RESIST A HORIZONTAL FORCE ACTION IN ANY DIRECTION USING THE FOLLOWING CRITERIA:
    a. FIXED EQUIPMENT ON GRADE 33% OF OPERATING WEIGHT
    b. FIXED EQUIPMENT ON STRUCTURE 50% OF OPERATING WEIGHT
    c. FOR FLEXIBILITY MOUNTED EQUIPMENT, USE 2 TIMES THE ABOVE VALUES.
    d. SIMULTANEOUS VERTICAL FORCE USE 1/3 TIMES HORIZONTAL FORCE. THIS CRITERIA APPLIES TO EQUIPMENT ON THE FLOOR , WALL , OR ROOF WITH AN OPERATING WEIGHT OF LESS THAN 1,000 LB.

16. CONTRACTOR IS RESPONSIBLE FOR ALL CORING, CUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY PENETRATION, ALL OPENINGS MADE SHALL BE SEALED TO MEET THE FIRE RATING AND STRUCTURAL INTEGRITY OF THE PARTICULAR WALL, FLOOR, OR CEILING.

17. ALL ELECTRICAL FIXTURE AND EQUIPMENT SHALL BE GROUNDED, ALL CONVENIENCE RECEPTACLES SHALL BE GROUNDING TYPE.

18. ELECTRICAL CONTRACTOR SHALL FURNISH TEMPORARY CONSTRUCTION POWER WHERE REQUIRED.

19. ALL THE ELECTRICAL LINES SHOULD BE CONCEALED WITHIN THE BUILDING STRUCTURE TO AS GREAT EXTENT AS POSSIBLE.

20. ELECTRICAL RECEPTACLES OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES TO BE LOCATED:
    a. NO MORE THAN 48", MEASURED FROM TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING AND;
    b. NO LESS THAN 15', MEASURED FROM BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING, TO THE LEVEL OF THE FINISHED FLOOR OR WORKING PLATFORM.

21. ALL WORK TO COMPLY WITH 2022 CALIFORNIA ELECTRICAL CODE AND 2022 CALIFORNIA ENERGY CODE.

22. PROVIDE SWITCH & RECEPTACLE HEIGHTS PER STATE OF CALIFORNIA ACCESSIBLE REQUIREMENTS.

23. THE ISSUANCE OF PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ERRORS ON THESE PLANS OR FROM PREVENTING ANY VIOLATION OF CODES ADOPTED BY THE CITY,RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.

24. FOR RATED WALLS/CEILINGS PENETRATIONS AND/OR MEMBRANE PENETRATIONS, COMPLETE NRTL CLASSIFICATION SHEETS SHALL BE PROVIDED TO THE INSPECTOR AT THE TIME OF INSPECTION.

25. GIVE THE POWER COMPANY WRITTEN NOTICE OF THE EXTENT AND NATURE OF ANY MATERIAL CHANGES IN THE SIZE, CHARACTER, OR EXTENT OF THE UTILIZING EQUIPMENT OR OPERATIONS FOR WHICH POWER COMPANY IS SUPPLYING ELECTRIC SERVICE BEFORE MAKING ANY SUCH CHANGE.

26. THE UNGROUNDED AND GROUNDED CONDUCTORS OF EACH MULT–IWIRE BRANCH CIRCUIT SHALL BE GROUNDED BY WIRE TIES OR SIMILAR MEANS IN AT LEAST ONE LOCATION WITHIN THE PANEL–BOARD OR OTHER POINT OF ORIGINATION (210.4(D)).

27. EACH MULTI–WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES.(210.4)

28. PROVIDE SEPARATE SUBMITTAL, OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND APPROVALS FOR ALL FIRE ALARM SYSTEM INSTALLATIONS AND/OR MODIFICATIONS.

29. PROVIDE SEPARATE SUBMITTAL FOR ALL ELECTRICAL SUBSYSTEMS WITH POWER SUPPLY(S) OF MORE THAN 50VA AND/OR 24V (E.G., SECURITY ,CARD READERS, TELCO/DATA,PA,AUDIO/VISUAL,NURSE CALL,HVAC AND REFRIGERATION CONTROLS, ETC.).

30. ALL INSTALLED MATERIALS AND EQUIPMENT SHALL BE LISTED U.L.,NRTL OR LISTED AND APPROVED BY AN APPROVED LISTED LABORATORY..

CODE INFORMATION:

THE CONTRACTOR SHALL CONFORM TO ALL CODES, ORDINANCES, ETC. WHICH HAVE JURISDICTION OVER THIS WORK. BELOW IS A LIST OF MAJOR STANDARDS LISTED FOR CONVENIENCE ONLY. REFERENCE TO A STANDARD MEANS, THE LATEST EDITION OF SUCH STANDARD AT DATE OF BUILDING PERMIT. THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR COMPLIANCE WITH LATEST REVISIONS OF ALL OTHER APPLICABLE CODES AND ORDINANCES NOT LISTED HEREIN .

CALIFORNIA BUILDING CODE (CBC) 2022
CALIFORNIA MECHANICAL CODE (CMC) 2022
CALIFORNIA PLUMBING CODE (CPC) 2022
CALIFORNIA ELECTRICAL CODE (CEC) 2022
CALIFORNIA ENERGY CODE (TITLE 24, PART 6) 2022

ELECTRICAL SPECIFICATIONS

PART –I GENERAL:

1. 1.1 ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA ELECTRICAL CODE (CEC 2022), THE NATIONAL ELECTRICAL CODE NEC 2017 AND CURRENT CITY ORDINANCES.
2. 1.2 ELECTRICAL EQUIPMENT, MATERIALS AND APPURTENANCES SHALL BE BRACED IN ACCORDANCE WITH CBC 2022 FOR SEISMIC CODES.

PART –II PRODUCTS:

1. EQUIPMENT AND MATERIALS SHALL BE NEW AND FREE FROM DEFECTS. ALL EQUIPMENT OF THE SAME OR SIMILAR TYPE SHALL BE THE SAME MANUFACTURER THROUGHOUT THE WORK. STANDARD PRODUCTION MATERIALS SHALL BE USED WHEREVER POSSIBLE.
2. CONDUIT SHALL BE PROVIDED FOR ALL WIRING INCLUDING POWER, CONTROL , GROUNDING , LIGHTING,RECEPTACLES AND SIMILAR SYSTEMS.
3. RACEWAYS: EXPOSED CONDUIT SUBJECT TO DAMAGE SHALL BE THREADED, GALVANIZED,RIGID STEEL CONDUIT, MINIMUM SIZE BE 3/4" BUSHING SHALL BE GALVANIZED , MALLEABLE IRON WITH INSULATED COLLARS. GROUNDING BUSHING SHALL BE LOCKED TYPE WITH THROUGH COMPRESSION LUG.
4. LIQUID TIGHT , FLEXIBLE STEEL CONDUIT SHALL BE PROVIDED FOR ALL DAMP OR WET LOCATIONS.
5. EMBEDDED OR ENCASED CONDUIT SHALL BE SCHEDULE 40 , HIGH IMPACT , POLYVINYL CHLORIDE(PVC). FITTING FOR PVC CONDUIT SHALL BE SOLVENT WELDED TYPE.
6. JUNCTION AND PULL BOXES FOR USE IN OUTDOOR AREAS SHALL BE CAST TYPE . NEMA 3R RATED WITH INTEGRALLY CAST THREADED HUBS FOR CONDUIT ENTRY. CONDUIT BODIES SHALL FERROUS ALLOY TYPE WITH SCREW FOR FASTENING COVERS.GASKETS SHALL BE MADE OF NEOPRENE.
7. INDIVIDUAL CONDUIT SUPPORTS SHALL BE TWO–HOLE GALVANIZED STEEL STRAPS. PLUMBERS TYPE IS NOT ACCEPTABLE.
8. CONDUCTORS,WIRES & CABLES SHALL BE PROVIDED FOR POWER CONTROL, LIGHTING, RECEPTACLES, INTRUMENTATION,GROUNDING AND SIGNAL CIRCUITS. THE QUANTITY AND SIZE OF CONDUCTORS SHALL BE AS SPECIFIED. CONDUCTORS FOR LIGHTING AND RECEPTACLE CIRCUITS SHALL BE SIGNAL CONDUCTOR, ANNEALED COPPER WITH 600–VOLT THWN/THHN PVC INSULATION.
9. GROUNDING CONDUCTORS SHALL BE CONCENTRIC STRANDED,ANNEALED BARE COPPER.
10. RECEPTACLES.PLUGS,SWITCHES AND APPURTENANCES SHALL BE PROVIDED AS SPECIFIED ON THE DRAWINGS.
11. LIGHT SWITCHES SHALL BE 20 AMP,ROCKER TYPE,LEVITON, OR EQUAL.
12. GROUND RODS SHALL BE COPPER–COVERED STEEL 3/4" DIAMETER,10' LONG.
13. CIRCUIT BREAKERS SHALL MOLDED–CASE TYPE RATED FOR THE CURRENT RATINGS AND POLE CONFIGURATIONS SPECIFIED ON THE PANEL BOARD SCHEDULE.

PART –III INSTALLATION:

1. NAMEPLATES SHALL BE MADE FROM LAMINATED PHENOL PLASTIC SHALL 3/4" HIGH BY 2" LONG.NAMEPLATES SHALL HAVE BLACK BACKGROUNDS WITH 3/16" WHITE LETTERS AND SHALL BE FASTENED USING SELF–TAPPING STAINLESS STEEL SCREWS.THE USE OF ADHESIVES WILL NOT BE PERMITTED ON THE OUTSIDE OF ENCLOSURE.
2. UNLESS OTHERWISE DETAILED OR DIMENSIONED , ELECTRICAL LAYOUT DRAWINGS ARE DIAGRAMATIC. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ELECTRICAL MATERIAL AND EQUIPMENT WITH THE WORK SWITCHES , OUTLETS & FIXTURE LOCATIONS SHALL BE CONFIRMED WITH ARCHITECT PRIOR TO INSTALLATION.
3. THE CONTRACTOR SHALL LIMIT NUMBER OR DIRECTIONAL CHANGES OF CONDUIT FOR A TOTAL OF NOT MORE THAN 270 DEGREES IN ANY RUN BETWEEN PULL BOXES. CONDUIT RUNS SHALL BE LIMITED TO 400' FOR EACH 90 DEGREES CHANGE IN DIRECTION.
4. SINGLE CONDUITS SHALL BE SEPARATED FROM AC POWER AND CONTROL CONDUITS. THE MINIMUM SEPARATION SHALL BE 12" FOR RIGID STEEL AND 24" FOR PVC CONDUITS.
5. EXPOSED CONDUIT SHALL RUN PARALLEL AND PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS. NO CONDUIT SHALL APPROACH CLOSER THAN 6" TO ANY OBJECT OPERATING ABOVE 80 DEGRESS C.
6. LIQUID–TIGHT, FLEXIBLE STEEL CONDUIT SHALL BE USED FOR THE FINAL CONNECTION TO EQUIPMENT,DEVICES AND INSTRUMENTS WHERE FLEXIBILITY IS REQUIRED.
7. LIGHTS AND RECEPTACLE CIRCUITS SHALL NOT BE IN CONDUIT WITH THE LOW VOLTAGE OR SIGNAL/DATA CIRCUITS.
8. CONDUITS,WIRING OR MOUNTING OF DEVICES NOT SHOWN ON THE ELECTRICAL OR INSTRUMENTATION DRAWINGS BUT REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM SHALL BE PROVIDED.
9. UNLESS OTHERWISE SPECIFIED,SWITCHES SHALL BE MOUNTED 48" ABOVE FINISH FLOOR,RECEPTACLES SHALL BE MOUNTED 15" ABOVE FINISHED FLOOR.
10. ELECTRICAL EQUIPMENT AND ENCLOSURES, METAL SURFACES OF EQUIPMENT,AND METAL STRUCTURAL MEMBERS SHALL BE GROUNDED. GROUNDING SYSTEMS SHALL BE PROVIDED IN COMPLIANCE WITH THE CEC AND AS SPECIFIED ON THE DRAWINGS.
11. GROUNDING CONDUCTORS SHALL BE A SUFFICIENT LENGTH TO REACH THE FINAL CONNECTION POINT WITHOUT SPLICING.
12. A SEPARATE GROUND SHALL BE RUN IN EACH POWER CONDUIT. THE CONDUCTOR SHALL BE SIZED IN ACCORDING WITH CEC TABLE 250–95. THE CONDUCTOR SHALL BE BOUNDED TO THE INSIDE OF THE DEVICE JUNCTION BOX.
13. THE LOCATION AND TYPE OF FIXTURES AND RECEPTACLES ARE SHOWN ON THE DRAWINGS. RACEWAYS AND WIRE SHALL BE PROVIDED FROM THE FIXTURE , SWITCHES AND RECEPTACLES TO THE LIGHTING PANEL IN ACCORDANCE WITH THE NEC.
14. FIXTURES LABELED TO REQUIRED CONDUCTORS WITH A TEMPERATURE RATING EXCEEDING 75 DEGREES C SHALL BE SPLICED TO CIRCUIT CONDUCTORS IN A SEPARATELY MOUNTED JUNCTION BOX. FIXTURE SHALL BE CONNECTED TO JUNCTION BOX USING FLEXIBLE CONDUIT WITH A TEMPERATURE RATING EQUAL TO OR GREATER THAN THAT OF THE FIXTURE.
15. PHOTOELECTRIC CELLS SHALL BE ORIENTED TOWARD THE NORTH.
16. THE CONTRACTOR SHALL TYPE IN THE CIRCUIT DESCRIPTION ON THE CIRCUIT DIRECTORY AS SHOWN ON THE FINAL RECORD DRAWINGS.

ELECTRICAL SERVICE NOTES

1. ALL EQUIPMENT SHALL BE FULLY BUSSED AND BRACED FOR THE INTERRUPTING CURRENT PER POWER COMPANY REQUIREMENTS.
2. ALL EQUIPMENT SHALL BE U.L. LISTED AND INSTALLED AS PER LISTING AND LABELING.
3. CIRCUIT BREAKERS USED AS SWITCHES SHALL BE LISTED FOR SWITCHING DUTY AND MARKED "SWD" PER C.E.C. 240–83(D).
4. ALL CIRCUIT BREAKERS SHALL BE MOLDED CASE THERMAL MAGNETIC AND RATED FOR AVAILABLE SHORT CIRCUIT CURRENT.
5. GROUNDING AND GROUND CONTINUITY PER C.E.C. 250.
6. SERVICE EQUIPMENT SIZE VARIES WITH MANUFACTURES VERIFY EXACT EQUIPMENT DIMENSION WITH MANUFACTURER.
7. ALL CIRCUITS SHALL BE CLEARLY IDENTIFIED AND MARKED ON PANEL BOARD CIRCUIT I.D. TAG.
8. ALL FUSE HOLDERS FOR CURRENT LIMITING FUSES SHALL BE REJECTION TYPE.

ELECTRICAL LEGEND & ABBREVIATIONS

SYMBOL	DESCRIPTION
	ELECTRICAL PANEL , FLUSH MOUNT
	ELECTRICAL PANEL, SURFACE MOUNT
	MAIN SERVICE SWITCHBOARD (MSB)
	CIRCUIT BREAKER
	GROUND CONNECTION
	120V DUPLEX OUTLET
	120V SPLIT WIRED DUPLEX OUTLET
	120V QUAD OUTLET
	208V/240V OUTLET
	120V DIRECT CONNECTION
	208V/240 V DIRECT CONNECTION
	EXHAUST FAN
PC	PHOTOCELL
OS	OCCUPANCY SENSOR
	TELEPHONE OUTLET BOX MOUNTED AT 18" AFF UON WITH (1)3/4" CONDUIT ONLY TO ACCESSIBLE CEILING SPACE
	TELE/DATA OUTLET
J	JUNCTION BOX
	FLEX CONDUIT
GROUND NEUTRAL SWITCHED HOT HOT A–3,5	HOME–RUN TO PANEL 2#12 WIRES
$X	TOGGLE SWITCH AT +44" A.F.F. SUBSCRIPTS INDICATE THE FOLLOWING: 2–TWO POLE; 3–THREE WAY; 4–FOUR WAY;A,B,C–NUMBER OF SWITCHES; M–OCCUPANCY SENSOR D–DIMMER T–TIMER H–HUMIDITY SENSOR V–VACANCY SENSOR
A 64	LIGHT FIXTURE DESIGNATION. FIXTURE "A", 64 WATTS.
	CONDUIT CONCEALED ABOVE CEILING OR IN WALL
—(E)—	EXISTING CIRCUIT/CONDUIT
	CONDUIT UNDER SLAB OR BELOW GRADE
	FLUORESCENT LIGHT FIXTURE–VARIATIONS
	CEILING MOUNTED LIGHT FIXTURE
	FAN & LIGHT COMBINATION
	WALL MOUNTED FIXTURE
	EMERGENCY LIGHT FIXTURE , WALL MOUNTED
(N.L.)	FLUORESCENT FIXTURE WITH EMERGENCY BATTERY PACK
	EXIT LIGHT FIXTURE
	LIGHT FIXTURE– RECESSED
	EMERGENCY LIGHT FIXTURE WITH INTERNAL BATTERY UNIT
PP	POWER POLE
PB	PUSH BUTTON
	FUSIBLE DISCONNECT SWITCH AS NOTED
	SAFETY DISCONNECT SWITCH AS NOTED
	PATHWAY LIGHT
P01 1"	CONDUIT DESIGNATION. P01 , 1" CONDUIT
SD CO	SMOKE DETECTOR/CARBON MONOXIDE DETECTOR COMBO
	PULL BOX
M	WATT METER

AMPERE	
ABOVE FINISHED FLORR	
ABOVE FINISHED GRADE	
AMERICAN WIRE GAGE	
AUXILIARY	
BATTERY	
BOARD	
BUILDING	
CONDUIT	
CIRCUIT BREAKER	
CEILING	
CIRCUIT	
CONDUIT ONLY	
DISCONNECT SWITCH	
DRAWING	
EMERGENCY	
ELECTRICAL METALLIC TUBING	
EXHAUST FAN	
ENERGY SAVING	
EVAPORATIVE COOLER	
EXISTING	
GROUND FAULT CIRCUIT INTERRUPTER	
GROUND	
HIGH PRESSURE SODIUM	
ISOLATED GROUND	
KILO VOLT AMPERES	
KILOWATT	
LONG CONTINUOUS LOAD	
LIGHTING	
MECHANICAL	
METAL HALIDE	
MOUNTED	
NEW	
NATIONAL ELECTRICAL CODE	
NOT IN CONTRACT	
NIGHT LIGHT	
NOT TO SCALE	
POLE	
PHOTOCELL	
RELOCATED	
RECEPTACLE	
TIME CLOCK	
TELEPHONE	
TYPICAL	
UNDERWRITERS LABORATORY	
UNLESS OTHERWISE NOTED	
TRANSFORMER	
VOLTS	
WEATHERPROOF	

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
ELECTRICAL
GENERAL NOTES,
LEGEND &
ABBREVIATIONS

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO.

E100

of

\\MYCLOUDEX2ULTRA\Blueberry\01- Blueberry Inc\02- Blueberry Engineering\03 - Projects\10 - 2023 Projects\235651 Vakili's Residence\2- Technical\3- Native Files\235651 - BB Rev 2022 - Building B\235651-B-E-REV0.dwg
Plotted: Monday, August 28, 2023 9:40 AM

FEEDER SCHEDULE

COPPER CONDUCTORS THW 600V (AWG)

FEEDER TYPE	CONDUIT SIZE AND QUANTITY		CONDUCTORS IN EACH CONDUIT		
			PHASE/NEUTRAL		EQUIPMENT GROUND
	QTY.	SIZE	QTY.	SIZE	WIRE SIZE
F20	1	3/4"	2	12	12
F30	1	1"	3	10	10
F40	1	1"	3	8	10
F50	1	1"	3	6	10
F60	1	1 1/4"	3	4	10
F70	1	1 1/4"	3	4	8
F80	1	1 1/4"	3	2	8
F90	1	1 1/4"	3	2	8
F100	1	1 1/2"	3	1	8
F110	1	1 1/2"	3	1	6
F125	1	1 1/2"	3	1	6
F150	1	2"	3	1/0	6
F175	1	2"	3	2/0	6
F200	1	2"	3	3/0	6
F225	1	2 1/2"	3	4/0	4

ALL CONDUCTORS SHALL BE COPPER AND RATED 90°C AND 600 VOLTS. SIZES NO. 8 AWG AND LARGER SHALL BE STRANDED AND NO. 10 AND SMALLER SHALL BE SOLID. USE TYPE THHN/THWN-2/XHHW/XHHW-2.

MAIN SERVICE GROUNDING DETAIL NOTES:

1. ALL GROUNDING ELECTRODE CONDUCTORS AND MAIN BONDING JUMPERS SHALL BE BARE COPPER, SIZED IN ACCORDANCE WITH NEC TABLE 250-66 UNLESS NOTED OTHERWISE.
2. BOTH ENDS OF GROUND BUSSES IN MOTOR CONTROL CENTERS, SWITCHBOARDS, SWITCHGEAR, ETC. SHALL BE SEPARATELY CONNECTED TO THE MAIN GROUND BUS TO FORM TWO(2) SEPARATE PATHS TO GROUND.
3. ADDITIONAL GROUND RODS SHALL BE INSTALLED A MINIMUM OF SIX(6) FEET APART AND CONNECTED BY GROUNDING ELECTRODE CONDUCTORS UNTIL THE GROUND RESISTANCE DOES NOT EXCEED TWENTY FIVE(25) OHMS. REFER TO ELECTRICAL SPECIFICATIONS SECTION 16450 FOR ADDITIONAL GROUNDING REQUIREMENTS.

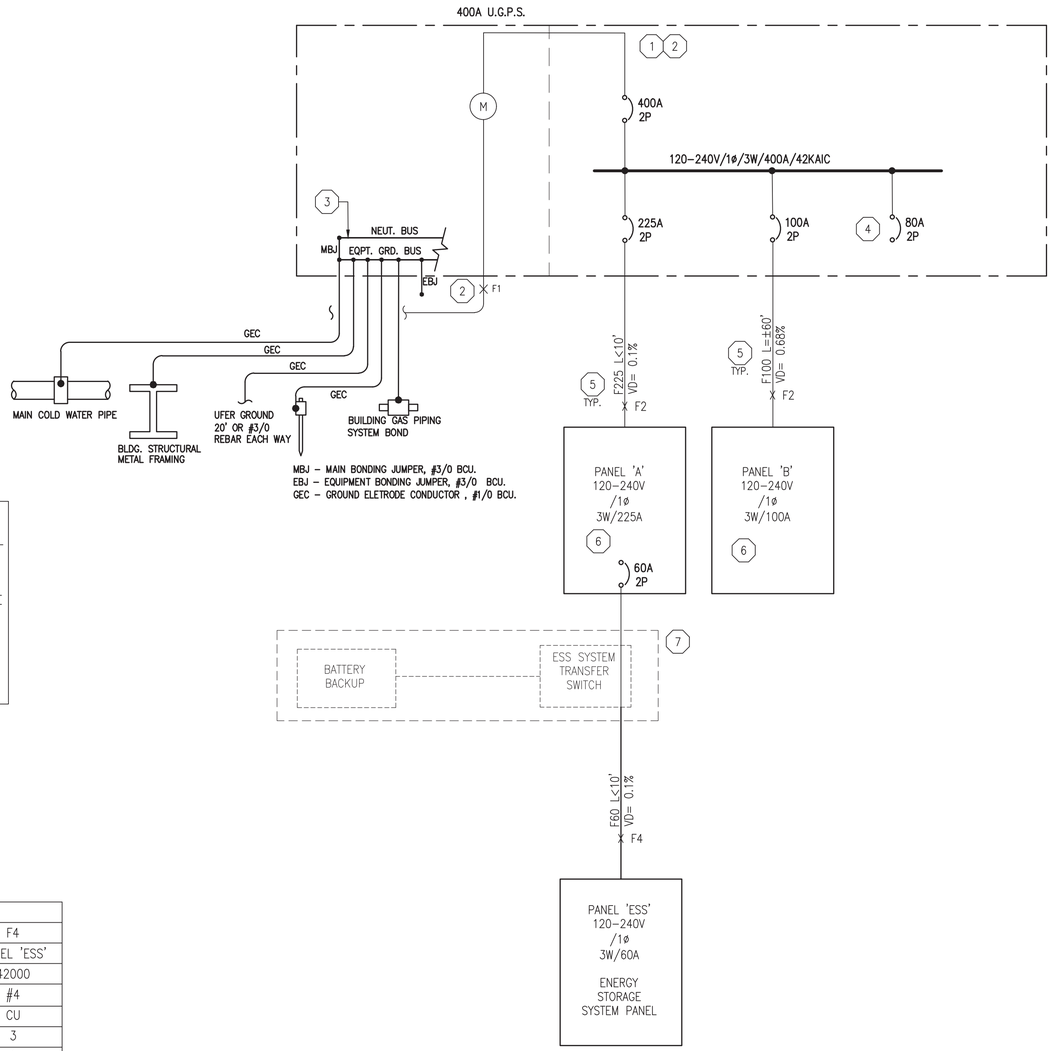
SERVICE LOAD CALCULATIONS

No.	LOAD DESCRIPTION	KVA	FLA
1	PANEL "A"	47.0	196.0
2	PANEL "B"	18.8	78.4
	TOTAL @ 240V/1ø	65.9	274.4

(2)

FAULT CURRENT CALCULATIONS

FAULT	F1	F2	F3	F4
LOCATION	SCE	PANEL 'A'	PANEL 'B'	PANEL 'ESS'
AFC FROM SOURCE	42000	42000	42000	42000
CONDUCTOR SIZE		#4/0	#1	#4
CONDUCTOR TYPE		CU	CU	CU
LENGTH		10	60	3
# OF SETS		1	1	1
CONDUIT TYPE		RMC	RMC	RMC
VOLTAGE		240V	240V	240V
CALCULATED FAULT CURRENT	42000	37145	10828	34475



1 SINGLE LINE DIAGRAM
N.T.S.

KEYED NOTES

1. NEW 120-240V/1ø/225A NEMA3R MAIN-METER PANEL. CONTRACTOR TO VERIFY AND COORDINATE WITH OWNER AND UTILITY COMPANY.
2. CONTRACTOR TO VERIFY THE AVAILABLE SHORT CIRCUIT CURRENT WITH THE UTILITY COMPANY
3. PRIOR TO ENERGIZING THE SYSTEM, CONTRACTOR SHALL PROVIDE GROUND TEST TO MEASURE THE RESISTANCE BETWEEN THE GROUND SYSTEM AND EARTH.
4. PROVISION BREAKER FOR FUTURE SOLAR PV INSTALLATIONS
5. SEE FEEDER SCHEDULE
6. SEE PANEL SCHEDULE ON E120
7. ESS AND BATTERY BACKUP SYSTEM ARE FOR FUTURE INSTALLATION. RUN THE RACEWAY AND CONDUIT DIRECTLY FROM MAIN PANEL TO FEED THE PANEL 'ESS' FOR CURRENT INSTALLATION

SINGLE LINE DIAGRAM GENERAL NOTES:

1. INFORMATION SHOWN ON DRAWINGS IS INTENDED TO INDICATE MINIMUM REQUIREMENTS TO MEET THE NEEDS OF THIS PROJECT.
2. CONTRACTOR TO OBTAIN THE AVAILABLE FAULT CURRENT LETTER FROM THE UTILITY COMPANY.
3. ALL CONDUCTORS SHALL BE COPPER AND RATED 75°C AND 600 VOLTS. SIZES NO. 8 AWG AND LARGER SHALL BE STRANDED AND NO. 10 AND SMALLER SHALL BE SOLID. USE TYPE THHN/THWN-2/XHHW/XHHW-2.
4. ALL NEW CIRCUIT BREAKERS , FUSIBLE SWITCHES IN MAIN SWITCHBOARD OR PANEL BOARDS SHALL BE FULLY RATED
5. FUSES SHALL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.
6. NO PIPING , DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT PER 110.26 (E) (1) . CONTRACTOR TO MAINTAIN ALL CLEARANCES AS REQUIRED BY 110.269A) -(E) FOR ALL INSTALLATIONS OF THIS PROJECT.
7. MAIN SERVICE SHALL NOT BE ENERGIZED PRIOR TO THE BUILDING INSPECTOR'S RECEIPT OF A THIRD PARTY "NRTL" TESTING LABORATORY PERFORMANCE TEST CERTIFICATION FOR THE SERVICE GROUND FAULT PROTECTION 2017 NEC 230.95

LISTING NOTE:

1. ALL NEW ELECTRICAL EQUIPMENT SHALL BE UL CERTIFIED. CONTRACTOR TO VERIFY THE EQUIPMENT LISTING WITH THE EQUIPMENT VENDOR AND PROVIDE EQUIPMENT LISTING.

UTILITY NOTES:

1. INCOMING UTILITIES ARE IN THE PROCESS OF BEING COORDINATED WITH SDGE BUT ARE STILL NOT TOTALLY DEFINED. CONTRACTOR SHALL BUILD FROM ELECTRICAL UTILITY COMPANY ENGINEERED DRAWINGS.

CONSTRUCTION NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THE PROJECT SPECIFICATIONS.
2. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. NEITHER THE DISTRICT NOR THE ENGINEER WILL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND FACILITIES.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY. INSTALLATION SHALL BE IN ACCORDANCE WITH APPROVED LISTING.
4. PROVIDE WARNING LABELS AS REQUIRED BY CEC 110.22. ENGRAVED LAMINATED NAMEPLATES SHALL BE PROVIDED AT THE SES AND PANEL BOARDS. REFER TO CEC 110.22 FOR SPECIFIC WORDING OF SERIES RATED LABELS.
5. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT PRIOR APPROVAL OF THE DESIGN ENGINEER AND ELECTRICAL INSPECTOR.
6. PROVIDE ALL ARC-FLASH LABELING AS REQUIRED PER CEC 110.16
7. SERVICE EQUIPMENT IN OTHER THAN DWELLING UNITS SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKINGS SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. CEC 110.24(A).

ELECTRICAL PLAN NOTES:

1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH POWER COMPANY FOR FINAL LOCATION OF METERS AND PANELS.
2. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL SAFETY , NEC AND LOCAL CODES.
3. CONTRACTOR TO PROVIDE ALL HARDWARE , BRACKETS, LAMPS , TUBES, ETC.. FOR A COMPLETE INSTALLATION.
4. PULL SECTION, METER AND SWITCHBOARD SHALL BE BRACED FOR AVAILABLE FAULT CURRENT.

DATE | REVISION | NO.

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
PLUMBING
SINGLE LINE DIAGRAM

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. E110
of

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Plotted: Monday, August 28, 2023 9:40 AM

PANEL SCHEDULE

PANEL NAME: A				LOCATION: EXTERIOR				FEED FROM: METER MAIN			
DESCRIPTION	LOAD (VA)	DMD.	BKR. (AMP)	CIR. #	PHASE-A (VA)	PHASE-B (VA)	CIR. #	BKR. (AMP)	DMD.	LOAD (VA)	DESCRIPTION
GARAGE LIGHTS	160	1.25 L	20	1	4040		2	40	1.00 N	3840	EV CHARGER
SPARE	0	1.25 L	20	3		3840	4		1.00 N	3840	
KITCHEN LIGHTS	160	1.25 L	20	5	740		6	20	1.00 N	540	GARAGE OPENER
BATHROOMS LIGHTS	250	1.25 L	20	7		1033	8	20	1.00 N	720	GARAGE RECEPTACLES [GFCI]
EXTERIOR LIGHTS	80	1.25 L	20	9	100		10	20	1.00 N	0	SPARE]
MAIN BEDROOM LIGHTS	110	1.25 L	20	11		858	12	20	1.00 N	720	EXTERIOR RECEPTACLES [GFCI]
SD-CO [AFCI]	250	1.00 N	20	13	790		14	20	1.00 N	540	EXTERIOR RECEPTACLES [GFCI]
GREAT ROOM RECEPTACLES[AFCI]	1260	1.00 N	20	15		2520	16	20	1.00 N	1260	MAIN BEDROOM RECEPTACLES
KITCHEN RECEPTACLES [AFCI-GFCI]	1500	1.00 N	20	17	2040		18	20	1.00 N	540	GREAT ROOM RECEPTACLES [AFCI]
KITCHEN RECEPTACLES [AFCI-GFCI]	1500	1.00 N	20	19		1500	20	20	1.00 N	0	SPARE
DISH WASHER	750	1.00 N	20	21	750		22	20	1.00 N	0	SPARE
GARBAGE DISPOSAL	750	1.00 N	20	23		1110	24	20	1.00 N	360	BATHROOM RECEPTACLES [AFCI-GFCI]
KITCHEN RECEPTACLES [AFCI-GFCI]	1500	1.00 N	20	25	6300		26	40	1.25 M	3840	HVAC CONDENSER CU-1
KITCHEN RECEPTACLES [AFCI-GFCI]	1500	1.00 N	20	27		6300	28		1.25 M	3840	
ELECTRIC RANGE	2000	1.00 N	30	29	4500		30	30	1.00 N	2500	ELECTRIC FIRE PLACE
	2000	1.00 N		31		4500	32		1.00 N	2500	
MICROWAVE	1000	1.00 N	20	33	3600		34	30	1.00 N	2600	HEAT PUMP WATER HEATER
SPARE	0	1.00 N	20	35		2600	36		1.00 N	2600	
SPARE	0	1.00 N	20	37	1643		38	60	1.00 N	1643	PANEL 'ESS'
SPARE	0	1.00 N	20	39		500	40		1.00 N	500	
BATHROOM RECEPTACLES [AFCI-GFCI]	360	1.00 N	20	41	360		42	20	1.00 N	0	SPARE
					24863	22181					

PANEL SIZE: 225 A
VOLTAGE: 240 V| 120 V
PHASE: 1
WIRE: 3
NEUTRAL: X
AIC RATING: 42 KAIC
BUS: 225 A

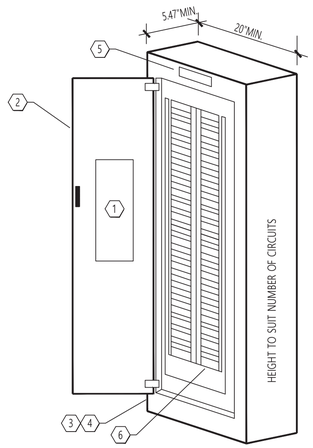
GROUND: X
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R
MAIN BREAKER: 225 A
LUG ONLY: –
CONNECTED LOAD: 47.0 KVA
FEEDER AMPACITY: 196.0 A

NOTES:
1. ALL BREAKERS ARE FULLY RATED

DEMAND COLUMN VALUES– (DMD.) 1.0 @ 100% N=NON CONTINUOUS, 1.25@125% C=CONTINUOUS, M=LARGEST MOTOR CONNECTED, L=LIGHTING LOAD

SPECIFIC NOTES: (-)

1. COVER ON INSIDE OF DOOR.
2. ALL CABINETS KEYED ALIKE. KEYS TO MATCH EXISTING PANEL BOARD WHERE ADDING TO EXISTNIG FACILITY.
3. WHERE INDICATED ON SCHEDULE PROVIDE VERTICALLY MOUNTED MAIN BREAKER AHEAD OF PANEL BUS.
4. FLUSH OR SURFACE MOUNTED PANEL BOARD AS INDICATED ON DRAWINGS.
5. FACTORY INSTALLED METAL CIRCUIT NUMBERS SCREWED OR RIVETED TO TRIM.
6. LAMINATED, ENGRAVED NAME PLATE.



PANEL SCHEDULE

PANEL NAME: B				LOCATION: 2ND FLOOR				FEED FROM: METER MAIN			
DESCRIPTION	LOAD (VA)	DMD.	BKR. (AMP)	CIR. #	PHASE-A (VA)	PHASE-B (VA)	CIR. #	BKR. (AMP)	DMD.	LOAD (VA)	DESCRIPTION
HALL AND MASTER BEDROOM LIGHTS	340	1.25 L	20	1	675		2	20	1.00 N	250	SD-CO [AFCI]
MASTER BATHROOM LIGHTS	220	1.25 L	20	3		635	4	20	1.00 N	360	EXTERIOR RECEPTACLES [GFCI]
BATHROOMS LIGHTS	270	1.25 L	20	5	338		6	20	1.00 N	0	SPARE
BEDROOMS AND HALL LIGHTS	180	1.25 L	20	7		765	8	20	1.00 N	540	MASTER BATHROOM REC. [AFCI-GFCI]
BEDROOM 3 RECEPTACLES [AFCI]	900	1.00 N	20	9	1800		10	20	1.00 N	900	HALLWAY RECEPTACLES [AFCI]
BEDROOM 4 RECEPTACLES [AFCI]	900	1.00 N	20	11		1260	12	20	1.00 N	360	BATHROOM RECEPTACLES [GFCI]
WASHER [AFCI-GFCI]	750	1.00 N	20	13	5550		14	40	1.25 M	3840	HVAC CONDENSER CU-2
ELECTRIC DRYER [AFCI-GFCI]	1500	1.00 N	30	15		6300	16		1.25 M	3840	
	1500	1.00 N		17	1500		18	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	19		0	20	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	21	0		22	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	23		0	24	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	25	0		26	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	27		0	28	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	29	0		30	20	1.00 N	0	SPARE
					9863	8960					

PANEL SIZE: 100 A
VOLTAGE: 240 V| 120 V
PHASE: 1
WIRE: 3
NEUTRAL: X
AIC RATING: 14 KAIC
BUS: 100 A

GROUND: X
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R
MAIN BREAKER: 100 A
LUG ONLY: –
CONNECTED LOAD: 18.8 KVA
FEEDER AMPACITY: 78.4 A

NOTES:
1. ALL BREAKERS ARE FULLY RATED

DEMAND COLUMN VALUES– (DMD.) 1.0 @ 100% N=NON CONTINUOUS, 1.25@125% C=CONTINUOUS, M=LARGEST MOTOR CONNECTED, L=LIGHTING LOAD

PANEL SCHEDULE

PANEL NAME: ESS				LOCATION: GARAGE				FEED FROM: PANEL 'A'			
DESCRIPTION	LOAD (VA)	DMD.	BKR. (AMP)	CIR. #	PHASE-A (VA)	PHASE-B (VA)	CIR. #	BKR. (AMP)	DMD.	LOAD (VA)	DESCRIPTION
HALLWAY AND GREAT AREA LIGHTS	450	1.25 L	20	1	1643		2	20	1.00 N	1080	MASTER BEDROOM RECEPTACLES
FRIDGE	500	1.00 N	20	3		500	4	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	5	0		6	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	7		0	8	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	9	0		10	20	1.00 N	0	SPARE
SPARE	0	1.00 N	20	11		0	12	20	1.00 N	0	SPARE
					1643	500					

PANEL SIZE: 60 A
VOLTAGE: 240 V| 120 V
PHASE: 1
WIRE: 3
NEUTRAL: X
AIC RATING: 42 KAIC
BUS: 60 A

GROUND: X
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
MAIN BREAKER: 60 A
LUG ONLY: –
CONNECTED LOAD: 2.1 KVA
FEEDER AMPACITY: 8.9 A

NOTES:
1. ALL BREAKERS ARE FULLY RATED

DEMAND COLUMN VALUES– (DMD.) 1.0 @ 100% N=NON CONTINUOUS, 1.25@125% C=CONTINUOUS, M=LARGEST MOTOR CONNECTED, L=LIGHTING LOAD

NO.	REVISION	DATE

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
ELECTRICAL
PANEL SCHEDULES

PROJECT NO.: 235651

DATE: 04/24/2023

SCALE: AS SHOWN

DRAWING NO.
E120
of

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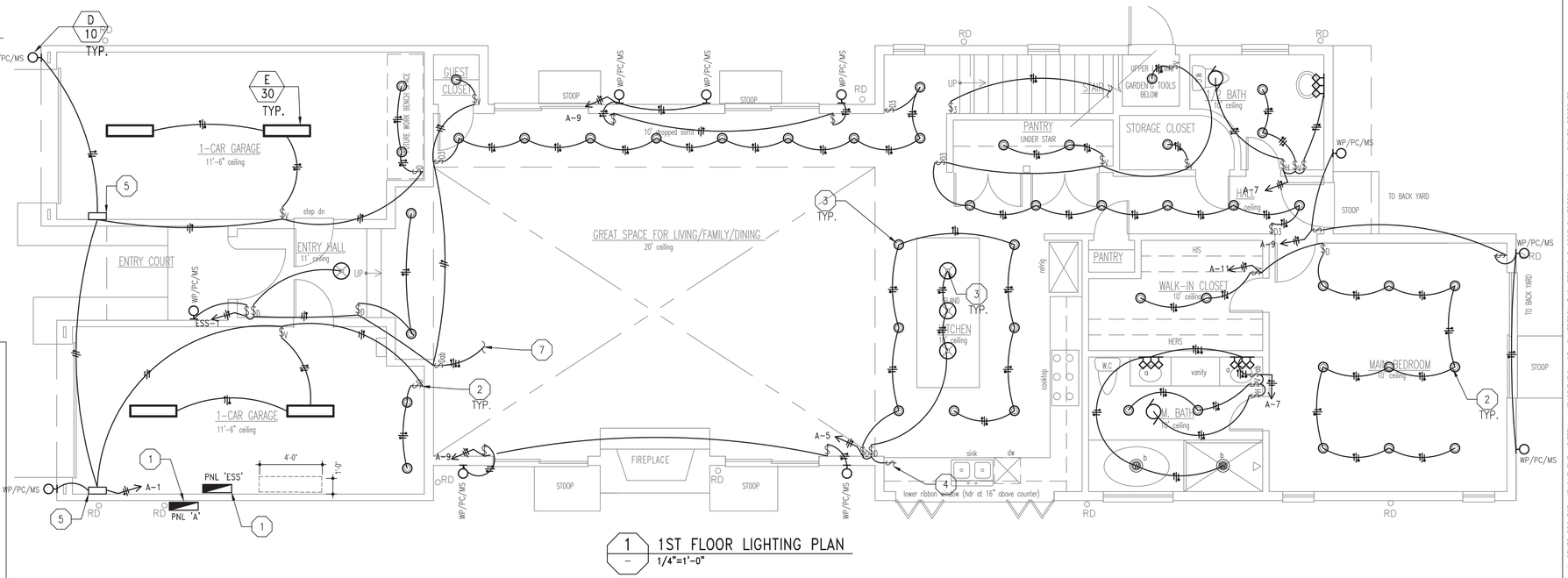
Plotted: Monday, August 28, 2023 9:40 AM

KEYED NOTES

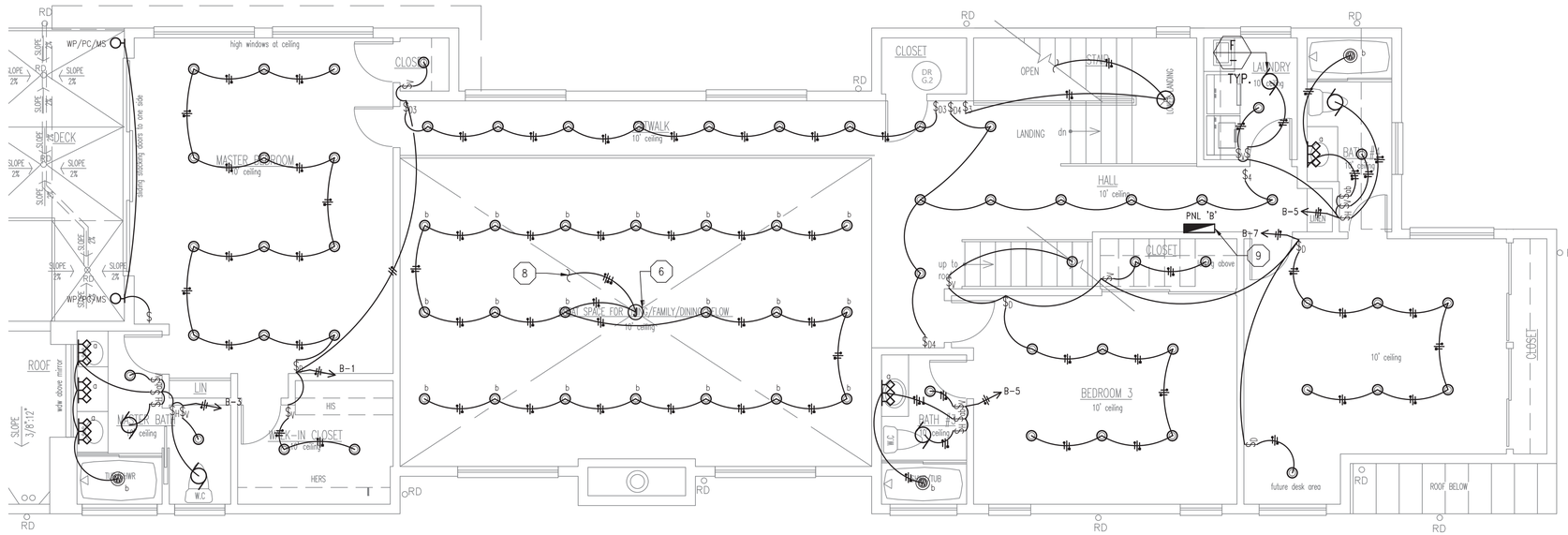
1. NEW SURFACE MOUNT MAIN/METER ELECTRICAL PANEL. SEE SINGLE LINE DIAGRAM ON E110.
2. PRIOR TO INSTALLATION AND CONDUIT WORKS, ELECTRICAL CONTRACTOR TO VERIFY AND FINALIZE ALL SWITCHES, CONTROL LOCATIONS, WITH ARCHITECT, OWNER, TENANT. FOR APPROVAL PERFORM NECESSARY ADJUSTMENTS IF NEEDED.
3. ALL LIGHTS IN KITCHEN AREA SHALL BE HIGH EFFICACY DIMABLE LED.
4. SWITCH FOR KITCHEN UNDER COUNTER LIGHTS. CONTRACTOR TO COORDINATE WITH THE OWNER PRIOR TO ORDER AND INSTALLATION OF SWITCH AND LIGHTS
5. UL LISTED DIGITAL LIGHTING CONTROL 24/7 ASTRONOMICAL TIMER
6. JUNCTION BOX FOR CHANDELIER INSTALLATION
7. SEE 2/E200
8. SEE 1/E200
9. NEW FLUSH MOUNT PANEL. SEE SINGLE LINE DIAGRAM ON SHEET E110

ELECTRICAL LIGHTING NOTES:

1. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THE ELECTRICAL AND COMMUNICATION PANELS
2. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL SAFETY , NEC AND LOCAL CODES.
3. CONTRACTOR TO PROVIDE ALL HARDWARE , BRACKETS, LAMPS , TUBES, ETC.. FOR A COMPLETE INSTALLATION.
4. ALL LIGHTING FIXTURES SHALL BE PERMANENTLY ATTACHED TO THE CEILING PER C.E.C. 410-16(C).
5. ALL CONDUITS/ RACEWAYS TO BE E.M.T., MC-CABLE OR METAL FLEX.
6. ALL NEW ELECTRICAL FIXTURES SHALL COMPLY WITH THE 2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS.
7. ALL LIGHT FIXTURES AND LED DRIVES AND LIGHTS SHALL BE CALIFORNIA TITLE-24 APPROVED.
8. VERIFY LOCATION OF TELE/DATA/MEDIA RACKS WITH THE OWNER.
9. ALL WORK SHALL COMPLY WITH 2022 CEC & NEC2017.
10. USE RIGID METAL CONDUIT IN ALL AREAS EXPOSED TO WEATHER.
11. USE GROUND WIRE INSIDE ALL FLEXIBLE METAL CONDUITS.
12. METAL CONDUITS SHALL NOT BE INSTALLED IN CONTACT WITH EARTH.



1 — 1ST FLOOR LIGHTING PLAN
1/4"=1'-0"



2 — 2ND FLOOR LIGHTING PLAN
1/4"=1'-0"

LIGHTING FIXTURES SCHEDULE

SYMBOL	TAG	LAMPS TYPE: INCAND.	FLOUR.	L.E.D	H.P.S.	M.HALIDE	VOLTAGE	LAMPS: WATTS	TEMP.	MOUNTING: T-BAR	RECESSED	CEILING	WALL	DESCRIPTION AND VARIATIONS
◎	A / 10			X			120V	10W	NOTE 1		X			4" RECESSED DOWN LIGHT DIMABLE HIGH EFFICACY DIMABLE LED LIGHT FIXTURE FOR DRY AREAS
ⓦ	B / 10			X			120V	10W	NOTE 1		X			4" RECESSED DOWN LIGHT DIMABLE HIGH EFFICACY DIMABLE LED LIGHT FIXTURE FOR WET AREAS
⊗	C / 30			X			120V	30W	NOTE 1			X		PENDANT LED LIGHT. MODEL # TO BE APPROVED BY THE OWNER
⊙	D / 10			X			120V	10W	NOTE 1				X	OUTDOOR WALL MOUNT LIGHT FIXTURE WITH BUILT-IN PHOTOCELL AND MOTION SENSOR . MODEL# TO BE APPROVED BY THE OWNER
▭	E / 30			X			120V	30W	NOTE 1			X		1X4 LED FIXTURE SURFACE MOUNT.MODEL# TO BE APPROVED BY THE OWNER
⩙	H / 30			X			120V	30W	NOTE 1				X	WALL MOUNTED VANITY FIXTURE WITH DIMABLE LED LIGHTS. MODEL# TO BE APPROVED BY THE OWNER
◌	F / –						120V	-	-			X		ENERGY STAR RESTROOM FAN. SEE MECHANICAL PLANS FOR EQUIPMENT SCHEDULE.

LIGHTING FIXTURE NOTES:

1. VERIFY THE LED LAMPS COLOR TEMPERATURE WITH OWNER
2. VERIFY ALL TYPES WITH OWNER/ARCHITECT PRIOR TO ORDERING.

CONSTRUCTION NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THE PROJECT SPECIFICATIONS.
2. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. NEITHER THE DISTRICT NOR THE ENGINEER WILL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND FACILITIES.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY. INSTALLATION SHALL BE IN ACCORDANCE WITH APPROVED LISTING.

LISTING NOTE:

1. ALL NEW ELECTRICAL EQUIPMENT SHALL BE UL CERTIFIED. CONTRACTOR TO VERIFY THE EQUIPMENT LISTING WITH THE EQUIPMENT VENDOR AND PROVIDE EQUIPMENT LISTING.

NO.	REVISION	DATE

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
ELECTRICAL
LIGHTING PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO.

