REMODEL PLANS
FOR
MICHAEL HOPKINS & IRENE MORCOS

9032 CHRISTINE DRIVE, HUNTINGTON BEACH, CALIFORNIA 92646 – LOT 208, TRACT 3903

ADDRESS

ADDRESS SHALL BE POSTED ON THE RESIDENCE, CLEARLY VISIBLE, ILLUMINATED, AND LEGIBLE. ADDRESS NUMBERS SHALL BE MINIMUM 4" HIGH WITH MINIMUM 1/2" STROKE, AND THEY MUST CONTRAST WITH THE BACKGROUND.

PROPERTY SPECS:

OWNER:
MICHAEL HOPKINS & IRENE MORCOS

LOT 208, TRACT 3903
APN:114-481-22
ADDRESS:
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646

SCOPE OF WORK:

ADDITION TO EXISTING 2-STORY S.F.R. CONVERSION OF A PORTION OF THE EXISTING CONDITIONED SPACE TO UNCONDITIONED CALIFORNIA ROOM. ADDITION OF LOWER LEVEL TO THE FRONT. CONVERSION OF FRONT PORCH/ENTRY TO CONDITIONED SPACE. EXPANSION OF UPPER LEVEL OVER GARAGE AND OVER EXISTING LOWER LEVEL. CONVERSION OF A PORTION OF THE EXISTING ROOF TO A VIEWING DECK. VIEWING DECK IS ACCESSIBLE, BUT DOES NOT CONSTITUTE AN ADDITIONAL STORY (STRUCTURALLY) AS THERE IS NO COVER AND THE WALKING SURFACE IS THE SAME LEVEL AS THE UPPER LEVEL ROOF.

9032 Christine Dr. Zoning Conformance Matrix

SUBJECT	CODE SECTION	REQUIRED	PROPOSED
Parking	231.18	10 ft driveway width 150 feet or less length	18.5 ft driveway width 19 ft driveway length
Landscaping	232.08	Min 8% entire site Site: 6000 sf 8% = 480 sf	19.5% = 1175 sf
Front Yard	210.06S	Min 40% of front landscaped Front: 1200 sf 40% = 480 sf	48% = 580 sf
Trees	232.08	1 24" Box Tree	1 24" Box Tree (unchanged)
Site Coverage	210.06	Max 50% of site Site: 6000 sf 50% = 3000 sf coverage	Lower Level: 1756 sf Garage: 457 sf Total: 36.88% = 2213 sf
Setbacks	210.06		
Front		15 ft	20.07 feet (unchanged)
Side Left		5 ft	5 ft (unchanged)
Side Right		5 ft	5 ft (unchanged)
Rear		10 ft	26 ft (unchanged)
Garage		20 ft	20.07 feet (unchanged)
Maximum Height	210.06	35 ft	26 ft (unchanged)

DESIGN PARAMETERS

OCCUPANCY – R3/U
CONSTRUCTION TYPE – VB
FIRE SPRINKLERS REQUIRED – NO
FIRE HAZARD SEVERITY: NONE
CLIMATE ZONE: 6

EXISTING BUILDING SQUARE FOOTAGE BREAKDOWN
1729 SQUARE FEET – LOWER LEVEL CONDITIONED AREA
1110 SQUARE FEET – UPPER LEVEL CONDITIONED AREA
2839 SQUARE FEET – TOTAL CONDITIONED AREA
457 SQUARE FEET – GARAGE
251 SQUARE FEET – FRONT PORCH
314 SQUARE FEET – REAR BALCONY

MODIFICATIONS:
421 SQUARE FEET – LOWER LEVEL CONDITIONED ADDITION
394 SQUARE FEET – LOWER LEVEL CONDITIONED REMOVED
1348 SQUARE FEET – UPPER LEVEL CONDITIONED ADDITION
25 SQUARE FEET – UPPER LEVEL CONDITIONED REMOVED
229 SQUARE FEET – FRONT PORCH REMOVAL
102 SQUARE FEET – REMOVE EXISTING BALCONY
38 SQUARE FEET – EXTEND EXISTING BALCONY
346 SQUARE FEET – NEW UPPER DECK ADDITION

FINAL BUILDING SQUARE FOOTAGE BREAKDOWN
1756 SQUARE FEET – LOWER LEVEL CONDITIONED AREA
2433 SQUARE FEET – UPPER LEVEL CONDITIONED AREA
4189 SQUARE FEET – TOTAL CONDITIONED AREA
394 SQUARE FEET – LOWER LEVEL UNCONDITIONED AREA
457 SQUARE FEET – GARAGE
22 SQUARE FEET – FRONT PORCH
250 SQUARE FEET – REAR BALCONY
346 SQUARE FEET – UPPER DECK

ENGINEERING CALCULATION DATA
ROOF LIVE LOAD – 19 PSF ROOF DEAD LOAD – 20 PSF
FLOOR LIVE LOAD – 40 PSF FLOOR DEAD LOAD – 15 PSF
DECK LIVE LOAD – 60 PSF DECK DEAD LOAD – 10 PSF
WIND SPEED – 95 MPH (LRFD) WIND EXPOSURE – C
TOPOGRAPHIC EFFECT (KZT) – 1.00
SEISMIC DESIGN
SDC – D2 SITE CLASS – D
S_s=1.388 S_{DS}=1.111
S_1=0.499 S_{D1}=N/A (SEE SEC. 11.4.8)
T_L=8 SEC.
ALLOWABLE SOIL BEARING PRESSURE: 1500 PSF

PRIVACY STANDARDS:

PLAN COMPLIES WITH 210.06.W

NO BEDROOMS OR BATHROOMS ON RIGHT SIDE OF HOUSE.
HOUSE ON THE LEFT SIDE IS SINGLE STORY.