E200

of

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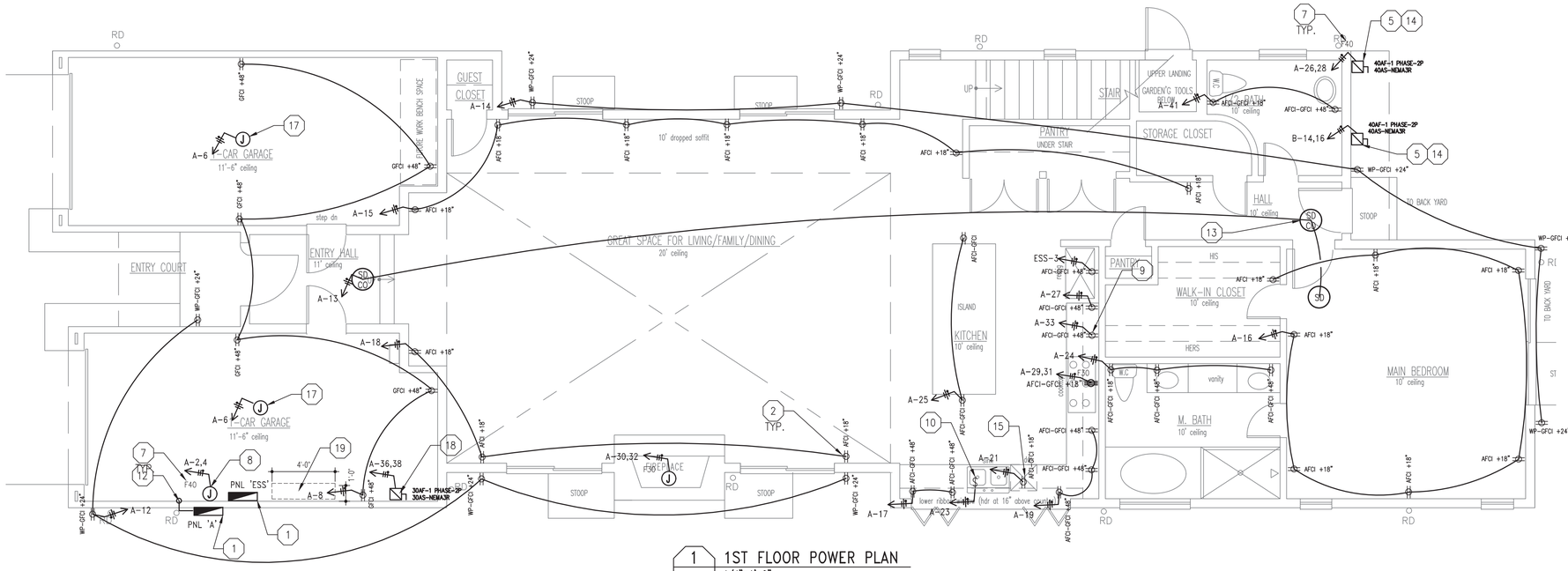
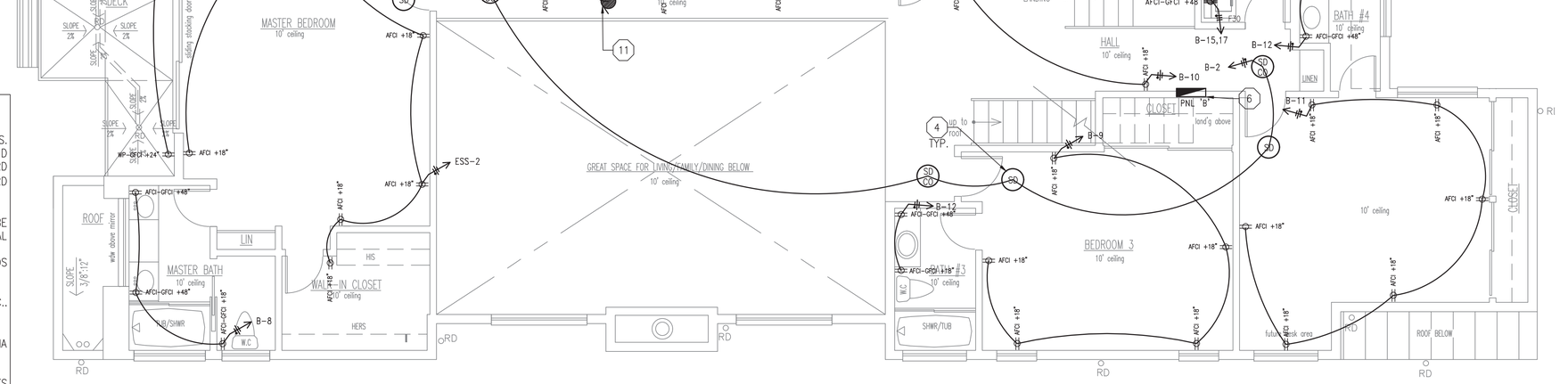
Plotted: Monday, August 28, 2023 9:40 AM

KEYED NOTES

1. NEW SURFACE MOUNT MAIN/METER ELECTRICAL PANEL. SEE SINGLE LINE DIAGRAM ON E110.
2. PRIOR TO INSTALLATION AND CONDUIT WORKS, ELECTRICAL CONTRACTOR TO VERIFY AND FINALIZE ALL RECEPTACLES AND SWITCHES LOCATIONS WITH ARCHITECT, OWNER, TENANT. FOR APPROVAL PERFORM NECESSARY ADJUSTMENTS IF NEEDED.
3. UL-2034 SMOKE DETECTOR AND CARBON MONOXIDE ALARM COMBO HARD WIRED IN SERIES INTERLOCKED ALL WITH BATTERY BACKUP.
4. UL-217 SMOKE DETECTOR ALARM HARD WIRED IN SERIES INTERLOCKED ALL WITH BATTERY BACKUP.
5. NEMA3R FUSED DISCONNECT SWITCH FOR OUTDOOR CONDENSER UNIT. SEE MECHANICAL PLANS
6. NEW FLUSH MOUNT ELECTRICAL PANEL. SEE SINGLE LINE DIAGRAM ON E110.
7. SEE FEEDER SCHEDULE ON SHEET E110
8. JUNCTION BOX FOR EV CHARGER
9. 120V RECEPTACLE WITH DEDICATED CIRCUIT FOR MICROWAVE
10. SWITCH FOR GARBAGE DISPOSAL
11. INDOOR AIR QUALITY VENTILATION FAN (IAQ-1). THE VENTILATION FAN SHALL OPERATE CONTINUOUSLY. THE ON/OFF SWITCH SHALL BE LABELED 'VENTILATION CONTROL' . SEE MECHANICAL PLANS.
12. RUN 2" CONDUIT FROM THE ELECTRICAL PANEL TO THE ROOF FOR FUTURE SOLAR PV INSTALLATION. SEE ROOF PLAN
13. SD/CO SHALL BE INSTALLED 3' FROM THE BATHROOM DOOR. CONTRACTOR TO FIELD VERIFY.
14. CONTRACTOR TO FIELD VERIFY AND MAINTAIN 3FEET WORKING CLEARANCE AT FRONT, LEFT AND RIGHT SIDE OF THE HVAC DISCONNECT SWITCH
15. RECEPTACLE FOR DISHWASHER
17. JUNCTION BOX FOR GARAGE OPENER
18. CONNECTION FOR HEAT PUMP WATER HEATER
19. RESERVED SPACE FOR ESS BATTERY AND TRANSFER SWITCH FOR FUTURE INSTALLATION.



1 1ST FLOOR POWER PLAN
1/4"=1'-0"



2 2ND FLOOR POWER PLAN
1/4"=1'-0"

ELECTRICAL POWER NOTES:

1. ALL RECEPTACLE OUTLETS SHALL BE LOCATED WITHIN ALLOWABLE REACH RANGES. LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND HIGH REACH SHALL BE MEASURED TO THE TOP OF OUTLET BOX. HIGH FORWARD REACH THAT IS UNOBSTRUCTED SHALL BE 48" MAXIMUM AND LOW FORWARD REACH SHALL BE 15" MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
2. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL SAFETY , NEC AND LOCAL CODES.
3. NO PIPING,DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
4. PROVIDE PROTECTION FROM PHYSICAL DAMAGE FOR SWITCHBOARDS,PANEL BOARDS AND OTHER ELECTRICAL EQUIPMENT.
5. ALL EQUIPMENT SHALL BE U.L. LISTED.
6. CONTRACTOR TO PROVIDE ALL HARDWARE , BRACKETS, LAMPS , TUBES, ETC.. FOR A COMPLETE INSTALLATION.
7. ALL CONDUITS/ RACEWAYS TO BE E.M.T., MC-CABLE OR METAL FLEX.
8. ALL NEW ELECTRICAL FIXTURES SHALL COMPLY WITH THE 2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS.
9. ALL OUTLETS IN KITCHEN,WET BARS , LAUNDRY TO BE GFCI PROTECTED.
10. ALL CONDUCTORS SHALL BE COPPER AND RATED 90°C AND 600 VOLTS. SIZES NO. 8 AWG AND LARGER SHALL BE STRANDED AND NO. 10 AND SMALLER SHALL BE SOLID. USE TYPE THHN/THWN-2/XHHW/XHHW-2.
11. GARAGE OPENER SHALL HAVE A BATTERY BACKUP
12. ALL 125V RECEPTACLES SHALL BE TAMPER-RESISTANT

CONSTRUCTION NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THE PROJECT SPECIFICATIONS.
2. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. NEITHER THE DISTRICT NOR THE ENGINEER WILL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND FACILITIES.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY. INSTALLATION SHALL BE IN ACCORDANCE WITH APPROVED LISTING.

LISTING NOTE:

1. ALL NEW ELECTRICAL EQUIPMENT SHALL BE UL CERTIFIED. CONTRACTOR TO VERIFY THE EQUIPMENT LISTING WITH THE EQUIPMENT VENDOR AND PROVIDE EQUIPMENT LISTING.

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NO.	REVISION	DATE

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VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
ELECTRICAL
POWER PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. E300
of

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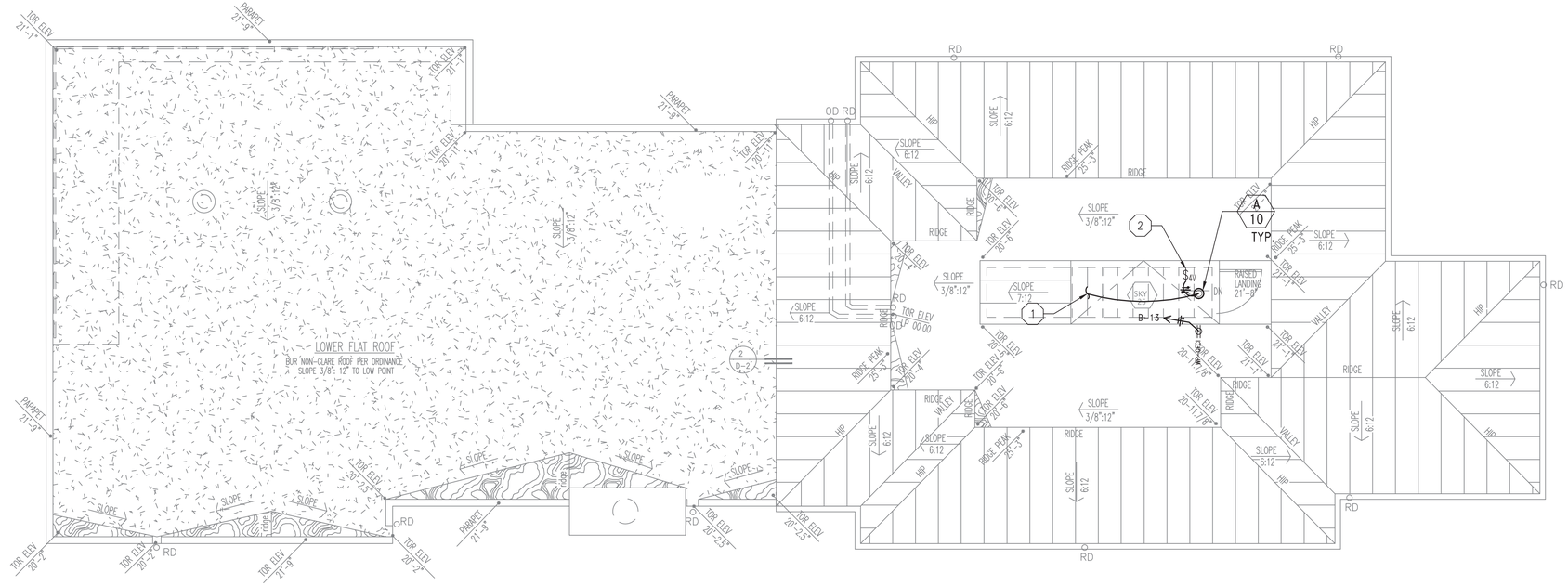
Plotted: Monday, August 28, 2023 9:40 AM



1 ROOF DECK ELECTRICAL PLAN
1/4"=1'-0"

KEYED NOTES

1. FOR CONTINUATION SEE E200
2. PRIOR TO INSTALLATION AND CONDUIT WORKS, ELECTRICAL CONTRACTOR TO VERIFY AND FINALIZE ALL RECEPTACLES AND SWITCHES LOCATIONS WITH ARCHITECT, OWNER, TENANT. FOR APPROVAL PERFORM NECESSARY ADJUSTMENTS IF NEEDED.

CONSTRUCTION NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THE PROJECT SPECIFICATIONS.
2. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. NEITHER THE DISTRICT NOR THE ENGINEER WILL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND FACILITIES.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY. INSTALLATION SHALL BE IN ACCORDANCE WITH APPROVED LISTING.

LISTING NOTE:

1. ALL NEW ELECTRICAL EQUIPMENT SHALL BE UL CERTIFIED. CONTRACTOR TO VERIFY THE EQUIPMENT LISTING WITH THE EQUIPMENT VENDOR AND PROVIDE EQUIPMENT LISTING.

ELECTRICAL POWER NOTES:

1. ALL RECEPTACLE OUTLETS SHALL BE LOCATED WITHIN ALLOWABLE REACH RANGES. LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND HIGH REACH SHALL BE MEASURED TO THE TOP OF OUTLET BOX. HIGH FORWARD REACH THAT IS UNOBSTRUCTED SHALL BE 48" MAXIMUM AND LOW FORWARD REACH SHALL BE 15" MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
2. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL SAFETY , NEC AND LOCAL CODES.
3. NO PIPING,DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
4. PROVIDE PROTECTION FROM PHYSICAL DAMAGE FOR SWITCHBOARDS,PANEL BOARDS AND OTHER ELECTRICAL EQUIPMENT.
5. ALL EQUIPMENT SHALL BE U.L. LISTED.
6. CONTRACTOR TO PROVIDE ALL HARDWARE , BRACKETS, LAMPS , TUBES, ETC.. FOR A COMPLETE INSTALLATION.
7. ALL CONDUITS/ RACEWAYS TO BE E.M.T., MC-CABLE OR METAL FLEX.
8. ALL NEW ELECTRICAL FIXTURES SHALL COMPLY WITH THE 2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS.
9. ALL OUTLETS IN KITCHEN,WET BARS , LAUNDRY TO BE GFCI PROTECTED.
10. ALL CONDUCTORS SHALL BE COPPER AND RATED 90°C AND 600 VOLTS. SIZES NO. 8 AWG AND LARGER SHALL BE STRANDED AND NO. 10 AND SMALLER SHALL BE SOLID. USE TYPE THHN/THWN-2/XHHW/XHHW-2.
11. GARAGE OPENER SHALL HAVE A BATTERY BACKUP
12. ALL 125V RECEPTACLES SHALL BE TAMPER-RESISTANT

NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER KARAN VAKILI NO. E-20068 ELECTRICAL STATE OF CALIFORNIA

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
ROOF DECK
ELECTRICAL PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO.
E310
of

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Plotted: Monday, August 28, 2023 9:40 AM

MECHANICAL LEGEND & ABBREVIATIONS

SYMB.	DESCRIPTION
	SQUARE SUPPLY AIR DIFFUSER 4-WAY THROW
	RETURN OR TRANSFER GRILLE
	EXHAUST GRILLE
	SIDEWALL SUPPLY GRILLE
	SIDEWALL RETURN OR EXHAUST GRILLE
	LINEAR SLOT
FS/FD	COMBINATION FIRE/SMOKE DAMPER
FD	FIRE DAMPER
	EXISTING TO REMAIN
	EXISTING BELOW GRADE
	EXISTING TO BE REMOVED
	NEW
	NEW BELOW GRADE
ø	ROUND DUCT INDICATOR
M	MOTOR OPERATED
T	THERMOSTAT
DP	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
	PUMP
	SUPPLY AIR SYMBOL
	RETURN AIR SYMBOL

ADDITIONAL NOTES:

1. ALL MECHANICAL EQUIPMENT AND SYSTEMS INSTALLED AS PART OF PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2022 CALIFORNIA MECHANICAL CODE AND THE 2022 CALIFORNIA BUILDING CODE, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AND THE 2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.
2. PROVIDE 120 VOLT ELECTRICAL OUTLETS WITHIN 25 FT. OF ALL ROOF MOUNTED AND OUTDOOR MECHANICAL EQUIPMENT. (CMC 301.4) ALL MECH. EQUIP. (CMC 301.4)
3. ALL DUCTWORK FOR HEATING AND COOLING SYSTEM OR EVAPORATIVE COOLING SYSTEM SHALL BE CONDUCTED THROUGH DUCT SYSTEMS CONSTRUCTED OF METAL AS SET FORTH IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARD - METAL AND FLEXIBLE. FACTORY MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL COMPLY WITH THE 2022 CMC REFERENCED STANDARDS CHAPTER 17. (CMC 602.1)
4. THE REQUIRED SERVICE DISTANCE FROM MECHANICAL EQUIPMENT TO SCREENING, PARAPETS, WALLS AND OTHER EQUIPMENT SHALL BE A MINIMUM OF 30" X 30" ON THE SERVICE SIDE OF THE EQUIPMENT, OR AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, IF THE INSTRUCTIONS REQUIRE A GREATER CLEARANCE. (CMC SECTION 304.1)
5. ALL APPLIANCES DESIGNED TO BE IN A FIXED POSITION SHALL BE SECURELY FASTENED IN PLACE IN ACCORDANCE WITH THE MANUFACTURE'S INSTALLATION INSTRUCTIONS. SUPPORTS FOR APPLIANCES SHALL BE DESIGNED AND CONSTRUCTED TO RESIST HORIZONTAL AND VERTICAL LOADS WITHIN THE STRESS LIMITATIONS OF THE CBC. (CMC 303.5)
6. EQUIPMENT AND APPLIANCES SHALL BE ACCESSIBLE FOR SERVICE, INSPECTION REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION. SUFFICIENT CLEARANCE SHALL BE MAINTAINED TO PERMIT CLEANING, REPLACEMENT OF FILTERS, BLOWERS, MOTORS CONTROLS AND LUBRICATION OF MOVING PARTS. 30 INCHES OF CLEARANCE IN DEPTH WIDTH AND HEIGHT SHALL BE PROVIDED TO SERVICE THE APPLIANCE OR EQUIPMENT. (CMC 304.1)
7. MECHANICAL DUCT PENETRATIONS OF A NON-FIRE RESISTANCE RATED FLOOR ASSEMBLY SHALL BE PROTECTED WITH A SHAFT ASSEMBLY IN ACCORDANCE WITH CBC SECTION 708. OR, WHEN THE DUCT CONNECTS NOT MORE THAN TWO STORIES, THE ANNULAR SPACE AROUND THE PENETRATING DUCT MUST BE PROTECTED WITH AN APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND PRODUCTS OF CONSTRUCTION. (CBC 716.6.3)
8. OUTSIDE AIR FOR A HEATING OR COOLING SYSTEM SHALL NOT BE TAKEN FROM CLOSER THAN 10 FEET FROM AN APPLIANCE VENT OUTLET, VENT OPENING OF A PLUMBING SYSTEM, OR THE DISCHARGE OUTLET OF EXHAUST FAN, UNLESS THE OUTLET IS 3 ABOVE THE OUTSIDE AIR INLET. (CMC 314.3)
9. ALL MATERIALS EXPOSED WITHIN DUCTS AND PLENUMS INCLUDING ANY ABOVE CEILING RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED TWENTY-FIVE (25) AND A SMOKE DEVELOPED INDEX NOT TO EXCEED THEN FIFTY (50) WHEN TESTED AS A COMPOSITE PRODUCT IN ACCORDANCE WITH ASTM E 84 OR UL 723 AND SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2013 CMC SECTION 602.2

CODE INFORMATION:

THE CONTRACTOR SHALL CONFORM TO ALL CODES, ORDINANCES, ETC. WHICH HAVE JURISDICTION OVER THIS WORK. BELOW IS A LIST OF MAJOR STANDARDS LISTED FOR CONVENIENCE ONLY. REFERENCE TO A STANDARD MEANS, THE LATEST EDITION OF SUCH STANDARD AT DATE OF BUILDING PERMIT. THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR COMPLIANCE WITH LATEST REVISIONS OF ALL OTHER APPLICABLE CODES AND ORDINANCES NOT LISTED HEREIN .

CALIFORNIA BUILDING CODE (CBC) 2022
CALIFORNIA MECHANICAL CODE (CMC) 2022
CALIFORNIA PLUMBING CODE (CPC) 2022
CALIFORNIA ELECTRICAL CODE (CEC) 2022
CALIFORNIA ENERGY CODE (TITLE 24, PART 6) 2022

MECHANICAL GENERAL NOTES:

1. CONTRACTOR SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS.INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
2. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS , REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY OWNER OF ANY DISCREPANCIES BEFORE STARTING WORK.
3. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE , LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK , CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
4. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF NFPA , OSHA, UBC, OR ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL, PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK.OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
5. MOUNT PROGRAMMABLE THERMOSTATS AT 48" AFF CENTERLINE UNLESS INDICATED OTHERWISE ON PLAN.
6. ALL ELBOWS TO BE RADIUS UNLESS SPECIFICALLY SHOWN OTHERWISE.
7. INSTALL DUCTWORK TIGHT TO BOTTOM OF STRUCTURE.
8. ALL VOLUME DAMPERS SHALL BE LOCKING TYPE.
9. MECHANICAL CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT , AS SHOWN ON THESE DRAWINGS, WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, PIPING OR EQUIPMENT.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RECEIVE, OFF-LOAD, STORE, INSURE, CARRY UP , DISPOSE OF DEBRIS AND SET IN PLACE ALL OWNER FURNISHED ITEMS AND EQUIPMENT.
11. MECHANICAL CONTRACTOR SHALL PROVIDE COMPLETE INFORMATION AND COOPERATION TO THE OTHER CONTRACTORS AND TRADES AS REQUIRED FOR COMPLETION AND COORDINATION OF THE COMPLETE PROJECT .
12. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADMINISTERING ALL WARRANTIES ON EQUIPMENT WHICH INSTALLS.
13. ALL FLEXIBLE DUCTS SHALL BE SUPPORTED EVERY 3'-0" WITH 2" WIDE GALVANIZED STEEL BANDS WITH A MINIMUM OF ONE PER EACH SECTION OF FLEXIBLE DUCT. THE MAXIMUM ALLOWABLE LENGTH OF THE FLEX DUCT SHALL BE 5'-0".
14. NO FLEXIBLE DUCTWORK SHALL BE ALLOWED IN EXPOSED CONDITION FOR ABOVE INACCESSIBLE CEILINGS.
15. ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
16. ALL MECHANICAL EQUIPMENTS SHALL BE INSTALLED , ANCHORED AND BRACED IN ACCORDANCE WITH LOCAL SEISMIC RESTRAINT REQUIREMENTS..
17. PROVIDE SPLITTER DAMPERS AT ALL SUPPLY AIR BRANCH DUCT TAKEOFFS FROM MAIN DUCT.
18. CONCEALED DUCTWORK SHALL BE NEW , PRIME GRADE, CONTINUOUS HOT-DIP MILL GALVANIZED, LOCK-FORMING QUALITY STEEL SHEETS. EXPOSED DUCTWORK SHALL BE "PAINT-GRIP" . DUCTS SHALL BE LOW PRESSURE CLASSIFIED WITH 2 IN. WG AND IN ACCORDANCE TO SMACNA STANDARDS. PROVIDE COLLARS AT EXPOSED DUCT WALL PENETRATIONS. DUCT LINING SHALL BE 1" ACOUSTICAL DUCT LINING IN ACCORDANCE WITH SMACNA STANDARDS.
    SHEET METAL
    GALVANIZED IRON FABRICATED AND INSTALLED AS PER 2022 CALIFORNIA MECHANICAL CODE AND CALIFORNIA TITLE 24 STANDARD.
    SUPPLY AND RETURN MAINS
    A. SPIRAL DUCT FABRICATED, INSTALLED AND INSULATED AS PER CODE.
       OR
    B. RECTANGULAR OR ROUND, FABRICATED AND INSTALLED AS PER UNIFORMED MECHANICAL CODE AND INSULATED PER INSULATION SCHEDULE.
    FINAL CONNECTORS TO AIR DEVICES
    FLEXIBLE FIBERGLASS DUCT. MAXIMUM 7"-0" LONG, 1 1/2" THICK HEAVY DENSITY FIBERGLASS WITH LINER AND CAPOR JACKET, CLASS 1, STANDARD 181.
19. WITHIN 90 DAYS AFTER ISSUANCE OF CERTIFICATE OF OCCUPANCY RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER. IF ANY CHARACTERISTIC IS MATERIALLY CHANGED BEFORE FINAL CONSTRUCTION AND INSTALLATION, SUCH THAT THE BUILDING MAY NO LONGER COMPLY WITH PART6, THE BUILDING MUST BE BROUGHT INTO COMPLIANCE, AND SO INDICATED ON AMENDED PLANS AND CERTIFICATE OF COMPLIANCE THAT SHALL BE SUBMITTED FOR PLAN APPROVAL.SEC.10-103(a)2B
20. THE BUILDER SHALL PROVIDE THE BUILDING OWNER OR THE PERSON(S) RESPONSIBLE FOR BUILDING MAINTENANCE (IN CASE OF MULTI-TENENANT OR CENTRALLY OPERATED BUILDINGS) AT OCCUPANCY THE FOLLOWING:
    A. OPERATING INFORMATION; THE APPROPRIATE CERTIFICATE(S) OF COMPLIANCE AND A LIST OF THE FEATURES, MATERIALS,COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING AND INSTRUCTIONS ON HOW TO OPERATE THEM EFFICIENTLY.
    B. MAINTENANCE INFORMATION: REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL MAY BE LIMITED TO IDENTIFYING THE OPERATION AND MAINTENANCE MANUAL.
    C. VENTILATION INFORMATION: A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AND RE-CIRCULATED AIR THAT THE VENTILATION SYSTEMS ARE DESIGNED TO PROVIDE TO EACH AREA.SEC.10-13(b)

TITLE24 NOTES:

1. DUCTWORK, INCLUDING INSULATION, SHALL CONFIRM TO CALIFORNIA ADMINISTRATIVE CODE, 2022 TITLE 24, AND THE CMC LOW VELOCITY DUCT CONSTRUCTION STANDARDS, LATEST 2022 EDITION.
2. THE PIPING FOR ALL SPACE CONDITIONING AND SYSTEMS SHALL BE INSULATED IN ACCORDANCE WITH TABLE 4-3 OF THE CALIFORNIA ENERGY COMMISSION,2022 ENERGY EFFICIENCY STANDARDS MANUAL.
3. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENIFICIAL TO THE OCCUPIED AREA TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC TAPE.
4. A MAINTENANCE LABEL SHALL BE AFFLICTED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
5. DUCT SYSTEMS USED WITH BLOWER TYPE EQUIPMENT WHICH ARE PORTIONS OF A HEATING, COOLING, ABSORPTION,EVAPORATIVE COOLING OR OUTDOOR AIR VENTILATION SYSTEM SHALL BE SIZED IN ACCORDANCE WITH CHAPTER 17 REFERENCE STANDARDS OF THE CALIFORNIA MECHANICAL CODE.
6. THE PERSON WITH THE OVERALL RESPONSIBILITY FOR CONSTRUCTION OR THE PERSON RESPONSIBLE FOR THE INSTALLATION OF THE REGULATED MANUFACTURED DEVICES SHALL POST, OR MAKE AVAILABLE WITH THE BUILDING PERMIT(S) ISSUED FOR THE BUILDING, THE INSTALLATION CERTIFICATE(S) SHALL BE MADE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPROPRIATE INSPECTIONS. THESE CERTIFICATES SHALL:
    A. IDENTIFY FEATURES REQUIRED TO VERIFY COMPLIANCE WITH THE APPLIANCE STANDARDS AND PART 6.
    B. INCLUDE A STATEMENT INDICATED THAT THE INSTALLED DEVICES CONFORM TO THE APPLIANCE STANDARDS AND PART 6 AND THE REQUIREMENTS FOR SUCH DEVICES GIVEN IN THE PLANS AND SPECIFICATION APPROVED BY THE LOCAL ENFORCEMENT AGENCY.
    C. STATE THE NUMBER OF THE BUILDING PERMIT UNDER WHICH THE CONSTRUCTION OR INSTALLATION WAS PERFORMED.
7. 7-AFTER INSTALLING WALL, CEILING, OR FLOOR INSULATION, THE INSTALLER SHALL MAKE AVAILABLE TO THE ENFORCEMENT AGENCY OR POST IN A CONSPICUOUS LOCATION IN THE BUILDING A CERTIFICATE SIGNED BY THE INSTALLER STATING THAT THE INSTALLATION IN CONSISTENT WITH THE PLANS AND SPECIFICATIONS MATERIAL IDENTIFICATION, AND INSTALLED R-VALUE.
8. 8-JOINTS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, CASKETED, WEATHER STRIPPED, OR OTHERWISE SEALED TO LIMIT INFILTRATION AND EX-FLITRATION.
9. 9-INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAMEPROOF RATING AND SMOKE DENSITY REQUIREMENTS OF THE SECTIONS 707 OF THE CBC.

21. HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL HAVE CONTROLS:
    A. THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND
    B. IN WHICH THE CUT-ON TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-ON TEMPERATURE FOR SUPPLEMENTARY HEATING, AND CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING. SEC.112(b)
22. THE LESSER OF MINIMUM RATE OF OUTDOOR AIR REQUIRED BY SEC. 21-B OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BUILDING DURING THE ONE-HOUR PERIOD IMMEDIATELY BEFORE THE BUILDING IS NORMALLY OCCUPIED. SEC.121(C)2
23. ALL AIR DISTRIBUTION SYSTEMS DUCTS AND PLENUMS, INCLUDING, BUT NOT LIMITED TO, BUILDING CAVITIES, MECHANICAL CLOSETS, AIR-HANDLER BOXES AND SUPPORT PLATFORMS USED AS DUCTS OR PLENUMS, SHALL BE INSTALLED, SEALED AND INSULATED TO MEET THE REQUIREMENTS OF THE 2022 CALIFORNIA MECHANICAL CODE. SUPPLY-AIR AND RETURN-AIR DUCTS CONVEYING HEATED OR COOLED AIR SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-8, UNLESS DUCTS ARE IN CONDITIONED SPACE. SEC.124(a)
24. THE THERMOSTATIC CONTROLS FOR HVAC SYSTEMS SHALL MEET THE FOLLOWING REQUIREMENTS AS APPLICABLE:
    A. EACH SPACE CONDITIONINGS ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE AND MEETS THE APPLICABLE REQUIREMENTS OF SECTION (B).
    B. EACH THERMOSTATIC CONTROL REQUIRED BY SECTION (A) SHALL BE CAPABLE OF BEING SET LOCALLY OR REMOTELY BY ADJUSTMENT OR SELECTION OF SENSORS TO CONTROL:
       - COMFORT HEATING DOWN TO 55'F OR LOWER.
       - COMFORT COOLING UP TO 85'F OR HIGHER.
       - BOTH HEATING AND COOLING, THE THERMOSTATIC CONTROLS SHALL BE CAPABLE OF PROVIDING A TEMPERATURE RANGE OR DEAD HAND OF AT LEAST 5'F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM .SEC. 122(a)&(b)
25. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN. SEC.122(f)
26. DEMAND CONTROL VENTILATION DEVICES(CO2 SENSORS) SHALL BE INSTALLED IN ACCORDANCE WITH SEC.121(c)4. SEC.121(c)4
27. EACH SPACE-CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT COMPLY WITH ITEMS "A" AND "B" BELOW:
    A. ARE CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SYSTEM DURING PERIODS OF NON-USE AND SHALL HAVE:
       - AN AUTOMATIC TIME SWITCH CONTROL DEVICE COMPLYING WITH SEC 119(c) WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM FOR UP TO 4 HOURS; OR
       - AN OCCUPANCY SENSOR; OR
       - A FOUR-HOUR TIMER THAT CAN BE MANUALLY OPERATED.
       EXCEPTION: MECHANICAL SYSTEMS SERVING RETAIL STORES AND ASSOCIATED MALLS, RESTAURANTS,GROCERY STORES,CHURCHES, AND THEATERS EQUIPPED WITH 7-DAY PROGRAMMABLE TIMERS.
    B. AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN:
       - A SETBACK HEATING THERMOSTAT SET POINT, IF THE SYSTEM PROVIDES MECHANICAL HEATING;
       EXCEPTION: AREA WITH THE DESIGN WINTER OUTDOOR TEMP. OR GREATER THAN 32'F
       - A SETUP COOLING THERMOSTAT SET POINT, IF THE SYSTEM PROVIDES MECHANICAL COOLING
       EXCEPTION: AREA WITH THE DESIGN SUMMER OUTDOOR TEMPERATURE. OF LESS THAN 100'F
       EXCEPTION: SYSTEMS SERVING HOTEL/MOTEL GUEST ROOMS, IF THEY HAVE A READILY ACCESSIBLE MANUAL SHUT-OFF SWITCH. SEC.122(e)
28. ALL MECHANICAL EQUIPMENT AND SYSTEMS INSTALLED, AS PART OF PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2022 CALIFORNIA MECHANICAL CODE AND 2022 CALIFORNIA BUILDING CODE, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AND THE 2022 CALIFORNIA BUILDING EFFICIENCY STANDARDS.
29. ALL DUCTWORKS FOR HEATING AND COOLING SHALL BE CONDUCTED THROUGH DUCT SYSTEMS CONSTRUCTED OF METAL AS SET FOURTH IN THE ANSI/SMACNA 006-2006 HVAC DUCT CONSTRUCTION STANDARD-METAL FLEXIBLE; OR ANOTHER APPROVED METHOD. FACTORY MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL COMPLY WITH THE 2022 CMC REFERENCED STANDARD CHAPTER 17.(CMC 602)
30. ALL DUCT SMOKE DETECTORS INSTALLED , AS PART OF THIS PROJECT SHALL BE SUPERVISED BY THE BUILDING FIRE DETECTION OR ALARM SYSTEM WHEN THE BUILDING IS EQUIPPED WITH SUCH SYSTEM.CITY FIRE DEPARTMENT FIRE PREVENTION BUREAU PLAN CHECK APPROVAL AND PERMIT ARE REQUIRED FOR CONNECTION OF DUCT SMOKE DETECTORS TO THE FIRE DETECTION OR ALARM SYSTEMS.(CMC609)
31. THE REQUIRED SERVICE DISTANCE FROM MECHANICAL EQUIPMENT TO SCREENING. PARAPETS, WALLS AND OTHER EQUIPMENT SHALL BE A MINIMUM OF 30"X30" ON THE SERVICE SIDE OF THE EQUIPMENT, OR AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. IF THE INSTRUCTIONS REQUIRE A GREATER CLEARANCE . (CMC SECTION 35.0)
32. ALL APPLIANCES DESIGNED TO BE IN A FIXED POSITION SHALL BE SECURELY FASTENED IN PLACE. SUPPORTS FOR APPLIANCES SHALL BE DESIGNED AND CONSTRUCTED TO RESIST HORIZONTAL AND VERTICAL LOADS WITHIN THE STRESS LIMITATIONS OF THE CBC. (CMC303.4).
33. OUTSIDE AIR FOR A HEATING OR COOLING SYSTEM SHALL NOT BE TAKEN FROM CLOSER THAN 10 FEET FROM AN APPLIANCE VENT OUTLET, VENT OPENING OF A PLUMBING SYSTEM. OR THE DISCHARGE OUTLET OF EXHAUST FAN, UNLESS THE OUTLET IS 3FT. ABOVE THE OUTSIDE AIR INLET. (CMC 311.3).

SEISMIC NOTES:

1. ANCHORAGE AND/OR SEISMIC RESTRAINTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.
2. THE ANCHORAGE AND/ORSEISMIC RESTRAINT OF PERMANENT EQUIPMENT AND ASSOCIATED SYSTEMS LISTED SHALL BE DESIGNED TO RESIST THE TOTAL DESIGN SEISMIC FORCES PRESCRIBED IN SECTION 1632.2 OF THE 2022 CALIFORNIA BUILDING CODE.
3. SEISMIC RESTRAINTS ARE REQUIRED FOR THE FOLLOWING INSTALLATIONS.REFER TO THE SMACNA GUIDELINES FOR ADDITIONAL REQUIREMENTS:
    A. FLOOR OR ROOF MOUNTED EQUIPMENT WEIGHTING 400LBS. OR GREATER.
    B. SUSPENDED OR WALL MOUNTED EQUIPMENT WEIGHTING 20LBS. OR GREATER.
    C. VIBRATION ISOLATION EQUIPMENT WEIGHING 20LBS. OR GREATER.
    D. PIPING 1-1/4 INCHES NOMINAL DIAMETER AND LARGER LOCATED IN BOILER, MECHANICAL EQUIPMENT AND REFRIGERATION MECHANICAL ROOMS.
    E. PIPING 2-1/2 INCHES NOMINAL DIAMETER AND LARGER.
    F. DUCTWORK 6 SQUARE FEET AND LARGER IN CROSS SECTIONAL AREA.
    G. ROUND DUCTWORK 28 INCH DIAMETER AND GREATER.
    H. PIPES AND DUCTS SUPPORTED BY A TRAPEZE WHERE NONE OF THOSE ELEMENTS WOULD INDIVIDUALLY REQUIRE BRACING NEED NOT BE BRACED IF CONNECTIONS TO THE PIPE/DUCT OR DIRECTIONAL CHANGES DO NOT RESTRICT MOVEMENT OF THE TRAPEZE.
    IF THIS FLEXIBILITY IS NOT PROVIDED, BRACING IS REQUIRED WHEN THE COMBINED OPERATING WEIGHT OF ALL ELEMENTS SUPPORTED BY THE TRAPEZE IS 10 LBS/FT OR GREATER.

CALGREEN NOTES:

1. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.(CAL GREEN 5.410.4.4)
2. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING AND COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER OR DEBRIS WHICH MAY ENTER THE SYSTEM.(CAL GREEN 5.504.3)

NO.	REVISION	DATE

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
MECHANICAL
GENERAL NOTES,
LEGEND &
ABBREVIATIONS

PROJECT NO.:
235651

DATE:
04/24/2023

SCALE:
AS SHOWN

DRAWING NO.

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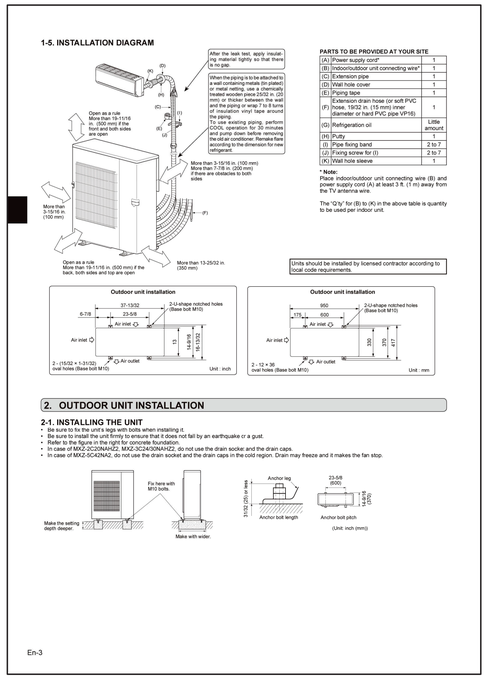
Plotted: Monday, April 24, 2023 8:43 AM

OUTDOOR HEAT PUMP SYSTEM UNIT SCHEDULE

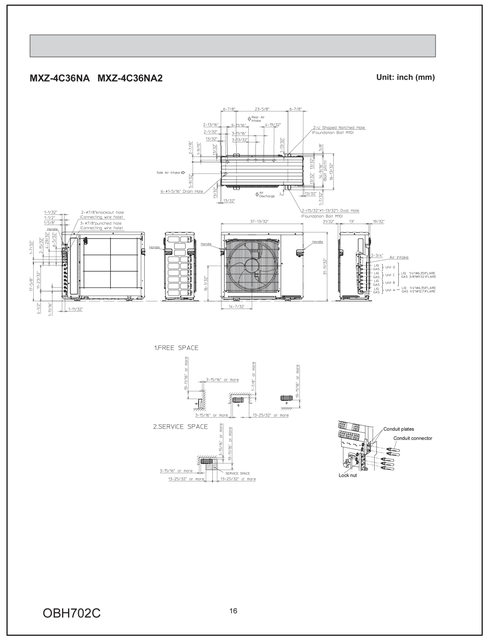
TAG	MANUFACTURER	MODEL#	INDOOR UNITS	NOMINAL CAPACITY	REFRIGERANT TYPE	EFFICIENCY			COOLING	HEATING	WEIGHT	VOLTAGE/ PHASE/ FREQUENCY/ CURRENT
						EER	SEER	HSPF	TOTAL BTUH	TOTAL BTUH		
CU 1	MITSUBISHI	MXZ-4C36NA2 OR EQUAL	FC-1-1 FC-1-2 FC-1-3 FC 1-4	3.0 TON	R-410A	9.4	19.2	11.0	33,500	35,000	189 LBS	230/1/60/29.3
CU 2	MITSUBISHI	MXZ-4C36NA2 OR EQUAL	FC-2-1 FC-2-2 FC-2-3 FC 2-4	3.0 TON	R-410A	9.4	19.2	11.0	33,500	35,000	189 LBS	230/1/60/29.3

CEILING MOUNT DUCTLESS INDOOR UNITS SCHEDULE

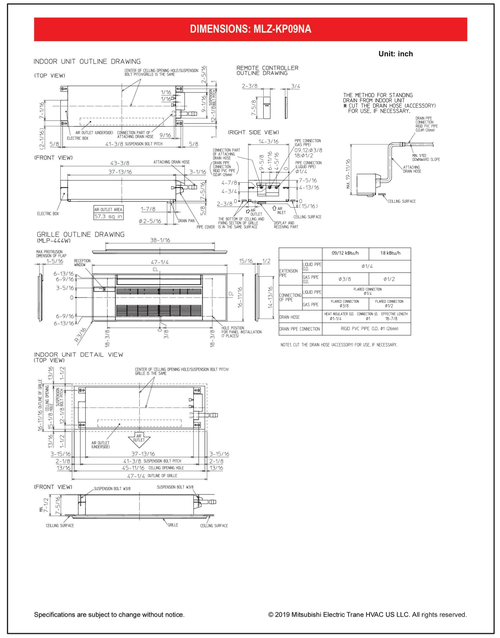
TAG	MANUFACTURER	MODEL#	SERVICE	CONDENSER	PIPE SIZES			COOLING	HEATING	WEIGHT	UNIT RATED CFM	VOLTAGE/ PHASE/ FREQUENCY
					LIQ.	GAS	DRAIN	BTUH	BTUH			
FC 1-1	MITSUBISHI	MLZ-KP 09 OR EQUAL	GREAT SPACE	CU 1	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 1-2	MITSUBISHI	MLZ-KP 09 OR EQUAL	GREAT SPACE	CU 1	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 1-3	MITSUBISHI	MLZ-KP 09 OR EQUAL	KITCHEN	CU 1	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 1-4	MITSUBISHI	MLZ-KP 09 OR EQUAL	MAIN BEDROOM	CU 1	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 2-1	MITSUBISHI	MLZ-KP 09 OR EQUAL	MASTER BEDROOM	CU 2	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 2-2	MITSUBISHI	MLZ-KP 09 OR EQUAL	HALL	CU 2	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 2-3	MITSUBISHI	MLZ-KP 09 OR EQUAL	BEDROOM 3	CU 2	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60
FC 2-4	MITSUBISHI	MLZ-KP 09 OR EQUAL	BEDROOM 4	CU 2	1/4"	3/8"	5/8"	9,000	9,000	22 LBS	325	230/1/60



HEAT PUMP INSTALLATION DETAILS



HEAT PUMP OUTDOOR UNIT DIMENSIONS



HEAT PUMP INDOOR UNITS DIMENSIONS

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NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

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OWNER/CLIENT:
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(949)215-7544
ARMAN@ACMBUILDER.COM

PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
EQUIPMENT SCHEDULE

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO.
M110
of

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Plotted: Monday, April 24, 2023 8:43 AM

EXHAUST FAN UNITS SCHEDULE

UNIT	MANUFACTURER	MODEL#	LOCATION	TYPE	CFM	DUCT SIZE	SONE	ESP	ELECTRICAL			WEIGHT	REMARKS
									POWER	VOLTS/PH/HZ	LIGHT		
EF 1-1	DELTA BREEZE	VFB25ACH	MASTER BATHROOM 1ST FLOOR	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK
EF 1-2	DELTA BREEZE	VFB25ACH	1ST FLOOR BATHROOM 1	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK
EF 2-1	DELTA BREEZE	VFB25ACH	2ND FLOOR MASTER BATHROOM	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK
EF 2-2	DELTA BREEZE	VFB25ACH	2ND FLOOR MASTER BATHROOM	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK
EF 2-3	DELTA BREEZE	VFB25ACH	LAUNDRY ROOM	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK
EF 2-4	DELTA BREEZE	VFB25ACH	2ND FLOOR BATHROOM 4	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK
EF 2-5	DELTA BREEZE	VFB25ACH	2ND FLOOR BATHROOM 5	CENTRIFUGAL WITH HUMIDITY CONTROL	80	4" MAX. 20 LF	<0.3	0.5"WC	50 WATTS	115/1/60	–	15	PROVIDE BACK DRAFT DAMPER AND WALL MOUNT JACK

NOTE:
KITCHEN RANGE, EXHAUST HOOD, CLOTHES DRYER EXHAUST, LAUNDRY EHAUST FANS SHALL ALL TERMINATE OUTSIDE.

DELTA breez Signature

MODEL VFB25ACH
(80 CFM)

Description
Low noise ceiling mount ventilating fan with humidity sensor, rated for continuous running. Fan has been awarded ENERGY STAR® Most Efficient in 2016. Evaluated by Underwriter Laboratories and conforms to both UL and cUL safety standards.

Motor/Blower
- Power rating of 110~220volts/50~60Hz
- DC brushless motor engineered to run continuously
- Motor equipped with thermal cutoff fuse
- Permanently lubricated motor
- Meets or exceeds the requirements set forth by ASHRAE 62.2 for continuous or intermittent running applications

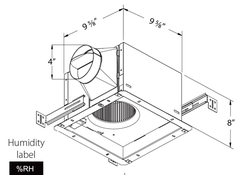
Housing
- Galvanized steel body
- Detachable 4" diameter duct adapter
- Built-in backdraft damper
- Easy installation

Grille
- Attractive design using ABS material
- Attaches directly to housing with torsion springs

Warranty
- 3-year limited warranty

Features
- Blue and amber LED indicator lights to show humidity sensor and full speed modes
- For ceiling mount only, air flow of 80 CFM (±10%) and approximately <0.3 Sones at 0.1" static pressure
- Power consumption approximately 7.2 Watts with an efficiency rating approximately 11.0 CFM/Watt at 0.1" static pressure
- Duct diameter no less than 4"
- UL and cUL listed for tub/shower enclosure when used with GFCI branch circuit wiring

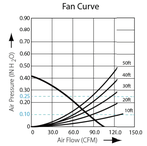
DC Motor Technology
- Allows fan to operate in full speed mode or humidity control mode by cycling ON/OFF switch
- Built-in soft start function to increase bearings' life
- Automatically powers OFF when impeller is locked abnormally



Most Efficient 2019 www.energystar.gov | HVI CERTIFIED | cULus

VFB25ACH	4"Duct (Standard)	
Static Pressure (inches w.g.)	0.1	0.25
Air Flow (CFM)	80	56
Sones	<0.3	0.8
Power Consumption (Watts)	7.2	9.3
Energy Efficiency (CFM/Watt)	11.0	6.0
Current (Amps)	0.15 @ 110 Vac	
Power Rating (V/Hz)	110~220 / 50~60	

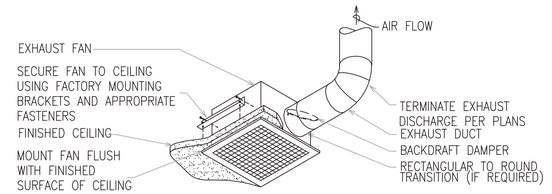
Fan Curve

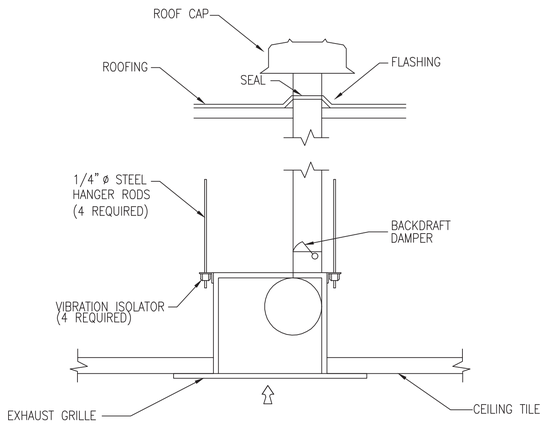


Model	Quantity	Comments	Project:
			Location:
			Architect:
			Engineer:
			Contractor:
			Submittedby:
			Date:

46101 Fremont Blvd., Fremont, CA 94538 | tel 1.888.979.9889 | www.deltabreez.ccm

BATHROOMS FAN SPECIFICATIONS





1 – EXHASUT FAN INASTALLATION DETAIL
N.T.S.

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NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
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No. M30230
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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
EQUIPMENT SCHEDULE

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. M120
of

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Plotted: Monday, April 24, 2023 8:43 AM

ASHRAE 62.2 INDOOR AIR QUALITY VENTILATION CALCULATION				INDOOR AIR QUALITY VENTILATION UNIT SCHEDULE								
DWELLING UNIT	AREA	NUMBER OF BEDROOMS	REQUIRED CFM= 0.03 * AREA + (NUMBER OF BEDROOMS + 1) * 7.5	FAN TAG#	MANUFACTURER	MODEL#	EXHAUST CFM	DUCT COLLAR	SONE	ELECTRICAL		REMARKS
										POWER	VOLTS/PH/HZ	
BUILDING 'B'	3412	4	106	IAQ 1	PANASONIC	FV-0511VK2	110	6" ROUND	0.8	23 WATTS	115/1/60	

NOTES:
1. INDOOR AIR QUALITY FAN SHALL OPERATE CONTINUOUSLY WITH MAXIMUM SOUND OF 1 SONE. THESE EXHAUST FANS CAN BE CONTROLLED BY A STANDARD ON/OFF SWITCHES BUT THE SWITCHES MUST LABELED TO INFORM THE OCCUPANT THE INDOOR AIR QUALITY FANS MUST OPERATE CONTINUOUSLY WHEN THE DWELLING UNIT IS IN USE.

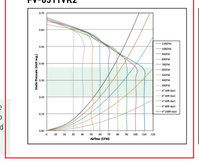
INDOOR AIR QUALITY FAN SPECIFICATIONS

WhisperGreen® Select™ Ventilation Fans

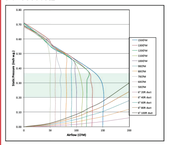
WhisperGreen Select VENTILATION FAN

Industry research indicates static pressure in typical installations ranges from 0.20" to 0.375". Panasonic's powerful ECM motored fans produce airflow rates that force through real-world static pressure.

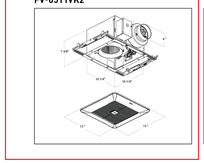
FV-0511VK2



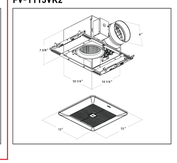
FV-1115VK2



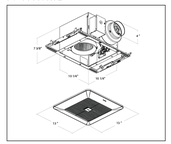
FV-0511VK2



FV-1115VK2



FV-0511VKS2



Specifications		WhisperGreen® Select™ (Fan Only) — Base Fan																					
		FV-0511VK2										FV-1115VK2											
Characteristics (HVI tested data for 0.1" S.P.)	Static Pressure in inches w.g.	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	
	Air Volume (CFM)	110	110	108	80	80	79	50	51	51	150	151	132	130	130	126	110	112	105				
	Noise (sones)	0.3	0.8	–	0.2	0.5	–	0.1	0.4	–	0.3	0.7	–	0.1	0.4	–	0.3	0.3	–				
	Power Consumption (watts)	11.9	15.6	20.0	5.1	7.6	13.6	2.1	4.2	9.6	12.9	22.0	26.6	9.2	14.5	22.1	4.9	12.8	17.9				
	Energy Efficiency (CFM/Watt)	11.1	7.1	5.4	15.7	8.3	5.9	16.2	8.3	5.3	11.7	6.8	5.4	14.2	7.9	5.6	14.0	8.7	5.8				
	Speed (RPM)	900	1160	1264	795	1110	1215	722	1054	1244	684	916	1084	643	930	1080	620	894	1082				
	Current (amps)	0.10	0.16	0.20	0.06	0.10	0.14	0.06	0.07	0.10	0.14	0.22	0.26	0.10	0.17	0.22	0.08	0.13	0.18				
	MAX. Current (amps)	0.20												0.24									
	Power Rating (Vhz)	120/60												120/60									
Specifications	Motor Type	ECM												ECM									
	Type of Motor Bearing	Ball												Ball									
	Thermal Fuse Protection	Yes												Yes									
	Blower Wheel Type	Sirocco												Sirocco									
	ENERGY STAR Qualified	Yes												Yes									
Installation	Duct Diameter (inches)	4 & 6												4									
	Mounting Opening (inches sq.)	10-1/2												10-1/2									
	Grille Size (inches sq.)	13												13									
Light Specifications	Lamp Watts	N/A												N/A									
	Lumens (lm)	N/A												N/A									
	Lumens Per Watt (LPW)	N/A												N/A									
	Color Rendering Index	N/A												N/A									
	Color Temperature (Kelvin)	N/A												N/A									
	Rated Life (hours)	N/A												N/A									
	Lamp Model #	N/A												N/A									
	Type of Lamp Socket	N/A												N/A									
Night Light Specs	Night Light Watts	N/A*												N/A*									
Shipping	Gross Weight (lbs)	11.80												11.95									
Approved Code/ Standard/ Regulation	UL tub/Shower Enclosure	Yes												Yes									
	Washington VAIQ Code	Yes												Yes									
	Wall installation	No												No									
	California Title 24 Compliant	Yes												Yes									
	Mfg in ISO 9001 Certified Facility	Yes												Yes									

Specifications		WhisperGreen® Select™ (Fan Only) — Base Fan with Pre-Installed Multi-Speed																					
		FV-0511VK2										FV-1115VK2											
Characteristics (HVI tested data for 0.1" S.P.)	Static Pressure in inches w.g.	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	
	Air Volume (CFM)	110	110	108	100	101	101	90	90	90	80	80	79	70	71	70	60	60	60	50	51	51	
	Noise (sones)	0.3	0.8	–	0.2	0.5	–	0.1	0.4	–	0.3	0.5	–	0.2	0.5	–	0.2	0.4	–	0.2	0.3	–	
	Power Consumption (watts)	11.9	15.6	20.0	7.9	13.1	17.8	4.5	11.2	16.0	5.1	9.6	13.4	4.3	8.5	12.1	3.7	6.9	10.5	3.1	4.2	9.6	
	Energy Efficiency (CFM/Watt)	11.1	7.1	5.4	12.7	7.7	5.7	13.9	8.0	5.6	15.7	8.3	5.9	16.7	8.5	5.9	16.3	8.7	5.7	16.2	8.3	5.3	
	Speed (RPM)	930	1160	1264	889	1164	1356	839	1155	1351	795	1113	1315	746	1112	1309	701	1043	1287	702	1094	1266	
	Current (amps)	0.10	0.16	0.20	0.09	0.14	0.18	0.07	0.12	0.16	0.06	0.10	0.14	0.05	0.09	0.13	0.05	0.08	0.11	0.04	0.07	0.10	
	MAX. Current (amps)	0.20																					
	Power Rating (Vhz)	120/60																					
Specifications	Motor Type	ECM																					
	Type of Motor Bearing	Ball																					
	Thermal Fuse Protection	Yes																					
	Blower Wheel Type	Sirocco																					
	ENERGY STAR Qualified	Yes																					
Installation	Duct Diameter (inches)	4 & 6																					
	Mounting Opening (inches sq.)	10-1/2																					
	Grille Size (inches sq.)	13																					
Light Specifications	Lamp Watts	N/A																					
	Lumens (lm)	N/A																					
	Lumens Per Watt (LPW)	N/A																					
	Color Rendering Index	N/A																					
	Color Temperature (Kelvin)	N/A																					
	Rated Life (hours)	N/A																					
	Lamp Model #	N/A																					
	Type of Lamp Socket	N/A																					
Night Light Specs	Night Light Watts	N/A*																					
Shipping	Gross Weight (lbs)	11.80																					
Approved Code/ Standard/ Regulation	UL tub/Shower Enclosure	Yes																					
	Washington VAIQ Code	Yes																					
	Wall installation	No																					
	California Title 24 Compliant	Yes																					
	Mfg in ISO 9001 Certified Facility	Yes																					

Specifications		WhisperGreen® Select™ (Fan Only) — Base Fan with Multi-speed Plug 'N Play Module																					
		FV-0511VK2 + FV-0512VK1										FV-1115VK2 + FV-1512VK1											
Characteristics (HVI tested data for 0.1" S.P.)	Static Pressure in inches w.g.	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	0.1	0.25	0.3125	
	Air Volume (CFM)	110	110	108	100	101	101	90	90	90	80	80	79	70	71	70	60	60	60	50	51	51	
	Noise (sones)	0.3	0.8	–	0.2	0.5	–	0.1	0.4	–	0.3	0.5	–	0.2	0.5	–	0.2	0.4	–	0.2	0.3	–	
	Power Consumption (watts)	11.9	15.6	20.0	7.9	13.1	17.8	4.5	11.2	16.0	5.1	9.6	13.4	4.3	8.5	12.1	3.7	6.9	10.5	3.1	4.2	9.6	
	Energy Efficiency (CFM/Watt)	11.1	7.1	5.4	12.7	7.7	5.7	13.9	8.0	5.6	15.7	8.3	5.9	16.7	8.5	5.9	16.3	8.7	5.7	16.2	8.3	5.3	
	Speed (RPM)	930	1160	1264	889	1164	1356	839	1155	1351	795	1113	1315	746	1112	1309	701	1043	1287	702	1094	1266	
	Current (amps)	0.10	0.16	0.20	0.09	0.14	0.18	0.07	0.12	0.16	0.06	0.10	0.14	0.05	0.09	0.13	0.05	0.08	0.11	0.04	0.07	0.10	
	MAX. Current (amps)	0.20																					
	Power Rating (Vhz)	120/60																					
Specifications	Motor Type	EC																					
	Type of Motor Bearing	Ball																					
	Thermal Fuse Protection	Yes																					
	Blower Wheel Type	Sirocco																					
	ENERGY STAR Qualified	Yes																					
Installation	Duct Diameter (inches)	4" or 6"																					
	Mounting Opening (inches sq.)	10-1/2"																					
	Grille Size (inches sq.)	13"																					
Light Specifications	Lamp Watts	N/A																					
	Lumens (lm)	N/A																					
	Lumens Per Watt (LPW)	N/A																					
	Color Rendering Index	N/A																					
	Color Temperature (Kelvin)	N/A																					
	Rated Life (hours)	N/A																					
	Lamp Model #	N/A																					
	Type of Lamp Socket	N/A																					
Night Light Specs	Night Light Watts	N/A*																					
Shipping	Gross Weight (lbs)	11.95																					
Approved Code/ Standard/ Regulation	UL tub/Shower Enclosure	Yes																					
	Washington VAIQ Code	Yes																					
	Wall installation	No																					
	California Title 24 Compliant	Yes																					
	Mfg in ISO 9001 Certified Facility	Yes																					

*Industry research indicates static pressure in typical installations ranges from 0.20" to 0.375".

ECM Motor with SmartFlow™ Technology
WhisperGreen® Select™ is designed to perform as rated. When the fan senses static pressure, its speed is automatically increased to ensure optimal CFM output. This feature provides peace of mind, as the installer doesn't have to worry about compromising the fan's performance.

NEW

LED Lighting
Includes a 10 Watt dimmable LED chip panel/3000 Kelvin Warm White/90CRI/700 lumens/70 LPW/ENERGY STAR® 2.0 certified/JA-8 compliant for CA Title 24/50,000 hours rated average life / <1W LED night light.

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NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — RASH ZAHARAN — No. M30230 — MECHANICAL — STATE OF CALIFORNIA

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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

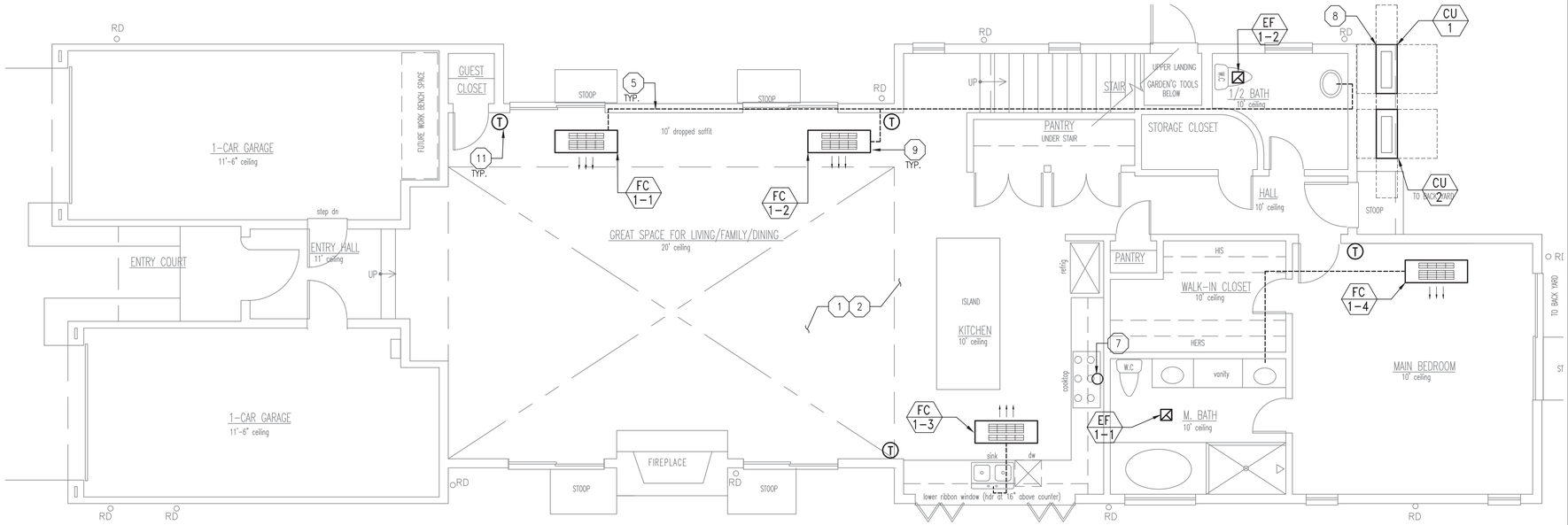
SHEET TITLE
INDOOR AIR QUALITY FAN SCHEDULE

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. M121
of

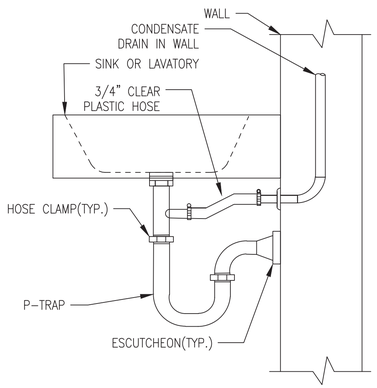
\\MYCLOUDPR2CXLTRA\Blueberry01- Blueberry Inc\02- Blueberry Engineering\03- Projects\10 - 2023 Projects\235651 Vakili's Residence\5. Technical\5- Native Files\235651 - BB Rev 102 - Building B\235651B-M-REV02.dwg
Plotted: Monday, April 24, 2023 8:44 AM

KEYED NOTES

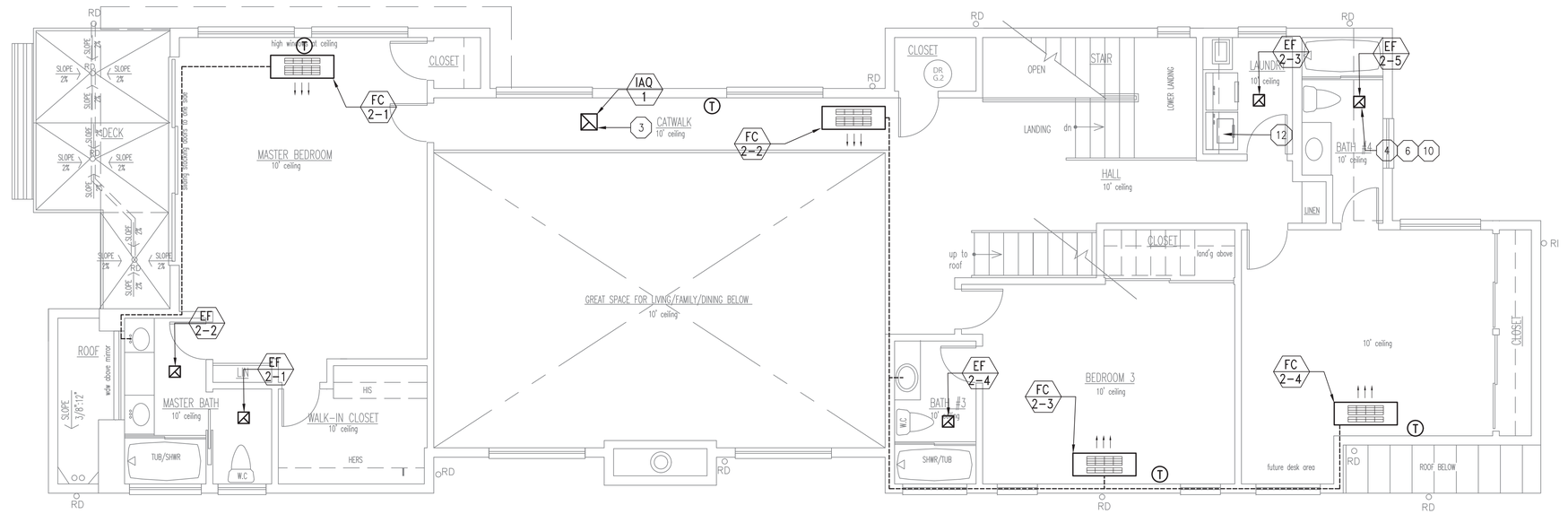
1. IMPORTANT: COORDINATE CLOSELY EQUIPMENT LOCATION WITH EXISTING PLUMBING, ELECTRICAL AND STRUCTURAL.
2. ALL INSTALLATIONS MUST BE CONFORM TO REQUIREMENTS OF 2022 CALIFORNIA MECHANICAL CODE.
3. INDOOR AIR QUALITY FAN. SEE SCHEDULE AND INSTALL 6" RIGID DUCT TO THE BACK OF THE BUILDING WITH CAP.
4. SEE INSTALLATION DETAILS (1 / M120)
5. 5/8" CONDENSATE WATER LINE TO LAVATORY/SINK WASTE LINE. FOLLOWING MANUFACTURER INSTALLATION MANUAL. SEE DETAIL 3/M200
6. BATHROOM EXHAUST TERMINATION TO ROOF. AIR DUCT SHALL EXHAUST 3'-0" FROM OPENING INTO THE BUILDING. CONTRACTOR TO FIELD VERIFY.
7. 7" RIGID METAL ROUND DUCT THROUGH ROOF WITH ROOF CAP FOR KITCHEN HOOD MINIMUM 100 CFM FAN
8. OUTDOOR HEAT PUMP UNIT TO BE INSTALLED AT GROUND LEVEL . SEE M-110 FOR SCHEDULE AND DETAILS
9. INDOOR FAN COIL UNIT . SEE M-110 FOR SCHEDULE AND DETAILS
10. INSTALL HUMIDISTAT CONTROL FOR BATHROOM FAN. SEE ELECTRICAL PLANS FOR DETAILS
11. WALL MOUNTED THERMOSTAT AND FAN-COIL CONTROL
12. DUCTLESS ELECTRIC DRYER WHIRLPOOL MODEL# WHD560CHW OR EQUAL.



1 / – 1ST FLOOR MECHANICAL PLAN
1/4"=1'-0"



3 / – CONDENSATE LINE INSTALLATION DETAILS
N.T.S.



2 / – 2ND FLOOR MECHANICAL PLAN
1/4"=1'-0"

CONSTRUCTION NOTES:

1. SUBMITTAL OF A CERTIFICATE AIR BALANCE REPORT AND OUTSIDE AIR CERTIFICATION ARE REQUIRED PRIOR TO OCCUPANCY.
2. CONTRACTOR TO PROVIDE DUCT SMOKE DETECTOR IN SUPPLY AIR PLENUM, INTEGRATE TO SHUT DOWN HVAC UNITS.
3. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENING SHALL BE COVERED WITH TAPE, PLASTIC OR SHEET METAL UNTIL THE FINAL STARTUP OF HEATING, COOLING AND VENTILATING EQUIPMENT. (5.504.3) CALIFORNIA GREEN CODE.
4. NO AIR INTAKES INCLUDING ADJACENT TENANT ROOF AREA WITHIN 10' OF EXHAUST FANS.
5. ALL MECHANICAL EQUIPMENT AND DUCTS SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY. INSTALLATION SHALL BE IN ACCORDANCE WITH APPROVED LISTING.
6. DUCT INSULATION SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 AND SMOKE DEVELOPED INDEX NOT TO EXCEED 50.
7. EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER CMC 504.1.1
8. MAXIMUM PERMITTED LENGTH OF EACH FLEXIBLE DUCT RUN IS 5 FEET.
9. EQUIPMENT SHOWN ON THIS PLAN IS LIMITED TO SCOPE OF THIS PROJECT.
10. NO AIR INTAKES INCLUDING ADJACENT TENANT ROOF AREA WITHIN 10' OF EXHAUST FANS.
11. EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER CMC 504.1.1

RESIDENTIAL HVAC NOTE:

1. RESIDENTIAL HVAC SYSTEMS SHALL BE INSPECTED IN ACCORDANCE WITH ACCA 4 QM. THE OWNER OR THE OWNER'S DESIGNATED AGENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF MECHANICAL SYSTEMS OR EQUIPMENT. THE AUTHORITY HAVING JURISDICTION SHALL BE PERMITTED TO CAUSE AN HVAC SYSTEM TO BE RE-INSPECTED. CMC 102.3.2

NOTES:

1. EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS [CMC504.1.1]
2. DRYER VENTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS [CMC 504.1.1]
3. ALL TERMINATION OF EXHAUST DUCTS SHALL MAINTAIN A MINIMUM 3 FEET CLEARANCE TO OPENING TO THE BUILDING AND TO PROPERTY LINE.
4. MAXIMUM TOTAL HORIZONTAL AND VERTICAL LENGTH OF DRYER VENTS SHALL BE 14' WITH 2 OFFSETS (REDUCE LENGTH FOR EACH ADDITIONAL BEND)

ADDITIONAL NOTES:

1. AN ACCESS THROUGH AN OPENING AND PASSAGEWAY AT LEAST AS LARGE AS THE LARGEST COMPONENT OF THE APPLIANCE, 22-INCH X 30-INCH MINIMUM. CMC 304.4
2. PROVIDE A 20 FEET MAXIMUM PASSAGEWAY TO THE FURNACE FROM THE ACCESS POINT. THE WIDTH OF THE PASSAGEWAY SHALL NOT BE LESS THAN 24 INCHES.
3. PROVIDE A LEVEL WORKING PLATFORM NOT LESS THAN 30 INCH BY 30 INCH IN FRONT OF THE SERVICE SIDE OF THE FURNACE.
4. PROVIDE A RECEPTACLE OUTLET AND SWITCHED LIGHT FIXTURE NEAR THE FURNACE. THE SWITCH SHALL BE LOCATED AT THE ENTRANCE OF THE PASSAGEWAY

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NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — RASH ZAHAR — No. M29230 — MECHANICAL — STATE OF CALIFORNIA

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34456 VIA GOMEZ
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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
MECHANICAL
SYSTEM PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. M200
of

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Plotted: Monday, April 24, 2023 8:44 AM

CODE INFORMATION:

THE CONTRACTOR SHALL CONFORM TO ALL CODES, ORDINANCES, ETC. WHICH HAVE JURISDICTION OVER THIS WORK. BELOW IS A LIST OF MAJOR STANDARDS LISTED FOR CONVENIENCE ONLY. REFERENCE TO A STANDARD MEANS, THE LATEST EDITION OF SUCH STANDARD AT DATE OF BUILDING PERMIT. THE CONTRACTOR SHALL RETAIN RESPONSIBILITY FOR COMPLIANCE WITH LATEST REVISIONS OF ALL OTHER APPLICABLE CODES AND ORDINANCES NOT LISTED HEREIN .

CALIFORNIA BUILDING CODE (CBC) 2022
CALIFORNIA MECHANICAL CODE (CMC) 2022
CALIFORNIA PLUMBING CODE (CPC) 2022
CALIFORNIA ELECTRICAL CODE (CEC) 2022
CALIFORNIA ENERGY CODE (TITLE 24, PART 6) 2022

CONSTRUCTION NOTES:

1. HOT WATER AND DRAIN PIPES EXPOSED UNDER SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED SO AS TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS.
2. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL NOT BE GREATER THAN 5 LB. FT.
3. NEW PLUMBING FIXTURES AND FITTINGS SHALL NOT EXCEED THE MAXIMUM ALLOWABLE FLOW RATES SPECIFIED IN SECTION 5.303.2
4. HOT WATER PIPING SHALL BE INSULATED AS PER CPC 609.11 AND CAL ENERGY CODE TABLE 120.3–A.
5. NO VENTING SYSTEM SHALL TERMINATE LESS THAN 3FEET ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10 FEET OR LESS THAN 4 FEET FROM ANY PROPERTY LINE EXCEPT A PUBLIC WAY.
6. NO VENT FROM INDIRECT WASTE PIPING SHALL BE COMBINED WITH ANY SEWER CONNECTED VENT BUT SHALL EXTEND SEPARATELY TO THE OUTSIDE AIR.
7. STEAM AND/OR HOT WATER DRAINAGE REQUIRES AN INDIRECT WASTE LINE.
8. EACH PLUMBING FIXTURE SHALL BE SEPARATELY TRAPPED BY AN APPROVED TYPE WATER SEAL TRAP.
9. BUILDING SEWER SHALL BE TESTED TO COMPLY WITH CPC 732.0

PLUMBING SPECIFICATION:

1. CLEANOUTS
   PROVIDE CLEANOUTS WITH BRASS SCREW PLUG AT ALL CHANGES OF DIRECTION TO PERMIT ROUTING OF ALL SEWERS. ALL CLEAN OUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUT LOCATIONS OF EQUIPMENT, CABINETS, ETC., WITH THE ARCHITECT PRIOR TO ANY INSTALLATION.
2. VALVES
   EVERY PLUMBING FIXTURE SHALL BE INDEPENDENTLY VALVED.
3. TESTING
   ALL SEWERS AND WATER PIPING SHALL BE PROPERLY TESTED TO THE SATISFACTION OF THE ARCHITECT AND THE LOCAL BUILDING INSPECTOR.
4. EXCAVATION AND BACK FILLING
   TRENCHES SHALL BE BACK FILLED AND SETTLED BY PUDDLING. NO PIPE SHALLBE LESS THAN 12" BELOW FINISH GRADE.
5. PIPING SUPPORTS
   ALL PIPING TO BE SUPPORTED WITH HANGERS AND BRACKETS WHICH PROVIDE ISOLATION FROM FRAMING. CONTACT BETWEEN PIPE AND SUPPORT TO BE LINED WITH PLASTIC OR FELT.
6. WATER HEATER INSTALLATION
   A. APPLIANCES IN GARAGES AND IN ADJACENT SPACES THAT OPEN TO THE GARAGE AND ARE NOT PART OF THE LIVING SPACE OF A DWELLING UNIT SHALL BE INSTALLED SO THAT BURNERS AND BURNER–IGNITION DEVICES ARE LOCATED NOT LESS THAN 18 INCHES ABOVE THE FLOOR UNLESS LISTED AS FLAMMABLE VAPOR RESISTANT.
   B. APPLIANCES INSTALLED IN GARAGES, WAREHOUSES, OR OTHER AREAS SUBJECT TO MECHANICAL DAMAGE SHALL BE GUARDED AGAINST SUCH DAMAGE BY BEING INSTALLED BEHIND PROTECTIVE BARRIERS OR BY BEING ELEVATED OR LOCATED OUT OF THE NORMAL PATH OF VEHICLES.

ENERGY CONSERVATION STANDARDS:

1. DOMESTIC HOT WATER SHALL BE INSULATED. HOT WATER PIPING WILL HAVE A MINIMUM INSULATION FOR THE FOLLOWING PIPE SIZES:

PIPE SIZE IN DIAMETER	INSULATION THICKNESS
1/2"	1/2"
3/4"	1"
1"~1–1/2"	1–1/2"
2" OR GREATER	2"

2. TIME CLOCKS TO BE INSTALLED TO CONTROL ANY HOT WATER CIRCULATING PUMPS.
3. SINKS AND LAVATORY FAUCETS AND SHOWER HEADS TO BE CERTIFIED BY STATE FOR
4. ENERGY APPLIANCE STANDARD COMPLIANCE.
5. MAXIMUM FLUSH VOLUMES AND FLOW RATES:

WATER CLOSETS:	1.28 GALLONS PER FLUSH(BLOWOUT TYPE EXEMPT)
LAVATORY:	1.2 GALLON PER MINUTE @ 60PSI
SHOWER:	1.8 GALLON PER MINUTE @ 80PSI
KITCHEN FAUCETS:	1.8 GALLON PER MINUTE @ 60 PSI

CA GREEN BUILDING NOTES:

5.303.2 PLUMBING FIXTURES SHALL MEET THE MAXIMUM FLOW RATE VALUES SHOWN IN TABLE 5.303.2.3.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL
COMPLY WITH THE FOLLOWING:

5.303.3.1 WATER CLOSETS. THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK–TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S.EPA WATER SENSE 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.

5.303.6 PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1401.1 OF THE CALIFORNIA PLUMBING CODE AND IN CHAPTER 6 OF THIS CODE.

PLUMBING LEGEND & ABBREVIATIONS

SYMBOL	ABBREVIATION	DESCRIPTION
	ABC	ABOVE CEILING
	ABV	ABOVE
	AD	ACCESS DOOR
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	BF	BELOW FLOOR
	BG	BELOW GRADE
	BV	BALL VALVE
		BRANCH – BOTTOM CONNECTION
		BRANCH – SIDE CONNECTION
		BRANCH – TOP CONNECTION
	CBV	CALIBRATED BALANCE VALVE
		CAP ON END OF PIPE
	CD, D	CONDENSATE DRAIN
	CKV	CHECK VALVE
	CLG	CEILING
	CLR	CLEAR
	CO	CLEANOUT
	CONN	CONNECT OR CONNECTION
	CONT	CONTINUATION
	CONTR	CONTRACTOR
	CP	CIRCULATING PUMP
	CW	COLD WATER PIPING
°F	DEG	DEGREES (FAHRENHEIT)
	DIA	DIAMETER
	DN	DOWN
	(E), EXIST	EXISTING
		EXISTING TO BE REMOVED
	EWH	ELECTRIC WATER HEATER
	FA, FB	FROM ABOVE, FROM BELOW
	FC	FLEXIBLE CONNECTION
	FD	FLOOR DRAIN
	FS	FLOOR SINK
	FU	FIXTURE UNIT
	FV, FT	FLUSH VALVE, FLUSH TANK
GAS	G	LOW PRESSURE (7" W.C.) GAS PIPING
	GA	GAUGE
	GPM	GALLONS PER MINUTE
	GD	GARBAGE DISPOSAL
	GV	GATE VALVE
	GWH	GAS WATER HEATER
	HB	HOSE BIBB
	HW	HOT WATER PIPING
	HW	HOT WATER PIPING WITH HEAT TRACE TAPE
	HWR	HOT WATER RETURN PIPING
	IE	INVERT ELEVATION
	KW	KILOWATTS
	LBS	POUNDS
	LPC	LUBRICATED PLUG COCK
	MAX	MAXIMUM
MPG	MPG	MEDIUM PRESSURE (5 PSI) GAS PIPING
	MFR.	MANUFACTURER
	MIN	MINIMUM
	(N)	NEW
OF	OF	OVERFLOW, OVERFLOW PIPING
	OH	OVERHEAD
O2	O2	OXYGEN, OXYGEN PIPING
	POC	POINT OF CONNECTION
	PRV	PRESSURE REDUCING VALVE
	PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
	RE	RIM ELEVATION
	R, D	RISE OR DROP
	RD	ROOF DRAIN
		RISER DOWN (ELBOW)
		RISER UP (ELBOW)
	RV OR P&TRV	RELIEF VALVE OR PRESSURE & TEMPERATURE RELIEF VALVE
SD	SD	STORM DRAIN, STORM DRAIN PIPING
	SQIN, FT	SQUARE FEET
	SQIN, IN	SQUARE INCHES
	TA, TB	TO ABOVE, TO BELOW
	TP	TRAP PRIMER
	TYP	TYPICAL
	UG	UNDERGROUND
	UON	UNLESS OTHERWISE NOTED
	VB	VALVE BOX
	V	VENT PIPING
	V, VR, VTR	VENT, VENT RISER, VENT THRU ROOF
	WCO	WALL CLEANOUT
	W	WASTE OR SANITARY SEWER
	(E) W	EXISTING WASTE PIPING
	WC	WATER CLOSET
	W.C.	WATER COLUMN
	W/ AD	WITH ACCESS DOOR
	WT	WEIGHT

NOTE: ALL SYMBOLS MAY NOT BE USED

PLUMBING GENERAL NOTES

1. SHOULD A CONFLICT OCCUR BETWEEN OR WITH THE SPECIFICATIONS AND/OR DRAWINGS, CODES, STANDARDS, REQUIREMENTS, MANUFACTURER'S INSTRUCTIONS, THE MORE COMPLETE AND/OR RESTRICTIVE CONDITION SHALL HAVE PRECEDENCE. AS DETERMINED BY THE CONTRACTING OFFICER.

2. THE DRAWINGS PRESENTS THE FINISHED PROJECT UNLESS OTHERWISE NOTED. THEY DON'T INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS. METHODS, TECHNIQUES, AND SEQUENCES.

3. ALL DIMENSIONS, EXISTING JOB SITE CONDITIONS, AND SERVICE REQUIREMENTS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.

4. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH CALIFORNIA LOCAL CODES APPLYING TO THE PROPOSED CONSTRUCTION.

FIXTURES:
1. ALL FIXTURES SHALL BE MADE IN ACCORDANCE WITH THE CPC 2022 CH.4 AND ALL APPLICABLE SECTIONS OF THE CPC 2022.
2. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CPC 2022, CH.4 WITH REGARD TO WORKMANSHIP, ALIGNMENT AND TESTING
3. FIXTURES SHALL BE CERTIFIED FOR THE FOLLOWING FLOW RATES:
   a. WATER CLOSET MAX = 1.28 GPF
   b. LAVATORY FAUCETS MAX = 1.0 GPM
   c. SHOWER HEADS MAX = 1.8 GPM
4. FIXTURE CONNECTIONS TO THE DRAINAGE SYSTEM SHALL BE THROUGH AN APPROVED WET SEAL TRAP AS PER CPC,CH7 & CH.10
5. FAUCET AND VALVE OPENINGS SHALL HAVE A MINIMUM AIR GAP AS PER CPC , CH 6 & 2X THE DIAMETER MIN. 1" FROM THE POTABLE WATER OUTLET TO THE FLOOD LEVEL RIM OF THE FIXTURE SERVED
6. ALL STORAGE TANK WATER HEATERS SHALL INSTALLED AS PER CPC,CH.5
7. ALL FIXTURES WILL BE PROVIDED WITH INDIVIDUAL SHUT–OFF VALVES

MATERIALS:
1. ALL MATERIALS SHALL BE APPROVED FOR THE USE AND SYSTEM INTENDED, AND SHALL BE NEW AND IN GOOD CONDITION, FREE FROM DEFECT.
2. ALL MATERIALS SHALL BE INSTALLED , PROTECTED , AND SUPPORTED AS PER CPC 2022
3. COPPER TUBING MAY NOT BE INSTALLED ON A MANNER THAT ALLOWS IT TO BE IN CONTACT WITH OTHER METAL PIPING, CONDUIT OR METAL FRAMING MEMBERS.
4. ABS, COPPER TUBING AND STEEL PIPE MUST BE WRAPPED WHERE THEY PASS THROUGH CONCRETE AND/OR MASONRY BUILDING COMPONENTS.
5. WATER PIPING MATERIAL WITHIN BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUMBING CODE. PEX.CPVC AND OTHER PLASTIC WATER PIPING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC.604 OF THE CPC, INSTALLATION STANDARDS OF APPENDIX I OF THE CPC AND MANUFACTURERS RECOMMENDED INSTALLATION STANDARDS. CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPECIFIED IN SEC. 604.1.1 OF THE CPC PRIOR TO PERMIT ISSUANCE.

DRAINAGE,WASTE AND VENT(DMV):
1. ALL DRAINAGE LINES TO BE SLOPED MINIMUM OF 2% , 1/4" PER FOOT
2. CLEANOUTS TO BE INSTALLED ACCORDING TO CPC , CH.7
3. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING LINES BEFORE STARTING TRENCHING. SHOULD IT BE NECESSARY TO RE–ROUTE LINES DUE TO CONDITIONS FOUND ON SITE.
4. CHANGES OF DIRECTION OF DRAINAGE PIPE WILL BE MADE USE OF APPROVED FITTINGS AS PER CPC, CH7 SECTION 706.0
5. VENTS SHALL TERMINATE NOT LESS THAN 10'–0" FROM OR 3'–0" ABOVE ANY OPENING WINDOW , DOOR ,AIR INTAKE OR VENTILATION SHAFT AS PER CPC, CH.9
6. ACROSS–SECTIONAL AREA OF THE VENT(S) MUST EQUAL THE CROSS–SECTIONAL AREA OF THE BUILDING DRAIN AS PER CPC, CH.9 SECTION 904.0
7. METER PROTECTION SHALL BE INSTALLED PER CITY STANDARD. (THIS DEVICE IS A LEAD–FREE REDUCE PRESSURE PRINCIPLE DEVICE–RPPD)
8. LANDSCAPE IRRIGATION DEVICE SHALL BE INSTALLED PER CITY STANDARD (THIS DEVICE IS A REDUCE PRESSURE PRINCIPLE DEVIDCE–RPPD)
9. A REDUCE PRESSURE PRINCIPLE DEVICE SHALL BE INSTALLED PER CITY STANDARD(THIS DEVICE SHALL BE LOCATED ON THE INLET SIDE OF THE CARBONATOR MACHINE)
10. AN ABOVE GROUND DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) PER CITY STANDARD SHALL BE INSTALLED(THIS DEVICE IS A FIRE PROTECTION).
11. 12–ALL DEVICES SHALL BE TESTED BY A CERTIFIED BACK–FLOW TESTER.

FUEL GAS:
1. ALL GAS APPLIANCES SHALL BE PROVIDED WITH AN APPROVED SHUT OF VALVE
2. APPLIANCE CONNECTORS SHALL BE OF AN APPROVED SIZE AND LENGTH ACCORDING CPC 2022, CH.12
3. ALL GAS PIPING SHALL BE SUPPORTED AS PER CPC 2022,CH.3

ADDITIONAL NOTES:
1. ALL WORK TO COMPLY WITH 2022 CALIFORNIA PLUMBING CODE, 2022 CALIFORNIA BUILDING CODE, AND 2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.
2. LEAD FREE COMPLIANCE REQUIRED EFFECTIVE JANUARY 1,2010 PER CALIFORNIA HEALTH & SAFETY CODE SEC. 116875
3. ALL FIXTURES IN HANDICAP RESTROOMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA HANDICAP CODE AND LOCAL HANDICAP CODES HAVING JURISDICTION.
4. ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE MODEL ENERGY CODE REQUIREMENTS AND LABELED.
5. WATER CLOSETS REQUIRED TO HAVE ELONGATED BOWLS WITH OPEN FRONT SEATS.
6. ALL HOSE BIBS ARE TO BE PROVIDED WITH A BACK–FLOW/ ANTI–SIPHON VALVE.
7. WATER HEATER CLEARANCES SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTION.
8. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SEC. 609.9 OF CALIFORNIA PLUMBING CODE.
9. HOT WATER PIPING SHALL BE INSULATED AS PER CPC 609.11 AND CAL ENERGY CODE TABLE 120.3–A.
10. SANITARY WASTE VENTS SHALL RISE VERTICALLY TO A POINT NOT LESS THEN SIX(6) INCHES IN HEIGHT ABOVE THE FLOOR LEVEL RIM OF THE FIXTURE BEFORE BEING CONNECTED TO ANY OTHER VENT.
11. DRAINAGE PIPING SERVING FIXTURE WHICH HAVE FLOODWATER RIMS LOCATED BELOW THE ELEVATION OF THE NEXT UPSTREAM MANHOLE COVER OF THE SEWER SERVING SUCH DRAINAGE PIPING SHALL BE PROTECTED FROM BACK–FLOW OF SEWAGE BY INSTALLING AN APPROVED TYPE BACKWATER VALVE.
12. TRAP SEAL PROTECTION REQUIRED FOR ALL FLOOR SINKS AND FLOOR DRAINS.
13. INDIRECT WASTES LONGER THAN FIVE (5) FEET MUST BE TRAPPED, AND IT LONGER THAN FIFTEEN (15) FEET MUST BE TRAPPED AND VENTED INDIRECT WASTES FROM FOOD SERVICE EQUIPMENT MUST DISCHARGE TO RECEPTOR WITH A MINIMUM AIR–GAP OF ONE (1) INCH.
14. PRIMARY CONDENSATE PIPING TO TERMINATE AT TAILPIECE OF LAVATORY/SINK IN THE UNIT IT SERVES, FLOOR SINK OR DEDICATED ROOF TOP RECEPTOR.
15. ROOF DRAINS, OVERFLOW DRAINS, AND RAINWATER PIPING WITHIN THE INTERIOR OF THE BUILDING SHALL BE TESTED IN ACCORDANCE WITH THE PROVISIONS OF THE 2022 CPC FOR TESTING DRAIN, WASTE AND VENT SYSTEMS.
16. ROOF DRAINS AND OVERFLOW PIPING WITHIN THE BUILDING SHALL UTILIZE APPROVED DRAINAGE FITTINGS.
17. TESTING PROCEDURE OF GAS SYSTEMS SHOULD BE PERFORMED AS PER SEC. 1214.0 OF THE CALIFORNIA PLUMBING CODE.
18. THE PREMISE OWNER OR RESPONSIBLE PERSON IS RESPONSIBLE TO COORDINATE WITH GAS COMPANY FOR NEW GAS DEMAND, METER LOCATION AND TYPE OR PRESSURE AVAILABLE. COORDINATE WITH TENANT FOR PRESSURE REQUIRED AT EACH APPLIANCE.
19. THE PREMISE OWNER OR RESPONSIBLE PERSON SHALL COORDINATE WITH CITY OF CORONA WATER DISTRICT FOR NEW WATER DEMAND, METER LOCATION AND TYPE OF PRESSURE AVAILABLE.

NO.	REVISION	DATE

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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
PLUMBING
GENERAL NOTES,
LEGEND &
ABBREVIATIONS

PROJECT NO.: 235651

DATE: 04/24/2023

SCALE: AS SHOWN

DRAWING NO.

P100

of

\\BRYCLOUDSERZXUL1RA\Blueberry01-Blueberry Inc\02- Blueberry Engineering\03 - Projects\10 - 2023 Projects\235651 Vakili's Residence\2- Technical\3- Native Files\235651 - BB Rev 2022 - Building B.235651B-P-REV0.dwg

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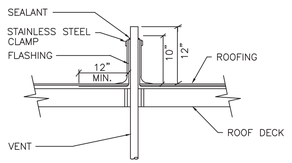
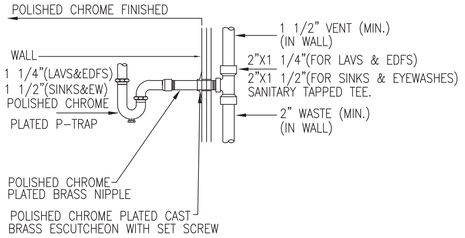
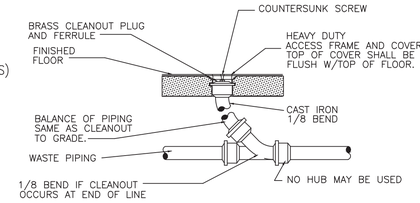


1. CONTRACTOR TO VERIFY AND KEEP 10' CLEARANCE BETWEEN THE VTR AND ANY AIR INTAKE TO THE BUILDING

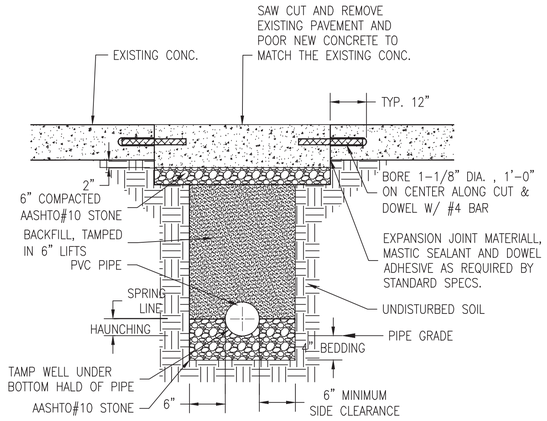
1 – VENT THRU ROOF DETAIL
N.T.S.



2 – DRAIN PIPING DETAIL
N.T.S.

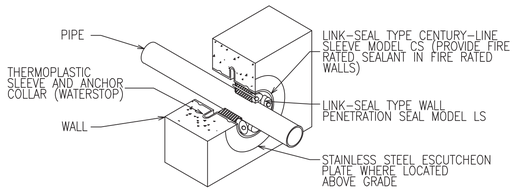


3 – FLOOR CLEAN-OUT DETAIL
N.T.S.

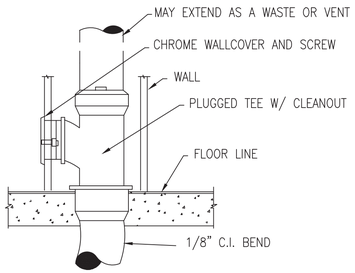


NOTES:
1. PAVEMENT SAW CUT SHALL BE DONE BY AN APPROVED SAW CUT MACHINE.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

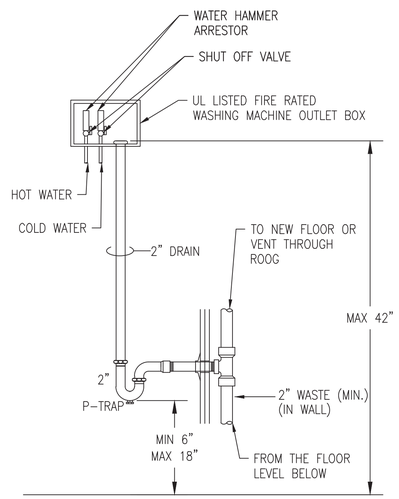
4 – SEWER TRENCH DETAILS
N.T.S.



5 – PIPE SLEEVE AT EXTERIOR WALLS
N.T.S.



7 – WALL CLEAN-OUT DETAIL
N.T.S.



6 – WASHING MACHINE OUTLET BOX INSTALLATION DETAIL
N.T.S.

Oatey

FIRE – RATED WASHING MACHINE OUTLET BOXES TECHNICAL SPECIFICATION

Job Name _____ Item # _____
Location _____
Engineer _____ Contractor _____
PO # _____ Tag _____
Representative _____

SPECIFICATIONS

Oatey Fire-Rated Washing Machine Outlet Boxes can be used in applications requiring supply valves and waste drains recessed into a fire-rated wall. Unit shall allow for the mounting of supply lines from top or bottom on the left or right side. Unit shall be available with single lever or ¼ turn brass ball valves in configurations with and without water hammer arrestors listed to ASSE 1010. Adjustable metal support bracket shall be installed on top and bottom of unit for support in stud wall. Drain size to be 2" with ¼ turn test cap.

APPROVALS AND LISTINGS

Valves	ASME A112.18.1 / CSA B125.1
Water Hammer Arrestors	ASSE 1010
Boxes	IAPMO-Listed, PS-54

ASTM E814
- 1-hour wall: 60 min. (F)
- 1-hour wall: 32 min (T)
- 2-hour wall: 120 min (F)
- 2-hour wall: 85 min (T)

CAN/ULC S115
- 1-hour wall: 60 min. (F/FH)
- 1-hour wall: 32 min (FT/FTH)
- 2-hour wall: 120 min. (F/FH)
- 2-hour wall: 85 min. (FT/FTH)

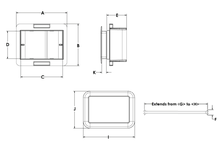
MULTIPLE VALVE INSTALLATION OPTIONS:
- Right-hand offset, bottom mount
- Right-hand offset, top mount
- Left-hand offset, bottom mount
- Left-hand offset, top mount

ADJUSTABLE MOUNTING BRACKET:
- Use nails or screws to secure into stud wall
- **Faceplate:** Snap –on faceplate accommodates up to two layers of 5/8" gypsum
- **Drain**: 2" Drain Piece fits 2" PVC or ABS Schedule 40 pipe

MATERIALS

Outlet Box	Bulk Molded Compound (BMC) Thermoset fire-rated plastic
Adjustable Mounting Bracket	Galvanized Steel
2" DWV Drain Piece	PVC
Drain Piece Metal Sleeve	Galvanized steel with Integrated intumescent pad
Plugs	Bulk Molded Compound (BMC) thermoset Fire-rated plastic
Test Cap	PVC
Box Pad	UL Classified FyreWrap Insulation Material

FyreWrap is a registered trademark of Unifrax LLC.



DIMENSIONS

[A]:	Box Width	10.10"	[G]:	Bracket Width	14.25"
[B]:	Box Height	8.36"	[H]:	Bracket Width	23.00"
[C]:	Box Opening Width	8.33"	[I]:	Faceplate Width	10.24"
[E]:	Box Depth	3.92"	[J]:	Faceplate Height	7.44"
[F]:	Bracket Height	1.22"	[K]:	Faceplate Depth	0.91"

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NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — RASH ZAHAB — No. 33035 — MECHANICAL — STATE OF CALIFORNIA

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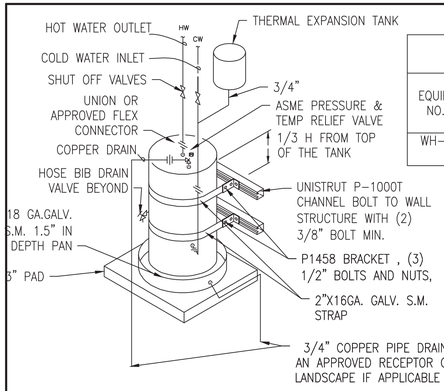


WATER HEATER SCHEDULE

EQUIP. NO.	MAKE	MODEL #	INPUT KW	FIRST HOUR OF DELIVERY	CAPACITY	INLET/OUTLET NPT	VOLTAGE/ PHASE/ AMPS	EFFICIENCY
WH-1	RHEEM	XE80T10H45U 0OROR EQUAL	5.2	87 GALLONS	72 GALLONS	1"	208V/3P/ 30.0A	4.07 UEF

NOTE:

1. CONTRACTOR SHALL VERIFY WITH THE OWNER PRIOR TO ORDERING THE WATER HEATER.
2. CONTRACTOR TO FOLLOW THE MANUFACTURER INSTALLATION INSTRUCTIONS.

1 – HEAT PUMP WATER HEATER INSTALLATION
N.T.S.

PLUMBING FIXTURE SCHEDULE

MARK	TYPE	WASTE	VENT	CW	HW	DESCRIPTION	QTY.
WC-1~5	WATER CLOSET	3"	3"	1/2"	–	WATER CLOSET 1.28 GPF, AMERICAN STANDARD	5
LV-1~7	LAVATORY	2"	2"	1/2"	1/2"	AMERICAN STANDARD TO COMPLY WITH ANSI A117.1 GUIDELINES	7
KS-1	KITCHEN SINK W/DW	2"	2"	1/2"	1/2"	KITCHEN SINK WITH DISH WASHER	1
WR-1	WASHER	3"	2"	5/8"	5/8"	CLOTHES WASHER	1
SR-1,2	SHOWER	2"	2"	1/2"	1/2"	SHOWER	2
TS-1,2	TUB/SHOWER	2"	2"	5/8"	5/8"	TUB/SHOWER	2
RF-1	REFRIGERATOR	–	–	1/2"	–	REFRIGERATOR	1
HB-1,2	HOSE BIBB	–	–	1/2"		HOSE BIBB	2

NOTES:
1. CONTRACTOR SHALL VERIFY WITH THE OWNER PRIOR TO ORDERING THE FIXTURES.
2. ALL PLUMBING FIXTURES AND PIPING SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY. INSTALLATION SHALL BE IN ACCORDANCE WITH APPROVED LISTING.
3. DOMESTIC HOT WATER PIPING SHALL BE INSULATED PER SECTION 609.11 CPC.