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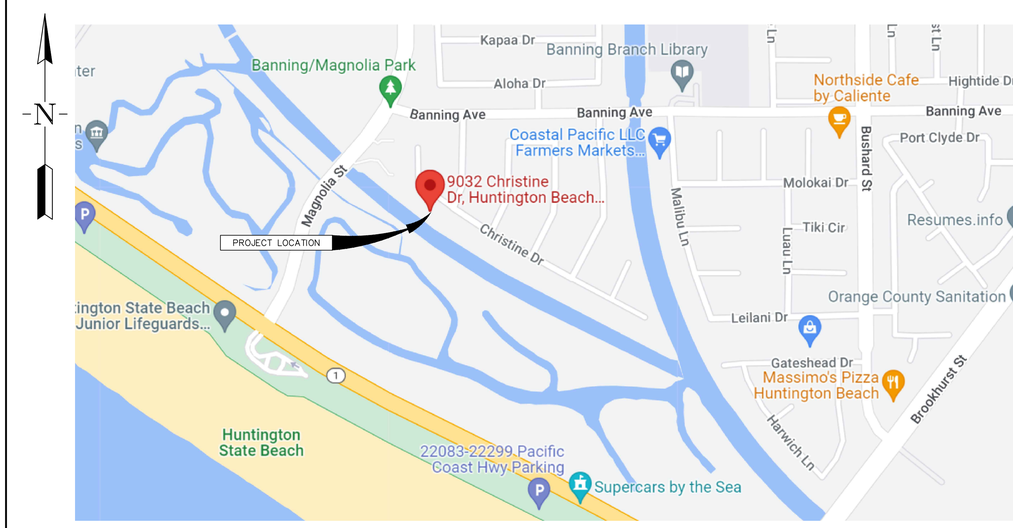
VICINITY MAP



GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH THE CURRENTLY APPROVED EDITIONS OF:

   2019 CALIFORNIA BUILDING CODE 2019 CALIFORNIA RESIDENTIAL CODE
   2019 CALIFORNIA GREEN BUILDING CODE 2019 CALIFORNIA PLUMBING CODE
   2019 CALIFORNIA ELECTRICAL CODE 2019 CALIFORNIA MECHANICAL CODE
   2019 CALIFORNIA FIRE CODE 2019 CALIFORNIA ENERGY CODE
   HUNTINGTON BEACH MUNICIPAL CODE

2. DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO DETAILS FOR SIMILAR CONSTRUCTION ILLUSTRATED WITHIN THESE CONSTRUCTION DOCUMENTS.
3. EACH CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL TRADES AND SHALL CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT DESIGNER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE PROJECT.
4. NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS SPECIFICALLY APPROVED BY THE PROJECT DESIGNER OR ENGINEER IN ADVANCE, SPECIFIED IN THE CONSTRUCTION DOCUMENTS, OR ALLOWED BY GOVERNING CODES.
5. ALL ELEVATIONS ARE REFERENCED FROM TOP OF ENTRY FLOOR SHEATHING OR TOP OF SLAB, 0'-0" UNLESS OTHERWISE NOTED.
6. THE DESIGN, AND PLANNING DATA CONTAINED IN THIS PLAN ARE THE SOLE PROPERTY OF STEPHEN MILLER, R.C.E. THIS PLAN IS NOT TO BE USED OR COPIED BY ANY OTHER PERSON, ASSOCIATION, CORPORATION OR COMPANY WITHOUT THE EXPRESSED WRITTEN PERMISSION OF STEPHEN MILLER, R.C.E.
7. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE, AND SHALL NOTIFY THE GENERAL CONTRACTOR AND THE PROJECT DESIGNER OF ANY DEVIATIONS FROM THE DIMENSIONS AND THE CONDITIONS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

DEFERRED SUBMITTALS

"CONSTRUCTION WASTE MANAGEMENT (CWM) COMPLIANCE FORMS AND WORKSHEETS ARE A DEFERRED SUBMITTAL PER CBC SECTION 107.3.4.1. ALL DOCUMENTS, INCLUDING WASTE-SEPARATION METHODS AND DIVERSION RATES, CWM ACKNOWLEDGMENT, AND FINISH MATERIAL CERTIFICATES, WILL BE PROVIDED BY THE CONTRACTOR PRIOR TO CONSTRUCTION."

CONTRACTOR RESPONSIBILITY

I_____ UNDERSTAND THAT AS THE CONTRACTOR RESPONSIBLE FOR CONSTRUCTION OF THE BUILDING AS DESIGNED AND SHOWN IN THESE CONSTRUCTION DOCUMENTS, I AM TO BE RESPONSIBLE FOR ALL PHASES OF CONSTRUCTION OF THE PROJECT AND OVERSEE THE PROJECT IN, BUT NOT LIMITED TO THE FOLLOWING AREAS:

1. I UNDERSTAND THAT I AM TO ADHERE TO THE FOLLOWING QUALITY CONTROL INSPECTIONS AS LISTED HEREON IN THE QUALITY ASSURANCE NOTE.
2. I UNDERSTAND THAT I AM TO BE RESPONSIBLE FOR THIS PROJECT, AND MAINTAIN CONFORMANCE WITH THESE CONSTRUCTION DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO THE WIND AND SEISMIC RESISTING SYSTEM AS DESIGNED BY STEPHEN MILLER, R.C.E., AND SHOWN IN THESE CONSTRUCTION DOCUMENTS.
3. I SHALL MAINTAIN INTEGRITY OF THIS PROJECT IN THE BELOW LISTED MANNER:
   A. PERIODIC ON-SITE INSPECTIONS BY STEPHEN MILLER, R.C.E. AS NOTED IN THE QUALITY CONTROL NOTES HEREON.
4. THE PERSON ULTIMATELY RESPONSIBLE FOR ALL INSPECTIONS PERFORMED WILL BE STEPHEN MILLER R.C.E. C55892.