WATER SYSTEM SIZING

JOB ADDRESS: 34456 VIA GOMEZ BUILDING 'B', DANA POINT, CA 92624

WATER INFO.:	MAX PRESSURE:	85 PSI	MIN PRESSURE:	70 PSI	@	FT A.S.L
GIVEN BY:		DATE:		MAIN METER SIZE:	1.00 INCH	
50.5 F.U.	27.0 GPM		DEVELOPED LENGTH:	120.00		FT
		25% OF DEVELOPED LENGTH:		30.00		FT
	EQUALENT DEVELOPED LENGTH(DEVELOPED LENGTH +25%)			150.00		FT

WATER CLOSETS AND URINALS

TAG	W/TANK	W/FLUSH VALVE	MAKE	MODEL
WC	X		AMERICAN STANDARD	1.28 GPF ADA COMPLIANT

SYSTEM COMPONENTS

PIPING MAT.	PEX				
PRESSURE REDUCING VLAVE	1.25 INCH	MAKE	WATTS	MODEL	LF223

HYDRAULIC CALCULATIONS

A	MINIMUM PRESSURE AT CITY MAIN		70	PSI
B	SET PRESSURE AT PRESSURE REDUCE VALVE		70	PSI
C	PRESSURE LOSS THROUGH 1.00 INCH METER		3	PSI
D	PRESSURE LOSS THRU 1.25 INCH	PRESSURE REDUCING VLAVE	7	PSI
E	PRESSURE LOSS THRU INCH		0	PSI
F	OTHER PRESSURE LOSSES		0	PSI
G	PRESSURE LOSS DUE TO ELEVATION	20.0 FTx.43	8.60	PSI
H	RESIDUAL PRESSURE		25.00	PSI
I	TOTAL PRESSURE LOSSES		43.60	PSI
J	PRESSURE AVAILABLE FOR FRICTION LOSS IN THE SYSTEM		26.40	PSI
K	PRESSURE/100FT	J/(EQUALENT LENGTH x100) 17.60	PSI/100FT	

FIXTURE UNIT TYPE	F.U.	QTY.	TOTAL
KITCHEN SINK W/DW	1.5	1	1.5
PREP SINK	2.0	0	0.0
BAR SINK	1.0	0	0.0
LAUNDRY SINK	1.5	1	1.5
CLOTHES WASHER	4.0	1	4.0
LAVATORIES	1.0	7	7.0
BATHTUB , BATH/SHOWER	4.0	4	16.0
BATHTUB 3/4" FILL	10.0	0	0.0
SHOWER PER HEAD	2.0	1	2.0
WATER CLOSET 1.28GPF	2.5	5	12.5
WC W/FLUSHOMETER	5.0	0	0.0
URINAL W/FLUSHOMETER	4.0	0	0.0
FIRST HOSE BIBB	2.5	1	2.5
ADDITIONAL HOSE BIBBs	2.5	1	2.5
WATER FOUNTAIN	2.0	0	0.0
REFRIGERATOR	1.0	1	1.0
	0.0	0	
TOTAL FIXTURE UNITS	50.5	FU	= 27.0 GPM
ADDITIONAL FLOW	0.0	FU	= 0.0 GPM
TOTAL FLOW	50.5	FU	= 27.0 GPM

PIPE SIZE SCHEDULE

PIPE MATERIAL:PEX LARR5482 [UPONOR] PLASTIC INSERT & COLD EXPANSION FITTINGS

PRESS. LOSS = 17.60 PSI/100'

PIPE SIZE	ALLOWABLE F.U.		
	FLUSH TANK		F. VLV.
	HOT	COLD	COLD
	5FT/S	8FT/S	8FT/S
1/2"	3	3	0
5/8"	7	7	0
3/4"	12	12	0
1"	20	26	0
1-1/4"	34	47	10
1-1/2"	56	83	26
2"	141	205	95
2-1/2"			
3"			
3-1/2"			
4"			

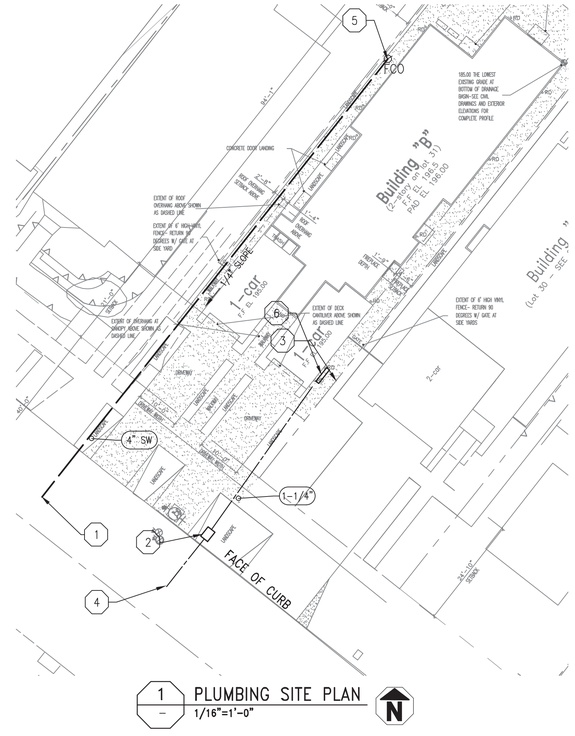
NOTES:
1. WATER PRESSURE TO ALL FIXTURES AND EQUIPMENT SHALL BE IN COMPLIANCE AS PER SECTION 608.1 CPC 2022.
2. THESE WATER CALCULATIONS ARE BASED ON THE SPECIFIED FIXTURES IN THIS PROJECT AS NOTED ABOVE WITH THE PRESSURE LOSS AS PROVIDED BY THE MANUFACTURER.

PEX FITTING TYPE NOTE:
ALL PEX FITTINGS ARE PLASTIC INSERT AND COLD EXPANSION FITTINGS(UPC APPX I SECT.10.6.3.)

PIPE SPECIFICATION

APPLICATION	UNDER GROUND	ABOVE GROUND
WATER INSIDE THE BUILDING	PRE-INSULATED AQUAPEX	PEX PIPE LARR#5482
WATER OUTSIDE THE BUILDING	COPPER 'K'	COPPER 'L'
WATER PIPES CONNECTION TO THE WATER HEATER	N/A	COPPER 'L'
GAS	SCHEDULE 40 BLACK STEEL WITH BLACK MALLEABLE IRON TREADED FITTINGS.	SCHEDULE 40 BLACK STEEL WITH BLACK MALLEABLE IRON TREADED FITTINGS.
CONDENSATE DRAINS	SCHEDULE 40 DWV PVC PIPE	SCHEDULE 40 DWV PVC PIPE
SANITARY SEWER	ABS DWV SCHEDULE 40 PIPE	ABS DWV SCHEDULE 40 PIPE

PIPE SPECIFICATIONS NOTE:
ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS.



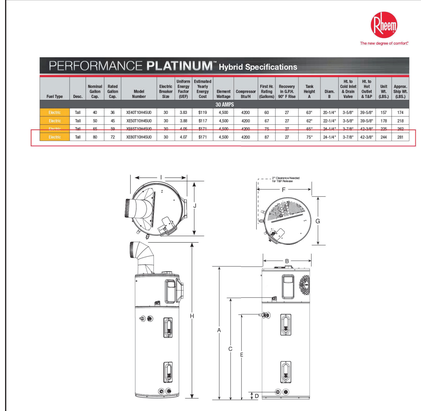
1 – PLUMBING SITE PLAN
1/16"=1'-0"

NOTE:
THE WATER AND SEWER SERVICES SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY SOUTH COAST WATER DISTRICT(SCWD). SEE CIVIL SITE PLAN FOR DETAILS.

KEYED NOTES:

1. SEWER LATERAL CONNECTION. SEE CIVIL SITE PLAN
2. NEW 1" WATER METER. CONTRACTOR TO COORDINATE WITH SOUTH COAST WATER DISTRICT.THE WATER AND SEWER SERVICES SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY SOUTH COAST WATER DISTRICT(SCWD).
3. SEE SHEET P-200 FOR CONTINUATION
4. WATER LATERAL CONNECTION. SEE CIVIL SITE PLAN.
5. SEE SHEET P-300 FOR CONTINUATION
6. NEW GAS METER. CONTRACTOR TO COORDINATE WITH GAS COMPANY.

UNDERGROUND SERVICE ALERT
CALL: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG



WATER METER AND MAIN SERVICE SIZING PER CPC 2022 TABLE 610.4

TABLE 610.4
FIXTURE UNIT TABLE FOR DETERMINING WATER PIPE AND METER SIZES

METER AND STREET SERVICE (inches)	BUILDING SUPPLY AND BRANCHES (inches)	MAXIMUM ALLOWABLE LENGTH (feet) 40	60	80	100	150	200	250	300	400	500	600	700	800	900	1000
PRESSURE RANGE – 30 to 45 psi[1]																
¾	½[2]	6	5	4	3	2	1	1	1	0	0	0	0	0	0	0
¾	¾	16	16	14	12	9	6	5	5	4	4	3	2	2	2	1
¾	1	29	25	23	21	17	15	13	12	10	8	6	6	6	6	6
1	1	36	31	27	25	20	17	15	13	12	10	8	6	6	6	6
1	1¼	36	33	31	28	24	23	21	19	17	16	13	12	12	11	11
1	1¼	54	47	42	38	32	28	25	23	19	17	14	12	12	11	11
1½	1¼	78	68	57	48	38	32	28	25	21	18	15	12	12	11	11
1	1½	85	84	79	65	56	48	43	38	32	28	26	22	21	20	20
1½	1½	150	124	105	91	70	57	49	45	36	31	26	23	21	20	20
2	1½	151	129	129	110	80	64	53	46	38	32	27	23	21	20	20
1	2	85	85	85	85	85	82	80	66	61	57	52	49	46	43	
1½	2	220	205	190	176	155	138	127	120	104	85	70	61	57	54	51
2	2	370	327	292	265	217	185	164	147	124	96	70	61	57	54	51
2	2½	445	418	390	370	330	300	280	265	240	220	198	175	158	143	133
PRESSURE RANGE – 46 to 60 psi[1]																
¾	½[2]	7	7	6	5	4	3	2	2	1	1	1	0	0	0	0
¾	¾	20	20	19	17	14	11	9	8	6	5	4	4	3	3	3
¾	1	39	39	36	33	28	23	21	19	17	14	12	10	9	8	8
1	1	39	39	39	36	30	25	23	20	18	15	12	10	9	8	8
1	1¼	39	39	39	39	39	34	32	27	25	22	19	19	17	16	
1	1¼	78	78	76	67	52	44	39	36	30	27	24	20	19	17	16
1½	1¼	78	78	78	78	66	52	44	39	33	29	24	20	19	17	16
1	1½	85	85	85	85	85	85	80	67	55	49	41	37	34	32	30
1½	1½	151	151	151	151	128	105	90	78	62	52	42	38	35	32	30
2	1½	151	151	151	151	150	117	98	84	67	55	42	38	35	32	30
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	83	80
1½	2	370	370	340	318	272	240	220	198	170	150	135	123	110	102	94
2	2	370	370	370	370	368	318	280	250	205	165	142	123	110	102	94
2	2½	654	640	610	580	535	500	470	440	400	365	335	315	285	267	250
PRESSURE RANGE – Over 60 psi[1]																
¾	½[2]	7	7	7	6	5	4	3	3	2	1	1	1	1	1	0
¾	¾	20	20	20	20	17	13	11	10	8	7	6	6	5	4	4
¾	1	39	39	39	39	35	30	27	24	21	17	14	13	12	12	11
1	1	39	39	39	39	38	32	29	26	22	18	14	13	12	12	11
1	1¼	39	39	39	39	39	39	39	39	34	28	26	25	23	22	21
1	1¼	78	78	78	78	78	74	62	53	47	39	31	26	25	23	22
1½	1¼	78	78	78	78	78	78	74	65	54	43	34	26	25	23	22
1	1½	85	85	85	85	85	85	85	85	81	64	51	48	46	43	40
1½	1½	151	151	151	151	151	151	151	130	113	88	73	51	51	46	43
2	1½	151	151	151	151	151	151	151	142	122	98	82	64	51	46	43
1	2	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1½	2	370	370	370	370	370	360	335	305	282	244	212	187	172	153	141
2	2	370	370	370	370	370	370	370	370	340	288	245	204	172	153	141
2	2½	654	654	654	654	654	650	610	570	510	460	430	404	380	356	329

For SI units: 1 inch = 25 mm, 1 foot = 304.8 mm, 1 pound-force per square inch = 6.8947 kPa
Notes:
[1] Available static pressure after head loss.
[2] Building supply, not less than ¾ of an inch (20 mm) nominal size.

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NO.	REVISION	DATE

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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
PLUMBING CALCULATIONS, SCHEDULES & SITE PLAN

PROJECT NO.: 235651

DATE: 04/24/2023

SCALE: AS SHOWN

DRAWING NO.
P110
of

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Plotted: Monday, August 28, 2023 9:42 AM

KEYED NOTES:

1. 1-1/4" PIPE TO NEW 1" WATER METER. SEE P110. CONTRACTOR TO VERIFY AND COORDINATE WITH WATER COMPANY.
2. SHOWER DOORS TO BE MINIMUM 22". SHOWER DOOR SHALL OPEN SO AS TO MAINTAIN 22" MINIMUM UNOBSTRUCTED FOR EGRESS PER CPC 408.5
3. 1-1/4" MAIN SHUT-OFF VALVE AND 1-1/4" PRESSURE REDUCING VALVE
4. NEW ELECTRIC HEAT PUMP WATER HEATER .SEE WATER HEATER SCHEDULE. AND INSTALLATION DETAILS ON P110. INSTALL MINIMUM 18" ABOVE FINISHED FLOOR. I
5. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL HOSE BIBBS.
6. INSTALL 3/4" P&T LINE FROM WATER HEATER TO LANDSCAPE.
7. INSTALL POST FOR COLLISION PROTECTION

PEX TUBING NOTES:

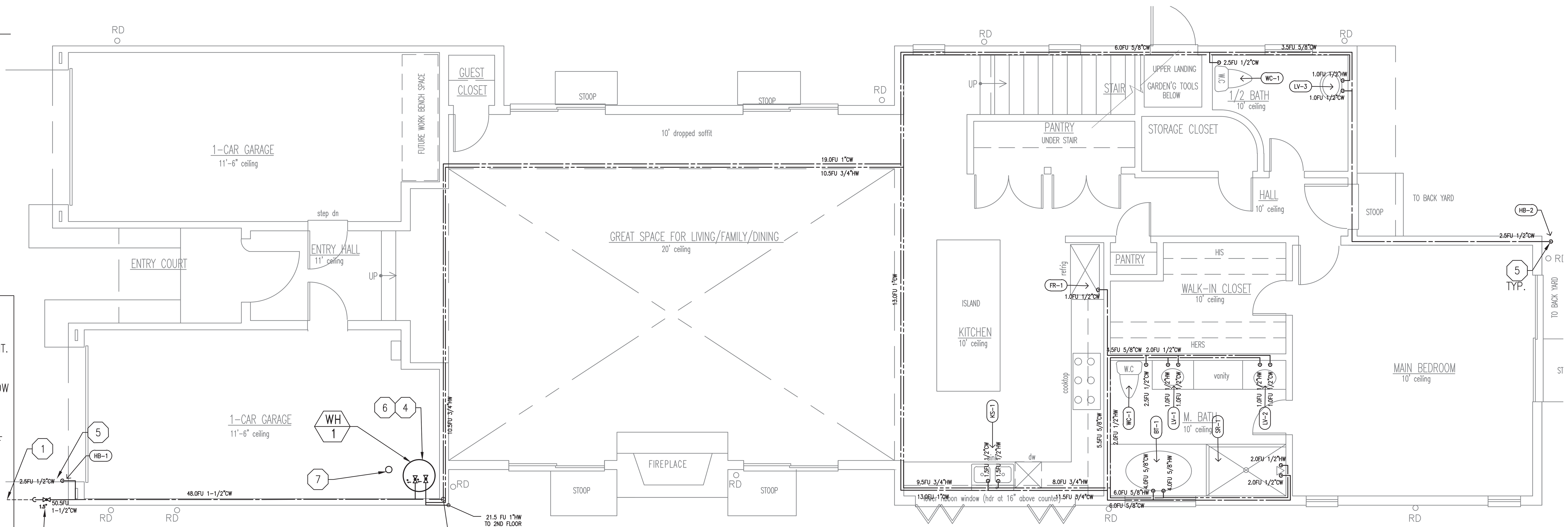
1. PEX PIPES SHALL NOT BE DEFORMED OR KINKED.
2. PEX INSTALLATION SHALL BE PER MANUFACTURER INSTALLATION RECOMMENDATIONS.
3. PEX TUBING SHALL NOT BE INSTALLED IMPLICATIONS WHERE EXPOSED TO DIRECT SUNLIGHT.
4. BORED HOLES AND SLEEVES SHALL PROVIDE ADEQUATE CLEARANCE BETWEEN THE TUBING AND STRUCTURE TO ALLOW FOR FREE LONGITUDINAL MOVEMENT.
5. TUBING PASSING THROUGH DRILLED OR NOTCHED METAL STUDS OR JOIST OR HOLLOW SHELL MASONRY WALLS SHALL BE PROTECTED FROM ABRASION DUE TO THERMAL EXPANSION AND CONTRACTION BY ELASTOMERIC OR PLASTIC SLEEVES.
6. ONLY APPROVED FITTINGS AND MANIFOLDS SHALL BE USED.
7. TRANSITION FROM PEX TUBING TO OTHER TYPES OF PIPING SHALL BE BY MEANS OF APPROVED TRANSITION FITTINGS.
8. PEX TUBING SHALL BE IDENTIFIED WITH MARKINGS AND SHALL INCLUDE THE FOLLOWING:
   - MANUFACTURER'S NAME OR TRADE MARK
   - NOMINAL SIZE
   - MATERIAL DESIGNATION CODE
   - STANDARD DIMENSION RATIO, "SDR 9"
   - TEMPERATURE AND PRESSURE RATINGS
   - "ASTM F876" OR "ASTM F877"
   - CHORINE CLASSIFICATION CODE
   - THIRD PARTY CERTIFICATION MARK
   - STANDARD DESIGNATION(S) OF THE FITTING SYSTEM(S) FOR WHICH THE TUBING IS RECOMMENDED FOR USE BY THE TUBING MANUFACTURER
   - MARKING THAT IDENTIFIES THE PRESENCE OF AN INNER, MIDDLE, OR OUTER LAYER.

PEX FITTING TYPE NOTE:

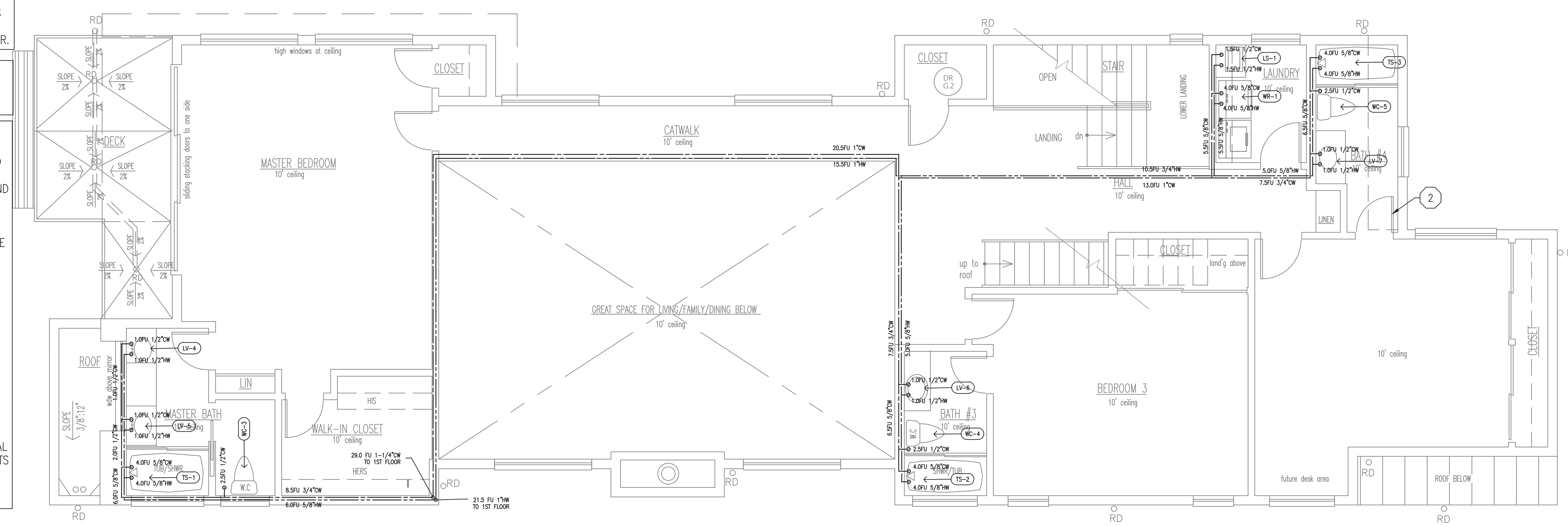
ALL PEX FITTINGS ARE PLASTIC INSERT AND COLD EXPANSION FITTINGS(UPC APPX I SECT.10.6.3.)

NOTES:

1. HOT WATER AND DRAIN PIPES EXPOSED UNDER SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED SO AS TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS.
2. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL NOT BE GREATER THAN 5 LB. FT.
3. ALL FAUCETS SHALL BE METERED.
4. NEW PLUMBING FIXTURES AND FITTINGS SHALL NOT EXCEED THE MAXIMUM ALLOWABLE FLOW RATES SPECIFIED IN SECTION 5.303.2
5. HOT WATER PIPING SHALL BE INSULATED AS PER CPC 609.11 AND CAL ENERGY CODE TABLE 120.3-A.
6. NO VENTING SYSTEM SHALL TERMINATE LESS THAN 3FEET ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10 FEET OR LESS THAN 4 FEET FROM ANY PROPERTY LINE EXCEPT A PUBLIC WAY.
7. NO VENT FROM INDIRECT WASTE PIPING SHALL BE COMBINED WITH ANY SEWER CONNECTED VENT BUT SHALL EXTEND SEPARATELY TO THE OUTSIDE AIR.
8. STEAM AND/OR HOT WATER DRAINAGE REQUIRES AN INDIRECT WASTE LINE.
9. EACH PLUMBING FIXTURE SHALL BE SEPARATELY TRAPPED BY AN APPROVED TYPE WATER SEAL TRAP.
10. BUILDING SEWER SHALL BE TESTED TO COMPLY WITH CPC 732.0
11. CONTRACTOR TO VERIFY AND INVERT ELEVATION OF EXISTING SANITARY SEWER AND ADJUST SYSTEM LAYOUT TO ACCOMMODATE.
12. CONTRACTOR SHALL CAP ALL UNUSED SEWER LINES.IN THE INSTALLATION OR REMOVAL OF ANY PART OF A DRAINAGE SYSTEM. DEAD ENDS SHALL BE PROHIBITED. CLEANOUTS EXTENSIONS AND APPROVED FUTURE FIXTURE DRAINAGE PIPING SHALL NOT BE CONSIDERED AS DEAD ENDS.
13. ALL PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE CAULKED OR SLEEVED.



1 — 1ST FLOOR WATER PLAN
1/4"=1'-0"



2 — 2ND FLOOR WATER PLAN
1/4"=1'-0"

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NO.	REVISION	DATE

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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
WATER SYSTEM PLAN

PROJECT NO.: 235651

DATE: 04/24/2023

SCALE: AS SHOWN

DRAWING NO.

P200

of

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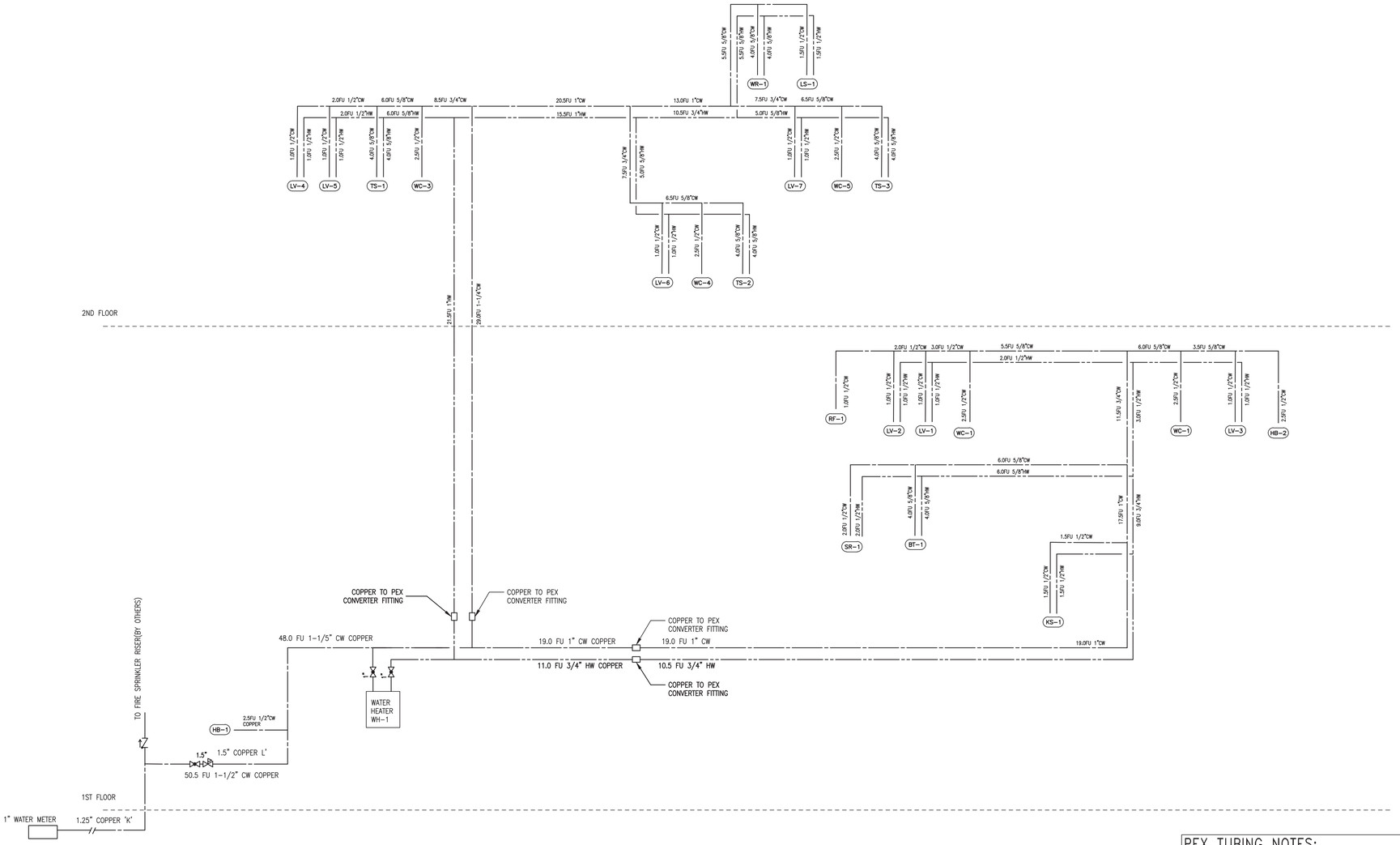

1 WATER SYSTEM RISER
N.T.S.

PEX TUBING NOTES:

1. PEX PIPES SHALL NOT BE DEFORMED OR KINKED.
2. PEX INSTALLATION SHALL BE PER MANUFACTURER INSTALLATION RECOMMENDATIONS.
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   - MARKING THAT IDENTIFIES THE PRESENCE OF AN INNER, MIDDLE, OR OUTER LAYER.

PEX FITTING TYPE NOTE:

ALL PEX FITTINGS ARE PLASTIC INSERT AND COLD EXPANSION FITTINGS(UPC APPX I SECT.10.6.3.)

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
WATER SYSTEM
RISER PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. P210
of

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Plotted: Monday, August 28, 2023 9:42 AM

KEYED NOTES:

1. SEE INSTALLATION DETAILS — 1/P101
2. SEE INSTALLATION DETAILS — 2/P101
3. SEE INSTALLATION DETAILS — 7/P101
4. CONTRACTOR TO VERIFY AND KEEP 10' CLEARANCE BETWEEN THE VTR AND ANY AIR INTAKE TO THE BUILDING
5. SEE INSTALLATION DETAILS — 6/P101
6. 4" SEWER LINE. SEE SHEET P110 AND CIVIL SITE PLAN.
7. SEE INSTALLATION DETAILS — 3/P101

NOTES:

1. NEW PLUMBING FIXTURES AND FITTINGS SHALL NOT EXCEED THE MAXIMUM ALLOWABLE FLOW RATES SPECIFIED IN SECTION 5.303.2
2. NO VENTING SYSTEM SHALL TERMINATE LESS THAN 3FEET ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10 FEET OR LESS THAN 4 FEET FROM ANY PROPERTY LINE EXCEPT A PUBLIC WAY.
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7. CONTRACTOR TO VERIFY AND INVERT ELEVATION OF EXISTING SANITARY SEWER AND ADJUST SYSTEM LAYOUT TO ACCOMMODATE.
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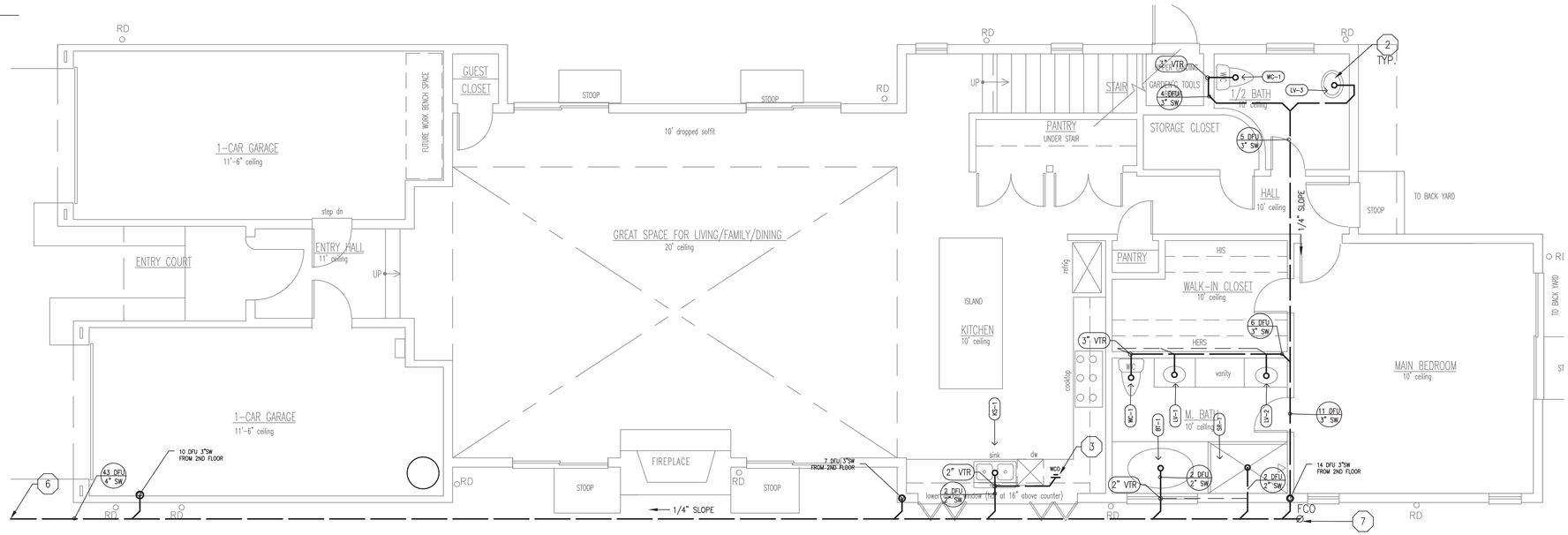
9. ALL PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE CAULKED OR SLEEVED.

DRAINAGE WASTE & VENT SYSTEM SIZING SYSTEM
TABLE-DWV CPC TABLE 703.2

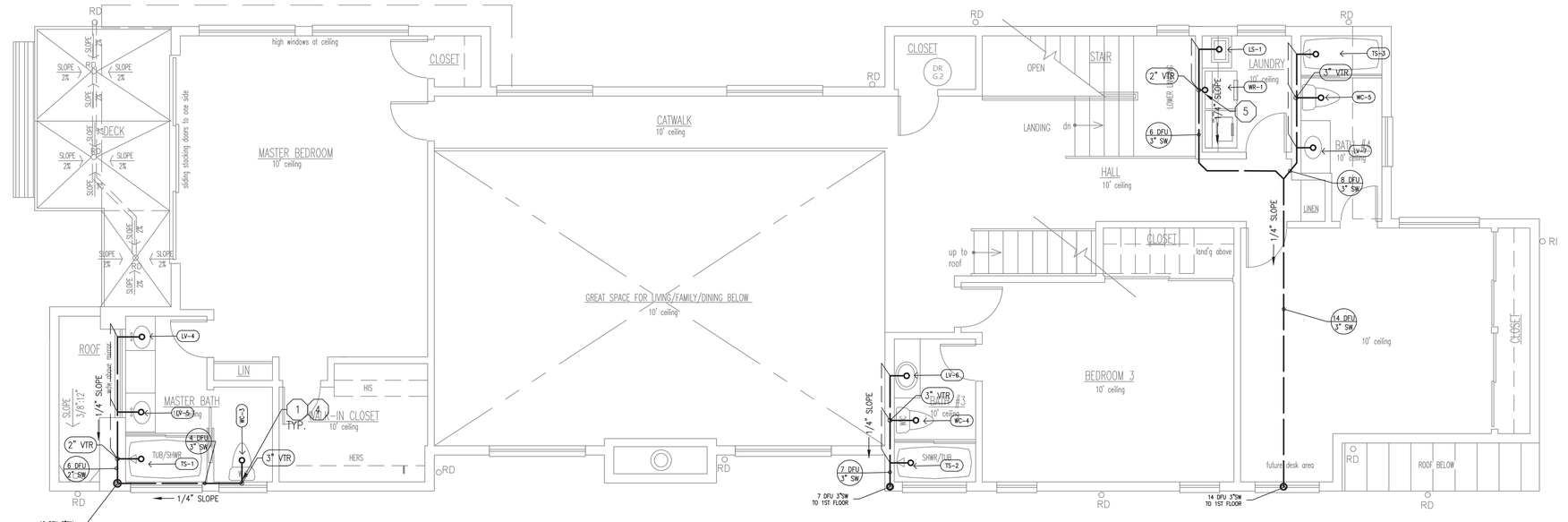
MATERIALS: BELOW GRADE & ABOVE GRADE SCH.40 ABS PIPE AND FITTING

TAG	SANITARY SEWER FIXTURE	COUNT	D.F.U.	T.D.F.U.	BRANCH WASTE SIZE	VENT SIZE
WC	WATER CLOSET	5	4.0	20.0	3"	3"
WR	CLOTHES WASHER	1	4.0	4.0	3"	2"
LV	LAVATORY	7	1.0	7.0	2"	2"
SR	SHOWER	1	2.0	2.0	2"	2"
KS	KITCHEN SINK	1	2.0	2.0	2"	2"
TS	TUB/SHOWER	3	2.0	6.0	2"	2"
BT	BATH TUB	1	2.0	2.0	2"	2"
TOTAL WASTE FIXTURE LOAD= 43.0					4" WASTE LINE	

NOTES:
1. CONTRACTOR TO VERIFY AND KEEP 10' CLEARANCE BETWEEN THE VTR AND ANY AIR INTAKE TO THE BUILDING



1 — 1ST FLOOR WASTE/VENT PLAN
1/4"=1'-0"



2 — 2ND FLOOR WASTE/VENT PLAN
1/4"=1'-0"

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DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
WASTE & VENT
SYSTEM PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. P300
of

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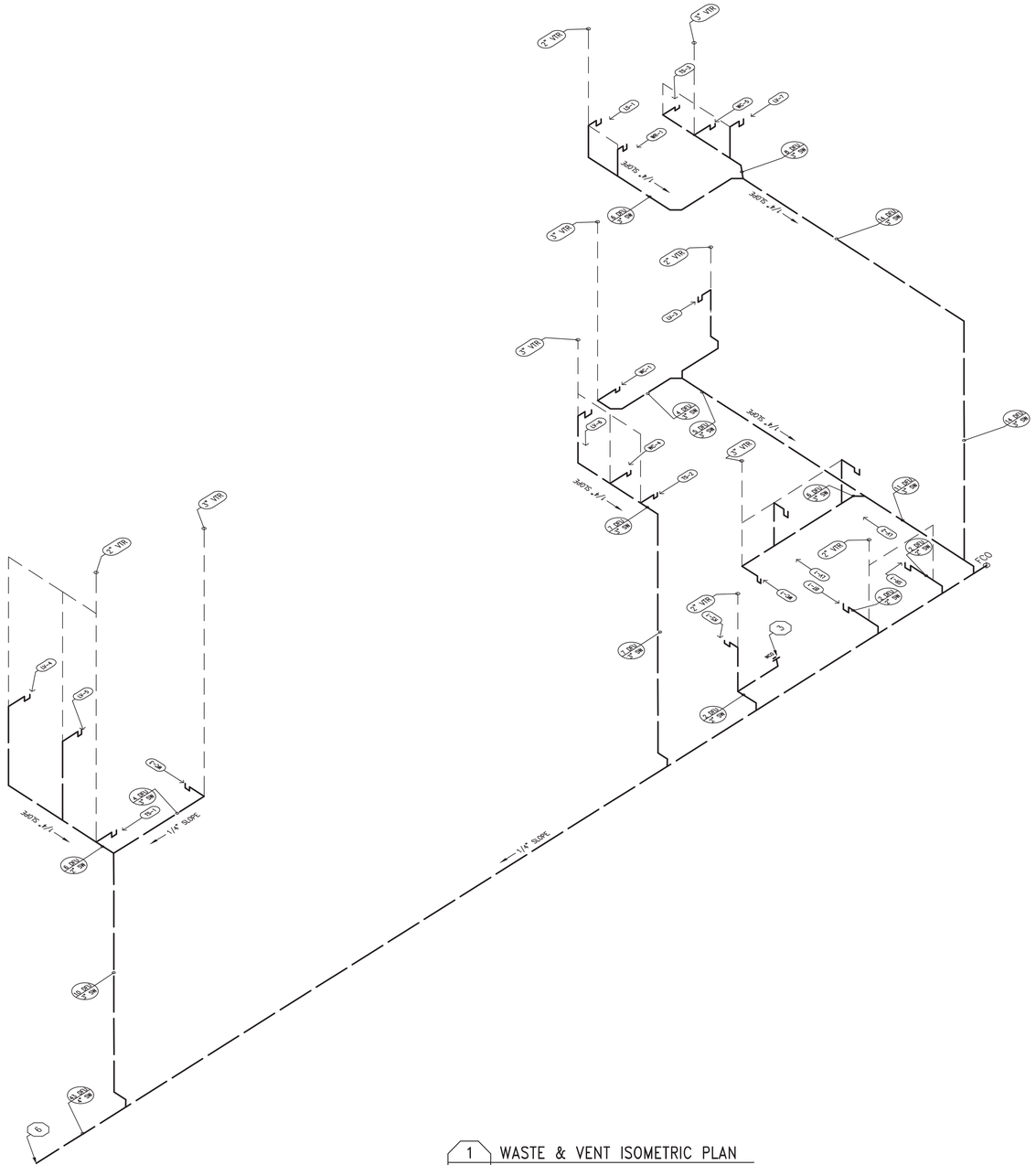

1 — WASTE & VENT ISOMETRIC PLAN
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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
WASTE & VENT
ISOMETRIC PLAN

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO.
P310
of

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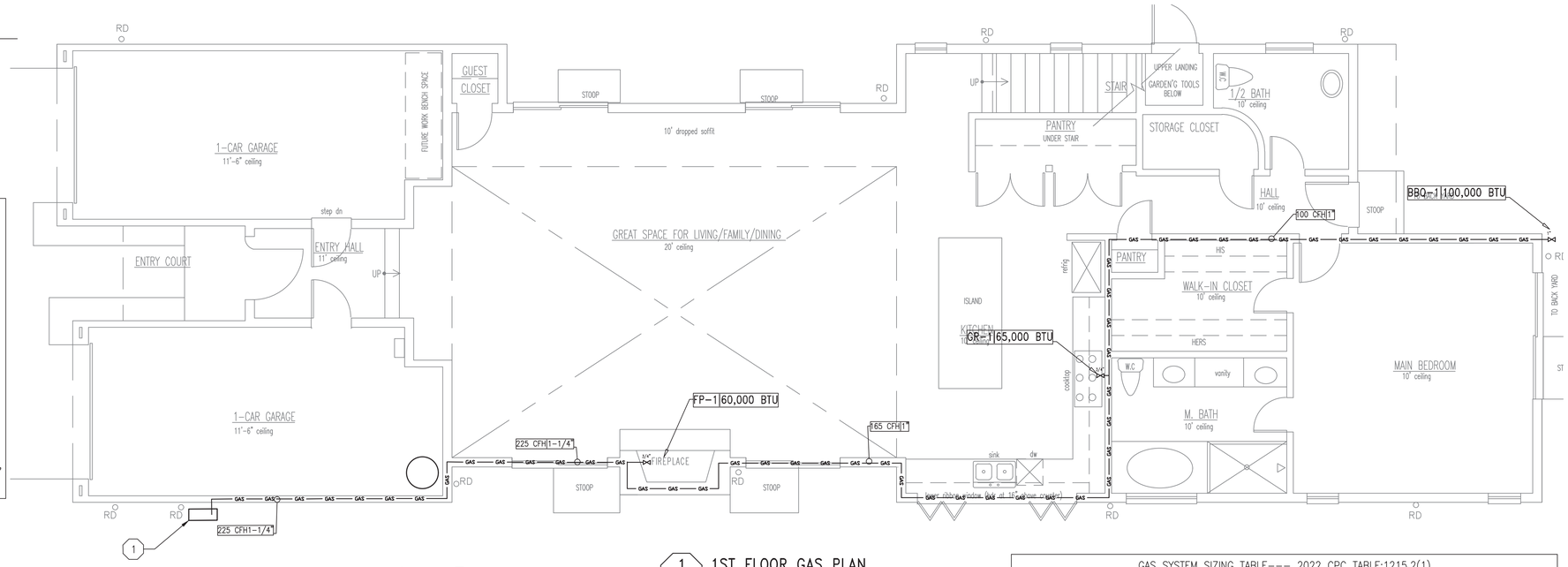
Plotted: Monday, August 28, 2023 9:42 AM

KEYED NOTES

(1) NEW GAS METER. CONTRACTOR TO COORDINATE WITH GAS COMPANY.

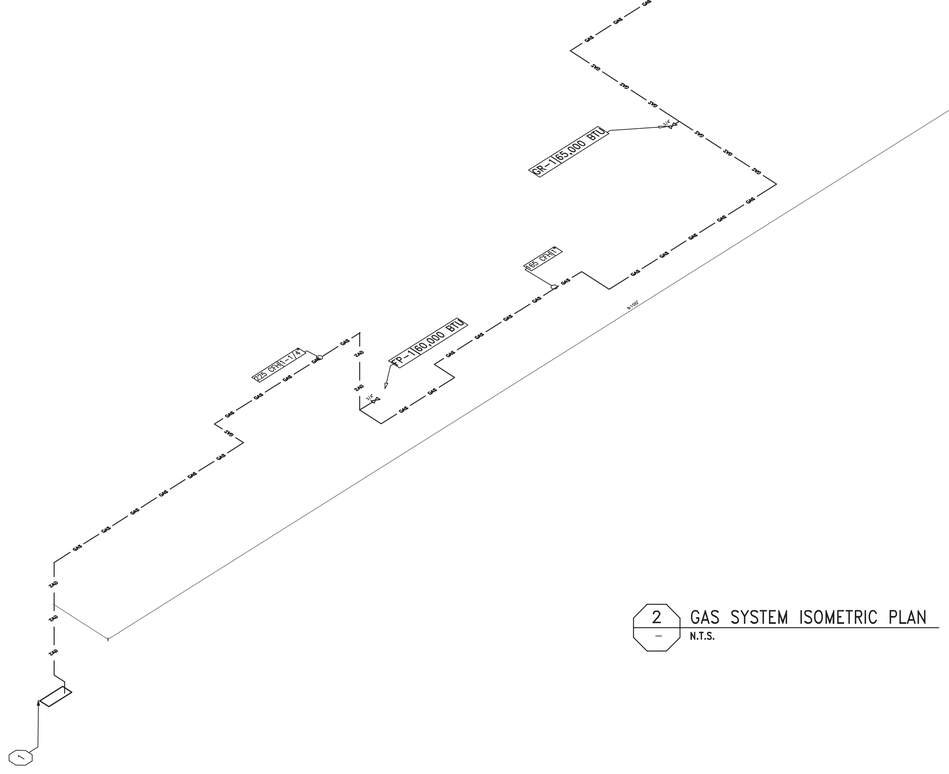
NOTES:

1. PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES. VERIFY STRUCTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS AND OTHER POTENTIAL OBSTRUCTIONS AND ROUTE PIPING TO AVOID INTERFERENCES.
2. MATERIALS:
   2" AND LARGER PIPES: CARBON STEEL SCH STD., ASTM A53, SMLS, ASME B36.10
   PIPES SMALLER THAN 2": CARBON STEEL SCH 80, ASTM A53, SMLS, ASME B36.10
   FITTINGS: MATERIAL AND THICKNESS SHALL MATCH PIPING.
   FLANGES: 150 LB, RF, ASTM A105, ASME/ANSI B16.5.
   GASKETS: 150 LB, RF, SPIRAL WOUND ANSI/ASME B16.20.
3. INSPECTION, TESTING AND INSPECTION SHALL BE IN ACCORDANCE WITH CHAPTER 8 OF NFPA 54. PNEUMATIC TEST SHALL BE PERFORMED AT 50 PSIG FOR A DURATION NOT LESS THAN 10 HOURS.
4. METALLIC GAS PIPING SHALL HAVE 12 INCHES OF EARTH COVER
5. GAS PIPING SHALL BE PROTECTED AGAINST DAMAGE. CORROSION, FREEZING, AND IS NOT PERMITTED TO BE INSTALLED UNDER A BUILDING OR STRUCTURE.



1 — 1ST FLOOR GAS PLAN
1/4"=1'-0"

GAS SYSTEM SIZING TABLE--- 2022 CPC TABLE:1215.2(1)						
DEV. LENGTH: 125'-0"				CFH=BTU/ 1000		
MATERIAL						
BELOW GRADE INTERIOR					-----NONE-----	
ABOVE GRADE INTERIOR					SCH. 40 STEEL	
TAG	FIXTURE	COUNT	BTU/H	CFH	LENGTH	BRANCH
BBQ-1	BBQ	1	100000	100	125'	1"
GR-1	GAS RANGE	1	65000	65	80'	3/4"
FP-1	FIRE PLACE	1	60000	60	40'	3/4"
TOTAL SYSTEM GAS DEMAND				225	1-1/4"	



2 — GAS SYSTEM ISOMETRIC PLAN
N.T.S.

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
GAS SYSTEM PLAN

PROJECT NO.:
235651

DATE:
04/24/2023

SCALE:
AS SHOWN

DRAWING NO.
P400

of

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Plotted: Monday, August 28, 2023 9:42 AM

GENERAL INFORMATION

01	Project Name	Vakili Residence B			
02	Run Title	Title 24			
03	Project Location	34456 Via Gomez			
04	City	Dana Point, CA	05	Standards Version	2022
06	Zip code	92624	07	Software Version	CBECC-Res 2022.2.0
08	Climate Zone	6	09	Front Orientation (deg/ Cardinal)	225
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	4
14	Addition Cond. Floor Area (ft^2)	0	15	Number of Stories	2
16	Existing Cond. Floor Area (ft^2)	n/a	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft^2)	3412	19	Glazing Percentage (%)	19.20%
20	ADU Bedroom Count	n/a			

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

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	40	47.9	30.2			
Proposed Design	30.6	45.2	21.5	9.4	2.7	8.7

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: 3.02 kWdc
- Proposed PV system downsized to 4.24 kWdc (a factor of 0.212) due to cap of 1 x proposed design electricity use

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	2.57	11.46	1.38	9.78	1.19	1.68
Space Cooling	0.08	4.08	0.18	6.8	-0.1	-2.72
IAQ Ventilation	0.31	3.31	0.31	3.31	0	0
Water Heating	0.8	8.84	0.54	6.28	0.26	2.56
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	**3.76**	**27.69**	**2.41**	**26.17**	**1.35**	**1.52**
Photovoltaics	-1	-27.41	-1.41	-37.92		
Battery			0	0		
Flexibility						
Indoor Lighting	0.68	6.82	0.68	6.82		
Appl. & Cooking	1.94	13.28	1.94	13.28		
Plug Loads	1.88	19.62	1.88	19.62		
Outdoor Lighting	0.18	1.68	0.18	1.68		
TOTAL COMPLIANCE	**7.44**	**41.68**	**5.68**	**29.65**		

ENERGY USE INTENSITY

	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Compliance Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	10.42	8.55	1.87	17.95
Net EUI[2]	5.32	1.39	3.93	73.87

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 (%)
4.24	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.