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NO.	DATE	REVISIONS	BY/CHK.

DES. S.D.M. DRW. S.D.M. CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS
FOR
MICHAEL HOPKINS & IRENE MORCOS
LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
LOT 208, TRACT 3903

AGAPE CIVIL ENGINEERING, INC.
STEPHEN D. MILLER – Registered Civil Engineer
CIVIL ENGINEERING – COMMERCIAL & RESIDENTIAL DESIGN & ENGINEERING
P.O. BOX 8504, LONG BEACH, CALIFORNIA 90808 – (661) 472-9575
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268-2204_rev1.dwg

January 9, 2023

REGISTERED PROFESSIONAL ENGINEER – STEPHEN MILLER – No. C55892 – CIVIL – STATE OF CALIFORNIA

SHEET	OF
1	17

JOB NO. 268-2204

GREEN BUILDING CODE NOTES:

Chapter 1 – ADMINISTRATION

101.3.1 Scope

Applies to ALL newly constructed residential buildings: low–rise, high–rise, and hotels/motels.

Chapter 3 – GREEN BUILDING

301.1.1 Additions and alterations

- Applies to additions or alterations of residential buildings where the addition or alteration increases the building's conditioned area, volume, or size.
- Requirements only apply within the specific area of the addition or alteration.
- Note directs code users to Civil Code Section 1101.1 et seq., regarding replacement of non–compliant plumbing fixtures.

301.2 Low–rise and high–rise buildings

Banners identify provisions applying to low–rise only [LR] or high–rise only [HR].

Division 4.1 – PLANNING AND DESIGN (SITE DEVELOPMENT)

4.106.2 Storm water drainage and retention during construction projects which disturb less than 1 acre of soil and are not part of a larger common plan of development shall manage storm water drainage during construction.

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. Exception for additions and alterations which do not alter the existing drainage path.

4.106.4 Electric vehicle (EV) charging for new construction

- Comply with Section 4.106.4.1, 4.106.4.2 or 4.106.4.3 for 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 on a case–by–case basis as determined by the Local Enforcing Agency:

1. Where there is no commercial power supply.
2. Verification that meeting requirements will alter the local utility infrastructure design requirements on the utility side of the meter increasing costs to the homeowner/developer by more than $400.00 per dwelling unit.

4.106.4.1 & 4.106.4.1.1 EV charging: 1– & 2–family dwellings/townhouses with attached private garages

- Install a listed raceway to accommodate a dedicated 208/240–volt branch circuit for each dwelling unit.
- Raceway shall not be less than trade size 1 (nominal 1–inch inside diameter).
- Raceway shall originate at the main service or subpanel and 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.
- Service panel and/or subpanel shall provide capacity to install a 40–ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. 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 EV charging for multifamily dwellings

- Applies to building sites with 17 or more multifamily dwelling units constructed on the site.
- 3% of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the number of EV spaces shall be rounded up to the nearest whole number.

Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 EV charging space (EV space) locations

- Construction documents shall indicate the location of proposed EV spaces. At least 1 EV space shall be located in common use areas and available for use by all residents.
- When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least 1 of the following options:

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

4.106.4.2.2 EV charging space (EV space) dimensions

EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet.
2. The minimum width of each EV space shall be 9 feet.
3. One in every 25 EV spaces, but not less than 1, shall also have an 8–foot wide minimum aisle. A 5–foot wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet.

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

4.106.4.2.3 Single EV space required

- Install 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 proposed location of the EV space.
- Construction documents shall identify the raceway termination point.
- The service panel and/or subpanel shall provide capacity to install a 40–ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.2.4 Multiple EV spaces required

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

4.106.4.2.5 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.

Notes:

1. The California Department of Transportation adopts and publishes the "California Manual on Uniform Traffic Control Devices (California MUTCD)"to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies Directives Number 12–01. Website: http://www.dot.ca.gov/hq/traffops/policy/13–01.pdf
2. See Vehicle Code Section 22511 for EV charging space signage in off–parking facilities and for use of EV charging spaces.
3. The Governor's Office of Planning and Research (OPR) published a "ZeroEmission Vehicle Community Readiness Guidebook"which provides helpful information for local governments, residents and businesses. Website: http://opr.ca.gov/docs/ZEV_Guidebook.pdf

4.106.4.3.2 Electrical Vehicle (EV) Charging Space Dimensions

1. Minimum length of each EV space shall be 18'.
2. Minimum width of each EV space shall be 9'.

4.106.4.3.3 Single EV Space Required.

Division 4.2– ENERGY EFFICIENCY

4.201.1 & 5.201.1

Scope

- Energy efficiency requirements for low–rise residential (Section 4.201.1) and highrise residential/hotels/motels (Section 5.201.1) are now in both residential and nonresidential chapters of CALGreen.
- Standards for residential buildings do not require compliance with levels of minimum energy efficiency beyond those required by the 2016 California Energy Code.

Division 4.3 – WATER EFFICIENCY AND CONSERVATION (INDOOR WATER USE)

4.303.1 Water conserving plumbing fixtures and fittings

Plumbing fixtures and fittings shall comply with the following:

4.303.1.1 Water Closets: ≤ 1.28 gal/flush

4.303.1.2 Wall Mounted Urinals: ≤ 0.125 gal/flush; all other urinals ≤ 0.5 gal/flush

4.303.1.3.1 Single Showerheads: Showerheads shall have a maximum flow rate of not more than 1.8 gpm @ 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 showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gpm @ 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time

4.303.1.4.1 Residential Lavatory Faucets: Maximum Flow Rate ≤ 1.2 gpm @ 60 psi; Minimum Flow Rate ≥0.8 gpm @ 20 psi

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas of Residential Buildings: ≤ 0.5 gpm @ 60 psi

4.303.1.4.3 Metering Faucets: ≤ 0.25 gallons per cycle

4.303.1.4.4 Kitchen Faucets: ≤ 1.8 gpm @ 60 psi; temporary increase to 2.2 gpm allowed but shall default to 1.8 gpm

4.303.2 Standards for plumbing fixtures and fittings

Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet applicable standards referenced in Table 1701.1 of the California Plumbing Code.

Division 4.3 –WATER EFFICIENCY AND CONSERVATION (OUTDOOR WATER USE)

4.304.1 Outdoor potable water use in landscape areas

After December 1, 2015, new residential developments with an aggregate landscape area equal to or greater than 500 square feet shall comply with one of the following:

1. A local water efficient landscape ordinance or the current California Department of Water Resources'Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent, or
2. Projects with aggregate landscape areas less than 2500 square feet may comply with the MWELO's Appendix D Prescriptive Compliance Option.

4.305.1 Recycled water supply systems. Newly constructed residential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, may be required to have recycled watr supply systems installed, allowing the use of recycled water for residential landscape irrigation systems. See Chapter 15 of the California Plumbing Code.

Division 4.4 –MATERIAL CONSERVATION & RESOURCE EFFICIENCY (ENHANCED DURABILITY & 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 closed with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency to prevent passage of rodents.

Division 4.4 –MATERIAL CONSERVATION & RESOURCE EFFICIENCY (CONSTRUCTION WASTE REDUCTION, DISPOSAL & RECYCLING)

4.408.1 Construction waste reduction of at least 65%

- Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous 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.
- Documentation is required per Section 4.408.5.

Exceptions:

1. Excavated soil and land–clearing debris.
2. Alternative waste reduction methods developed by working with local enforcing 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 meeting Items 1 through 5 in Section 4.408.2. Plans shall be updated as necessary and shall be available for examination during construction.

4.408.3 Waste management company

Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that diverted construction and demolition waste materials meet the requirements in Section 4.408.1.

4.408.4 & 4.408.4.1 Waste stream reduction alternative

- (LR) Projects that generate a total combined weight of construction and demolition waste disposed in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.
- Projects that generate a total combined weight of construction and demolition waste disposed 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.

Division 4.4 –MATERIAL CONSERVATION & RESOURCE EFFICIENCY (BUILDING MAINTENANCE & 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 covers 10 specific subject areas shall be placed in the building.

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 is identified for the depositing, storage and collection of non–hazardous materials for recycling, including (at minimum) paper, corrugated cardboard, glass, plastics, organic waste, 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 not required to comply with the organic waste portion of this section.

Division 4.5 –ENVIRONMENTAL QUALITY (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 all applicable local ordinances.

Division 4.5 –ENVIRONMENTAL QUALITY (POLLUTANT CONTROL)

4.504.1 Protection 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 intake and distribution component openings shall be covered. Tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris entering the system may be used.

4.504.2.1 Adhesives, sealants and caulks

Adhesives, sealants 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 Tables 4.504.1 or 4.504.2, as applicable. Such products shall also comply with Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroentylene), 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 the California Code of Regulations (CCR), 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 Air Resources Board 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 catergories listed in Table 4.504.3 shall be determined by classifying the coating as 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 Section 94522(e)(1) and (f)(1) of the CCR, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District shall additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.3 Carpet systems

Carpet installed in the building interior shall meet the testing and product requirements of 1 of the following:

1. Carpet and Rug Institute's Green Label Plus Program
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.1, February 2010 (also known as Specification 01350)
3. NSF/ANSI 140 at the Gold level
4. Scientific Certifications Systems Indoor Advantage™ Gold

4.504.3.1 Carpet cushion

Carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label Plus Program.

4.504.3.2 Carpet adhesive

Carpet adhesives 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 comply with one or more of the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.1, February 2010 (also known as specification 01350), certified as a CHPS Low–Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database
2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools Program)
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.1, February 2010 (also known as Specification 01350)

4.504.5 Composite wood products

- Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in the Air Resources Board's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et. seq.), as shown in Table 4.504.5. Documentation is required per Section 4.504.5.1.
- Definition of Composite Wood Products: Composite wood products include hardwood plywood, particleboard, and medium density fiberboard. "Composite wood products"do not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I–joists, or finger–joined lumber, all as specified in CCR, Title 17, Section 93120.1(a).

4.504.5.1 Documentation

Verification of compliance shall be provided as requested by the enforcing agency, and as required in Section 4.504.5.1.

Division 4.5 –ENVIRONMENTAL QUALITY (INTERIOR MOISTURE CONTROL)

4.505.2 Concrete slab foundations

Concrete slab foundations or concrete slab–on–ground floors required to have a vapor retarder by the California Building Code, Chapter 19, or the California Residential Code, Chapter 5, respectively, shall also comply with this section.

4.505.2.1 Capillary break

A capillary break shall be installed in compliance with at least 1 of the following:

1. A 4–inch thick base of 1/2–inch or larger clean aggregate shall be provided with a vapor retarder in direct contact with concreate 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% moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe–type or a contact–type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements in Section 101.8.
2. Moisture readings shall be taken at a point 2 feet to 4 feet from the grade–stamped end of each piece to be verified.
3. At least 3 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. Manufacturers' drying recommendations shall be followed for wet–applied insulation products prior to enclosure.