- PV System: 4.24 kWdc
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

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

- Indoor air quality ventilation
- Kitchen range hood
- Verified Refrigerant Charge
- Verified heat pump rated heating capacity

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Vakili Residence B	3412	1	4	2	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
First Story Dwelling	Conditioned	HVAC System 1	1820	10	DHW System 1	New
Second Story Dwelling	Conditioned	HVAC System 2	1592	8.5	DHW System 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
Front First Story Wall	First Story Dwelling	R15/4 Exterior Wall	225	Front	290	38	90
Left First Story Wall	First Story Dwelling	R15/4 Exterior Wall	315	Left	700	142.5	90
Right First Story Wall	First Story Dwelling	R15/4 Exterior Wall	135	Right	700	152.25	90
Back First Story Wall	First Story Dwelling	R15/4 Exterior Wall	45	Back	290	84	90
Front Second Story Exterior Wall	Second Story Dwelling	R15/4 Exterior Wall	225	Front	290	109.5	90
Back Second Story Exterior Wall	Second Story Dwelling	R15/4 Exterior Wall	45	Back	290	10.5	90
Right Second Story Exterior Wall	Second Story Dwelling	R15/4 Exterior Wall	135	Right	850	76	90
Left Second Story Exterior Wall	Second Story Dwelling	R15/4 Exterior Wall	315	Left	850	90	90
Ceiling (below attic) 1	Second Story Dwelling	R38 Ceiling	n/a	n/a	900	n/a	n/a
Interior Ceiling 1	First Story Dwelling	Construction Assembly 3	n/a	n/a	1820	n/a	n/a

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
Front Garage wall	Garage	Garage Ext Wall	225	Front	230	0	90
Right Garage Wall	Garage	Garage Ext Wall	135	Right	410	17.5	90
Left Garage Wall	Garage	Garage Ext Wall	315	Left	410	17.5	90
Back Garage wall	Garage	Garage Ext Wall	45	Back	230	0	90

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
Cathedral Ceiling 1	Second Story Dwelling	Cathedral Ceiling	45	Back	692	28	1	0.1	0.85	No
Garage Ceiling	Garage	Cathedral Ceiling	315	Left	514	0	5	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	Tile Roof	Ventilated	5	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
DR G.1	Window	Left First Story Wall	Left	315	6	8	1	48	0.3	NFRC	0.23	NFRC	Bug Screen
DR H.1	Window	Left First Story Wall	Left	315	6	8	1	48	0.3	NFRC	0.23	NFRC	Bug Screen

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
WDW 1	Window	Left First Story Wall	Left	315	2	5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 2	Window	Left First Story Wall	Left	315	2	5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 3	Window	Left First Story Wall	Left	315	3	3.5	1	10.5	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 4	Window	Right First Story Wall	Right	135	2	5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 5	Window	Right First Story Wall	Right	135	4	2.5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 6	Window	Right First Story Wall	Right	135	2.5	4.5	1	11.25	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 7	Window	Right First Story Wall	Right	135	10	2.5	1	25	0.3	NFRC	0.23	NFRC	Bug Screen
DR J.1	Window	Right First Story Wall	Right	135	6	8	1	48	0.3	NFRC	0.23	NFRC	Bug Screen
DR K.1	Window	Right First Story Wall	Right	135	6	8	1	48	0.3	NFRC	0.23	NFRC	Bug Screen
DR W.1	Window	Back First Story Wall	Back	45	8	8	1	64	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 8	Window	Front Second Story Exterior Wall	Front	225	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen

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
DR A.2	Window	Front Second Story Exterior Wall	Front	225	13	7.5	1	97.5	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 15	Window	Back Second Story Exterior Wall	Back	45	3	3.5	1	10.5	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 17	Window	Right Second Story Exterior Wall	Right	135	4	3	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 18	Window	Right Second Story Exterior Wall	Right	135	2	5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 19	Window	Right Second Story Exterior Wall	Right	135	2	5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 20	Window	Right Second Story Exterior Wall	Right	135	4	1.5	1	6	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 21	Window	Right Second Story Exterior Wall	Right	135	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 22	Window	Right Second Story Exterior Wall	Right	135	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 23	Window	Right Second Story Exterior Wall	Right	135	3	2	1	6	0.3	NFRC	0.23	NFRC	Bug Screen

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
WDW 24	Window	Right Second Story Exterior Wall	Right	135	4	2	1	8	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 9	Window	Left Second Story Exterior Wall	Left	315	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 10	Window	Left Second Story Exterior Wall	Left	315	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 11	Window	Left Second Story Exterior Wall	Left	315	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 12	Window	Left Second Story Exterior Wall	Left	315	2	6	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 13	Window	Left Second Story Exterior Wall	Left	315	2	5	1	10	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 14	Window	Left Second Story Exterior Wall	Left	315	4	3	1	12	0.3	NFRC	0.23	NFRC	Bug Screen
WDW 16	Window	Left Second Story Exterior Wall	Left	315	5	4	1	20	0.3	NFRC	0.23	NFRC	Bug Screen
Skylight 1	Skylight	Cathedral Ceiling 1	Back	45			1	28	0.3	NFRC	0.23	NFRC	

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NO.	REVISION	DATE

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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
TITLE-24

PROJECT NO.:
235651

DATE:
04/24/2023

SCALE:
AS SHOWN

DRAWING NO.
T2400

of

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Plotted: Monday, August 28, 2023 9:43 AM

OPAQUE DOORS

01	02	03	04
Name	Side of Building	Area (ft²)	U-factor
DR C.1	Front First Story Wall	38	0.2
DR Q.1	Left First Story Wall	16	0.2
DR S.1	Back First Story Wall	20	0.2
DR E.1	Right Garage Wall	17.5	1
DR D.1	Left Garage Wall	17.5	1

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab On Grade 1	First Story Dwelling	1820	200	none	0	80%	No
Slab On Grade 2	Garage	514	70	none	0	0%	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
R15/4 Exterior Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-15	None / None	0.074	Inside Finish: Gypsum Board Sheathing / Insulation: Gypsum Board Cavity / Frame: R-15 / 2x6 Sheathing / Insulation: Gypsum Board Exterior Finish: 3 Coat Stucco
Garage Ext Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco

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
Cathedral Ceiling	Cathedral Ceilings	Wood Framed Ceiling	2x6 @ 24 in. O. C.	R-19	None / None	0.054	Roofing: 5 PSF (Normal Gravel) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x6 Inside Finish: Gypsum Board
Tile Roof	Attic Roofs	Wood Framed Ceiling	2x4 Top Chord of Roof Truss @ 24 in. O. C.	R-0	None / None	0.4	Roofing: 10 PSF (RoofTileAirGap) Tile Gap: present Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Top Chrd
R38 Ceiling	Ceilings (below attic)	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-30	None / None	0.035	Over Ceiling Joists: R-0.7 insul. Cavity / Frame: R-29.3 / 2x12 Inside Finish: Gypsum Board
Construction Assembly 3	Interior Ceiling	Wood Framed Ceiling	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
Not 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 System 1	Domestic Hot Water (DHW)	Standard	Water Heater 1	1	n/a	None	n/a	Water Heater 1 (1)

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
Water Heater 1	1	80	Rheem	RheemXE80T10H22U0	Garage	Garage	Garage

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 System 1 - 1/1	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	Recuired Thermostat Type
HVAC System 1	Heat pump heating cooling	t24-SplitHeatPump	1	t24-SplitHeatPump	1	n/a	n/a	Setback
HVAC System 2	Heat pump heating cooling	t24-SplitHeatPump	1	t24-SplitHeatPump	1	n/a	n/a	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	Efficiency Type	HSPF / HSPF2 / COP	Cap 47	Cap 17	Efficiency Type	SEER / SEER2	EER / EER / CEER	Zonally Controlled	Compressor Type	HERS Verification
t24-SplitHeatPump	Multi-split HP-ductless	2	HSPF2	11	36000	24000	EER2SEER2	19.2	12.48	Not Zonal	Single Speed	t24-SplitHeatPump-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
t24-SplitHeatPump-hers-htpump	Not Required	0	Not Required	Not Required	Yes	No	Yes	Yes

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	Includes Fault Indicator Display?	HERS Verification	Status
5Fam IAQVentRpt	137	0.35	Exhaust	No	n/a	No	Yes	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Kourosh A. Sharifabad	Documentation Author Signature: Kourosh A. Sharifabad
Company: Blueberry Inc	Signature Date: 08/27/2023
Address: 38 Pemberly	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Mission viejo, CA 92692	Phone: (949) 945-9614

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: Kourosh A. Sharifabad	Responsible Designer Signature: Kourosh A. Sharifabad
Company: Blueberry Inc	Date Signed: 08/27/2023
Address: 38 Pemberly	License: E20068
City/State/Zip: Mission viejo, CA 92692	Phone: (949) 945-9614

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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NO.	REVISION	DATE

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PROJECT ADDRESS
34456 VIA GOMEZ
DANA POINT, CA 92624

PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
TITLE-24

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN

DRAWING NO.
T2401
of

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Plotted: Monday, August 28, 2023 9:43 AM

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or cn top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. *
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. *
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	**Solar Water-heating Systems**. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼". If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**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)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).

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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:

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§ 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 least30 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.

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NO.	REVISION	DATE

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PROJECT TITLE
VAKILI DEVELOPMENT
NEW RESIDENTIAL CONSTRUCTION
BUILDING 'B' (LOT 31)

SHEET TITLE
RESIDENTIAL
MANDATORY
MEASURES

PROJECT NO.: 235651
DATE: 04/24/2023
SCALE: AS SHOWN
DRAWING NO. T2402

of

I:\MYCLOUDEX2ULTRA\Blueberry01- Blueberry Inc\02- Blueberry Engineering\03 - Projects\0 - 2023 Projects\235651 Vakili's Residence\2- Technical\3- Native Files\235651 - BB Rev 2\02 - Building B\235651B-T24-REV0.dwg
Plotted: Monday, August 28, 2023 9:43 AM

DESIGN CRITERIA

PROJECT DESIGN CRITERIA	
BUILDING CODE	2022 CBC
OCCUPANCY CATEGORY	II
GEOTECHNICAL PARAMETERS	
GEOTECHNICAL ENGINIEER	P.A. & ASSOCIATES
REPORT NUMBER	219132-101
DATE	12/03/2019
ALLOWABLE SOIL BEARING PRESSURE	1600 PSF
COEFFICIENT OF FRICTION	-
SEISMIC DESIGN PARAMETERS	
SEISMIC DESIGN CATEGORY	D
SEISMIC IMPORTANCE FACTOR, I_E	1.0
SITE CLASS	D
SHORT PERIOD SPECTRAL ACCELERATION, S_S	1.21
1ST PERIOD SPECTRAL ACCELERATION, S_1	0.436
SHORT PERIOD ACCELERATION PARAMETER, S_{DS}	0.968
1 SECOND ACCELERATION PARAMETER, S_{D1}	0.542
RESPONSE MODIFICATION FACTOR, R	6.5
SEISMIC RESPONSE COEFFEICIENT, C_S	0.15
REDUNDANCY FACTOR, ρ	1.3
LATERAL FORCE RESISTING SYSTEM	PLYWOOD SHEAR WALL
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
DESIGN BASE SHEAR, V	0.1042W
WIND DESIGN PARAMETERS	
BASIC DESIGN WIND SPEED	96 MPH
EXPOSURE	D
WIND IMPORTANCE FACTOR, I_W	1.0
ANALYSIS PROCEDURE	ENCLOSED SYSTEM/ANALYTICAL ALL HEIGHT DESIGN METHODOLOGY (ASCE 7-16; CH. 27)

VERTICAL (GRAVITY) DESIGN PARAMETERS: (PSF)
(LIVE LOADS ARE REDUCIBLE, U.N.O.)

	Dead	Roof live	Snow	Live
Roof	20	20	-	
Floor	19			40
Deck	23			60
Stone Veneer Wall	15			

GENERAL NOTES

1. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL LAWS GOVERNING THE WORK AND OBTAIN ALL NECESSARY LICENSES AND PERMITS.
2. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL DIMENSIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE OMITTED OR NOT CLEAR, CONTACT THE ARCHITECT OR STRUCTURAL ENGINEER OF RECORD FOR CLARIFICATIONS.
3. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMPING, MECHANICAL, CIVIL AND ELECTRICAL DRAWINGS AS TO ALL LAYOUTS, DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.
4. SUBSTITUTION REQUESTS FOR MATERIALS SPECIFIED ON THE STRUCTURAL DRAWINGS MAY BE CONSIDERED WITH MATERIALS HAVING EQUIVALENT OR GREATER CAPACITY AND PERFORMANCE. CURRENT EVALUATION REPORTS AND PRODUCT INFORMATION SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER DEMONSTRATING THE REQUIRED CAPACITY AND PERFORMANCE OF THE MATERIAL TO BE SUBSTITUTED. WRITTEN APPROVAL FROM THE E.O.R SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL SPECIFIED ON THE STRUCTURAL CONSTRUCTION DOCUMENTS.
5. ANY DEVIATION, MODIFICATION & SUBSTITUTION FROM THE APPROVED SET OF STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW/APPROVAL PRIOR TO ITS USE OR INCLUSION ON THE SHOP DRAWINGS & PRIOR TO PROCEEDING WITH THE WORK.
6. EXISTING CONDITIONS AS SHOWN ON THESE PLANS ARE FOR REFERENCE ONLY. CONTRACTOR IS REQUIRED TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE STRUCTURE AT THE TIME THE LOADS ARE IMPOSED.
8. SPECIFICATIONS RELATED TO WATERPROOFING, INCLUDING BUT NOT LIMITED TO MEMBRANES, WATERSTOPS, SEALANTS, FLASHING, VAPOR BARRIER, ARE AS SPECIFIED BY ARCHITECT/WATER PROOFING CONSULTANT.
9. FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS. ALL DETAILS REFERENCED, AND DETAILS NOT REFERENCED ON PLANS, SHALL BE CONSIDERED TYPICAL AND APPLY TO ALL SIMILAR CONDITIONS OF THE CONSTRUCTION.
10. UNLESS SHOWN OTHERWISE, DETAILS SHOWN ON "TYPICAL DETAIL" SHEETS SHALL BE USED WHEREVER APPLICABLE. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER "TYPICAL DETAILS". SPECIFIC NOTES ON STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER NOTES SHOWN IN "GENERAL NOTES".
11. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR E.O.R SHALL NOT INCLUDE OBSERVATION OF THE ABOVE ITEMS.

TYPICAL ABBREVIATIONS

A.B.	ANCHOR BOLT	GLB.	GLUE-LAMINATED BEAM
ABV.	ABOVE	G.B.	GRADE BEAM
BAR.	REINF. BAR	GWB.	GYPSUM WALLBOARD
BD.	BOARD	HI.	HIGH
BLK'G.	BLOCKING	HDR.	HEADER
BLW.	BELOW	HFX	HARDY FRAME
BM.	BEAM	HORIZ.	HORIZONTAL
B.N.	BOUNDARY NAIL	K.P.	KING POST
B.O.B	BOTTOM OF BEAM	LT.WT.	LIGHT WEIGHT
B.W.	BOTH WAYS	L.V.L.	LAMINATED VENEER LUMBER
CANT.	CANTILEVER	MAS.	MASONRY
CJ.	CEILING JOIST	M.B.	MACHINE BOLT
COL.	COLUMN	(N)	NEW
CONC.	CONCRETE	N.G.	NATURAL GRADE
CONT.	CONTINUOUS	O/C	ON CENTER
DBL.	DOUBLE	P.J.	POUR JOINT
D.F.	DOUGLAS FIR	PSL.	PARALLAM BEAM
DIA.	DIAMETER	PLWD.	PLYWOOD
(E)	EXISTING	P.T.	PRESSURE TREATED
E.W.	EACH WAY	REINF.	REINFORCING
E.J.	EXPANSION JOINT	REQ'D	REQUIRED
E.N.	EDGE NAIL	RR.	ROOF RAFTER
E.Q.	EQUAL	T.O.B	TOP OF BEAM
F.G.	FINISH GRADE	UNO.	UNLESS NOTED OTHERWISE
F.J.	FLOOR JOIST	V.I.F.	VERIFY IN FIELD
FL.	FLUSH		
F.N.	FIELD NAIL		
F.O.C.	FACE OF CONCRETE		
F.O.M.	FACE OF MASONRY		
F.O.S.	FACE OF STUDS		
GA.	GAUGE		
GALV.	GALVANIZED		

FOUNDATION

1. THE GEOTECHNICAL INVESTIGATION REPORT AND ITS RECOMMENDATIONS SHALL BE FOLLOWED AND SHALL BE CONSIDERED MINIMUM REQUIREMENTS UNLESS MORE STRINGENT REQUIREMENTS ARE PRESENTED IN THE SPECIFICATIONS OR ON THE DRAWINGS.
2. FOOTINGS SHALL BEAR ON NATIVE SOIL OR ENGINEERED FILL AS DIRECTED BY THE GEOTECHNICAL REPORT.
3. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.
4. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL PLANS.
5. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED WITH NON-EXPANSIVE SOIL BUT NOT BEHIND RETAINING WALLS BEFORE CONCRETE OR MASONRY ATTAINS ITS FULL DESIGN STRENGTH.
6. THE CONTRACTOR SHALL CONFORM TO ALL RECOMMENDATIONS AND CONDITIONS INDICATED IN THE GEOTECHNICAL REPORT. THE GEOTECHNICAL ENGINEER SHALL OBSERVE ALL FOOTING EXCAVATIONS PRIOR TO PLACING CONCRETE OR STEEL.
7. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT:
   a. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE REPORT.
   b. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED
   c. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE REPORT.
8. WAITING PERIOD FOR CONCRETE SLABS-ON-GRADE PRIOR TO START OF CONSTRUCTION IS AS FOLLOWS:
   a. DO NOT WALK ON SLAB UNTIL 24 HOURS AFTER CONCRETE HAS BEEN POURED.
   b. BEGIN WALL FRAMING 4-5 DAYS AFTER CONCRETE POURED.
   c. BEGIN ROOF/FLOOR FRAMING 7-10 DAYS AFTER CONCRETE POURED.
   d. DO NOT LOAD ROOF PRIOR TO 14 DAYS AFTER CONCRETE POURED.
9. WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SHALL BE ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
10. ALUMINUM CONDUIT, ALUMINUM SLEEVES AND ALUMINUM EMBEDS ARE NOT PERMITTED IN CONCRETE.
11. ALL CONDUITS SHALL BE PLACED WITHIN THE MIDDLE ONE-THIRD OF THE SLAB THICKNESS. THE MAXIMUM SIZE OF CONDUITS SHALL BE 1 1/4" DIAMETER AND SHALL BE SPACED NO CLOSER (TO EACH OTHER OR REINFORCING STEEL) THAN 4 INCHES UNLESS PRIOR APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
12. ALL HOLDOWNS AND POST ANCHORS SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.
13. ALL GRADE BEAMS SHALL BE POURED MONOLITHICALLY FOR THEIR ENTIRE LENGTH.

CONCRETE

1. CONCRETE SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318 AND ACI 301 EXCEPT AS MODIFIED BY THE CONSTRUCTION DOCUMENTS.

PORLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE V, U.N.O.

AGGREGATE FOR STONE CONCRETE SHALL CONFORM TO ASTM C-33. FOR LOW SHRINKAGE AGGREGATE, USE LIMESTONE OR GRANITE. AGGREGATE FOR LIGHTWEIGHT
2. CONCRETE SHALL CONFORM TO ASTM C-330.
3. DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES. WATER USED IN MIXING CONCRETE SHALL CONFORM WITH ASTM C1602.

CONCRETE MIX DESIGNS CONTAINING FLY ASH MAY BE USED WHERE CONCRETE IS NOT
4. VISUALLY EXPOSED. FLY ASH SHALL CONFORM WITH ASTM C618 AND MAY REPLACE UP TO 20% PORTLAND CEMENT BY VOLUME.
5. CONCRETE STRENGTH TEST REPORTS SHALL BE IN COMPLIANCE WITH ACI 318 AND SHALL BE SUBMITTED TO E.O.R. FOR REVIEW.

ALL REINFORCING BARS, ANCHOR BOLTS AND ALL OTHER CONCRETE INSERTS SHALL BE
6. WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.

THE CONCRETE COMPRESSIVE STRENGTH (28 DAYS), f'c:
7. a. ALL LOCATIONS, U.N.O: MIN 4500 PSI, (W/C = 0.45) SPECIAL INSPECTION IS REQUIRED WHEN f'c > 2500 PSI.
8. b. CONCRETE IN CONTACT WITH SOIL CONTAINING SULFATE So_4 ≥ 0.1% BY WEIGHT: 4000 PSI, SPECIAL INSPECTION IS NOT REQUIRED.
   c. CONCRETE IN CONTACT WITH SOIL CONTAINING SULFATE So_4 ≥ 0.2% BY WEIGHT: 4500 PSI, SPECIAL INSPECTION IS NOT REQUIRED.

TIME BETWEEN CONCRETE BATCHING AND PLACEMENT SHALL BE IN ACCORDANCE WITH ASTM C94.

CONCRETE PLACEMENT/CURING/REDUCTION IN STRENGTH SHALL CONFORM TO ACI 305R
9. AND 3065R REQUIREMENTS FOR HOT AND COLD WEATHER CONCRETING.

CONCRETE SHALL BE CURED PER ACI 308R, UNLESS ALTERNATE METHODS OF CURING
10. HAVE BEEN APPROVED BY THE ARCHITECT OR ENGINEER. FOR SLAB CURING, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPATIBILITY OF CURING COMPOUNDS WITH PROPOSED FINISHES PRIOR TO COMMENCING ANY WORK.
11.

MAX. SLUMP SHALL BE 5 INCHES EXCEPT WHERE ADMIXTURES/PLACITIZERS HAVE BEEN ADDED IN THE MIX DESIGN TO IMPROVE FLOWABILITY/WORKABILITY. THE SLUMP LIMIT SHALL BE BASED ON ADMIXTURE MANUFACTURER'S RECOMMENDATIONS.

12.

REINFORCING STEEL

REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318, AND CRSI'S MANUAL OF STANDARD PRACTICE.

REINFORCING STEEL SHALL CONFORM TO ASTM A615OR ASTM 716(WELDABLE STEEL)
1. AND SHALL BE GRADE 60 DEFORMED BARS, TYP., U.N.O. REINFORCING IN SLAB ON GRADE MAYBE GRADE 40 STEEL FOR BARS #4 AND SMALLER U.N.O ON THE PLANS.
2. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. LAPS IN WWF SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRE OF EACH FABRICH SEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
3. ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING BARS/STEEL ARE TO THE CENTER OF STEEL U.N.O. ON THE PLANS OR DETAILS:
4.

CONDITION	COVER
A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
B. EXPOSED TO EARTH OR WEATHER (INCLUDING SLABS ON GRADE)	
#6 AND LARGER	2"
#5 AND SMALLER	1 1/2"
C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:	
1. STRUCTURAL SLABS, WALLS w/	
#11 BARS AND SMALLER	3/4"
#14 BARS AND LARGER	1 1/2"
2. BEAMS, COLULMNS	1 1/2"

5. LAP SPLICES OF BARS SHALL CONFORM TO THE TYPICAL THE LAP SCHEDULE ON THE PLANS, U.N.O. NO TACK WELDING OF BARS ALLOWED.
6. MECHANICAL SPLICE COUPLERS MAY BE USED AND SHALL HAVE CURRENT ICC APPROVAL AND BE CAPABLE OF DEVELOPING 125% OF THE BAR'S YIELD STRENGTH.
7. ALL REINFORCING BARS SHALL BE BENT COLD. DO NOT FIELD BEND OR UNBEND ANY BARS IN A MANNER THAT MAY DAMAGE REINFORCING.
8. REINORCING SPACING SHOWN ON THE PLANS ARE THE MAXIMUM SPACING "ON CENTER SPACING". DO NOT EXCEED THIS. ANY DISCREPANCIES DURING CONSTRUCTION SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW AND APPROVAL.
9. TYPICAL REINFORCING FOR CONCRETE SLAB ON METAL DECK SHALL BE 6x6-W1.4xW1.4 WELDED WIRE FABRIC, U.N.O. PLACE WWF MID-DEPTH OF THE SLAB OVER THE TOP OF THE FLUTE OF THE METAL DECK.
10. ALL DOWELS TO BE SET IN CONCRETE SHALL BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE PERFORMED DURING THE PLACEMENT OF CONCRETE.
11. DOWELS BETWEEN FOOTING AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE MAIN REINFORCING, UNO.
12. CHAIRS OR SPACERS FOR REINFORCING SHALL BE NON-FERROUS OR PLASTIC COATED WHEN RESTING ON EXPOSED SURFACES.

WOOD

1. SAWN LUMBER
   ALL STRUCTURAL WOOD SHALL BE OF DOUGLAS FIR LARCH SPECIES, (19% MAXIMUM MOISTURE CONTENT AT THE TIME OF CONSTRUCTION U.N.O.).

FRAMING MEMBER	SPECIFICATION
BEAMS/ POST/ RAFTERS & ALL OTHER STRUCTURAL FRAMING	2x FRAMING: #2 DF 4x FRAMING: #2 DF 6x FRAMING: #1 DF 8x FRAMING: #1 DF
STUDS	DFL STUD GRADE (UP TO 9'-0") DFL #2 (TALLER THAN 9'-0")
TOP PLATES & MUD SILLS	DFL CONSTRUCTION GRADE OR BETTER

2. STRUCTURAL COMPOSITE LUMBER
   THE FOLLOWING BEAMS/HEADERS/RIMS CAN BE FROM ANY MANUFACTURER WITH CURRENT APPROVED ICC-ES EVALUATION REPORT WITH THE FOLLOWING MECHANICAL PROPERTIES:

FRAMING MEMBER	SIZE (WIDTH)	F_b (MIN)	$F_{c\,perp}$ (MIN)	$F_{c\,parallel}$ (MIN)	F_v (MIN)	F_t (MIN)	E (MIN)	TYPE MATERIAL
BEAM/ HEADERS	3 1/2" & WIDER	3100 PSI	750 PSI	3000 PSI	285 PSI	2150 PSI	2.0E6 PSI	LVL
	1 3/4" & 2 5/8" WIDE	2800 PSI	750 PSI	3000 PSI	285 PSI	2150 PSI	2.0E6 PSI	LVL
RIM BOARD	1 1/4" THICK (MIN)	1750 PSI	525 PSI	2500 PSI	225 PSI	1100 PSI	1.3E6 PSI	LVL

3. GLUED LAMINATED LUMBER

SPEC	F_b @ BOT	F_b @ TOP	F_v (MIN)	E (MIN)	CAMBER	CONDITION
24F-V4	2400 PSI	1850 PSI	265 PSI	1.8E6 PSI	1600' RADIUS, UNO	SINGLE SPAN
24F-V8	2400 PSI	2400 PSI	265 PSI	1.8E6 PSI	1600' RADIUS, UNO	ALL OTHERS

4. TYPICAL UNBLOCKED DIAPHRAGM, UNO ON PLANS

	SHEATHING	NAILING
ROOF	APA RATED SHEATHING 15/32 PERFORMANCE CATEGORY 32/16 EXPOSURE 1	8d's @ 6" B.N. 8d's @ 6" E.N. 8d's @ 12" F.N.
FLOOR	APA RATED STURD-I-FLOOR 19/32 PERFORMANCE CATEGORY 20" OC EXPOSURE 1	10d's @ 6" B.N. 10d's @ 6" E.N. 10d's @ 12" F.N.

- ALL SHEATHING SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, SHALL BE C-D OR C-C SHEATHING CONFORMING TO CBC 2303.1.4.

NAILING & HARDWARE

1. NAIL SPACING TO BE NOT LESS THAN REQUIRED PENETRATION. EDGE AND END DISTANCES SHALL BE NOT LESS THAN HALF THIS SPACING. ALL SPACING AND EDGE AND END DISTANCES SHALL BE SUCH AS TO AVOID SPLITTING OF THE WOOD. HOLES FOR NAILS, WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE BORED OF A DIAMETER SMALLER THAN THAT OF THE NAILS. ALL NAILS SHALL BE SINKER NAILS AND STAGGERED U.N.O., EXCEPT AS SHOWN IN NAILING SCHEDULE.

NAIL SIZE	SHANK DIAMETER	LENGTH
8d COMMON	0.131"	2 1/2"
10d COMMON	0.148"	3"
16d COMMON	0.162"	3 1/2"

2. AS AN ALTERNATE TO 10D COMMON NAILS, THE FOLLOWING FASTNERS CAN BE USED: GRABBER PLYWOOD SCREWS (ICC-ER-5280), OR SIMPSON STRONG-TIE QUICK DRIVE SCREWS (ICC-ER-1472)
3. USE RING OR SCREW SHANK NAILS AND GLUE SHEATHING TO FRAMING USING ADHESIVES MEETING APA SPECIFICATION AFG-01 OR ASTM D3498.
4. HOT DIP GALVANIZED FASTENERS SUCH AS (BUT NOT LIMITED TO) NAILS, SCREWS, BOLTS, THREADED ROD, ETC., SHALL BE USED WHEN IN CONTACT WITH PRESERVATIVE OR FIRE RETARDANT TREATED LUMBER. EXCEPTION: PLAIN CARBON STEEL FASTENERS IN SBX/DOT AND ZINC BORATE PRESERVATIVE TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED.
5. ALL METAL FRAMING CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY (CURRENT CATALOG), OR "USP" WITH EQUIVALENT ICC PUBLISHED VALUES AND SHALL BE INSTALLED PER SPECIFICATIONS, NO EXCEPTIONS.
6. USE 5/8" DIA. X MIN. 12" ANCHOR BOLTS W/ MIN. 7" EMBEDMENT INTO CONCRETE FOOTING AT 72" O.C. MAX. FOR SILL PLATE TO FOUNDATION UNLESS NOTED OTHERWISE ON SHEARWALL SCHEDULE. A BOLT BETWEEN 6" TO 12" FROM THE END OF EACH PIECE OF SILL (2 BOLTS MIN EACH PIECE). PIECE OF SILL SHALL BE CONSIDERED ENDED WHERE PLATE IS CUT OUT OVER ONE-THIRD OF CROSS SECTION.
7. FOR SHEAR WALL APPLICATIONS, ANCHOR BOLT SHALL BE INSTALLED WITH PLATE WASHERS OF MIN. 3" SQ. X 0.229" THICK BETWEEN SILL PLATE AND NUT. EDGE(S) OF PLATE WASHERS SHALL BE 1/2" MAX. FROM INSIDE FACE OF SHEAR PANEL.
8. FOR NON-SHEAR WALL APPLICATIONS, ANCHOR BOLT SHALL BE INSTALL WITH ROUND WASHERS AND SHOULD CONFORM WITH ANSI/ASME B 18.22.1. USE MIN. 1 3/8" Ø X 7/64" THICK WASHER FOR 1/2" Ø BOLT, 1 3/4" Ø X 9/64" THICK WASHER FOR 5/8" Ø BOLT AND 2 1/2" Ø X 11/64" THICK WASHER FOR 1" Ø BOLT. U.N.O.
9. STUD WALLS PERPENDICULAR TO A CONCRETE OR MASONRY WALL SHALL BE BOLTED TO THE CONCRETE OR MASONRY WALL WITH 5/8" DIAMETER X 8" A307 BOLTS AT TOP, MID-HEIGHT AND BOTTOM.
10. FOR INTERIOR NON-SHEAR WALLS USE SIMPSON PHNW SERIES 0.145"Ø PINS WITH A PENETRATION OF 1 1/4" INTO SLAB AT 16" O.C. TO BE INSTALLED IN ACCORDANCE WITH ICC ESR-2138.

WOOD FRAMING

1. ALL NON-STRUCTURAL ELEMENTS SHALL BE CONSTRUCTED PER APPROVED CODE REQUIREMENTS. FRAMING PLAN IS ONLY SHOWING FOR THE MAIN STRUCTURAL ELEMENTS IN ACCORDANCE WITH BUILDING CODE OR REQUIREMENTS ARE SPECIFIED OR REQUIRED BY THE LOCAL JURISDICTION.
2. ALL EXTERIOR LUMBER AND ALL LUMBER IN CONTACT WITH CONRETE OR MASONRY, OR EXPOSED TO THE EXTERIOR SHALL BE TREATED LUMBER.
3. ALL WALLS SHALL HAVE SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE, UNO.
4. STUD BEARING WALLS AND PARTITIONS SHALL HAVE HAVE DOUBLE TOP PLATES LAPPED AT WALL AND PARTITION INTERSECTIONS. JOINTS IN UPPER AND LOWER MEMBERS OF DOUBLE TOP PLATES SHALL BE STAGGERED AT LEAST 4'-0".
5. FOR WALLS 10'-0" AND GREATER PROVIDE BLOCKING AT MID-HEIGHT FOR CONSTRUCTION STABILITY.
6. ALL WALLS SHALL BE CONSTRUCTED USING 2x STUDS @ 16" O.C. REFER TO FRAMING PLANS FOR ACTUAL STUD SIZE AND SPACING.
7. SILL PLATE SHALL BE PRESSURE-TREATED AND UNDER SHEAR WALLS OF UP TO 4'-0" IN LENGTH MUST BE CONTINUOUS.
8. WOOD COLUMNS SHALL HAVE SOLID VERTICAL BLOCKING THROUGH THE FLOORS TO THE SUPPORT BELOW.
9. I-JOISTS SHALL BE MANUFACTURED BY WEYERHAEUSER OR EQUIVALENT APPROVED ICC MANUFACTURED PRODUCT.

WOOD FRAMING, CONT.

10. PROVIDE DOUBLE JOISTS BENEATH ALL PARALLEL WALLS AND SOLID BLOCKING BENEATH ALL WALLS PERPENDICULAR TO JOISTS.
11. ALL CEILING JOISTS ARE TO BE 2x JOISTS. REFER TO FRAMING FOR ACTUAL SIZE AND SPACING.
12. DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE SHOWN IN THE DETAILS.
13. HOLES IN WOOD MEMBERS FOR BOLTS SHALL BE THE NOMIAL BOLT DIAMETER PLUS 1/16".
14. LAG SCREWS SHALL BE TURNED, NOT DRIVEN, INTO PRE DRILLED HOLES. HOLES IN WOOD FOR LAG SCREW SHANK SHALL BE BORED TO THE SAME DIAMETER AND DEPTH AS THE SHANK, AND FOR THE THREADED PORTION BORED WITH A BIT NOT LARGER THAN 40% TO 70% OF THE SHANK DIAMETER.
15. WOOD SCREWS SHALL BE TURNED, NOT DRIVE, INTO LEAD HOLES. SOAP OR OTHER LUBRICANTS SHALL BE PERMITTED AS NEEDED TO FACILITATE THE INSERTION AND PREVENT DAMAGE OF THE WOOD SCREW. LEAD SCREWS SHALL BE ABOUT 7/8 THE DIAMETER OF THE SCREW. THE MINIMUM PENETRATION OF WOOD SCREWS SHALL BE 10 TIMES THE SCREW DIAMETER OR 1.5", WHICHEVER IS GREATER. PENETRACTION IS MEASURED INTO THE PIECE RECEIVING THE NAIL POINT.
16. WOOD NAILERS: UNO. ON PLANS AND DETAILS, WHERE WOOD MEMBERS ARE TO BE CONNECTED TO STEEL ELEMENTS, OR WHERE WOOD NAILERS CONNECTED TO STEEL MEMBERS ARE NEEDED FOR PROPER INSTALLATION OF FINISH MATERIALS, AS A MINIMUM PROVIDE WOOD NAILERS AS SPECIFIED BELOW WITH 5/8"Ø WELDED THREADED STUDS @ 24" O.C.:

    A. WOOD NAILERS NEEDED ONLY FOR INSTALLATION OF FINISH MATERIAL: 2X WOOD NAILERS, COUNTERSINKING OF THREADED STUDS BOLT IS ACCEPTABLE IF NEEDED FOR FLUSH INSTALLATION OF FINISH MATERIAL.

    B. WOOD NAILERS NEEDED TO SUPPORT OTHER WOOD ELEMENTS: 2X OR 3X WOOD NAILERS WITH OR WITHOUT COUNTERSINKING OF THREADED STUDS BOLT RESPECTIVELY.
17. STRUCTURAL GLUED-LAMINATED (GLULAM) TIMBER OF SOFTWOOD SPECIES SHALL BE IN CONFORMANCE WITH ANSI/AITC STANDARD A190.1 AND ASTM D3737, OR OTHER CODE APPROVED DESIGN, MANUFACTURING AND/OR QUALITY ASSURANCE PROCEDURES. MEMBERS SHALL BE MARKED WITH THE ENGINEERED WOOD SYSTEM APA EWS TRADEMARK INDICATING CONFORMANCE WITH THE MANUFACTURING, QUALITY ASSURANCE AND MARKING PROVISIONS OF ANSI/AITC STANDARD A190.1. THE MANUFACTURER OR SELLER SHALL SUBMIT CERTIFICATES OF CONFORMANCE TO THE FIELD INSPECTOR PRIOR TO INSTALLATION.
18. ALL WOOD CONSTRUCTION CONNECTORS SHOWN ON THE PLANS OR DETAILS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT, U.N.O. ALL CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS IN CONJUNCTION WITH APPROVED ICC REPORTS. NOTIFY EOR FOR ANY POTENTIAL SUBSTITUTION PRIOR TO COMMENCING WORK.
19. SDS SCREWS SPECIFIED ON PLANS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE WITH ICC ESR-2236. ALTERNATES MAYBE USED ONLY WITH PRIOR APPROVAL BY EOR.

NAILING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
	ROOF	
1. BLOCKING BETWEEN CEILING JOISTS OR RAFTERS TO TOP PLATE	3-8d COMMON	TOE NAIL
2. CEILING JOISTS TO TO PLATE	3-8d COMMON	PER JOIST, TOE NAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITION	3-16d COMMON	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER, FACE NAIL OR 1 1/4"X20 GA.RIDGE STRAP TO RAFTER	3-10d COMMON	FACE NAIL EACH RAFTER
6. RAFTER OR ROOF TRUSS PLATE	3-10d COMMON	(2) TOE NAILS ON ONE SIDE AND (1) TOE NAIL ON OPP. SIDE OF EACH RAFTER OR TRUSS
7. ROOF RAFTER TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAM	3-10d COMMON	TOE NAIL
	WALL	
8. STUD TO STUD(NOT AT BRACED WALL PANELS)	16d COMMON	24" o.c. FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON	16" o.c. FACE NAIL
10. BUILT-UP HEADER(2" TO 2" HEADER WITH 1/2" SPACER)	16d COMMON	16" o.c. FACE NAIL
11. CONTINUOUS HEADER TO STUD	4-8d COMMON	TOE NAIL
12. TOP PLATE TO TOP PLATE	16d COMMON	16" o.c. FACE NAIL
13. DOUBLE TOP PLATE SPLICE	8-16d COMMON	FACE NAIL ON EA. SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EA. SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST,BAND JOIST OR BLOCKING(NOT AT BRACED WALL PANELS)	16d COMMON	16" o.c. FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST,BAND JOIST OR BLOCKING(AT BRACED WALL PANELS)	2-16d COMMON	16" o.c. FACE NAIL
16. TOP OR BOTTOM PLATE TO STUD.	4-8d COMMON	END NAIL
17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS.	2-16d COMMON	FACE NAIL
18. 1" BRACE TO EACH STUD AND PLATE.	2-8d COMMON	FACE NAIL
19. 1"x 6" SHEATHING TO EACH BEARING.	2-8d COMMON	FACE NAIL
20. 1"x8" AND WIDER SHEATHING TO EACH BEARING.	2-8d COMMON	FACE NAIL

NAILING SCHEDULE, CONT.

	FLOOR	
21. JOIST TO SILL, TOP PLATE OR GIRDER.	3-8d COMMON	TOE NAIL
22. RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE	8d COMMON	6" o.c. TOE NAIL
23. 1"x6" SUBFLOOR OR LESS TO EACH JOIST.	3-8d COMMON	FACE NAIL
24. 2" SUBFLOOR TO JOIST OR GIRDER.	2-16d COMMON	FACE NAIL
25. 2" PLANKS (PLANK & BEAM-FLOOR & ROOF).	2-16d COMMON	AT EACH BEARING, FACE NAIL.
26. BAND OR RIM JOIST TO JOIST.	3-16d COMMON	END NAIL
27. BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS.	10d COMMON	24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPSITE SIDES.
	AND: 3-10d COMMON	FACE NAIL AT ENDS AND AT EACH SPLICE.
28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS.	3-16d COMMON	END NAIL
29. BRIDGING OR BLOCKING TO JOIST.	2-8d COMMON	EACH END, TOE NAIL

A. NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN: 90 ksi FOR SHANK DIAMETERS LARGER THAN 0.142 INCH BUT NOT LARGER THAN 0.177 INCH, AND 100 ksi FOR SHANK DIAMETERS OF 0.142 INCH OR LESS.

B. NAILS SHALL BE SPACED AT NOT MORE THAN 6 INCHES ON CENTER AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR GREATER.

C. FOUR-FOOT BY 8-FOOT OR 4-FOOT BY 9 FOOT PANELS SHALL BE APPLIED VERTICALLY.

D. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON CHAPTER 23.

E. FOR WOOD STRUCTURAL PANEL ROOF SHEATHING ATTACHED TO GABLE END ROOF FRAMING AND TO INTERMEDIATE SUPPORTS WITHIN 48 INCHES OF ROOF EDGES AND RIDGES, NAILS SHALL BE SPACED AT 6 INCHES ON CENTER WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN 130 MPH AND SHALL BE SPACED 4 INCHES ON CENTER WHERE THE ULTIMETE DESIGN WIND SPEED IS 130 MPH OR GREATER BUT LESS THAN 140 MPH.

F. GYPSUM SHEATHING SHALL CONFORM TO ASTM C1396 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO ASTM C208.

G. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING AND AT FLOOR PERIMETERS ONLY. SPACING OF FASTENERS ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING MEMBERS NEED NOT BE PROVIDED EXCEPT AS REQUIRED BY OTHER PROVISIONS OF THIS CODE. FLOOR PERIMETER SHALL BE SUPPORTED BY FRAMING MEMBERS OR SOLID BLOCKING.

H.WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE, PROVIDE TWO TOE NAILS ON ONE SIDE OF THE RAFTER AND TOE NAILS FROM THE CEILING JOIST TO TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE. THE TOE NAIL ON THE OPPOSITE SIDE OF THE RAFTER SHALL NOT BE REQUIRED.

I. RSRS-01 IS A ROOF SHEATHING RING SHANK NAIL MEETING THE SPECIFICATIONS IN ASTM F1667.

SHEET INDEX

SHEET NO.	SHEET TITLE
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S-2.0	FLOOR FRAMING PLAN
S-3.0	ROOF FRAMING PLAN
SD1.0	STRUCTURAL FOUNDATION DETAILS
SD1.1	STRUCTURAL FOUNDATION DETAILS
SD2.0	STRUCTURAL DETAILS
SD3.0	STRUCTURAL DETAILS
SD4.0	STRUCTURAL DETAILS
SD5.0	STRUCTURAL DETAILS
WSWH1	STRONG-WALL® HIGH-STRENGTH WOOD SHEARWALL ANCHORAGE DETAILS
WSWH1.1	STRONG-WALL® HIGH-STRENGTH WOOD SHEARWALL ANCHORAGE DETAILS
WSWH2	STRONG-WALL® HIGH-STRENGTH WOOD SHEARWALL FRAMING DETAILS
WSWH4	STRONG-WALL® HIGH-STRENGTH WOOD SHEARWALL FRAMING DETAILS

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REVISION

DATE	DESCRIPTION
1	
2	
3	
4	
5	
6	

REGISTERED PROFESSIONAL ENGINEER
AMIR DEIHIMI
No. C78194
CIVIL
STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

PROJECT MANAGER: S.W.

GENERAL NOTES & REQUIREMENTS

JOB NO.:22256

SHEET NO.:

S-0.10

SUBMITTALS AND SHOP DRAWINGS

1. PREFABRICATED OR SPECIALTY ITEMS AND THEIR COMPONENTS, WHICH ARE INDICATED BY THE STRUCTURAL DRAWINGS TO BE DESIGNED BY OTHERS, MAY BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER OF RECORD FOR REVIEW AS A DEFERRED SUBMITTAL PROVIDED THAT SUCH SUBMITTAL IS AUTHORIZED BY THE BUILDING DEPARTMENT. DEFERRED SUBMITTALS REQUIRED TO BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD SHALL INCLUDE BUT NOT BE LIMITED TO:

   A. MECHANICAL, ELECTRICAL AND PLUMPING EQUIPMENT
   B. SELF SUPPORTING, PRE-MANUFACTURED STAIR ASSEMBLY
   C. PREFABRICATED ROOF & FLOOR TRUSSES
   D. HVAC STRUCTURAL SUPPORT REQUIREMENTS
   E. AWNINGS, SIGNAGE, FASCIAS, ETC.
   F. FIRE SPRINKLERS
   G. CONTINUOUS TIE DOWN SYSTEM
   H. CONCRETE MIX DESIGN

2. ALL DEFERRED SUBMITTALS SHALL INCLUDE CALCULATIONS AND DRAWINGS PREPARED IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES AND STAMPED BY AN APPROPRIATELY LICENSED PROFESSIONAL ENGINEER. SUBMITTALS SHALL SHOW LOCATION AND MAGNITUDE OF LOADS, SIZE AND CONFIGURATIONS OF MEMBERS, AND COMPATIBILITY WITH THE PRIMARY STRUCTURAL SYSTEM.

3. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS. SHOP DRAWINGS ARE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. DESIGN ACCURACY OF SUCH PRODUCT, DIMENSIONS AND QUANTITY OF THE PRODUCT IS NOT REVIEWED BY EOR. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW UNLESS SPECIFICALLY NOTED ACCORDINGLY.

4. THE SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE ORIGINAL CONTRACT DRAWINGS. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN APPROPRIATELY REGISTERED ENGINEER. ENGINEERING SYSTEM SOLUTIONS SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF ENGINEERING DESIGNS PERFORMED BY OTHERS.

5. SHOP DRAWINGS SHALL REFERENCE DATE AND DELTA (IF ANY) OF CONTRACT DRAWINGS.

STATEMENT OF SPECIAL INSPECTION:

1. CONTINUOUS AND PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE WORK AS DESCRIBLE IN IBC/CBC CHAPTER 17. SEE INSPECTION SCHEDULE BELOW, ONLY CHECKED ITEMS ARE REQUIRED.

2. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS, ANY DETAIL THAT FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE STRUCTURAL ENGINEER FOR INTERPRETATION OR CLARIFICATION.

3. CONTINUOUS SPECIAL INSPECTION PER AWS D1.1 IS REQUIRED FOR ALL STRUCTURAL STEEL WELDING, EXCEPT FOR SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16" IN SIZE.

4. STRUCTURAL WOOD, PERIODIC SPECIAL INSPECTION IS REQUIRED FOR WOOD SHEARWALLS, SHEAR PANELS, AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM, INCLUDING WOOD SHEARWALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, SHEAR PANELS, AND HOLD-DOWNS. EXCEPTION: SPECIAL INSPECTION IS NOT REQUIRED FOR WOOD SHEARWALLS, SHEAR PANELS AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHER COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM, WHERE THE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4 INCHES ON CENTER. INSPECTIONS SHALL BE PERFORMED BEFORE COVERING.

5. CONTRACTOR RESPONSIBLE FOR CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM/COMPONENT LISTED IN THIS STATEMENT OF SPECIAL INSPECTION SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH A SYSTEM OR COMPONENT PER SEC 1704.4.

6. WHERE FABRICATION OF MEMBERS AND ASSEMBLIES IS PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE REQUIRED BY THIS SECTION, UNLESS THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE OF VEVIRYING APPROVAL OF FABRICATOR.

7. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED INDIVIDUAL WHO WILL DEMONSTRATE COMPETENCE, AND KNOWLEDGE TO THE BUILDING OFFICIAL, FOR THE SPECIFIC TYPE OF SPECIAL INSPECTION REQUIREMENT REQUIRED PER SCHEDULE BELOW.

8. WOOD SPECIAL INSPECTIONS SHALL BE PER CBC SECTION 1705.5.

9. SPECIAL INSPECTIONS FOR WIND AND SEISMIC RESISTANCE SHALL BE PER SECTION 1705.11 AND 1705.12 RESPECTIVELY.

STATEMENT OF SPECIAL INSPECTIONS (ONLY INDICATED ITEMS ARE REQUIRED)

REQ'D(?)	INSPECTION ITEMS	SPECIAL INSPECTIORS (NAME, PHONE#, REGISTRATION#)
YES	STRUCTURAL STEEL (1705.2.1)	
	STEEL FRAME JOINT DETAILS	
	COLD-FORMED STEEL DECK (1705.2.2)	
	OPEN-WEB STEEL JOISTS AND JOISTS GIRDERS (1705.2.3)	
	REINFORCING STEEL AND PRE-STRESSING STEEL TENDONS	
	SHOTCRETE (CURING TEMPERATURE, DESIGN MIX, PLACEMENT, STRENGTH ETC. PER TABLE 1705.3)	
	COLD-FORMED STEEL TRUSSES SPANNING >= 60 FT	
	CONCRETE CONSTRUCTION (DESIGN MIX, FORMWORK, PLACEMENT, ETC. PER TABLE 1705.3) (SEE 1705.3 EXCEPTIONS)	
YES	STRUCTURAL WELDING/REBAR WELDING	
	ALL MASONRY CONSTRUCTION (1705.4)	
	WOOD FOR HIGH LOAD DIAPHRAGMS (1705.5.1)	
	METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING >=60 FT	
	SOILS (EXCAVATION, FILL, ETC. PER 1705.6) (SEE 1705.6 EXCEPTIONS)	
	DRIVEN PILES PER 1705.7	
	CAST IN PLACE PILES PER 1705.8	
	HELICAL PILE FOUNDATIONS PER 1705.9	
	ERECTION OF PRE- CAST CONCRETE MEMBERS	
	BOLTS INSTALLED IN CONCRETE	
	HIGH STRENGTH BOLTING/MATERIAL VERIFICATION	
YES	WOOD DIAPHRAGM AND SHEAR WALLS*	
	EPOXY/ POST INSTALLED ANCHORS	

*: FOR SPECIAL INSPECTION OF WOOD DIAPHRAGMS AND SHEAR WALLS, CONTACT EOR FOR SCHEDULE.

STRUCTURAL STEEL

1. STRUCTURAL STEEL TO BE SUPPLIED DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS.

2. PROVIDE THE FOLLOWING MATERIALS FOR STRUCTURAL STEEL, UNO:

ROLLED WIDE FLANGE SECTIONS	ASTM A992 (F_y = 50 ksi)
HOLLOW STRUCTURAL SECTIONS (HSS), SQUARE AND RECT.	ASTM A500, GR.B (F_y = 46 KSI)
STEEL PIPE	ASTM A53, GR B (F_y=35 KSI)
HOLLOW STRUCTURAL SECTION (HSS), ROUND	ASTM A500, GR. B (F_y=42 KSI)
HP SECTIONS	ASTM A572, GR.50 (F_y=50 KSI)
PLATES, ANGLES, CHANNELS & TEES	ASTM A36
MACHINE BOLTS	ASTM A307
HIGH STRENGTH BOLTS	ASTM A325, Type N, A490
WELDED HEADED STUDS	ASTM A108
NUTS	ASTM A563
ANCHOR RODS/BOLTS	ASTM F1554, GR. 36 OR 55

3. HOLES FOR BOLTS SHOULD BE DRILLED OR PUNCHED & SHALL BE 1/16" LARGER THAN BOLT DIAMETER.

4. ALL STRUCTURAL WELDING PROCEDURES AND MATERIALS SHALL CONFORM TO BUILDING CODE, SECTION 2204.1. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS.

5. ALL TESTING AND INSPECTION OF SHOP AND FIELD WELDING OPERATIONS SHALL BE MADE BY A CERTIFIED WELDING INSPECTOR WHICH ARE APPROVED BY THE BUILDING OFFICIAL.

6. WELDING SHALL CONFORM THE LATEST EDITION OF AWS D1.1 AND SHALL USE EITHER THE SHIELDED OR FLUX CORE METHODS. ELECTRODES USED SHALL BE E70XX, E71-T8 OR E70-T6. ALL WELDING SHALL BE PERFORMED BY QUALIFIED AND CERTIFIED WELDERS.

7. ALL FABRICATIONS SHALL BE DONE IN A SHOP OF AN APPROVED AND LICENSED FABRICATOR BY AISC AND/OR LOCAL JURISDICTION. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

8. NON-SHRINK GROUT BENEATH COLUMN BASES OR BEARING PLATES SHALL BE 5000 PSI(MIN.) NON-SHRINK SHALL BE INSTALLED IMMEDIATELY AFTER COLUMN IS PLUMBED. CONTRACTOR SHALL NOT LOAD COLUMN ANCHOR BOLTS UNDER PLACEMENT OF NON-SHRINK GROUT WITHOUT TAKING APPROPRIATE MEASURES TO PREVENT BUCKLING OF ANCHOR BOLTS UNDER CONSTRUCTION LOADS.

9. WELDS IDENTIFIED AS REQUIRING CONTINUOUS OR PERIODIC INSPECTIONS NEED NOT TO HAVE CONTINUOUS SPECIAL INSPECTION WHEN THE WELDING IS PERFORMED IN AN APPROVED FABRICATOR'S SHOP. FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH CBC SECTION 1704.2.

10. ALL FULL PENETRATION GROVE WELDS FOR MOMENT CONNECTIONS SHALL BE ULTRASONICALLY INSPECTED BY AN APPROVED TESTING AGENCY AND SHALL CONFORM TO THE LASTEST EDITION OF AWS D1.1, SECTIONS 5 & 6.

11. STEEL FABRICATOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS AND COORDINATE WITH MECHANICAL DRAWINGS AND SUB-CONTRACTOR FOR SIZE, LOCATION OF ALL MECHANICAL UNITS AND OPENINGS.

12. ALL MISC. FILLET WELDS NOT NOTED, INCLUDING THOSE FOR STIFFENERS, MISC. PLATES, ETC. SHALL BE PER AISC 360, TABLE J2.4.

13. WELDED MEMBERS AND CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM SHALL BE SUBJECT TO AWS D1.8 REQUIREMENTS.

SPECIAL INSPECTION TABLE FOR STEEL STRUCTURES

VERIFICATION AND INSPECTION	REFERENCE STANDARD
INSPECTION TASKS PRIOR TO WELDING	AISC 360, TABLE N5.4-1
INSPECTION TASKS DURING WELDING	AISC 360, TABLE N5.4-2
INSPECTION TASKS AFTER WELDING	AISC 360, TABLE N5.4-3
INSPECTION TASKS PRIOR TO BOLTING	AISC 360, TABLE N5.6-1
INSPECTION TASKS DURING BOLTING	AISC 360, TABLE N5.6-2
INSPECTION TASKS AFTER BOLTING	AISC 360, TABLE N5.6-3
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT	AISC 360, TABLE N6.1
SEISMIC FORCE RESISTING SYSTEMS	CBC 1705.12.1

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REVISION

	DATE	DESCRIPTION
1		
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REGISTERED PROFESSIONAL ENGINEER
AMIR DEHTIARI
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CIVIL
STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT EQUIPMENT
BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

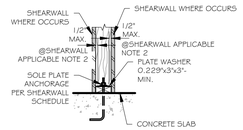
PROJECT MANAGER: S.W.

GENERAL NOTES & REQUIREMENTS

JOB NO.:22256

SHEET NO.:

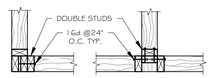
S-0.11



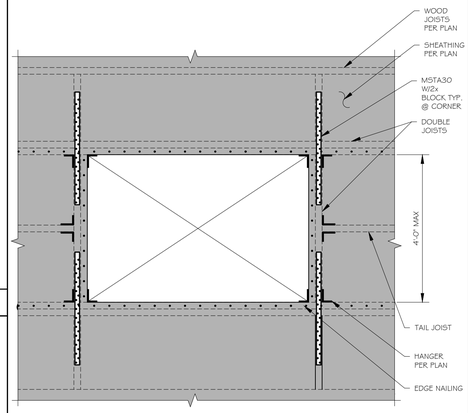
NOTES:

1. INSTALL SOLE PLATE ANCHORAGE AS SHOWN AND AT SPACING INDICATED IN WOOD SHEARWALL BASE CONNECTION SCHEDULE.
2. STAGGER ANCHORS AT DOUBLE SIDE OF SHEARWALL

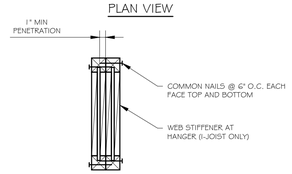
14 WOOD SHEARWALL SILL PLATE ANCHORAGE



10 WALL INTERSECTION



PLAN VIEW

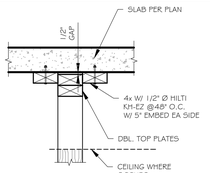


SECTION OF DOUBLE JOISTS

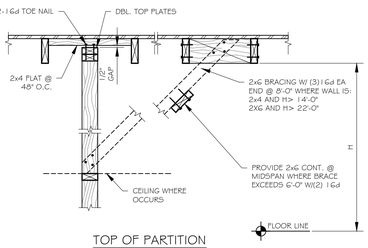
NOTES:

1. SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF OPENING

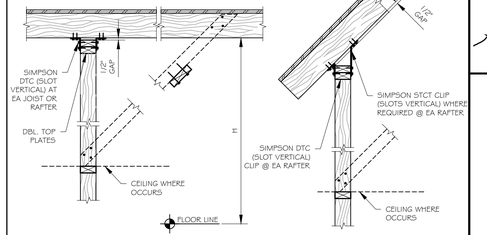
6 TYP. FLOOR AND ROOF OPENING



TOP OF PARTITION TO CONC. SLAB

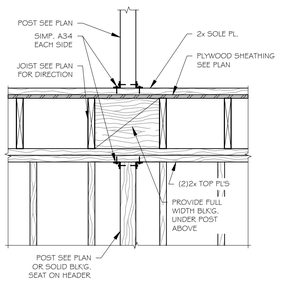


TOP OF PARTITION PARALLEL TO JOISTS

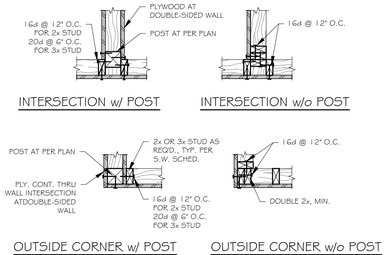


TOP OF PARTITION PERPENDICULAR TO JOISTS

3 PARTITION WALL (NON-BEARING/ NON-SHEARWALL)



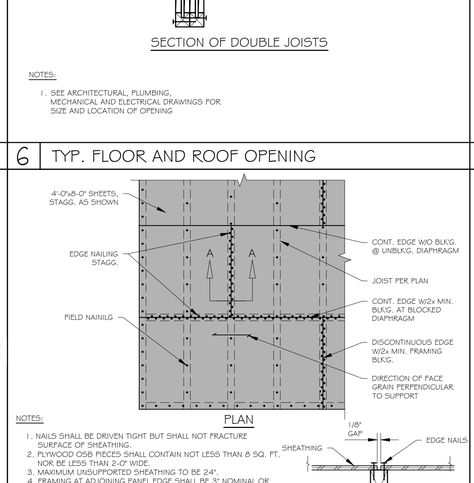
13 BLOCKING AT POSTS/TRIMMERS



NOTE:

SEE FRAMING PLAN FOR SHEAR WALL LOCATIONS, ORIENTATIONS AND SCHEDULE REFERENCES

9 SHEAR WALL/ INTERSECTION



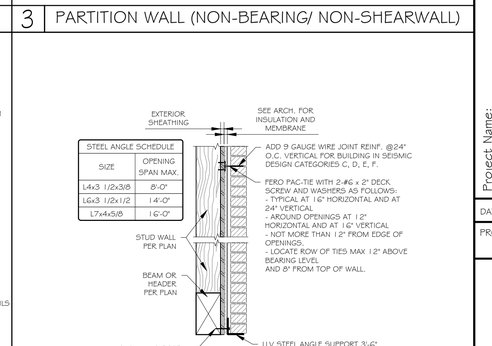
PLAN

NOTES:

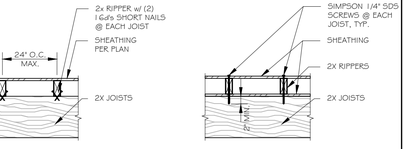
1. NAILS SHALL BE DRIVEN TIGHT BUT SHALL NOT FRACTURE SURFACE OF SHEATHING.
2. PLYWOOD OSB PIECES SHALL CONTAIN NOT LESS THAN 8 SQ. FT., NOR BE LESS THAN 2'-0" WIDE.
3. MAXIMUM UNSUPPORTED SHEATHING TO BE 24".
4. FRAMING AT ADJOINING PANEL EDGE SHALL BE 3" NOMINAL OR WIDER AND NAILS AT ALL PANEL EDGES SHALL BE STAGG. WHERE PANEL EDGE NAILING IS SPECIFIED AT 2 1/2" O.C. OR LESS.
5. ALL PANEL EDGES OF THE FLOOR SHEATHING SHALL HAVE APPROVED T AND G JOINTS OR SHALL BE SUPPORTED BY BLKG. PER IBC/CBC TABLE 2304.6 (3) FOOTNOTE D.
6. DIAPHRAGM BOUNDARY SHALL BE SUPPORTED BY FRAMING MEMBERS WITH BOUNDARY NAILING.

SECTION A-A
PANEL JOINT

5 ROOF OR FLOOR SHEATHING LAYOUT



2 VENEER TO WOOD WALL



16 2X RIPPER CONNECTION

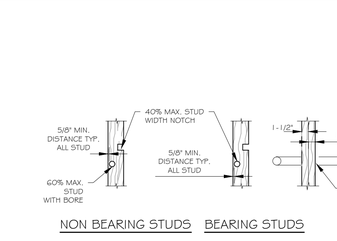
CLASS B REBAR TENSION SPLICE LENGTH
(PROVIDED CONCRETE COVER, CLEAR BAR SPACING AND TRANSVERSE REINFORCEMENT ARE IN COMPLIANCE WITH ACI 318-19, CHAPTER 25)

f'c	LOCATION	fy	3	4	5	6	7	8	9	10	11
			SPLICE LENGTH IN INCHES								
2500 PSI NORMAL WEIGHT CONCRETE	*TOP BARS AND HORIZONTAL WALL STEEL	40	20	27	34	41	59	68	76	86	95
		60	30	41	51	61	89	101	114	129	143
	OTHER BARS	40	16	21	26	31	46	52	59	66	73
		60	23	31	39	47	68	78	88	99	110
3000 PSI NORMAL WEIGHT CONCRETE	*TOP BARS AND HORIZONTAL WALL STEEL	40	19	25	31	37	54	62	70	78	87
		60	28	37	46	56	81	93	104	118	131
	OTHER BARS	40	14	19	24	28	42	47	54	60	67
		60	21	28	36	43	62	71	80	90	100

REBAR TENSION SPLICE LENGTH
(PROVIDED MASONRY COVER, CLEAR BAR SPACING AND TRANSVERSE REINFORCEMENT ARE IN COMPLIANCE WITH ACI 530-13, SECTION 9.3.3.3)

fy (psi)	f'm (psi)	BAR SIZE 3	4	5	6	7	8	9
		SPLICE LENGTH IN INCHES						
60000	1500	19	34	45	54	63	72	81
	2000	18	30	45	54	63	72	81
	2500	18	26	41	54	63	72	81
	3000	18	24	38	54	63	72	81

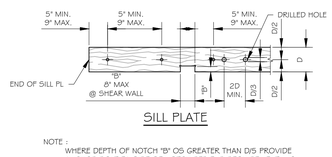
15 SPLICE LENGTH OF REINFORCEMENT



DOUBLE TOP PLATES

NOTE :

WHERE NOTCH IS GREATER THAN 1" PROVIDE 10 GA STRAP W/ WIDTH SAME AS DBL TOP PL TOP PL OF SHEAR WALLS SHALL NOT BE NOTCHED UNLESS SPECIFICALLY DETAILED.



SILL PLATE

NOTE :

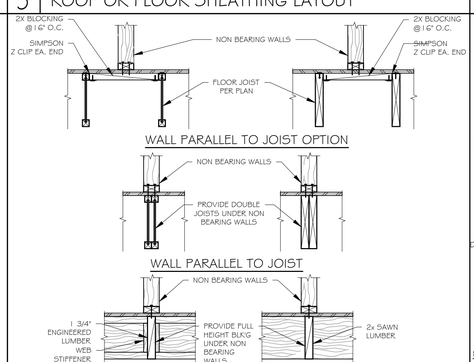
WHERE DEPTH OF NOTCH "B" OS GREATER THAN D/5 PROVIDE ANCHOR BOLT EA SIDE OF NOTCH PER END REQUIREMENT. NO MORE THAN ONE NOTCH IS PERMITTED IN EVERY 12'-0" @ SHEAR WALL

12 STUD NOTCHING/BORING LIMITS

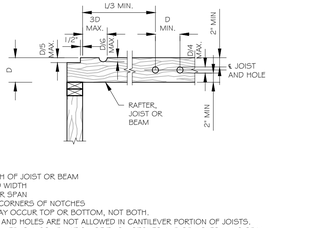
NOTE:

- USE PRE-FAB. STEP-DOWN TRUSSES PERPENDICULAR TO ROOF TRUSSES IN-LIEU OF 2x JACK RAFTERS

8 OVER FRAMING



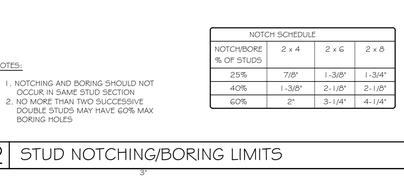
5 ROOF OR FLOOR SHEATHING LAYOUT



NOTE:

1. D = DEPTH OF JOIST OR BEAM
   D1 = STUD WIDTH
   L = CLEAR SPAN
2. PERDRILL CORNERS OF NOTCHES
3. NOTCH MAY OCCUR TOP OR BOTTOM, NOT BOTH.
4. NOTCHES AND HOLES ARE NOT ALLOWED IN CANTILEVER PORTION OF JOISTS.
5. MAX. ALLOWED IS A COMBINATION OF TWO NOTCHES AND/OR HOLES IN L/3 SPAN.

7 DRILLING HOLES AND NOTCHING OF THE JOIST

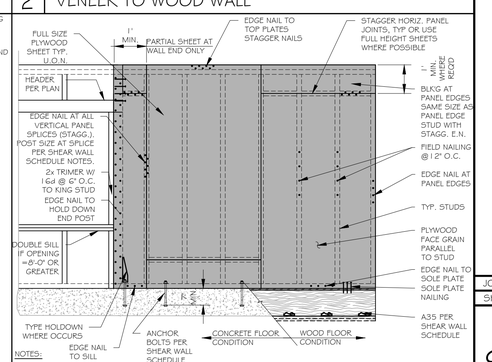


NOTCH SCHEDULE			
NOTCH/BORE % OF STUDS	2 x 4	2 x 6	2 x 8
25%	7/8"	1-3/8"	1-3/4"
40%	1-3/8"	2-1/8"	2-1/8"
60%	2"	3-1/4"	4-1/4"

NOTES:

1. NOTCHING AND BORING SHOULD NOT OCCUR IN SAME STUD SECTION
2. NO MORE THAN TWO SUCCESSIVE DOUBLE STUDS MAY HAVE 60% MAX BORING HOLES

4 FRAMING AT NON BEARING WALLS



NOTES:

1. PROVIDE STAGGERED NAILING AT ALL PANEL EDGES.
2. STUDS ARE SPACED @ 16" O.C. MAX. U.O.N.
3. PROVIDE 1/8" GAP BETWEEN ADJACENT PANELS.

1 SHEAR WALL FRAMING ELEVATION

CORE
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REVISION

DATE	DESCRIPTION
A	
2	
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REGISTERED PROFESSIONAL ENGINEER
AMIR DEITATNY
No. C78194
CIVIL
STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT
BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

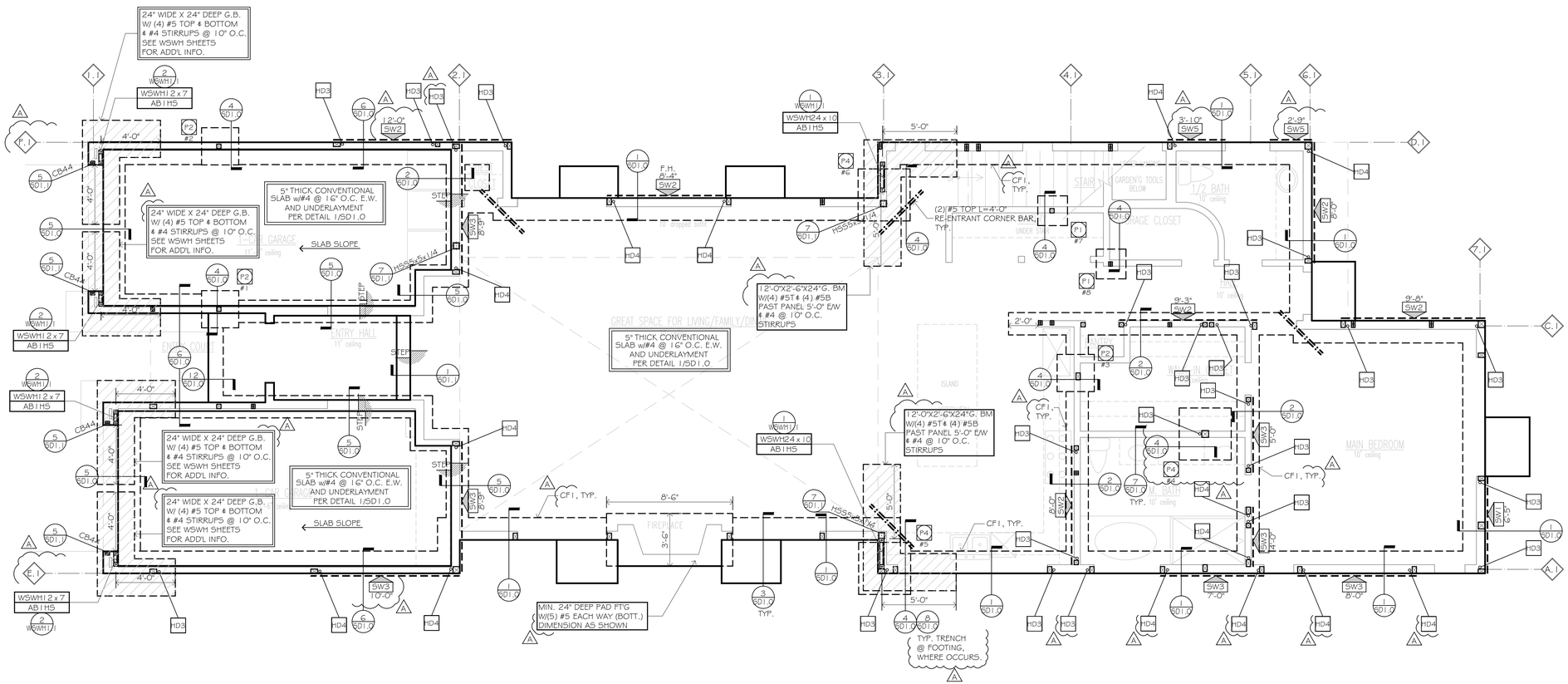
PROJECT MANAGER: S.W.

TYPICAL DETAILS

JOB NO.: 22256

SHEET NO.:

S-0.20



FOUNDATION PLAN

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

Geotechnical Review:

FOUNDATION NOTES

1. REFER TO SHEET S-0.10 FOR MORE INFORMATION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PREFABRICATED SHEAR WALLS AND MATCH TOP PLATE HEIGHT AND WALL WIDTH AND NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.
3. TOP OF ALL EXTERIOR FOOTING, GRADE BEAM FOOTING, PAD FOOTING, OR FLAG POLE FOOTING TO BE MIN. 6" BELOW FINISH GRADE.
4. FOR NON-SHEAR WALLS, MASA/MASAP MUDSILL ANCHORS CAN BE USED IN LIEU OF ANCHOR BOLTS WITH END DISTANCE OF 4" MIN. PER ESR #2555.
5. FOR DOUBLE SHEAR PANEL TYPES SW3, SW4, SW5 USE MIN. 3X6 SILL PLATES U.N.O.

LEGEND

- DENOTES FOOTING
- DENOTES PAD
- X / #X — DENOTES PAD NUMBER PER SCHEDULE; DENOTES PAD NUMBER IN CALCULATIONS
- X / SDX — DENOTES DETAIL NUMBER; DENOTES DETAIL SHEET NUMBER
- X — DENOTES HOLDOWN PER SCHEDULE
- X'-X" / X — DENOTES SHEAR PANEL LENGTH; DENOTES PANEL TYPE, REFER TO SHEARWALL SCHEDULE
- STEP — DENOTES SLAB STEP PER ARCH. (VERIFY PRIOR TO CONSTRUCTION)
- DENOTES POST OR TRIMMER AS NOTED

FOOTING SCHEDULE

SYMBOL	PAD SIZE	REINFORCEMENT
P1	2'-0" SQ. x 24" THICK	(3) #4 E.W.
P2	2'-6" SQ. x 24" THICK	(4) #4 E.W.
P3	3'-0" SQ. x 24" THICK	(4) #4 E.W.
P4	3'-6" SQ. x 24" THICK	(5) #4 E.W.
P5	4'-0" SQ. x 24" THICK	(6) #4 E.W.
CF1	CONT. W=18", D=24"	CONT. (2) #5 TOP & BOTTOM

HOLDOWN SCHEDULE

SYMBOL	SIMPSON HOLDOWN	USP HOLDOWN	NOTES
HD1	STHD10	STAD10	REFER TO DETAIL 8/SD1.0
HD2	STHD14	STAD14	
HD3	HTT5	HTT22	REFER TO DETAIL 9/SD1.0
HD4	HDU8	PHD8	

SHEAR WALL SCHEDULE

2019 CALIFORNIA BUILDING CODE (1), (3)

SHEAR PANEL TYPE	SHEATHING (8)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (9)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION: 1/4"Ø SDS SCREWS	SILL PLATE CONNECTION: 5/8" Ø A.B. SPCG 2X	FRAMING CLIPS A35's, LS50's OR LTP4's (5), (6)
SW1	3/8" APA rated	8 d's @ 6" O.C.	8 d's @ 12" O.C.	260	(7) 220 @ 6" O.C.	@ 16" O.C.	48" @ 24" O.C.
SW2 (4)(12)	3/8" APA rated	8 d's @ 4" O.C.	8 d's @ 12" O.C.	380 / (7) 320	@ 4" O.C.	@ 12" O.C.	42" @ 16" O.C.
SW3 (4)(12)	3/8" APA rated	8 d's @ 3" O.C.	8 d's @ 12" O.C.	490 / (7) 410	(10) @ 3" O.C.	(10) @ 8" O.C.	36" (10) @ 8" O.C.
SW4 (4)(12)	3/8" APA rated	8 d's @ 2" O.C.	8 d's @ 12" O.C.	640 / (7) 530	(10) @ 2" O.C.	(10) @ 6" O.C.	24" (10) @ 8" O.C.
SW5 (4) (2)	1 5/32" APA rated Structural I	10 d's @ 2" O.C.	10 d's @ 12" O.C.	870	(10) 2 ROWS STAGG. @ 3" O.C.	(10) @ 5" O.C.	18" (10) @ 6" O.C.

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
(2) PROVIDE 3" NOMINAL OR WIDER FRAMING AT ADJOINING PANEL EDGES WITH NAILS STAGGERED.
(3) STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
(4) PERIODIC SPECIAL INSPECTION IS REQUIRED.
(5) USE CLIPS @ 6" O.C. ON SIMPSON STRONG WALL & HARDY FRAME (U.N.O.).
(6) USE SPACING PER SCHEDULE IF NUMBER OF FRAMING CLIPS ARE NOT SPECIFIED ON FRAMING PLANS.
(7) ALLOWABLE SHEAR ARE FOR STUDS SPACED @ 24" O.C. MAX.
(8) SHEATHING CONFORMS TO EITHER DOC PS 1 OR PS 2 STANDARDS.
(9) NAILING @ 6" O.C. WHEN STUDS ARE SPACED @ 24" O.C.
(10) FOR DOUBLE SIDED SHEAR PANELS:

a. USE HALF THE SPACING OF SILL PLATE ANCHOR BOLTS FOR TYPES SW3, SW4 & SW5
b. USE ONLY 1/4"Ø x 6" SDS SCREWS IN SCHEDULE AND WITH HALF THE SPACING, FOR TYPES SW4 & SW5.
c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING, FOR TYPES SW3, SW4 & SW5.

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REVISION

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REGISTERED PROFESSIONAL ENGINEER — AMIR DEHGHANI — No. C78194 — CIVIL — STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT
BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

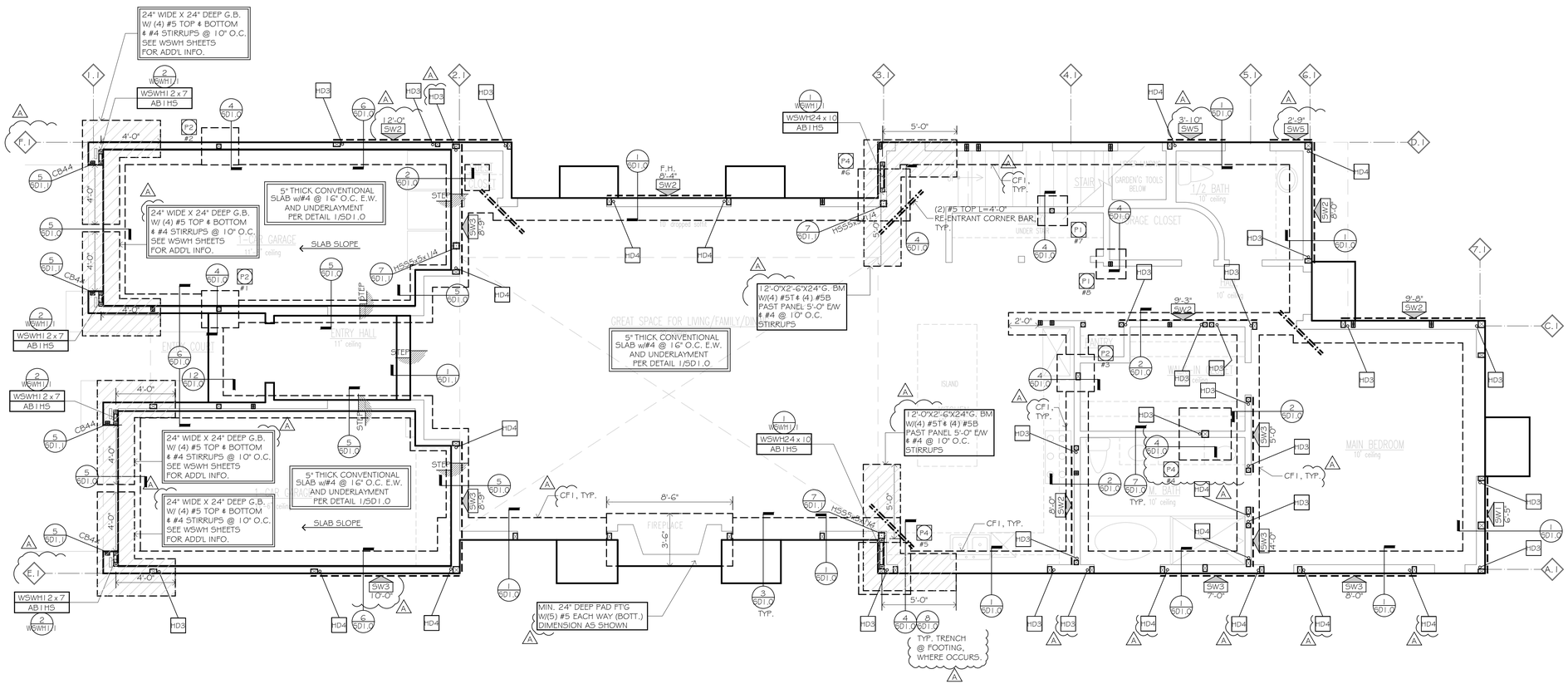
PROJECT MANAGER: S.W.

FOUNDATION PLAN

JOB NO.: 22256

SHEET NO.:

S-1.0



FOUNDATION PLAN

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

Geotechnical Review:

FOUNDATION NOTES

1. REFER TO SHEET S-0.10 FOR MORE INFORMATION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PREFABRICATED SHEAR WALLS AND MATCH TOP PLATE HEIGHT AND WALL WIDTH AND NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.
3. TOP OF ALL EXTERIOR FOOTING, GRADE BEAM FOOTING, PAD FOOTING, OR FLAG POLE FOOTING TO BE MIN. 6" BELOW FINISH GRADE.
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5. FOR DOUBLE SHEAR PANEL TYPES SW3, SW4, SW5 USE MIN. 3X6 SILL PLATES U.N.O.

LEGEND

- DENOTES FOOTING
- DENOTES PAD
- X / #X — DENOTES PAD NUMBER PER SCHEDULE; DENOTES PAD NUMBER IN CALCULATIONS
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P4	3'-6" SQ. x 24" THICK	(5) #4 E.W.
P5	4'-0" SQ. x 24" THICK	(6) #4 E.W.
CF1	CONT. W=18", D=24"	CONT. (2) #5 TOP & BOTTOM

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SYMBOL	SIMPSON HOLDOWN	USP HOLDOWN	NOTES
HD1	STHD10	STAD10	REFER TO DETAIL 8/SD1.0
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HD4	HDU8	PHD8	

SHEAR WALL SCHEDULE

2019 CALIFORNIA BUILDING CODE (1), (3)

SHEAR PANEL TYPE	SHEATHING (8)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (9)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION: 1/4"Ø SDS SCREWS	SILL PLATE CONNECTION: 5/8" Ø A.B. SPCG 2X	FRAMING CLIPS A35's, LS50's OR LTP4's (5), (6)
SW1	3/8" APA rated	8 d's @ 6" O.C.	8 d's @ 12" O.C.	260	(7) 220 @ 6" O.C.	@ 16" O.C.	48" @ 24" O.C.
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SW3 (4)(12)	3/8" APA rated	8 d's @ 3" O.C.	8 d's @ 12" O.C.	490 / (7) 410	(10) @ 3" O.C.	(10) @ 8" O.C.	36" (10) @ 8" O.C.
SW4 (4)(12)	3/8" APA rated	8 d's @ 2" O.C.	8 d's @ 12" O.C.	640 / (7) 530	(10) @ 2" O.C.	(10) @ 6" O.C.	24" (10) @ 8" O.C.
SW5 (4) (2)	1 5/32" APA rated Structural I	10 d's @ 2" O.C.	10 d's @ 12" O.C.	870	(10) 2 ROWS STAGG. @ 3" O.C.	(10) @ 5" O.C.	18" (10) @ 6" O.C.

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
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(3) STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
(4) PERIODIC SPECIAL INSPECTION IS REQUIRED.
(5) USE CLIPS @ 6" O.C. ON SIMPSON STRONG WALL & HARDY FRAME (U.N.O.).
(6) USE SPACING PER SCHEDULE IF NUMBER OF FRAMING CLIPS ARE NOT SPECIFIED ON FRAMING PLANS.
(7) ALLOWABLE SHEAR ARE FOR STUDS SPACED @ 24" O.C. MAX.
(8) SHEATHING CONFORMS TO EITHER DOC PS 1 OR PS 2 STANDARDS.
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(10) FOR DOUBLE SIDED SHEAR PANELS:

a. USE HALF THE SPACING OF SILL PLATE ANCHOR BOLTS FOR TYPES SW3, SW4 & SW5
b. USE ONLY 1/4"Ø x 6" SDS SCREWS IN SCHEDULE AND WITH HALF THE SPACING, FOR TYPES SW4 & SW5.
c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING, FOR TYPES SW3, SW4 & SW5.

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REVISION

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REGISTERED PROFESSIONAL ENGINEER — AMIR DEHGHANI — No. C78194 — CIVIL — STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT
BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

PROJECT MANAGER: S.W.

FOUNDATION PLAN

JOB NO.: 22256

SHEET NO.:

S-1.0

SHEAR WALL SCHEDULE

2019 CALIFORNIA BUILDING CODE (1), (3)

SHEAR PANEL TYPE	SHEATHING (8)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (9)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION			FRAMING CLIPS A35's, L550's OR (TP4's (5), (6)
					16d's SINKER	1/4"Ø×6" SDS SCREWS	5/8" Ø A.B. SPCG 2X	
SW1	3/8" APA rated	8 d's @ 6" O.C.	8 d's @ 12" O.C.	260 / 220 (7)	@ 6" O.C.	@ 16" O.C.	48"	@ 24" O.C.
SW2 (4)(12)	3/8" APA rated	8 d's @ 4" O.C.	8 d's @ 12" O.C.	360 / 320 (7)	@ 4" O.C.	@ 12" O.C.	42"	@ 16" O.C.
SW3 (4)(12)	3/8" APA rated	8 d's @ 3" O.C.	8 d's @ 12" O.C.	490 / 410 (7)	(10) @ 3" O.C.	(10) @ 8" O.C.	36"	(10) @ 8" O.C.
SW4 (4)(12)	3/8" APA rated	8 d's @ 2" O.C.	8 d's @ 12" O.C.	640 / 530 (7)	(10) @ 2" O.C.	(10) @ 6" O.C.	24"	(10) @ 8" O.C.
SW5 (4), (2)	15/32" APA rated Structural 1	10 d's @ 2" O.C.	10 d's @ 12" O.C.	870	(10) 2 ROWS STAGG. @ 3" O.C.	(10) @ 5" O.C.	18"	(10) @ 6" O.C.

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
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c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING, FOR TYPES SW3, SW4 & SW5.

FRAMING NOTES

1. REFER TO SHEET S-0.10 FOR MORE INFORMATION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PREFABRICATED SHEAR WALLS AND MATCH TOP PLATE HEIGHT AND WALL WIDTH AND NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.
3. USP CONNECTORS CAN BE USED IN LIEU OF SIMPSON STRONG TIE IN THIS PROJECT. CONTACT E.O.R. FOR CONVERSION TABLE OR SUBMIT SHOP DRAWINGS TO E.O.R. FOR REVIEW AND APPROVAL.
4. ALL BEAM HANGERS SHALL BE SIMPSON HU HANGERS, UNO. ON PLAN OR DETAIL.
5. USE ST6224 STRAP FOR THE TOP PLATES SPLICE AT ROOF FRAMING LEVELS (3B/SD2.0), UNO ON PLANS.
6. USE ST22 STRAP FOR LEDGER SPLICES, UNO.
7. USE (1)CS16 x 3'-0" STRAP AT RIM JOISTS SPLICE, U.N.O ON PLANS. 1 1/4" MIN. LVL RIM JOISTS SHOULD BE USED AT ALL FLOOR FRAMING EDGES.
8. HEADER AT NON-BEARING WALLS, USE 2x4 FOR OPENINGS UP TO 3'-0" MAX., (2)2x4 FOR OPENINGS UP TO 6'-0" MAX., 4x6 FOR OPENINGS UP TO 12'-0" MAX., (UNO). USE 4x4 FOR OPENINGS LESS THAN 16" AT BEARING WALLS WITHOUT POINT LOADS.
9. WOOD HEADER OR POSTS MADE UP OF 2 OR MORE 2X'S SHALL BE SPIKED TOGETHER PER THE NAILING SCHEDULE.
10. SHEARWALL PANEL TO BE NAILED TO ALL MULTIPLE STUDS RECEIVING HOLDOWNS AND DO NOT BREAK AT PERPENDICULAR WALL LOCATIONS, UNO.

LEGEND

- DENOTES DROP BEAM OR HEADER PER PLAN
- DENOTES FLUSH BEAM PER PLAN
- DENOTES BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- DENOTES POST OR TRIMMER AS NOTED
- DENOTES POST OR TRIMMER FROM FLOOR ABOVE
- DENOTES DIRECTION OF FRAMING MEMBER PER FRAMING SCHEDULE
- X'-X" / X — DENOTES SHEAR PANEL LENGTH; DENOTES PANEL TYPE, REFER TO SHEARWALL SCHEDULE
- (X) DENOTES KEY NOTE NUMBER
- X / SDX — DENOTES DETAIL NUMBER; DENOTES DETAIL SHEET NUMBER
- DENOTES BEARING WALL
- DENOTES OVER FRAMING
- (X) DENOTES FLOOR TO FLOOR HOLDOWN PER SCHEDULE IN DETAIL 1/SD3.0 (ALT. DETAIL 2/SD3.0 FOR WHERE HOLDOWN OCCURS AT BEAM)
- DENOTES DRAG DIRECTION
- DENOTES FRAMING ZONE DIVISION
- (X) DENOTES SHEARWALL LINE IN CALCULATIONS

KEY NOTES

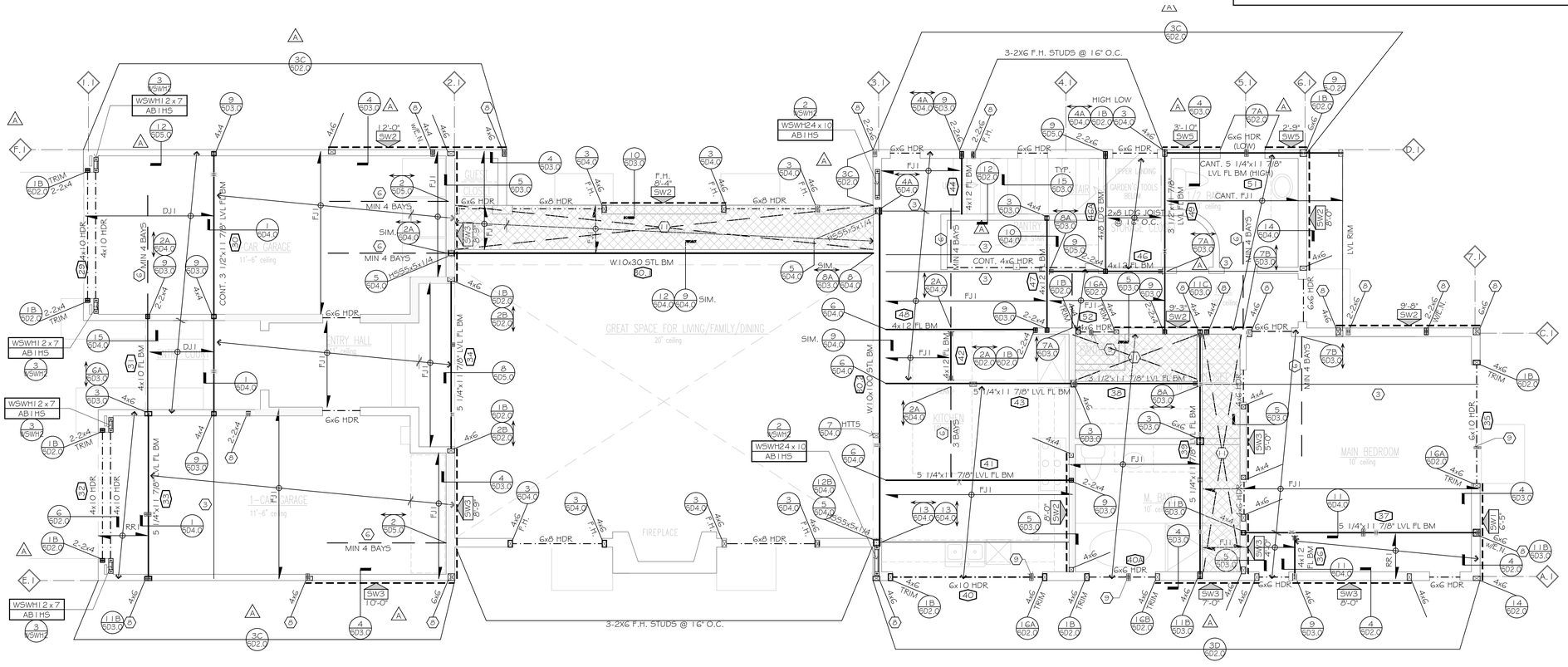
1. DRAG TRUSS W/E.N.
2. SHEAR TRUSS W/E.N.
3. CONTINUOUS JOIST W/E.N.
4. TRUSS HANGER BY TRUSS MANUFACTURER
5. LINE OF 2x FLAT BLOCKING W/E.N.
6. LINE OF FULL HEIGHT BLK'G W/E.N.
7. CONTINUOUS LINE OF BLOCKING W/E.N. UNDER SHEAR WALL ABOVE W/ (1) CS16
8. ALIGN POST WITH UPPER FLOOR POST WITH SOLID BLOCKING BETWEEN FLOOR
9. PROVIDE SOLID BLOCKING WHERE POSTS ARE DISCONTINUOUS AT JOIST SPACE AND/OR FROM TOP OF BEAMS/HEADERS TO LOWER TOP PLATE.

BLOCKED ROOF DIAPHRAGM (X) — 8d's @ 4" B.N., 8d's @ 6" E.N., 8d's @ 12" F.N.

BLOCKED FLOOR DIAPHRAGM (X) — 10d's @ 6" B.N., 10d's @ 6" E.N., 10d's @ 12" F.N.

FRAMING SCHEDULE

MARK	MEMBER TYPE
RR1	2 X 6 ROOF RAFTERS @ 16" O.C.
RR2	2-1 3/4"x9 1/2" LVL ROOF RAFTERS @ 16" O.C.
RR3	2-2 X10 ROOF RAFTERS @ 16" O.C.
RR4	2 X10 ROOF RAFTERS @ 16" O.C.
CJ1	2 X 6 CEILING JOISTS @ 16" O.C.
DJ1	2 X 10 DECK JOISTS @ 16" O.C.
DJ2	2 X 8 DECK JOISTS @ 16" O.C.
FJ1	1 1 7/8" TJI 230 FLOOR I-JOISTS @ 16" O.C.



FLOOR FRAMING PLAN

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

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REVISION	DATE	DESCRIPTION
A	08/07/23	BUILDING DEPARTMENT RESPONSE
B	12/20/23	BUILDING DEPARTMENT RESPONSE
3		
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REGISTERED PROFESSIONAL ENGINEER — AMIR DEHGHANI — No. C78194 — CIVIL — STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/18/2023

PROJECT MANAGER: S.W.

FLOOR FRAMING PLAN

JOB NO.:22256

SHEET NO.:

S-2.0

SHEAR WALL SCHEDULE

2019 CALIFORNIA BUILDING CODE (1), (3)

SHEAR PANEL TYPE	SHEATHING (5)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (9)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION 16d's SINKER	SILL PLATE CONNECTION 1/4"Ø x 4" SDS SCREWS	SILL PLATE CONNECTION 5/8" Ø A.B. SPC'G 2X	FRAMING CLIPS A35's, L550's OR LTP4's (5), (6)
SW1	3/8" APA rated	8 d's @ 6" O.C.	8 d's @ 12" O.C.	260 / (7) 220	@ 6" O.C.	@ 16" O.C.	48"	@ 24" O.C.
SW2 (4) (2)	3/8" APA rated	8 d's @ 4" O.C.	8 d's @ 12" O.C.	380 / (7) 320	@ 4" O.C.	@ 12" O.C.	42"	@ 16" O.C.
SW3 (4) (2)	3/8" APA rated	8 d's @ 3" O.C.	8 d's @ 12" O.C.	490 / (7) 410	(10) @ 3" O.C.	(10) @ 8" O.C.	36"	(10) @ 8" O.C.
SW4 (4) (2)	3/8" APA rated	8 d's @ 2" O.C.	8 d's @ 12" O.C.	640 / (7) 530	(10) @ 2" O.C.	(10) @ 6" O.C.	24"	(10) @ 8" O.C.
SW5 (4) (2)	15/32" APA rated Structural I	10 d's @ 2" O.C.	10 d's @ 12" O.C.	870	(10) 2 ROWS STAGG. @ 3" O.C.	(10) @ 5" O.C.	18"	(10) @ 6" O.C.

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
(2) PROVIDE 3" NOMINAL OR WIDER FRAMING AT ADJOINING PANEL EDGES WITH NAILS STAGGERED.
(3) STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
(4) PERIODIC SPECIAL INSPECTION IS REQUIRED.
(5) USE CLIPS @ 6" O.C. ON SIMPSON STRONG WALL & HARDY FRAME (U.N.O.).
(6) USE SPACING PER SCHEDULE IF NUMBER OF FRAMING CLIPS ARE NOT SPECIFIED ON FRAMING PLANS.
(7) ALLOWABLE SHEAR ARE FOR STUDS SPACED @ 24" O.C. MAX.
(8) SHEATHING CONFORMS TO EITHER DOC PS 1 OR PS 2 STANDARDS.
(9) NAILING @ 6" O.C. WHEN STUDS ARE SPACED @ 24" O.C.
(10) FOR DOUBLE SIDED SHEAR PANELS:
a. USE HALF THE SPACING OF SILL PLATE ANCHOR BOLTS FOR TYPES SW3, SW4 & SW5
b. USE ONLY 1/4"Ø x 6" SDS SCREWS IN SCHEDULE AND WITH HALF THE SPACING, FOR TYPES SW4 & SW5.
c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING, FOR TYPES SW3, SW4 & SW5.

FRAMING NOTES

1. REFER TO SHEET S-0.10 FOR MORE INFORMATION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PREFABRICATED SHEAR WALLS AND MATCH TOP PLATE HEIGHT AND WALL WIDTH AND NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.
3. USP CONNECTORS CAN BE USED IN LIEU OF SIMPSON STRONG TIE IN THIS PROJECT. CONTACT E.O.R. FOR CONVERSION TABLE OR SUBMIT SHOP DRAWINGS TO E.O.R. FOR REVIEW AND APPROVAL.
4. ALL BEAM HANGERS SHALL BE SIMPSON HU HANGERS, UNO. ON PLAN OR DETAIL.
5. USE ST6224 STRAP FOR THE TOP PLATES SPLICE AT ROOF FRAMING LEVELS (3B/SD2.0), UNO ON PLANS.
6. USE ST22 STRAP FOR LEDGER SPLICES, UNO.
7. USE (1)CS16 x 3'-0" STRAP AT RIM JOISTS SPLICE, U.N.O ON PLANS. 1 1/4" MIN. LVL RIM JOISTS SHOULD BE USED AT ALL FLOOR FRAMING EDGES.
8. HEADER AT NON-BEARING WALLS, USE 2x4 FOR OPENINGS UP TO 3'-0" MAX., (2)2x4 FOR OPENINGS UP TO 6'-0" MAX., 4x6 FOR OPENINGS UP TO 12'-0" MAX., (UNO). USE 4x4 FOR OPENINGS LESS THAN 16" AT BEARING WALLS WITHOUT POINT LOADS.
9. WOOD HEADER OR POSTS MADE UP OF 2 OR MORE 2X'S SHALL BE SPIKED TOGETHER PER THE NAILING SCHEDULE.
10. SHEARWALL PANEL TO BE NAILED TO ALL MULTIPLE STUDS RECEIVING HOLDOWNS AND DO NOT BREAK AT PERPENDICULAR WALL LOCATIONS, UNO.

LEGEND

- DENOTES DROP BEAM OR HEADER PER PLAN
- DENOTES FLUSH BEAM PER PLAN
- DENOTES BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- DENOTES POST OR TRIMMER AS NOTED
- DENOTES POST OR TRIMMER FROM FLOOR ABOVE
- DENOTES DIRECTION OF FRAMING MEMBER PER FRAMING SCHEDULE
- X'-X" / X — DENOTES SHEAR PANEL LENGTH; DENOTES PANEL TYPE, REFER TO SHEARWALL SCHEDULE
- (X) — DENOTES KEY NOTE NUMBER
- X / SDX — DENOTES DETAIL NUMBER; DENOTES DETAIL SHEET NUMBER
- DENOTES BEARING WALL
- DENOTES OVER FRAMING (A)
- (X) — DENOTES FLOOR TO FLOOR HOLDOWN PER SCHEDULE IN DETAIL 1/SD3.0 (ALT. DETAIL 2/SD3.0 FOR WHERE HOLDOWN OCCURS AT BEAM)
- DENOTES DRAG DIRECTION
- DENOTES FRAMING ZONE DIVISION
- (X) — DENOTES SHEARWALL LINE IN CALCULATIONS

KEY NOTES

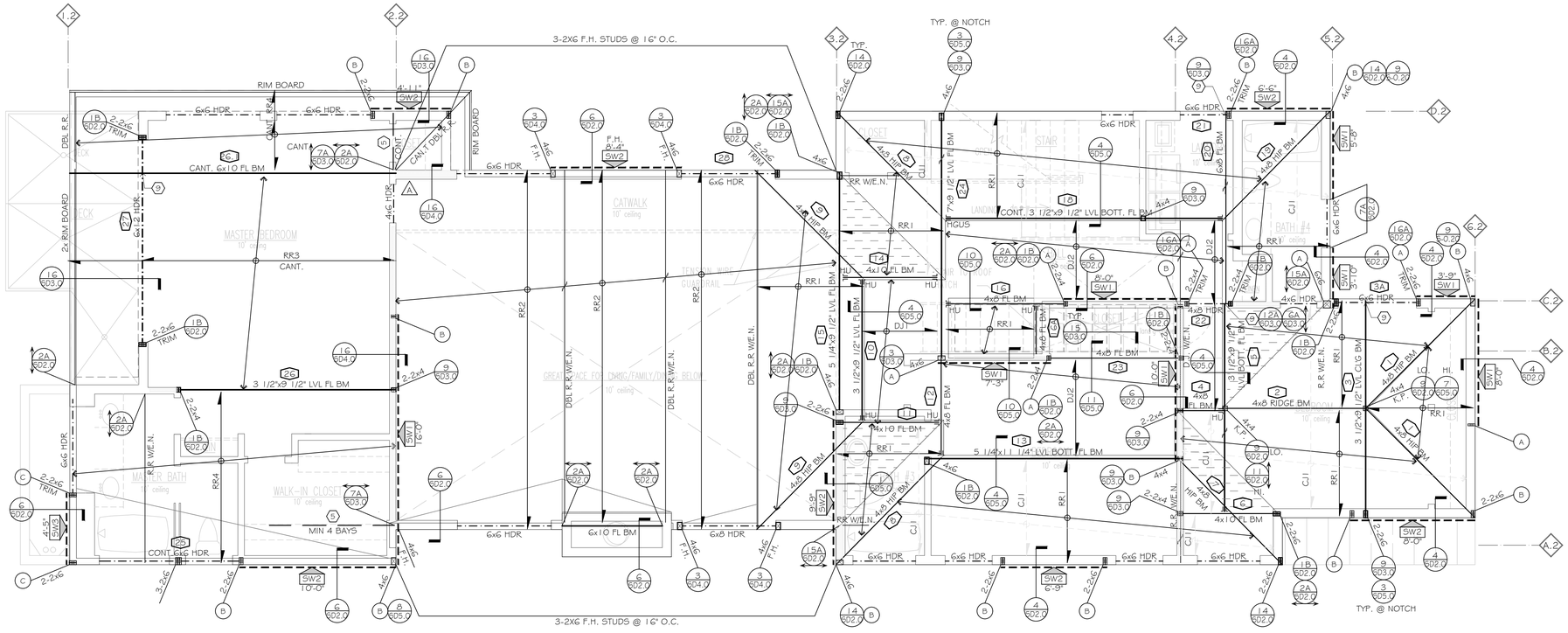
1. DRAG TRUSS W/E.N.
2. SHEAR TRUSS W/E.N.
3. CONTINUOUS JOIST W/E.N.
4. TRUSS HANGER BY TRUSS MANUFACTURER
5. LINE OF 2x FLAT BLOCKING W/E.N.
6. LINE OF FULL HEIGHT BLK'G W/E.N.
7. CONTINUOUS LINE OF BLOCKING W/E.N. UNDER SHEAR WALL ABOVE W/ (1) CS16
8. ALIGN POST WITH UPPER FLOOR POST WITH SOLID BLOCKING BETWEEN FLOOR
9. PROVIDE SOLID BLOCKING WHERE POSTS ARE DISCONTINUOUS AT JOIST SPACE AND/OR FROM TOP OF BEAMS/HEADERS TO LOWER TOP PLATE.