Division 4.5 –ENVIRONMENTAL QUALITY (INDOOR AIR QUALITY & 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 manual or automatic adjustment between a relative humidity range of less than 50% to a maximum of 80%.

b) A humidity control may be a separate component to the exhaust fan and is not required to be integral or built–in.

Note: For CALGreen a "bathroom"is a room which contains a bathtub, shower, or tub/shower combination. Fans or mechanical ventilation is required in each bathroom.

Division 4.5 –ENVIRONMENTAL QUALITY (ENVIRONMENTAL COMFORT)

4.507.2 Heating and air conditioning system design

Heating and air conditioning systems shall be sized, designed, and 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 systems functions are acceptable.

CHAPTER 7 –INSTALLER & SPECIAL INSPECTOR QUAUFICATION (QUALIFICATIONS, VERIFICATIONS)

702.1 Installer training

HVAC system installers shall be trained and certified in the proper installation of HVAC systems and equipment by a recognized training or certification program. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

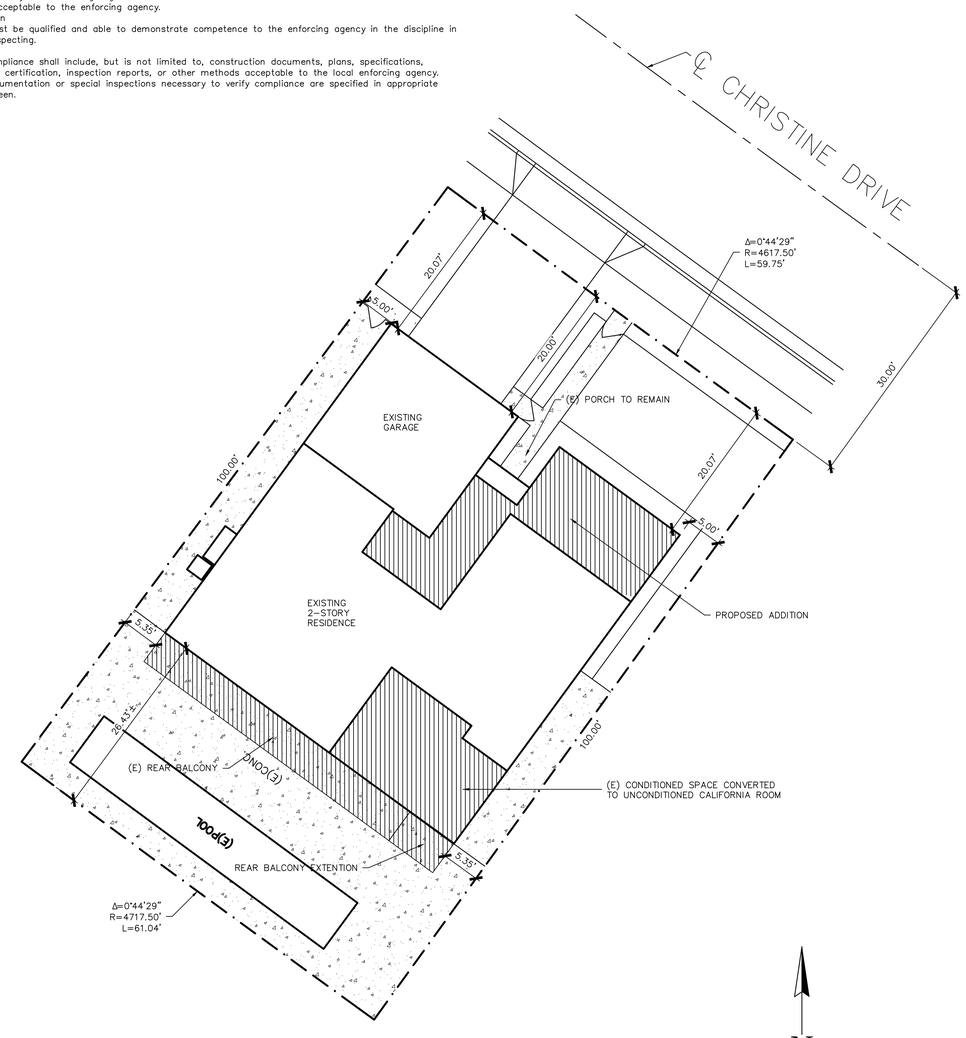
1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 Special inspection

Special inspectors must be qualified and able to demonstrate competence to the enforcing agency in the discipline in which they are inspecting.

703.1 Documentation

Documentation of compliance shall include, but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the local enforcing agency. Other specific documentation or special inspections necessary to verify compliance are specified in appropriate sections of CALGreen.



SITE PLAN 1"=10'

PER THE 2019 BUILDING REGULATIONS, PROVIDE A MINIMUM 2% SLOPE AWAY FROM BUILDING FOUNDATIONS A MINIMUM OF 10 FEET OR TO AN APPROVED DRAINAGE DISCHARGE.

NO.	DATE	REVISIONS	BY/CHK.

DES. S.D.M. | DRW. S.D.M. | CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS
FOR
MICHAEL HOPKINS & IRENE MORCOS
LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
LOT 208, TRACT 3903

AGAPE CIVIL ENGINEERING, INC.
STEPHEN D. MILLER – Registered Civil Engineer
CIVIL ENGINEERING – COMMERCIAL & RESIDENTIAL DESIGN & ENGINEERING
P.O. BOX 8504, LONG BEACH, CALIFORNIA 90808 – (661) 472–9575
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268–2204_rev1.dwg

January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C58692 CIVIL STATE OF CALIFORNIA

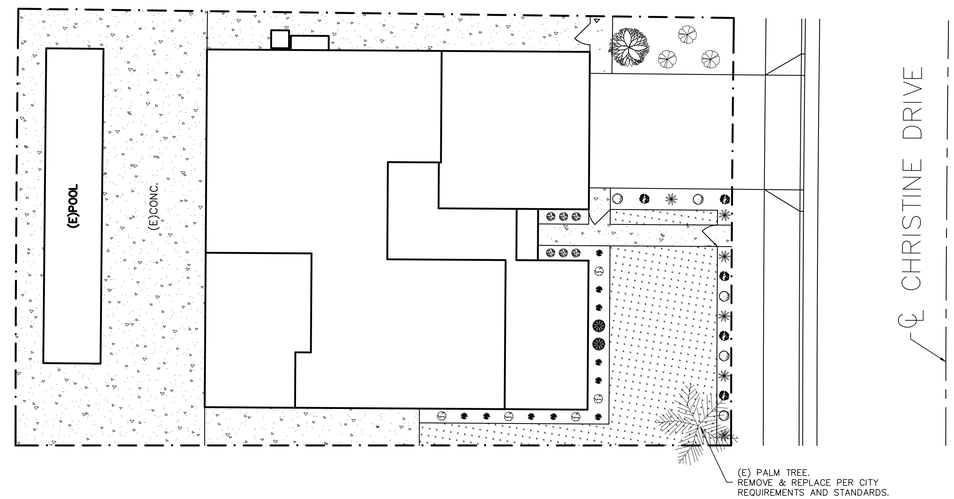
SHEET	OF
2	17

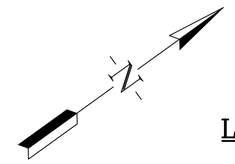
JOB NO. 268–2204

PUBLIC WORKS REQUIREMENTS

THE FOLLOWING DEVELOPMENT REQUIREMENTS SHALL BE COMPLETED PRIOR TO FRAMING INSPECTION:

1. Curb, gutter and sidewalk along the frontage shall be removed and replaced per Public Works Standard Plan Nos. 202 and 207. (ZSO 230.84)
2. The driveway approach shall be removed and replaced per Public Works Standard Plan No. 209. (ZSO 230.84)
3. A new cleanout shall be installed on the existing sewer lateral per Public Works Standard Plan No. 508. (ZSO 230.84)
4. The existing street tree shall be removed prior to public improvements and replaced with a similar City-approved palm tree after the new curb, gutter, and sidewalk is completed. (ZSO 230.84)
5. The existing sewer lateral may potentially be utilized if it is of adequate size, conforms to current Public Works Standards and is determined to be in serviceable condition by submitting a video of the existing lateral (to the City Public Works Department for review). If the sewer is determined to be inadequate, a new sewer lateral shall be installed, connecting to the main in the street or alley, per Public Works Standards. (ZSO 230.84)
6. The existing domestic water service currently serving the existing development may potentially be utilized if it is of adequate size, conforms to current standards, and are in working condition as determined by the Water Inspector. If the property owner elects to utilize the existing water service, any non-conforming water service, meter, and backflow protection device shall be upgraded to conform to the current Water Division Standards. Alternatively, a new separate domestic water service, meter and backflow protection device may be installed per Water Division Standards and shall be sized to meet the minimum requirements set by the California Plumbing Code (CPC) and Uniform Fire Code (UFC). (ZSO 230.84)
7. The existing domestic water service and meter, if not being used, shall be abandoned per Water Division Standards. (ZSO 230.84)





LANDSCAPE PLAN 1"=10'

LANDSCAPING BREAKDOWN:

FRONT YARD AREA (TOTAL):	1373 S.F.
FRONT YARD LANDSCAPED:	931 S.F.
FRONT YARD PAVED:	442 S.F.
%LANDSCAPED:	67.8%

- COLEONEMA PULCHELLUM
- SPANISH LAVENDAR
- FLORIBUNDA ROSE
- VERBENA
- MEXICAN FEATHER GRASS
- ARTEMISIA 'POWIS CASTLE'
- PEROVSKIA 'RUSSIAN SAGE'
- PLUMERIA
- STAR JASMINE
- BUFFALO GRASS