BLOCKED ROOF DIAPHRAGM — 8d's @ 4" B.N., 8d's @ 6" E.N., 8d's @ 12" F.N.

BLOCKED FLOOR DIAPHRAGM — 10d's @ 6" B.N., 10d's @ 6" E.N., 10d's @ 12" F.N.

FRAMING SCHEDULE

MARK	MEMBER TYPE
RR1	2 X 6 ROOF RAFTERS @ 16" O.C.
RR2	2-1 3/4"x9 1/2" LVL ROOF RAFTERS @ 16" O.C.
RR3	2-2 X10 ROOF RAFTERS @ 16" O.C.
RR4	2 X10 ROOF RAFTERS @ 16" O.C.
CJ1	2 X 6 CEILING JOISTS @ 16" O.C.
DJ1	2 X 10 DECK JOISTS @ 16" O.C.
DJ2	2 X 8 DECK JOISTS @ 16" O.C.
FJ1	11 7/8" TJI 230 FLOOR I-JOISTS @ 16" O.C.



ROOF FRAMING PLAN

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

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION	DATE	DESCRIPTION
A	08/07/23	BUILDING DEPARTMENT RESPONSE
B	12/20/23	BUILDING DEPARTMENT RESPONSE
3		
4		
5		
6		

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHGHANI — No. C78194 — CIVIL — STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/18/2023

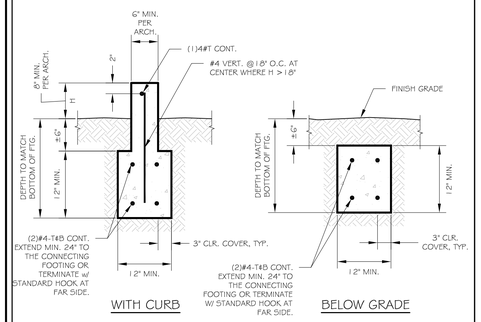
PROJECT MANAGER: S.W.

ROOF FRAMING PLAN

JOB NO.:22256

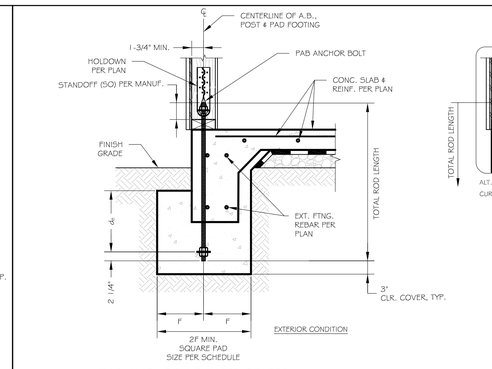
SHEET NO.:

S-3.0

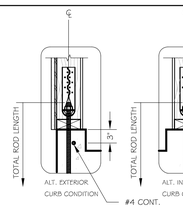


WITH CURB

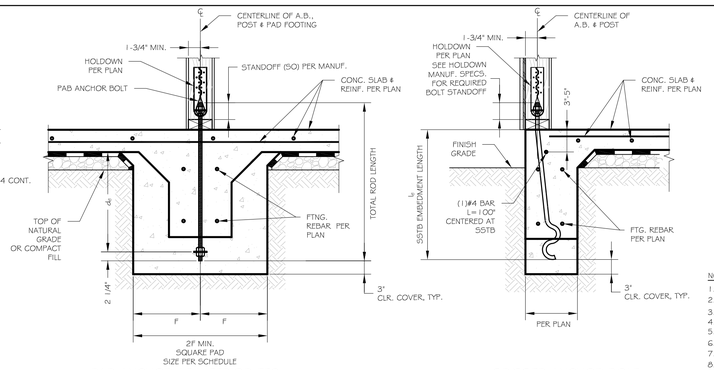
BELOW GRADE



PAB ANCHOR AT EXTERIOR FTG.



CURB CONDITION



PAB ANCHOR AT INTERIOR FTG.

SB/SSTB ANCHOR BOLT

HOLDOWN SIMPSON TYPE	SIMPSON "SSTB" ANCHOR BOLT		SIMPSON "SB" ANCHOR BOLT		SIMPSON "PAB" PRE-ASSEMBLED ANCHOR BOLT		
	SLAB ON GRADE	CURB/ STEMWALL	SLAB ON GRADE	CURB/ STEMWALL	TYPE	EMBEDMENT (de)	SQUARE PAD SIZE (2F)
HTT5	SSTB24	-	SB5/8x24	SB5/8x24	-	-	
HDU5	SSTB24	-	SB5/8x24	SB5/8x24	-	-	
HDU8	SSTB28	SSTB28	SB7/8x24	-	-	-	
HDU11	-	-	SB1x30	SB1x30	-	-	
HDU14	-	-	-	-	PAB6	11"	34"
HD19	-	-	-	-	PAB10	14 1/2"	44"

CORNER INSTALLATION (INSTALL WITH ARROW ON TOP OF THE BOLT ORIENTED AS SHOWN)

NON-CORNER INSTALLATION (BOLT MAY BE INSTALLED @ 45° TO 135° AS SHOWN)

CORNER INSTALLATION (INSTALL WITH ARROW ON TOP OF THE BOLT ORIENTED AS SHOWN)

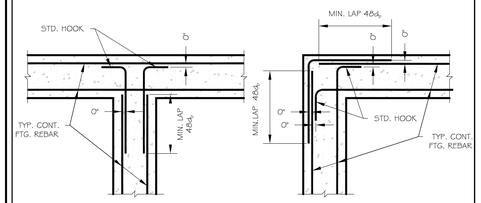
PLAN VIEW OF SB/SSTB PLACEMENT INCONCRETE ANCHOR ORIENTATION

NOTES:

1. BOLTS SHALL BE SECURED IN PLACE PRIOR TO FOUNDATION POUR, U.O.N.
2. REFER TO MANUF. REQUIREMENTS, SPECIFICATIONS, AND APPLICABLE ICC-ESR REPORT.
3. POST TENSION CABLE MAY NOT BE COUNTED AS REQ'D HOLDOWN REBAR.
4. FOOTING TOP REBAR(S) MAY BE COUNTED AS REQ'D HOLDOWN REBAR(S).
5. HOLDOWNS MAY BE RAISED OFF MUD-SILL TO ACCOMMODATE MIS-LOCATED ANCHOR BY 1-1/2" MAX. REFER TO MANUF. SPECS.
6. FOR ALL INFORMATION NOT SHOWN, REFER TO DETAIL 1.
7. USE OF MULTIPLE WASHERS TO ACCOMPLISH TOTAL REQ'D THICKNESS IS NOT PER MITTED.
8. REBAR IS REQUIRED AT TOP OF STEM WALL FOUNDATION, BUT IS NOT REQUIRED FOR SLAB ON GRADE EDGE AND GARAGE CURB IF FOOTING WIDTH IS 12" OR GREATER. REFER TO MANUFACTURER FOR MIN. END DISTANCES.
9. CURB SHALL BE 6" WIDE AT HTT5 AND HDU5 AND 8" WIDE AT HDU8 AND BEYOND

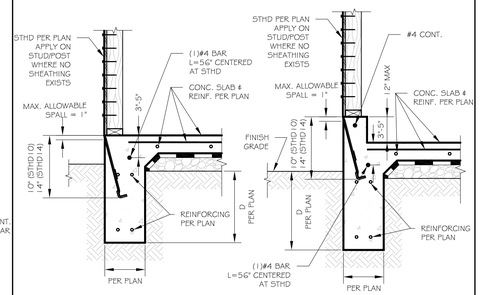
12 TIE BEAM

9 HOLDOWN ANCHOR BOLT FOR MONOLITHIC CAST-IN-PLACE CONCRETE FOOTING



T CONDITION

CORNER CONDITION

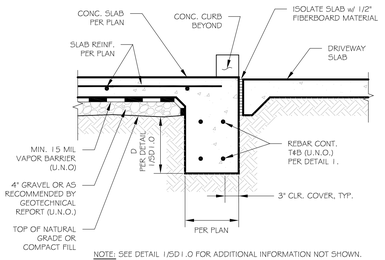


AT EXTERIOR FOOTING

AT CURB

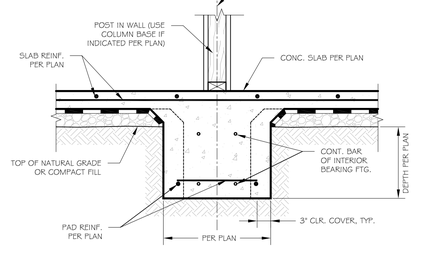
NOTES:

1. REFER TO MANUF. REQUIREMENTS, SPECIFICATIONS, AND APPLICABLE ICC-ESR REPORT.
2. FOOTING TOP REBAR(S) OR POST-TENSION TENDON MAY BE COUNTED AS REQ'D HOLDOWN REBAR.
3. FOR ALL INFORMATION NOT SHOWN, REFER TO DETAIL 1.

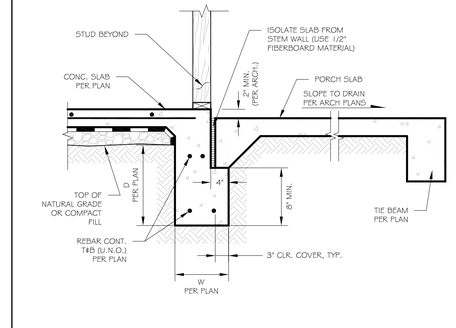


NOTE: SEE DETAIL 1/SD1.0 FOR ADDITIONAL INFORMATION NOT SHOWN.

GARAGE TO APRON - ALT 2



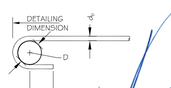
AT INTERIOR FOOTING



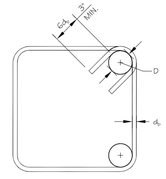
NOTE: SEE DETAIL 1/SD1.0 FOR ADDITIONAL INFORMATION NOT SHOWN.

3 HOUSE TO PORCH

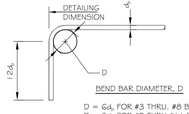
11 REINF. DETAILS AT FOOTING JUNCTIONS



180° STANDARD HOOK



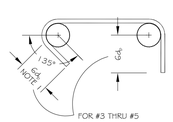
COLUMN & SPANDREL TIE



BEND BAR DIAMETER, D

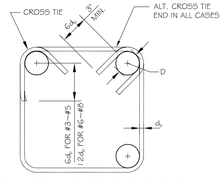
D = $6d_b$ FOR #3 THRU #8 BARS
D = $8d_b$ FOR #9 THRU #11 BARS
D = 10DB FOR #14 AND #18 BARS

90° STANDARD HOOK

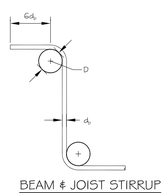


NOTE 1: BUT NOT LESS THAN 3" (SEISMIC HOOK)

CROSS TIE



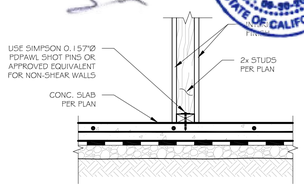
SPANDREL & BEAM SUPPLEMENTARY TIE



BEAM & JOIST STIRRUP

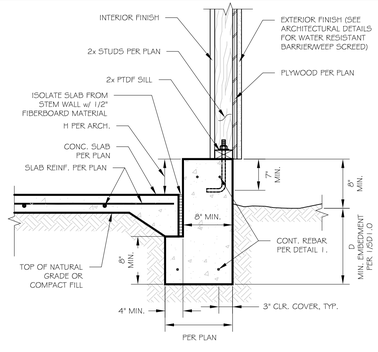
10 BAR BENDING & STANDARD HOOKS

8 STHD STRAP HOLDOWN



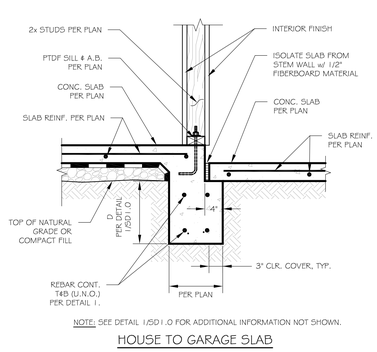
NOTE: SEE DETAIL 1/SD1.0 FOR ADDITIONAL INFORMATION NOT SHOWN.

7 NON-BEARING INTERIOR WALL



NOTE: SEE DETAIL 1 FOR ADDITIONAL INFORMATION NOT SHOWN.

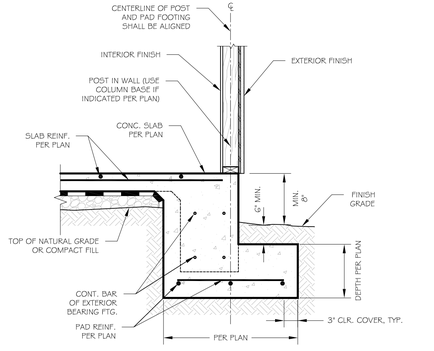
6 EXTERIOR BEARING AT GARAGE CURB



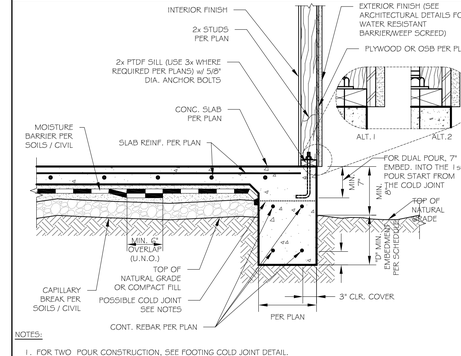
NOTE: SEE DETAIL 1/SD1.0 FOR ADDITIONAL INFORMATION NOT SHOWN.

HOUSE TO GARAGE SLAB

5 GARAGE TO HOUSE/DRIVEWAY



AT EXTERIOR FOOTING



NOTES:

1. FOR TWO POUR CONSTRUCTION, SEE FOOTING COLD JOINT DETAIL.
2. MAXIMUM WATER CEMENT RATIO FOR SLAB CONCRETE SHALL BE W/C=0.45.
3. EMBEDMENT DEPTH, "D" SHALL BE MEASURED FROM THE LOWEST ADJACENT GRADE.

4 PAD FOOTING WITHIN BUILDING PERIMETER

1 TYPICAL EXTERIOR FOOTING

2 TYPICAL INTERIOR FOOTING

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION	DATE	DESCRIPTION
A	08/07/23	BUILDING DEPARTMENT RESPONSE
2		
3		
4		
5		
6		

REGISTERED PROFESSIONAL ENGINEER — AMIR DETTINGER — No. C78194 — CIVIL — STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/18/2023

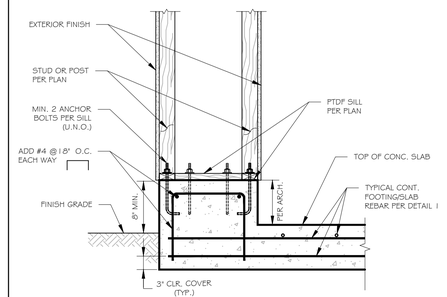
PROJECT MANAGER: S.W.

FOUNDATION DETAILS

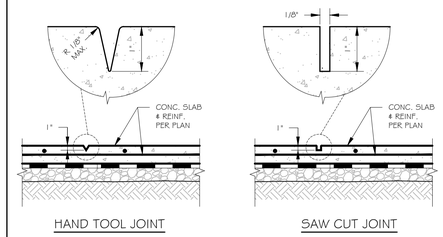
JOB NO.: 22256

SHEET NO.:

SD1.0



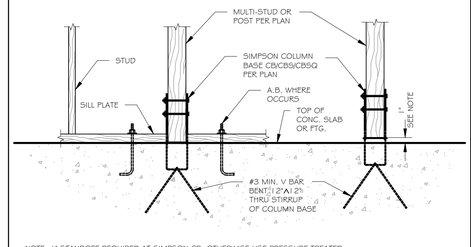
6 RAISED CURB



HAND TOOL JOINT

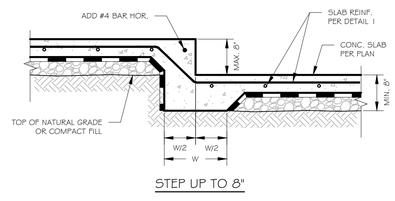
SAW CUT JOINT

3 TYPICAL CONTRACTION JOINT

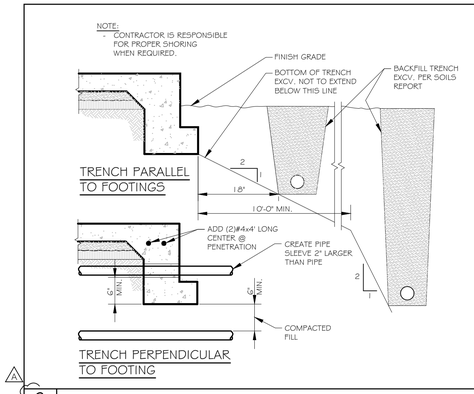


NOTE: 1" STANDOFF REQUIRED AT SIMPSON CB, OTHERWISE USE PRESSURE TREATED WOOD.

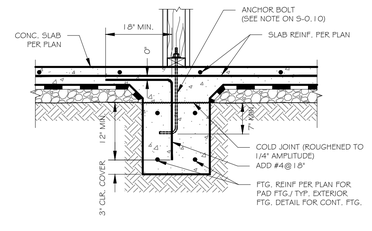
5 TYPICAL COLUMN BASE



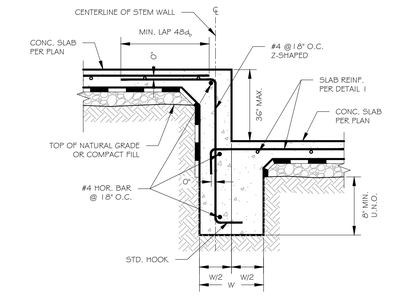
STEP UP TO 8"



8 TYPICAL TRENCH @ FOOTINGS



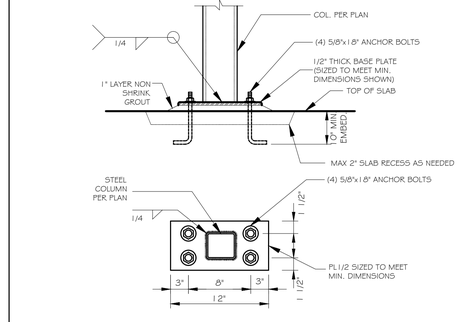
INTERIOR / PAD FOOTING



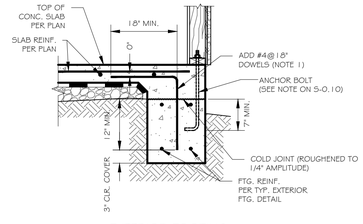
NOTE: SEE DETAIL 1/SD1.0 FOR ADDITIONAL INFORMATION NOT SHOWN.

STEP EXCEEDING 8"

2 STEP AT CONCRETE SLAB



7 BASE PLATE DETAIL

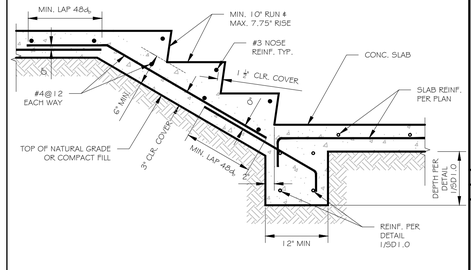


EXTERIOR FOOTING

NOTES:

1. DOWELS ARE REQUIRED WHERE ANCHOR BOLTS EMBEDMENT IS LESS THAN 7" IN FIRST POUR.
2. SLAB REBAR CAN BE BENT INTO THE FIRST POUR AND COUNTED TOWARDS REQUIRED DOWELS CROSSING COLD JOINT.
3. FOR BALANCE OF INFORMATION SEE TYPICAL FOOTING DETAILS.

4 TYPICAL COLD JOINT IN FOOTING



1 STAIRS ON GRADE

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION

	DATE	DESCRIPTION
A		
2		
3		
4		
5		
6		

REGISTERED PROFESSIONAL ENGINEER
AMIR DETTMAN
No. C78194
CIVIL
STATE OF CALIFORNIA

Project Name:
VAKILI DEVELOPMENT
BUILDING "B" (LOT 31)

Project Adress:
34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

PROJECT MANAGER:
S.W.

FOUNDATION DETAILS

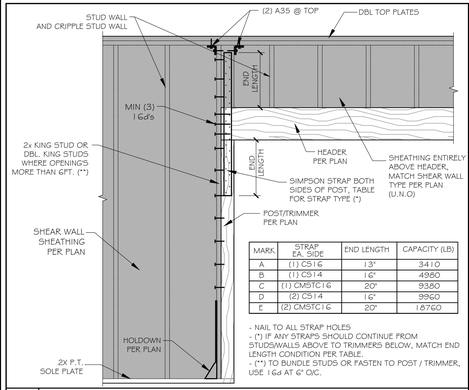
JOB NO.:22256

SHEET NO.:

SD1.1

REGISTERED PROFESSIONAL ENGINEER
PARVIZ ABDAVI-AZAR
No. C-37818
Exp: 03/31/25
CIVIL
STATE OF CALIFORNIA

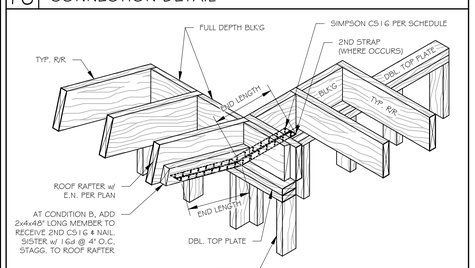
CERTIFIED ENGINEERING GEOLOGIST
JAMES W. SIMPSON
No. 2176
EXP. 10-31-2025
STATE OF CALIFORNIA



MARK	STRAP EA. SIDE	END LENGTH	CAPACITY (LB)
A	(1) CS16	13"	3410
B	(1) CS14	16"	4980
C	(1) CMSTC16	20"	9380
D	(2) CS14	16"	9960
E	(2) CMSTC16	20"	18760

- NAIL TO ALL STRAP HOLES
- (*) IF ANY STRAPS SHOULD CONTINUE FROM STUDS/WALLS ABOVE TO TRIMMERS BELOW, MATCH END LENGTH CONDITION PER TABLE.
- (**) TO BUNDLE STUDS OR FASTEN TO POST / TRIMMER, USE 16d AT 6" O/C.

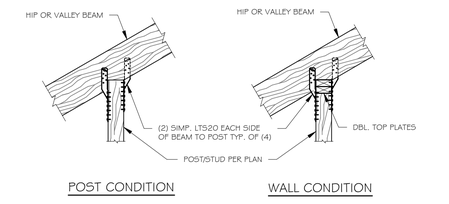
16 CONNECTION DETAIL



MARK	SIMPSON STRAP	END LENGTH
A	CS16	18"
B	(2) CS16	18"

NOTES:
1. PROVIDE FULL NAILING PER MANUFACTURER TO PROVIDE STRAP FULL CAPACITY.
2. ROOF SHEATHING NOT SHOWN FOR CLARITY.

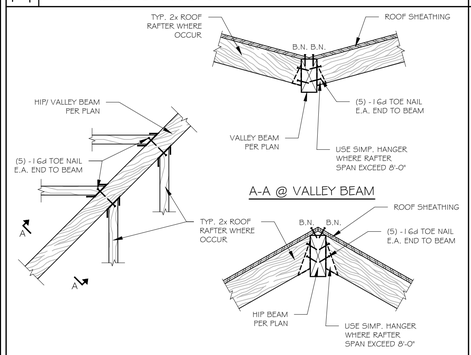
15 DRAG AT REENTRANT CORNER



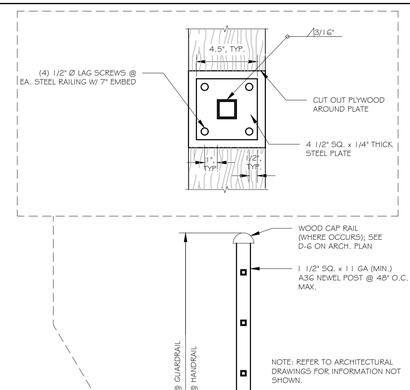
POST CONDITION WALL CONDITION

NOTES:
1. PROVIDE EQUAL NUMBER OF NAILS TO BM. FOR NAIL SIZE AND SPACING OUTSIDE THE LAP LENGTH AND STUDS. PROVIDE TOTAL NUMBER OF NAILS PER MANUF.
2. NAILING OF STRAP TO DBL. TOP PLATE IS NOT REQ'D AND SHALL NOT BE COUNTED TOWARDS TOTAL NUMBER OF NAILS REQ'D BY MANUF.

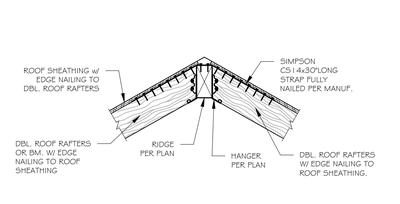
14 HIP/VALLEY BEAMS UPLIFT TIE



13 ROOF RAFTER TO HIP/ VALLEY BEAM

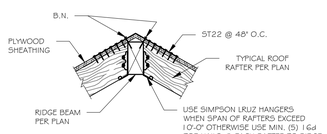


12 GUARDRAIL CONNECTION DETAIL

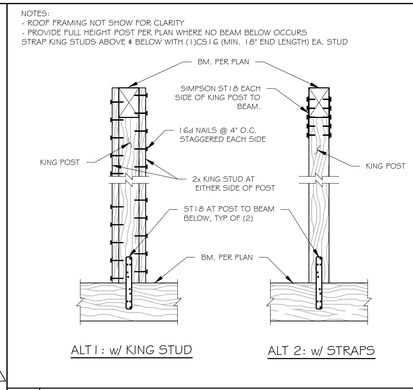


NOTE: APPLICATION OF STRAP OVER PLYWOOD SHEATHING IS ACCEPTABLE. E.N. NOT REQUIRED OVER THE STRAP LENGTH WHERE STRAP APPLIED OVER PLYWOOD.

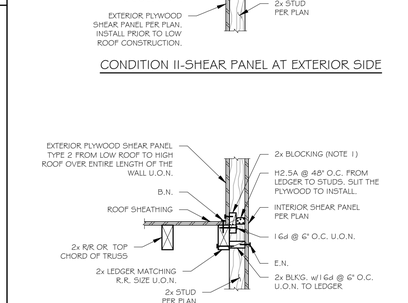
11 DRAG DETAIL AT FLUSH RIDGE CONNECTION



10 ROOF RAFTER TO FLUSH RIDGE CONNECTION

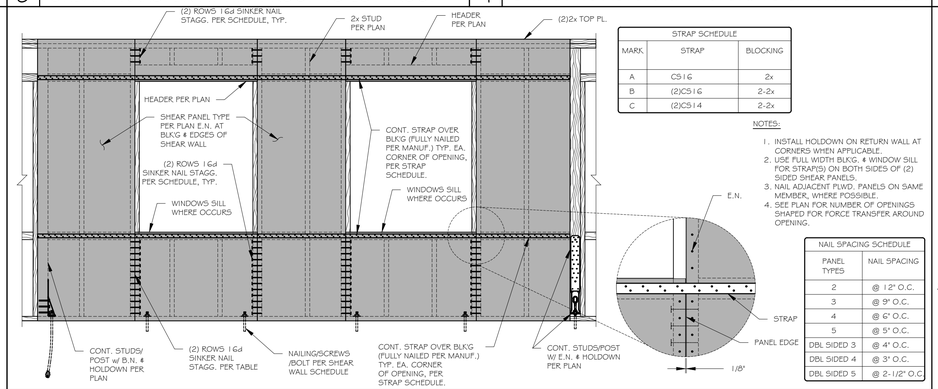


9 KING POST CONNECTION



NOTE: INSTALL HARDWARE AT EXTERIOR WALLS PRIOR TO BLOCKING INSTALL

8 SHEAR TRANSFER AT HIGH ROOF TO LOW ROOF

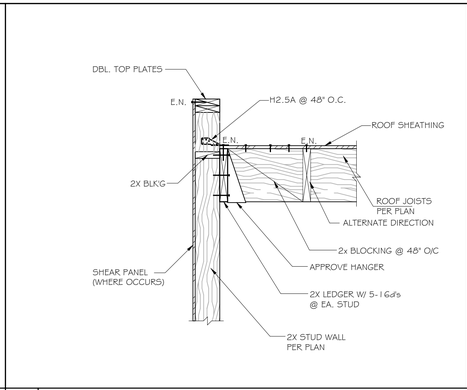


MARK	STRAP	BLOCKING
A	CS16	2x
B	(2)CS16	2-2x
C	(2)CS14	2-2x

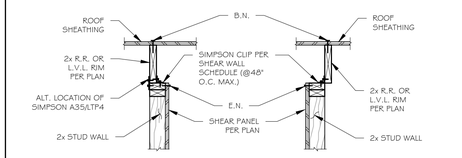
NOTES:
1. INSTALL HOLDOWN ON RETURN WALL AT CORNERS WHEN APPLICABLE.
2. USE FULL WIDTH BLKG. # WINDOW SILL FOR STRAP(S) ON BOTH SIDES OF (2) SIDED SHEAR PANELS.
3. NAIL ADJACENT PLWD. PANELS ON SAME MEMBER, WHERE POSSIBLE.
4. SEE PLAN FOR NUMBER OF OPENINGS SHAPED FOR FORCE TRANSFER AROUND OPENING.

PANEL TYPES	NAIL SPACING
2	@ 12" O.C.
3	@ 9" O.C.
4	@ 6" O.C.
5	@ 5" O.C.
DBL SIDED 3	@ 4" O.C.
DBL SIDED 4	@ 3" O.C.
DBL SIDED 5	@ 2-1/2" O.C.

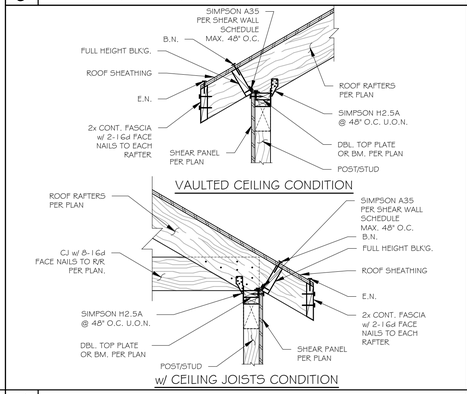
7 MULTI-OPENINGS AT SHEAR WALL



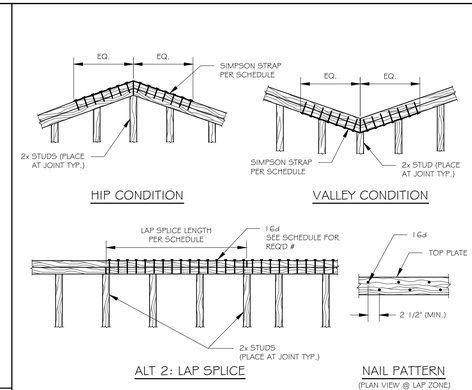
6 SHEAR TRANSFER DETAIL

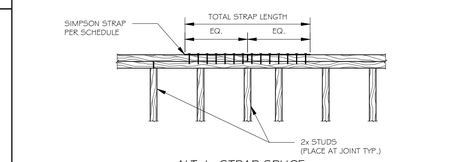


5 INTERIOR SHEAR TRANSFER AT ROOF RAFTER



4 SHEAR TRANSFER AT R/R PER. TO EXTERIOR WALL

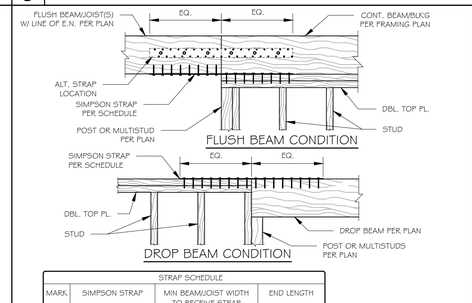




SPLICE SCHEDULE			
	LAP SPLICE		STRAP SPLICE
MARK	NO. OF 16d @ EACH LAP (NOTE 2)	LAP SPLICE LENGTH	SIMPSON STRAP (NOTE 1)
A	18	4'-0"	CS14
B	24	4'-0"	MSTA36
C	30	6'-0"	(2)CS14
D	36	8'-0"	MST48
E	42	8'-0"	CMST14

NOTES:
1. NAILING SHOULD BE PER MANUFACTURER TO DEVELOP 100% CAPACITY OF THE STRAP.
2. FOR NAIL SIZE AND SPACING OUTSIDE THE LAP LENGTH REFER TO NAILING SCHEDULE OF GENERAL NOTES.
3. STAGGER NAILS AND SPACE EVENLY TO AVOID SPLITTING.

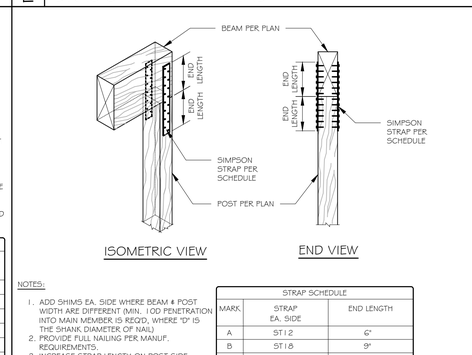
3 TOP PLATE SPLICE



STRAP SCHEDULE			
MARK	SIMPSON STRAP	MIN BEAM/JOIST WIDTH TO RECEIVE STRAP	END LENGTH
A	(1) CS16	2x	18"
B	(2) CS16	2-2x OR 3x	18"
C	(2) CS14	2-2x OR 3x	24"
D	CMST14	4x	36"

NOTE: PROVIDE FULL NAILING PER MANUF. TO DEVELOP FULL CAPACITY OF THE STRAP.

2 DRAG STRAP AT WALL END



NOTES:
1. ADD SHIMS EA. SIDE WHERE BEAM # POST WIDTH ARE DIFFERENT (MIN. 10D PENETRATION INTO MAIN MEMBER IS REQ'D, WHERE "D" IS THE SHANK DIAMETER OF NAIL)
2. PROVIDE FULL NAILING PER MANUF. REQUIREMENTS.
3. INCREASE STRAP LENGTH ON POST SIDE WHERE THERE IS DBL. TOP PLATE BETWEEN POST AND BEAM.

STRAP SCHEDULE		
MARK	STRAP EA. SIDE	END LENGTH
A	ST12	6"
B	ST18	9"
C	(2) ST2215	8"

1 BEAM/POST CONNECTION

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION	DESCRIPTION	DATE
A	BUILDING DEPARTMENT RESPONSE	08/07/23
B	BUILDING DEPARTMENT RESPONSE	12/20/23
3		
4		
5		
6		

REGISTERED PROFESSIONAL ENGINEER AMIR DEHTIARI No. C78194 CIVIL STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/18/2023

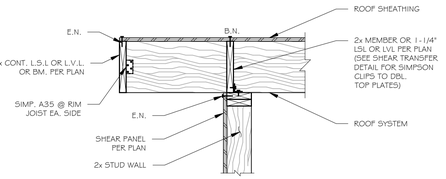
PROJECT MANAGER: S.W.

STRUCTURAL DETAILS

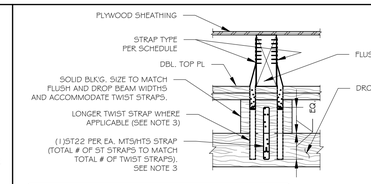
JOB NO.: 22256

SHEET NO.:

SD2.0



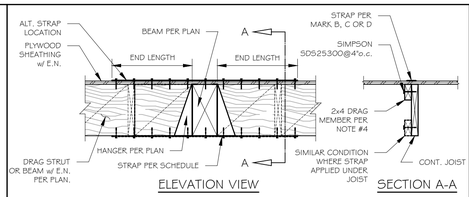
16 SHEAR TRANSFER AT CANTILEVER @ WALL



STRAP SCHEDULE		
MARK	SIMPSON STRAP TYPE	CAPACITY
A	(2) MTS16	1980#
B	(2) MTS20	2830#
C	(4) MTS20	5660#

NOTES:
1. PROVIDE EQUAL NUMBER OF NAILS TO BM. AND BLKG. PROVIDE TOTAL NUMBER OF NAILS PER MANUFACTURER.
2. NAILING OF STRAP TO DBL. TOP PLATE IS NOT REQ'D AND SHALL NOT BE COUNTED TOWARDS TOTAL NUMBER OF NAILS REQ'D BY MANUFACTURER.
3. CONTRACTOR'S OPTION TO USE LONGER TWIST STRAPS (MTS/HTS) AND ELIMINATE ST22 STRAP WHERE APPLICABLE. IN SUCH CASES, TOTAL # OF NAILS (PER MANUFACTURER) SHALL BE EQUALLY APPLIED TO FLUSH BEAM AND DROP BM./HDR. EXTRA NAILS TO SOLID BLKG SHALL NOT BE CONSIDERED TOWARDS TOTAL COUNT OF NAILS.

12 BEAM TO HDR / DROP BEAM CONNECTION

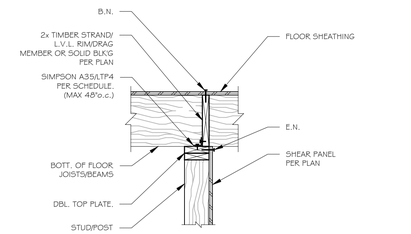


ELEVATION VIEW — SECTION A-A

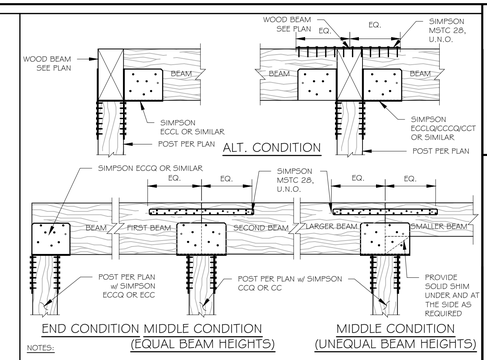
STRAP SCHEDULE		
MARK	SIPMSON STRAP TYPE	END LENGTH
A	CS16	18"
B	(2) CS16	18"
C	CMSCTC16	30"
D	CMST14	36"

NOTES:
1. PROVIDE FULL NAILING PER MANUFACTURER ON END LENGTH SIDES (i.e. ALL HOLES; ONLY HALF OF TOTAL # OF NAILS ARE REQUIRED AT EACH END LENGTH).
2. AT MARK C & D MIN. WIDTH OF MEMBER SHALL BE 3 1/2".
3. AT MARK B MIN. WIDTH OF MEMBER SHALL BE 3". ALTERNATIVELY ONE PIECE OF 2x4 x 4 FT LONG MEMBER MAY BE SISTERED TO MEMBER PER SECTION A-A.
4. APPLICATION OF STRAP OVER SHEATHING IS ACCEPTABLE. WHERE STRAP IS APPLIED OVER SHEATHING, E.N. ALONG THE STRAP LENGTH (ONLY) MAY BE ELIMINATED.

8 DRAG ELEMENT PARALLEL TO JOISTS



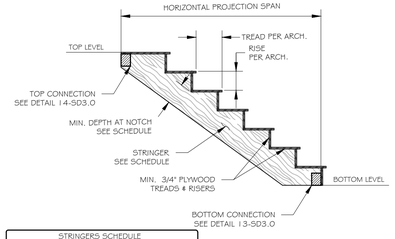
OFFSET INTERIOR SHEAR WALLS



END CONDITION MIDDLE CONDITION (EQUAL BEAM HEIGHTS) — MIDDLE CONDITION (UNEQUAL BEAM HEIGHTS)

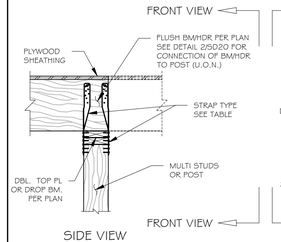
NOTES:
1. BEAMS SHALL BE ALIGNED TO RECEIVE STRAP. ALTERNATIVELY STRAP MAY BE PLACED OVER THE TOP OF BEAM.
2. SHIM TIGHT WHERE REQUIRED.
3. STRAP NOT REQUIRED AT INTERIOR SUPPORT OF CONTINUOUS BEAMS.

3 BEAM TO POST CONNECTION



STRINGERS SCHEDULE		
MAX HORIZONTAL PROJECTION SPAN	STRINGERS @ 16" O.C.	MIN. DEPTH AT NOTCH (NO OVERCUT)
18'-0"	(2) 2x16 (INTERIOR)	9 1/4"
	2x16 (EDGE)	9 1/4"
12'-0"	2x16 (ALL)	9 1/4"
10'-0"	2x14 (ALL)	7 1/4"
8'-0"	2x12 (ALL)	5 1/4"

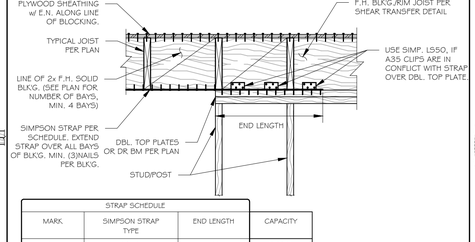
15 STAIRS STRINGER SCHEDULE



STRAP SCHEDULE		
MARK	SIMPSON STRAP TYPE	CAPACITY
A	(2) MTS16	1980#
B	(2) HTS20	2830#
C	(4) HTS24	5660#

NOTES:
1. PROVIDE EQUAL NUMBER OF NAILS TO BM. AND STUDS. PROVIDE TOTAL NUMBER OF NAILS PER MANUFACTURER.
2. NAILING OF STRAP TO DBL. TOP PLATE IS NOT REQ'D AND SHALL NOT BE COUNTED TOWARDS TOTAL NUMBER OF NAILS REQ'D BY MANUFACTURER.

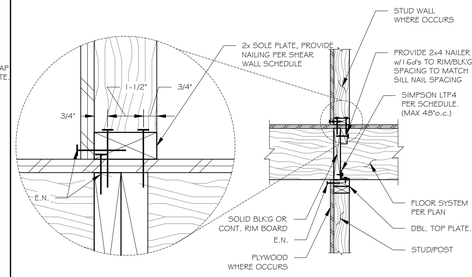
11 HOLDOWN OF FLUSH BEAM TO POST



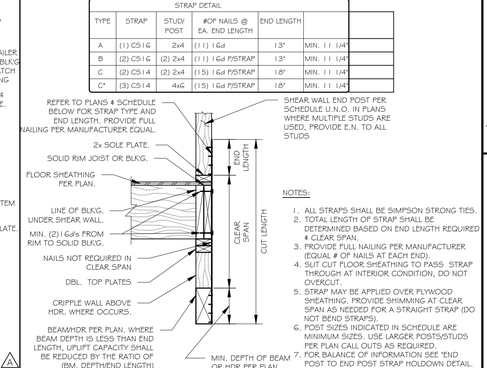
STRAP SCHEDULE			
MARK	SIMPSON STRAP TYPE	END LENGTH	CAPACITY
A	CS16	18"	1705#
B	(2)CS16	18"	3410#
C	CMSCTC16	30"	4690#

NOTES:
1. PROVIDE FULL NAILING PER MANUFACTURER ON END LENGTH SIDE (ALL HOLES).
2. AT BLKG. SIDE, NAILS MAY BE APPLIED AT EVERY OTHER ROW (2 NAILS PER EACH ROW). NOT LESS THAN 3 NAILS TO EACH BLKG. SHALL BE PROVIDED. NAIL SIZES SHALL BE PER MANUFACTURER'S CATALOG.
3. AT CONDITION B + C USE DOUBLE BLKG.

7 DRAG DETAIL AT PERPENDICULAR JOISTS

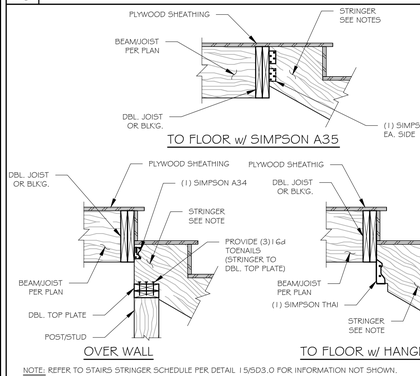


STACKED INTERIOR SHEAR WALLS



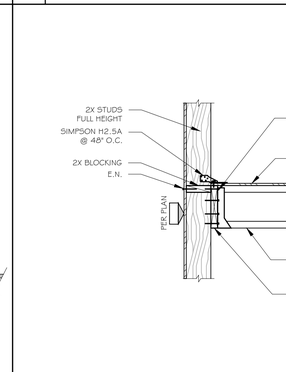
NOTES:
1. ALL STRAPS SHALL BE SIMPSON STRONG TIES.
2. TOTAL LENGTH OF STRAP SHALL BE DETERMINED BASED ON END LENGTH REQUIRED + CLEAR SPAN.
3. PROVIDE FULL NAILING PER MANUFACTURER (EQUAL # OF NAILS AT EACH END).
4. SLIT CUT FLOOR SHEATHING TO PASS STRAP THROUGH AT INTERIOR CONDITION, DO NOT OVERCUT.
5. STRAP MAY BE APPLIED OVER PLYWOOD SHEATHING. PROVIDE SHIMMING AT CLEAR SPAN AS NEEDED FOR A STRAIGHT STRAP (DO NOT BEND STRAPS).
6. POST SIZES INDICATED IN SCHEDULE ARE MINIMUM SIZES. USE LARGER POSTS/STUDS PER PLAN CALL OUTS AS REQUIRED.
7. FOR BALANCE OF INFORMATION SEE "END POST TO END POST STRAP HOLDOWN DETAIL.

2 END POST AT BEAM/HDR STRAP HOLDOWN

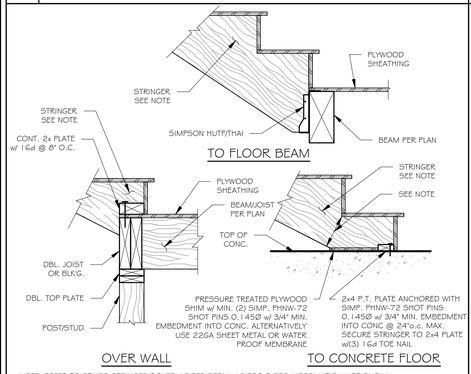


NOTE: REFER TO STAIRS STRINGER SCHEDULE PER DETAIL 15/SD3.0 FOR INFORMATION NOT SHOWN.

14 STAIRS STRINGER TOP CONNECTION

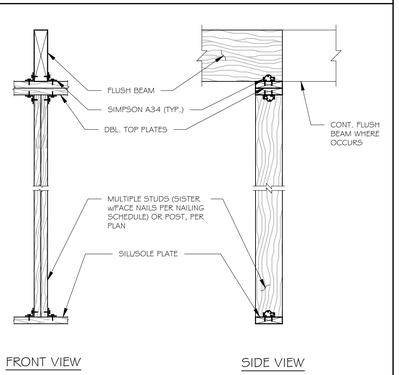


10 FLOOR JOIST TO FULL HEIGHT STUD CONNECTION

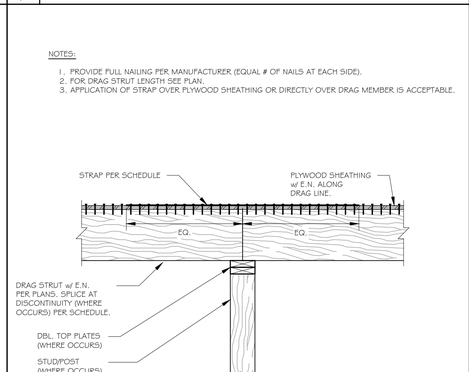


NOTE: REFER TO STAIRS STRINGER SCHEDULE PER DETAIL 15/SD3.0 FOR INFORMATION NOT SHOWN.

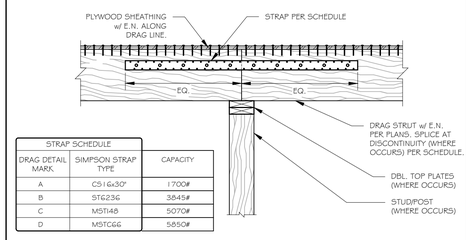
13 STAIRS STRINGER BOTTOM CONNECTION



9 FLUSH BEAM TO DBL TOP PLATES CONNECTION



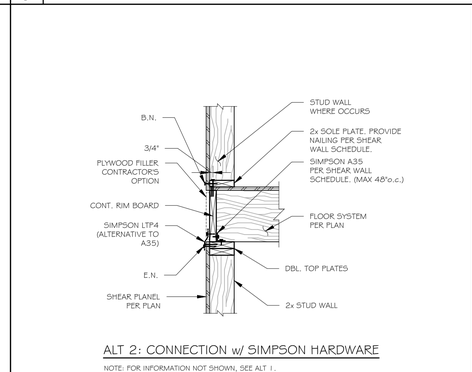
ALT 2: STRAP OVER DRAG MEMBER



STRAP SCHEDULE		
DRAG DETAIL MARK	SIMPSON STRAP TYPE	CAPACITY
A	CS16@30"	1700#
B	ST6236	3845#
C	MST48	5070#
D	MSTC66	5850#

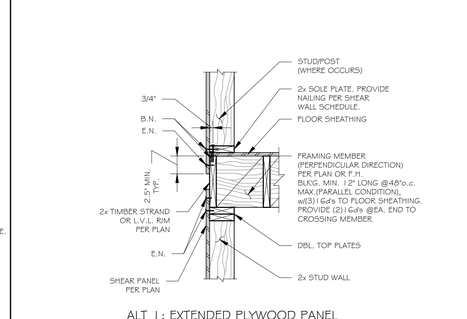
ALT 1: STRAP ON SIDE OF DRAG MEMBER

6 SPLICE OF DRAG MEMBER



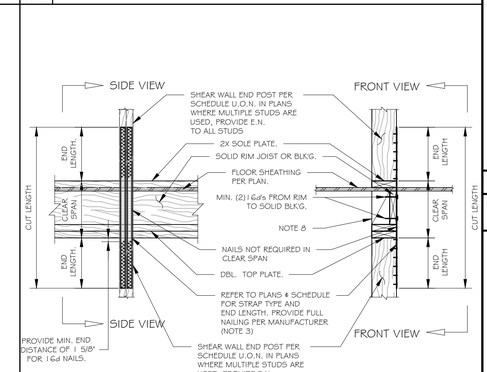
ALT 2: CONNECTION w/ SIMPSON HARDWARE

NOTE: FOR INFORMATION NOT SHOWN, SEE ALT 1.