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January 9, 2023

REGISTERED PROFESSIONAL ENGINEER
STEPHEN MILLER
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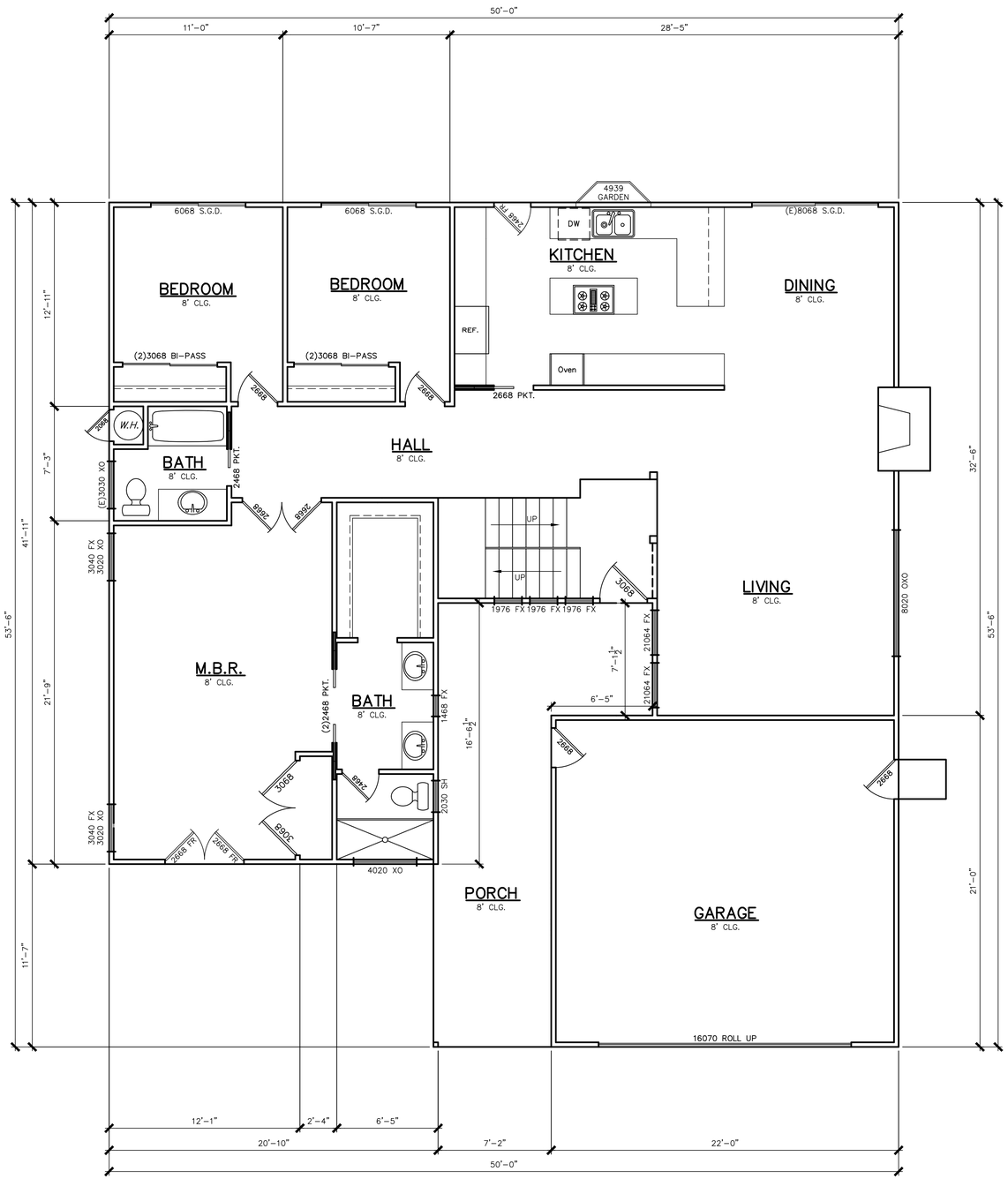
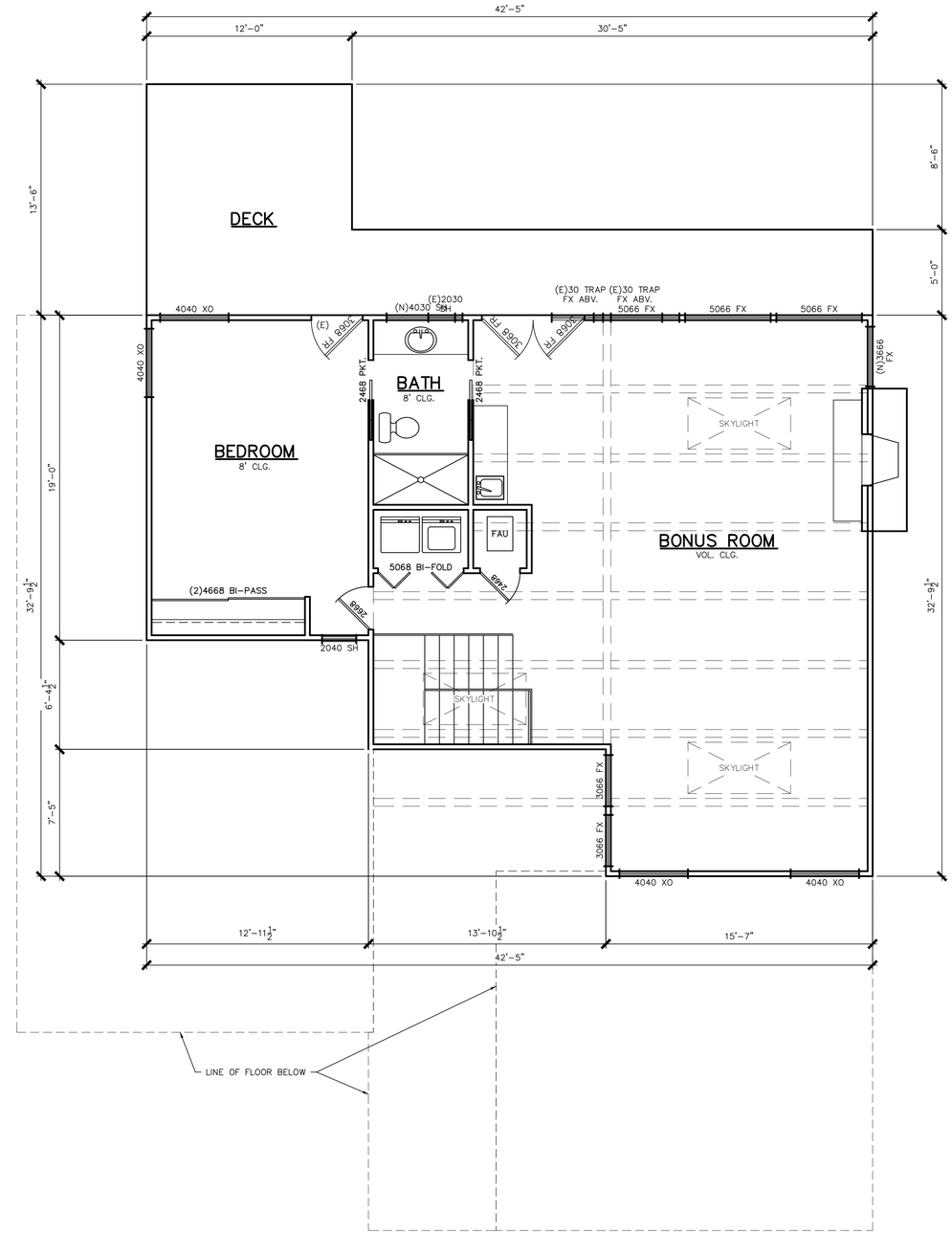
SHEET 3 OF 17