ALT 1: EXTENDED PLYWOOD PANEL

4 SHEAR TRANSFER AT EXTERIOR WALL



STRAP SCHEDULE				
MARK	STRAP	MIN. STUD/ POST SIZE	END LENGTH	CAPACITY
A	(1) CS16	2x4	14"	1705#
B	(2) CS16	(2) 2x4	14"	3410#
C	(2) CS14	(2) 2x4	19"	4980#
C*	(3) CS14	4x6	19"	7470#
D	(1) CMST14	4x4	34"	6475#
E	(1) CMST12	4x6	44"	9215#
F	(2) CMST14	6x6	34"	12950#
G	(2) CMST12	6x8	44"	18430#

NOTES:
1. ALL STRAPS SHALL BE SIMPSON STRONG TIES.
2. TOTAL LENGTH OF STRAP SHALL BE DETERMINED BASED ON END LENGTH REQUIRED & CLEAR SPAN.
3. PROVIDE FULL NAILING PER MANUFACTURER (EQUAL # OF NAILS AT EACH END).
4. SLIT CUT FLOOR SHEATHING TO PASS STRAP THROUGH AT INTERIOR CONDITION, DO NOT OVERCUT.
5. STRAP MAY BE APPLIED OVER PLYWOOD SHEATHING. PROVIDE SHIMMING AT CLEAR SPAN AS NEEDED FOR A STRAIGHT STRAP (DO NOT BEND STRAPS).
6. POST SIZES INDICATED IN SCHEDULE ARE MINIMUM SIZES. USE LARGER POSTS/STUDS PER PLAN CALL OUTS AS REQUIRED.
7. IN LIEU OF DOUBLE CS16/CS14 STRAPS, CMST14 MAY BE USED PER CONDITION D.
8. PROVIDE SOLID BLK'G TO FILL THE GAP BTW. UPPER AND LOWER POSTS. WIDTH TO MATCH POST WIDTH. WHEN USED ALONG SIDE FLOOR JOIST, TOTAL WIDTH OF BLK'G + JOIST SHALL BE EQUAL OR GREATER THAN POST WIDTH.

1 STRAP AT POST TO POST

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION

DATE	DESCRIPTION
A	
2	
3	
4	
5	
6	

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHGHANI — No. C78194 — CIVIL — STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34445G VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

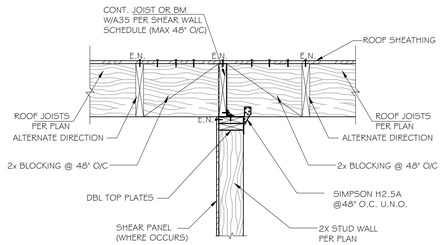
PROJECT MANAGER: S.W.

STRUCTURAL DETAILS

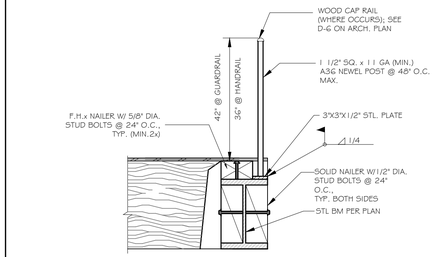
JOB NO.: 22256

SHEET NO.:

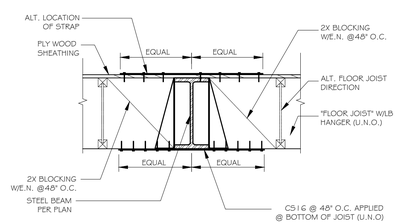
SD3.0



16 SHEAR TRANSFER DETAIL

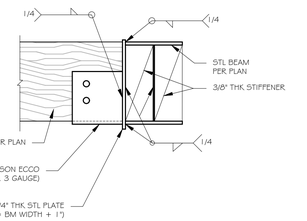


12 CONNECTION DETAIL

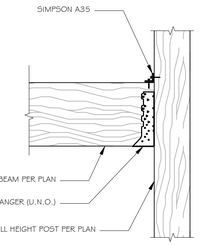


CONDITION B

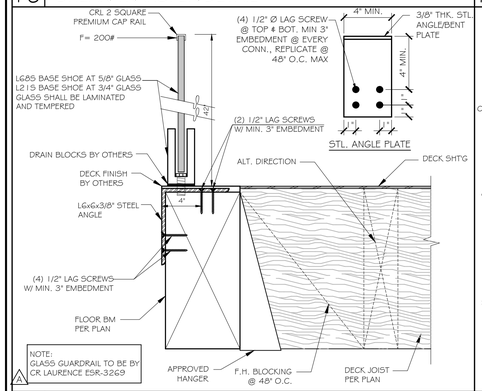
9 CONNECTION DETAIL



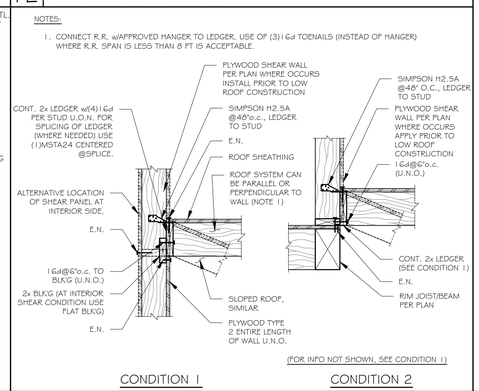
6 CONNECTION DETAIL



3 BEAM & POST CONNECTION

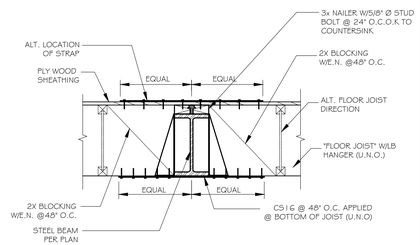


15 EXTERIOR GLASS GUARDRAIL DETAIL



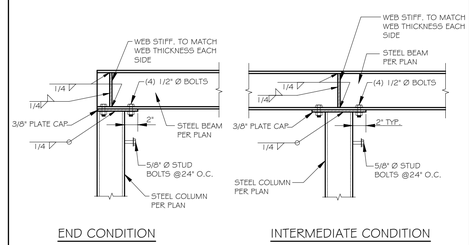
CONDITION 1 CONDITION 2

11 ROOF TO FLOOR CONNECTION



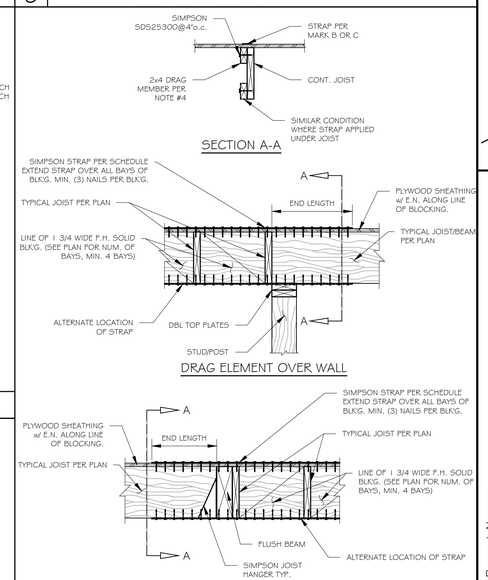
CONDITION A

9 CONNECTION DETAIL



END CONDITION INTERMEDIATE CONDITION

5 STEEL BEAM TO STEEL COLUMN

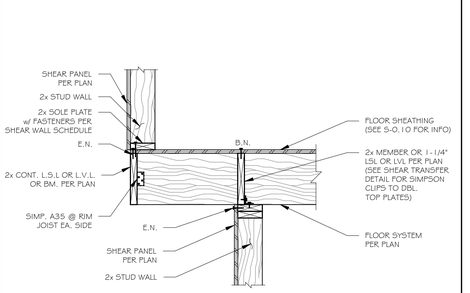


STRAP SCHEDULE		
MARK	SIMPSON STRAP TYPE	END LENGTH
A	CS16	18"
B	(2) CS16	18"
C	CMSCT16	30"

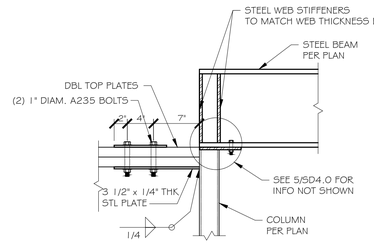
NOTES:

1. PROVIDE FULL NAILING PER MANUFACTURER ON END LENGTH SIDES (i.e. ALL HOLES; ONLY HALF OF TOTAL # OF NAILS ARE REQUIRED AT EACH END LENGTH).
2. AT BLKG. SIDE, NAILS MAY BE APPLIED AT EVERY OTHER ROW (2 NAILS PER EACH ROW). NOT LESS THAN 3 NAILS TO EACH BLKG. SHALL BE PROVIDED. NAIL SIZES SHALL BE PER MANUFACTURER'S CATALOG.
3. AT MARK B & C USE DOUBLE BLKG.
4. AT MARK B & C MIN. WIDTH OF JOIST/BM. SHALL BE 3". ALTERNATIVELY PIECE OF 2x4 x 4 FT LONG MEMBER MAY BE SISTERED TO JOIST/BM. PER SECTION A-A.
5. APPLICATION OF STRAP OVER SHEATHING IS ACCEPTABLE.
6. TRUSS JOIST BLKG.(S) MAY BE PERMITTED WHEN STRAP IS APPLIED AT TOP.
7. 2x BLKG. IS PERMITTED (IN LIEU OF 1 3/4" WIDE BLKG.) WHERE STRAP APPLIED UNDER BLKG.

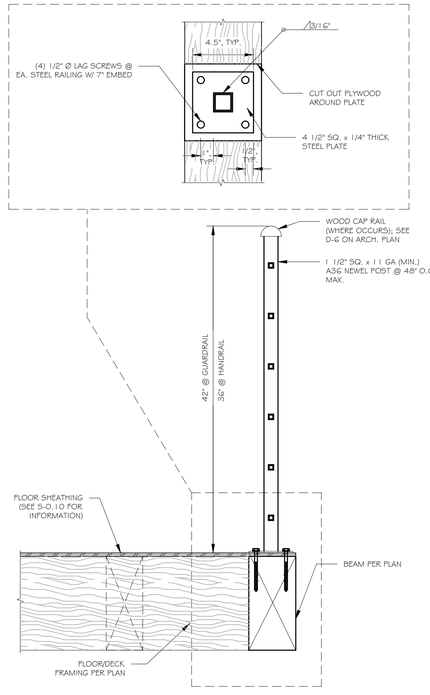
2 DRAG ELEMENT PERPENDICULAR TO JOISTS



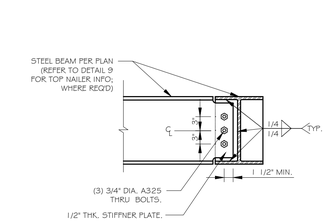
14 SHEAR TRANSFER AT CANTILEVER @ WALL



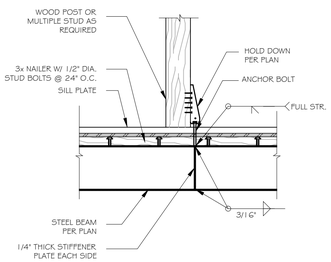
13 DRAG DETAIL



10 GUARDRAIL CONNECTION DETAIL



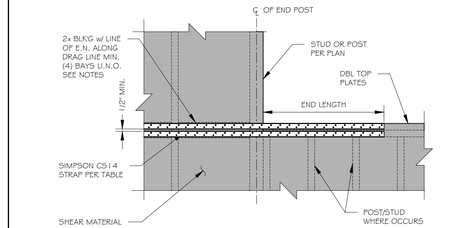
8 CONNECTION DETAIL



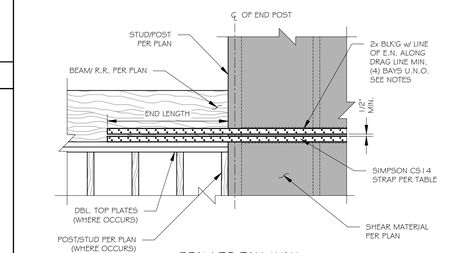
NOTES:

1. INSPECTOR TO VERIFY BOLT HOLES SHALL BE 1/16" OVERSIZED AT THE CONNECTOR OF HOLD DOWN TO THE POST.
2. ALL HOLD DOWN ANCHOR NUTS SHALL BE TIGHTENED JUST PRIOR TO COVERING.

7 HOLD DOWN ANCHOR TO STEEL BEAM



WALL STEP



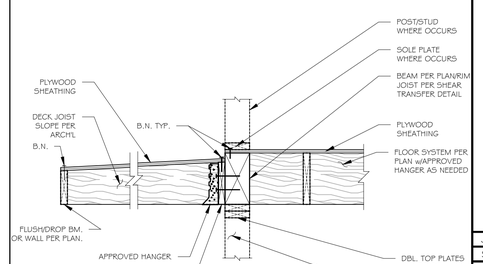
BEAM TO TALL WALL

STRAP SCHEDULE		
TYPE	STRAP TYPE	END LENGTH
A	(1) CS14	24"
B	(2) CS14	24"

NOTES:

1. USE 2x FLAT BLKG FOR CONDITION B w/ MIN. 1/2" SPACE BETWEEN STRAPS.
2. LOCATE STRAP OVER PLWD. SHEAR PANEL. SEE PLAN FOR TYPE & LOCATION.

4 TOP PLATES/BEAM DRAG TO TALL WALL



NOTE: USE PLYWOOD FILLER AT TRUSS JOIST TO RECEIVE HANGER OR OTHER MEMBERS.

1 CORRIDOR / DECK CONNECTION

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION	DESCRIPTION	DATE
A	BUILDING DEPARTMENT RESPONSE	08/07/23
B	BUILDING DEPARTMENT RESPONSE	12/20/23
3		
4		
5		
6		

REGISTERED PROFESSIONAL ENGINEER AMIR DEHGHANI No. C78194 CIVIL STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/18/2023

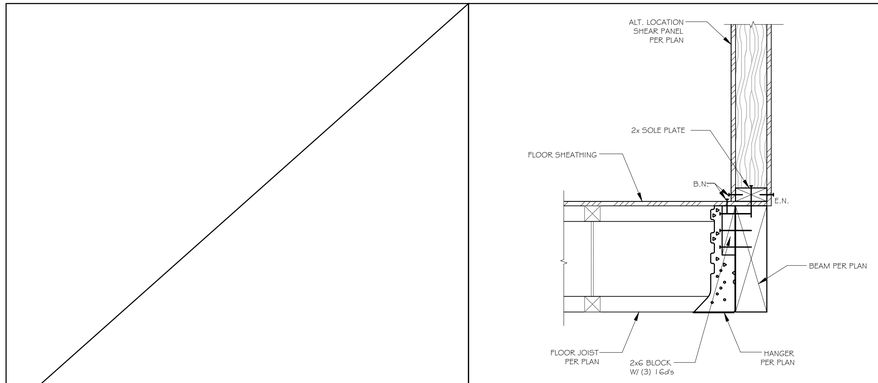
PROJECT MANAGER: S.W.

STRUCTURAL DETAILS

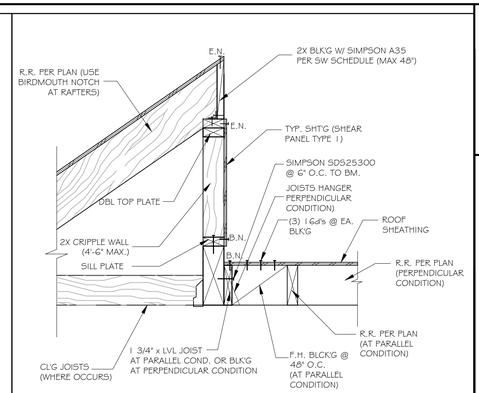
JOB NO.:22256

SHEET NO.:

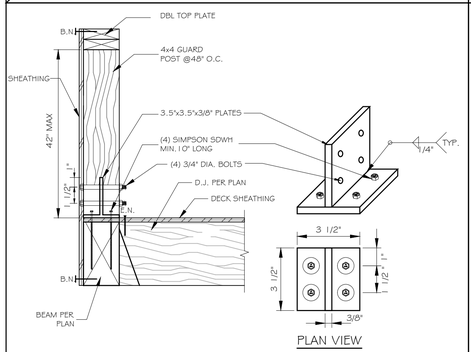
SD4.0



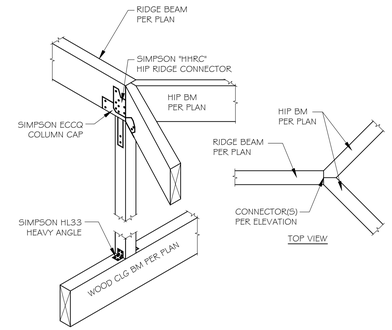
8 CONNECTION DETAIL



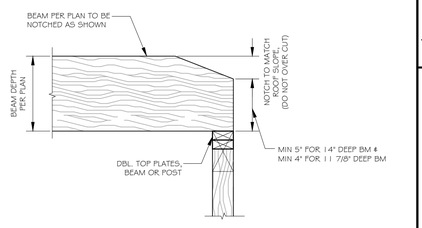
4 CONNECTION DETAIL



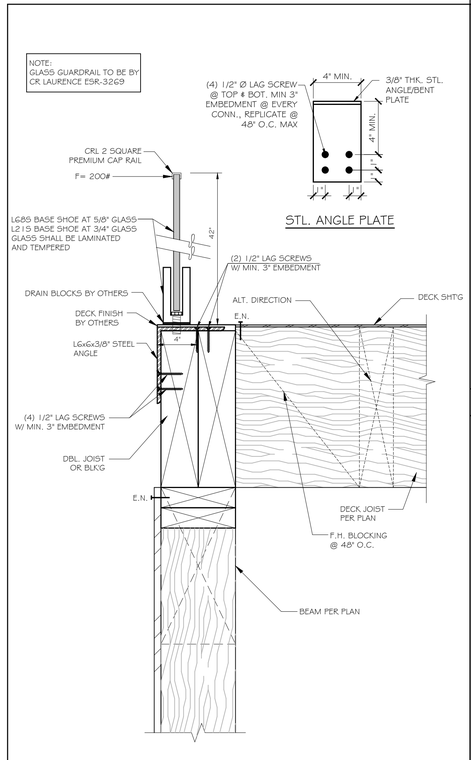
11 CONNECTION DETAIL



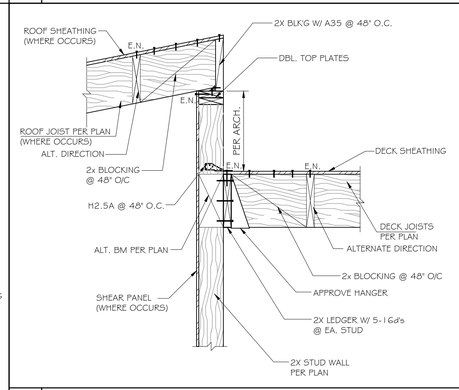
7 RIDGE BEAM TO HIP BEAM CONNECTION



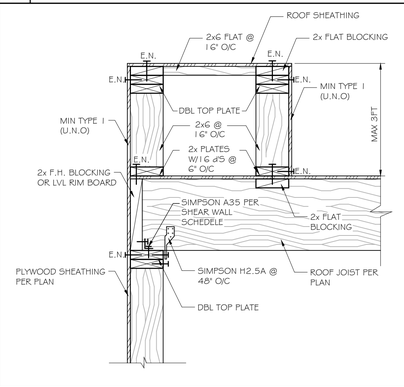
3 NOTCH @ BEAM



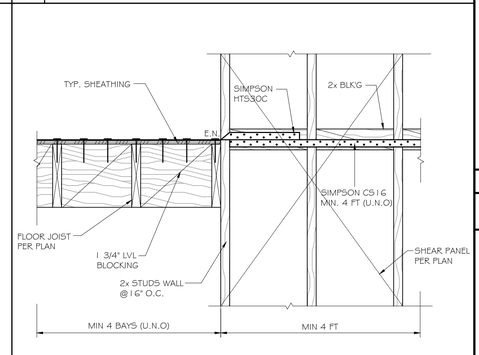
15 EXTERIOR GLASS GUARDRAIL DETAIL



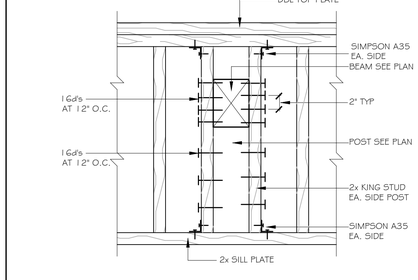
10 SHEAR TRANSFER DETAIL



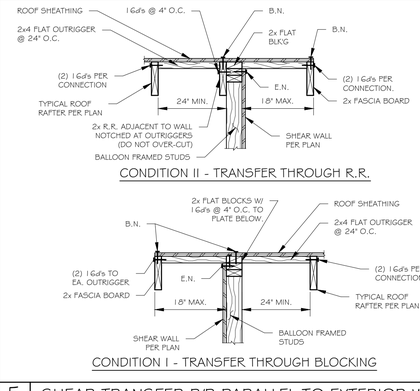
6 SHEAR TRANSFER



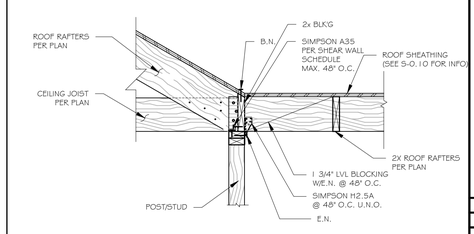
2 DRAG DETAIL



9 CONNECTION DETAIL



5 SHEAR TRANSFER R/R PARALLEL TO EXTERIOR WALL



1 SHEAR TRANSFER

CORE
From The Ground Up
Core Structure, Inc.
23172 Plaza Pointe Dr.
Suite #145
Laguna Hills, CA 92653
Phone: 949-954-7244
info@corestructure.com

REVISION

	DATE	DESCRIPTION
A		
2		
3		
4		
5		
6		

REGISTERED PROFESSIONAL ENGINEER
AMIR DEHTIARI
No. C78194
CIVIL
STATE OF CALIFORNIA

Project Name: VAKILI DEVELOPMENT
BUILDING "B" (LOT 31)

Project Adress: 34456 VIA GOMEZ, DANA POINT, CA 92624

DATE: 12/15/2023

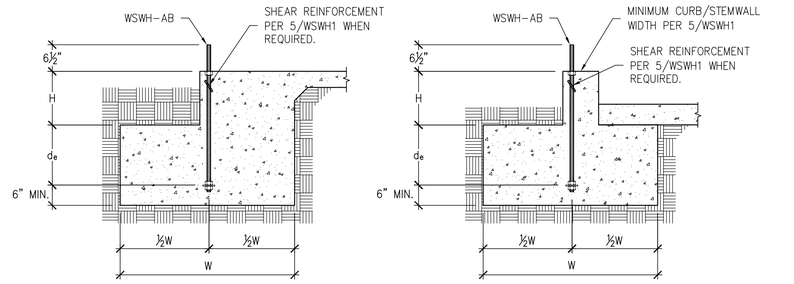
PROJECT MANAGER: S.W.

STRUCTURAL DETAILS

JOB NO.:22256

SHEET NO.:

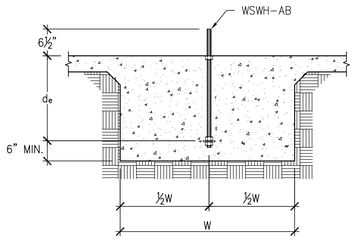
SD5.0



SLAB ON GRADE FOUNDATION

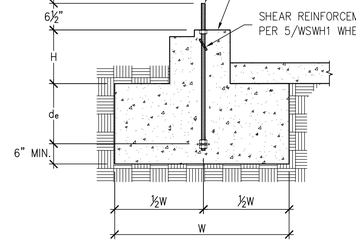
CURB OR STEMWALL FOUNDATION

NOTES :
1. SEE 2/WSWH1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSWH1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e–d_e. SEE 3/WSWH1 AND 4/WSWH1 FOR l_e.



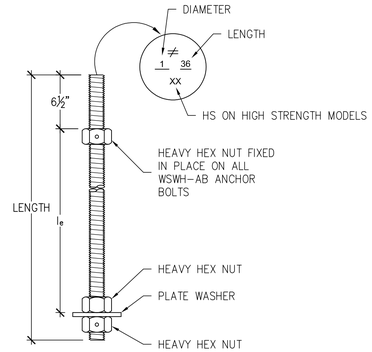
INTERIOR FOUNDATION

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



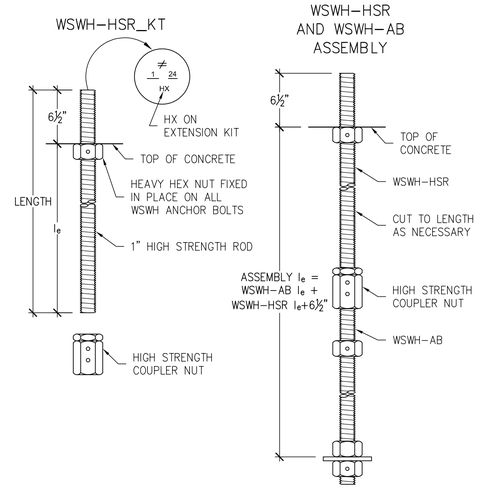
BRICK LEDGE FOUNDATION

STRONG–WALL® WSWH ANCHORAGE – TYPICAL SECTIONS | 1



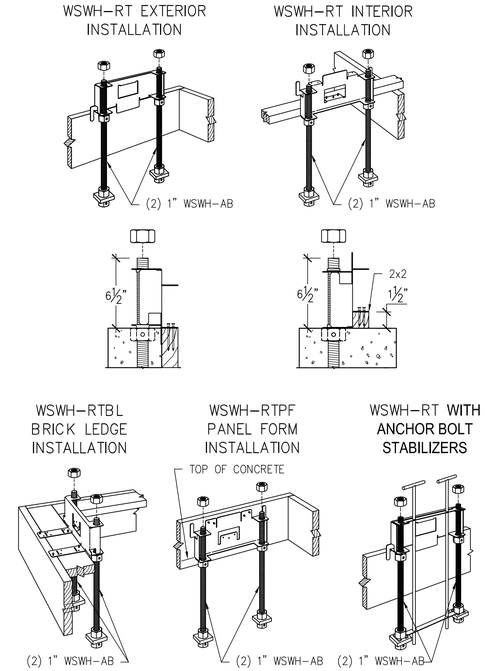
WSWH PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSWH12, WSWH18 AND WSWH24	WSWH–AB1x24	1"	24"	15½"
	WSWH–AB1x24HS	1"	24"	15½"
	WSWH–AB1x30	1"	30"	21½"
	WSWH–AB1x30HS	1"	30"	21½"
	WSWH–AB1x36	1"	36"	27½"
	WSWH–AB1x36HS	1"	36"	27½"

WSWH ANCHOR BOLTS | 3

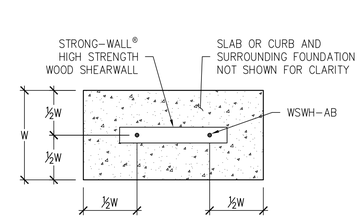


WSWH PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSWH12, WSWH18 AND WSWH24	WSWH–HSR1x24KT	1"	24"	17½"
	WSWH–HSR1x36KT	1"	36"	29½"

WSWH ANCHOR BOLT EXTENSION | 4



WSWH ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

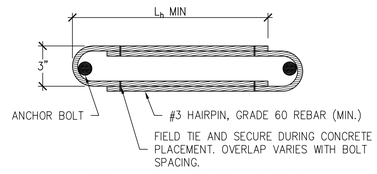
NOTES :
1. ANCHORAGE DESIGNS CONFORM TO ACI 318–11 APPENDIX D, ACI 318–14 CHAPTER 17 AND ACI 318–19 CHAPTER 17 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSWH–AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (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 d_e.

WSWH ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE					
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSWH–AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	d_e (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
			17,100	32	11
		HIGH STRENGTH	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
			17,100	28	10
		HIGH STRENGTH	22,900	33	11
			26,400	36	12
			34,200	42	14
			36,800	44	15

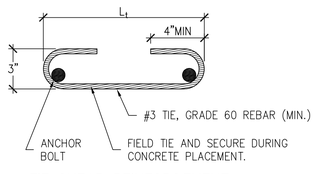
WSWH ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE					
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSWH–AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	d_e (in)
SEISMIC	CRACKED	STANDARD	16,000	31	11
			17,100	33	11
		HIGH STRENGTH	33,900	49	17
			36,800	52	18
	UNCRACKED	STANDARD	16,300	27	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
			17,100	30	10
		HIGH STRENGTH	20,000	33	11
			26,500	39	13
			33,600	45	15
			36,800	48	16
	UNCRACKED	STANDARD	6,200	13	6
			12,800	21	7
			17,100	26	9
		HIGH STRENGTH	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)	d_e (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
			17,100	26	9
		HIGH STRENGTH	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
			17,100	23	8
		HIGH STRENGTH	22,800	27	9
			26,700	30	10
			30,700	33	11
			36,800	37	13

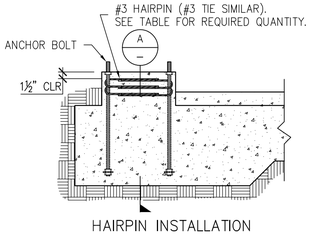
STRONG–WALL® HIGH STRENGTH WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2



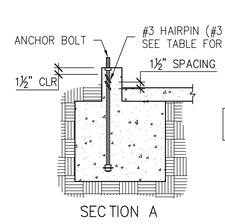
HAIRPIN SHEAR REINFORCEMENT



TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG–WALL® HIGH STRENGTH WOOD SHEARWALL SHEAR ANCHORAGE						
MODEL	SEISMIC[3]			WIND[4]		
	L_t OR L_h (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

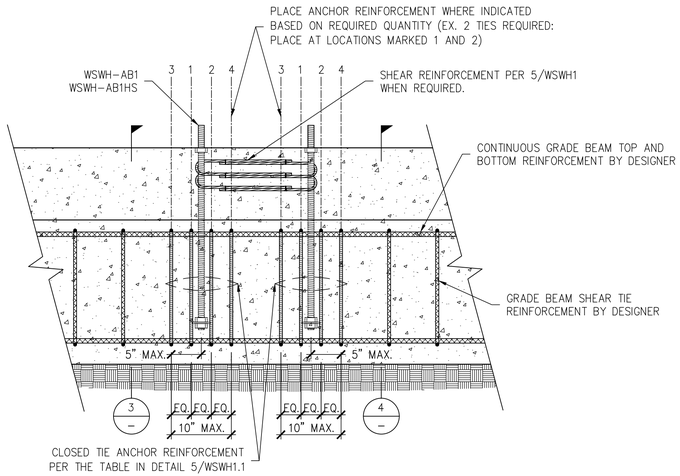
SIMPSON Strong-Tie, Co. Inc.
• 5956 W. Las Positas Blvd.
Pleasanton, CA 94588
• Tel: (800) 999-5099
• • Website: www.strongtie.com

SIMPSON Strong-Tie THERE IS NO EQUAL.

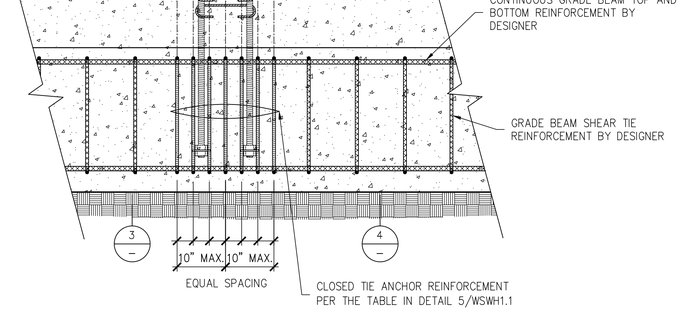
STRONG-WALL® WSWH
ANCHORAGE DETAILS
ENGINEERED DESIGNS

SIMPSON Strong-Tie THERE IS NO EQUAL.

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

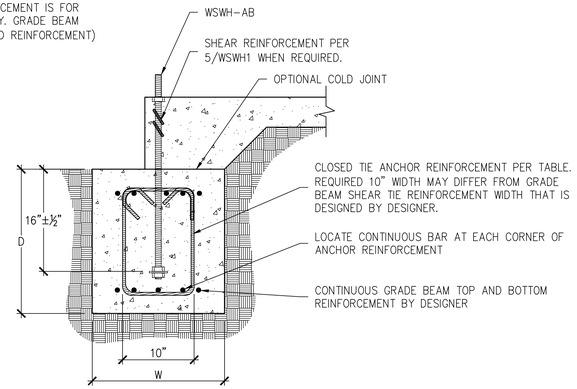


GRADE BEAM ELEVATION AT 18" AND 24" WALL MODELS | 1



GRADE BEAM ELEVATION AT 12" WALL MODEL | 2

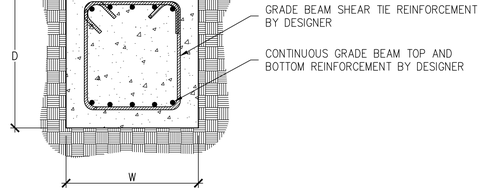
NOTES :
ANCHOR REINFORCEMENT IS FOR ANCHORAGE ONLY. GRADE BEAM DESIGN (SIZE AND REINFORCEMENT) BY DESIGNER.



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

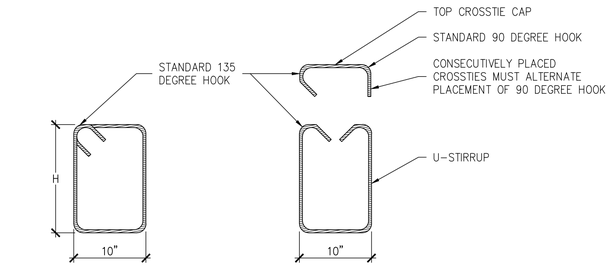
DIMENSIONING NOTES :
D: DEPTH BY DESIGNER (24" MIN.)
W: WIDTH BY DESIGNER (18" MIN.)

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



#4 SINGLE PIECE HOOP #4 TWO PIECE ASSEMBLY

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[3,8,9]		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, 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

SIMPSON Strong-Tie THERE IS NO EQUAL

STRONG-WALL® WSWH
ALTERNATE ANCHORAGE DETAILS
ENGINEERED DESIGNS

SIMPSON Strong-Tie THERE IS NO EQUAL

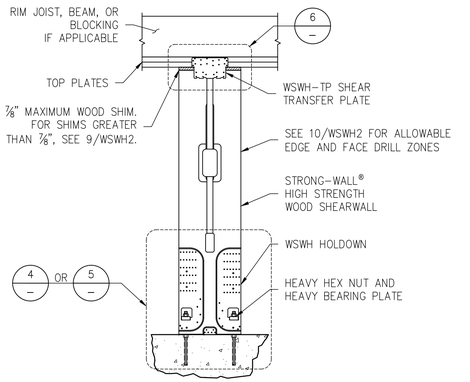
NAME	
DATE	03-16-2021
SCALE	N.T.S.
CHECKED	
SHEET	WSWH1.1
OF	SHEETS
JOB NO.	

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
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.

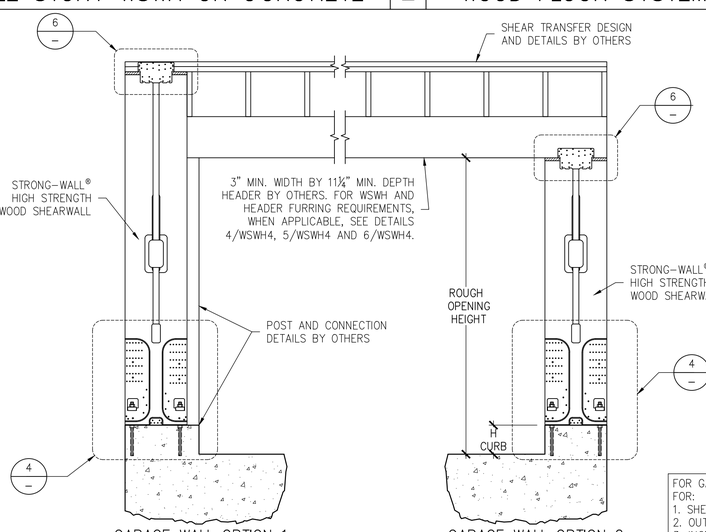
STRONG-WALL® WSWH MODELS | 1



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

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

SINGLE STORY WSWH ON CONCRETE | 2



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

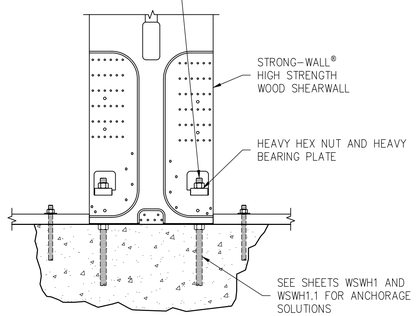
MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¾"	5½"	8'-2¾"
		6"	8'-3¾"

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

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3

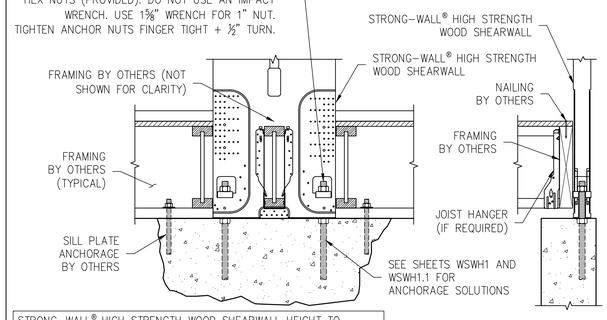
PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅜" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅜" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.



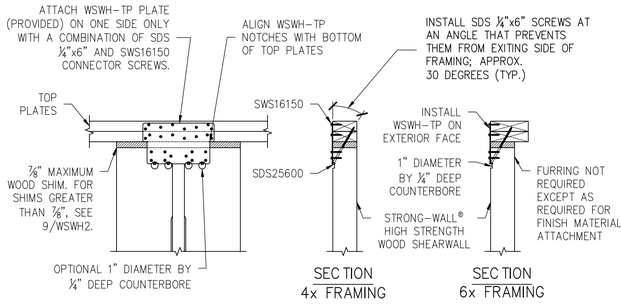
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

SECTION

WOOD FLOOR SYSTEM BASE CONNECTION | 5

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

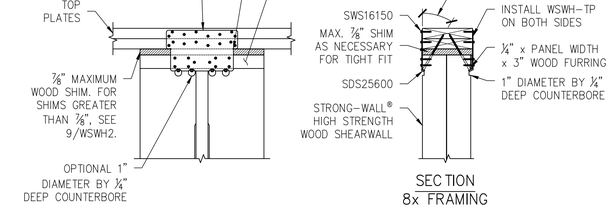
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



TOP CONNECTION | 6

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

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

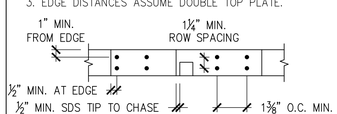


BACK-TO-BACK TOP CONNECTION | 7

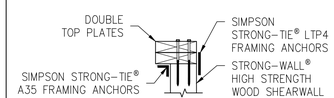
QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

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.

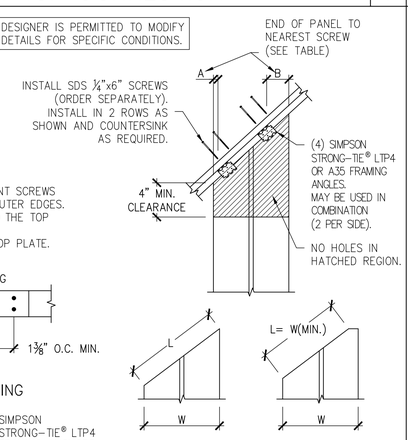


PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



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.

BACK-TO-BACK TOP CONNECTION | 7

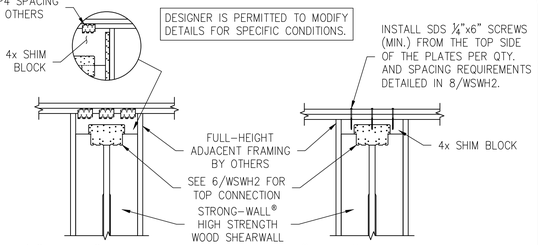
RAKE WALL | 8

LTP4 SPACING BY OTHERS

4x SHIM BLOCK

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

INSTALL SDS ¼"x6" SCREWS (MIN.) FROM THE TOP SIDE OF THE PLATES PER QTY. AND SPACING REQUIREMENTS DETAILED IN 8/WSWH2.



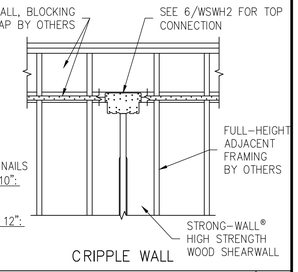
4⅛" TO 12" SHIM BLOCK
1" TO 4" SHIM BLOCK

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

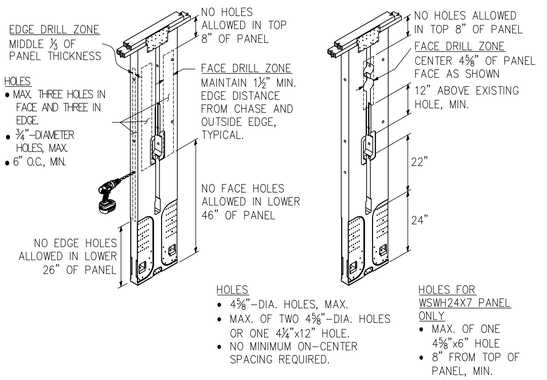
SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

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



CRIPPLE WALL

TOP OF WALL HEIGHT ADJUSTMENTS | 9



ALLOWABLE SMALL HOLES FACE AND EDGE DRILL ZONES

ALLOWABLE LARGE HOLES IN ADDITION TO ALLOWABLE SMALL HOLES

TRIM ZONE AND ALLOWABLE HOLES | 10

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.

NOTES | 11

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

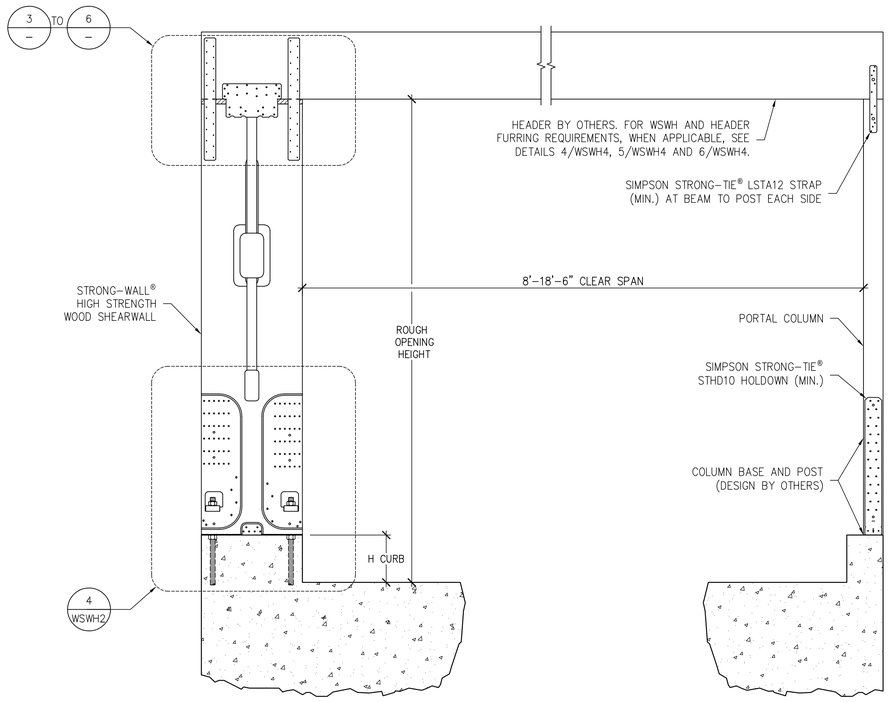
SIMPSON Strong-Tie, Co. Inc.
• 5956 W. Las Positas Blvd.
• Pleasanton, CA 94588
• Tel: (800) 999-5099
• Website: www.strongtie.com

SIMPSON Strong-Tie® THERE IS NO EQUAL

STRONG-WALL® WSWH
FRAMING DETAILS
ENGINEERED DESIGNS

SIMPSON Strong-Tie® THERE IS NO EQUAL

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



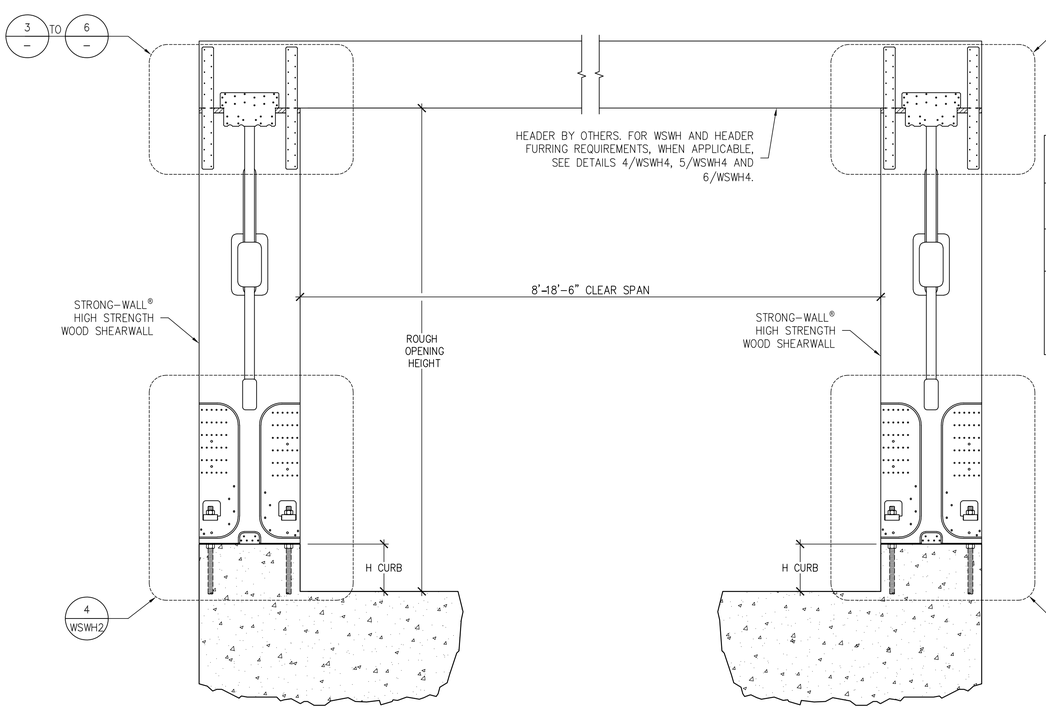
GARAGE HEADER ROUGH OPENING HEIGHT			
MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

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.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

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

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL SINGLE PORTAL ASSEMBLY | 1



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GARAGE HEADER ROUGH OPENING HEIGHT			
MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
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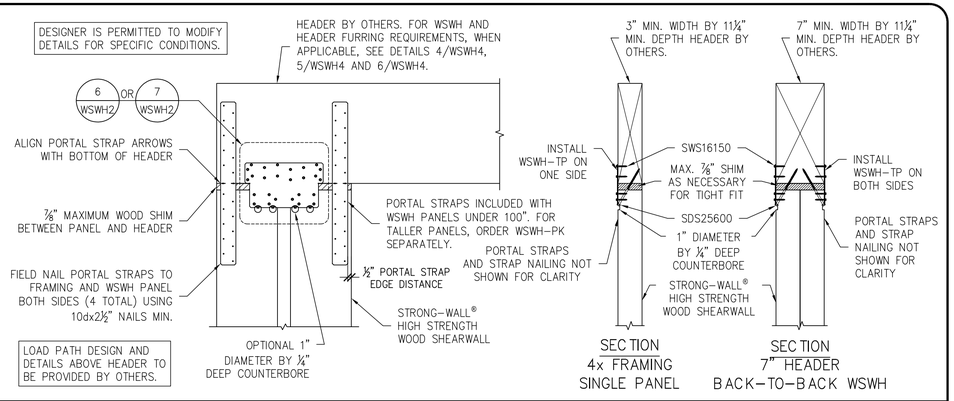
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

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.

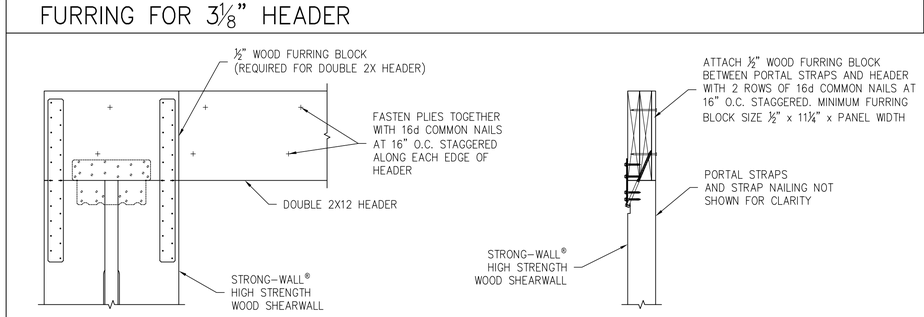
ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL DOUBLE PORTAL ASSEMBLY | 2

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

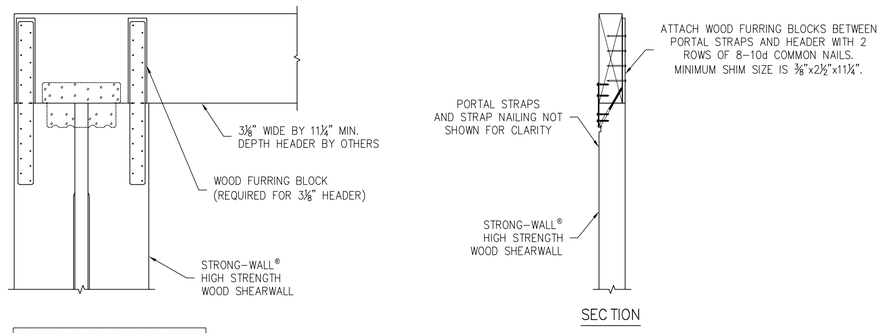


PORTAL TOP CONNECTION | 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

FURRING FOR 5⅛" TO 5½" HEADER | 4



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

FURRING FOR 3⅛" HEADER | 5

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

FURRING FOR DOUBLE 2X12 HEADERS | 6

REVISIONS		
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NAME	
DATE	03-16-2021
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SHEET	WSWH4
	OF SHEETS
JOB NO.	