JOB NO. 268-2204



EXISTING LOWER LEVEL FLOOR PLAN 1/4" = 1'-0"



EXISTING UPPER LEVEL FLOOR PLAN 1/4" = 1'-0"

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January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C58592 CIVIL STATE OF CALIFORNIA

SHEET	OF
4	17

JOB NO. 268-2204

SHEARWALL SCHEDULE

		SILL PLATE NAILING	SHEAR VALUE
1	3/8" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@6" O.C. EDGES, 12" O.C. FIELD.	16d @ 6" o.c.	280 plf
2	3/8" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@4" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 4" o.c.	430 plf
3	3/8" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@3" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 3" o.c.	550 plf
4	7/16" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@6" O.C. EDGES, 12" O.C. FIELD.	16d @ 6" o.c.	280 plf
5	7/16" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@4" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 4" o.c.	430 plf
6	7/16" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@3" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 3" o.c.	550 plf
7	15/32" STRUC. I WOOD STRUCTURAL PANEL WITH 10d@3" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 3" o.c.	665 plf
8	15/32" STRUC. I WOOD STRUCTURAL PANEL WITH 10d@2" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 2" o.c.	870 plf
S	7/8" STUCCO PER CRC R703.6, (NO FOAM) OR CBC TABLE 2306.3.3 (NO FOAM).	16d @ 8" o.c.	180 plf
C	6" MINIMUM CONCRETE SHEARWALL OR 8" C.M.U. WALL		2135 plf

- ASSUMES STUD FRAMING AT 16" o.c. FOR FRAMING AT 24" o.c. USE 15/32" WOOD STRUCTURAL PANEL IN PLACE OF 3/8" WOOD STRUCTURAL PANEL.
- SHEARWALLS SHALL BE CONTINUOUS FROM FOOTING OR FLOOR SHEATHING TO SHEATHING OF ROOF OR FLOOR LEVEL ABOVE, U.O.N.
- DRAG TRUSSES, IF USED, WILL ADEQUATELY TRANSFER SHEAR FROM TOP PLATE TO ROOF SHEATHING.

SEE FOUNDATION PLAN FOR ANCHOR BOLT AND HOLD DOWN SCHEDULES

GENERAL NOTES

1. 2x4 @ 16" O.C. WALLS
2. 8' PLATE HEIGHT (TYPICAL U.O.N.)
3. PLATE HEIGHTS ARE FROM CONCRETE SLAB F.F.
4. STUCCO EXTERIOR FINISH
5. ½" GYP BOARD WALL AND CEILING COVER
6. SEE CONTRACTOR / OWNERS FOR ALL FIXTURES, APPLIANCES, CABINETS, AND FLOOR COVERING PREFERENCES.
7. GLASS MAT GYPSUM BACKING PANEL (ASTM C1178), FIBER-REINFORCED GYPSUM PANELS (ASTM C1278), NON-ASBESTOS FIBER-CEMENT BACKER BOARD (ASTM 1288 OR ISO 8336, CATEGORY C), OR NON-ASBESTOS FIBER MAT REINFORCED CEMENTITIOUS BACKER UNITS (ASTM C1325) SHALL BE USED AS A BASE FOR WALL TILES IN TUB AND SHOWER AREAS. GREEN BOARD IS NOT ACCEPTABLE.
8. DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DRAWINGS. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE DESIGNER, CONTRACTOR AND ENGINEER OF RECORD.
9. WEEP SCREED TO BE 2" MIN. ABOVE PAVED AREAS & 4" MIN. ABOVE DIRT.
10. ALL NOTED HARDWARE IS SIMPSON U.O.N.
11. ATTIC ACCESS MUST BE A MINIMUM 22" X 30" WITH 30" CLEAR HEADROOM. ATTIC ACCESS DOOR SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE.
12. PER C.R.C. R302.5.2, DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING UNIT FROM THE GARAGE SHALL BE A MINIMUM OF 26 GAUGE STEEL (0.019" SHEET STEEL) AND SHALL HAVE NO OPENING INTO THE GARAGE.
13. PROVIDE A SIX SQUARE INCH AREA INTAKE FROM THE EXTERIOR AT THE FIRE BOX (UNLESS THE FIRE BOX IS ON A SLAB AND IT IS NOT LOCATED ON AN EXTERIOR WALL).
14. SAFETY GLAZING SHALL BE REQUIRED WHEN BOTH WITHIN 24" OF EITHER EDGE OF A DOOR AND WITHIN 60" OF A WALKING SURFACE, OR IN A TUB OR SHOWER ENCLOSURE WITHIN 60" VERTICALLY OF A WALKING OR STANDING SURFACE OR DRAIN.
15. PER R703.2 15# FELT SHALL BE ATTACHED TO STUDS OR SHEATHING BEHIND EXTERIOR WALL VENEER.
16. PROVIDE A MINIMUM 1" AIR GAP BETWEEN ROOF SHEATHING AND INSULATION AT VENT LOCATIONS.
17. IN ADDITION TO INSULATION REQUIREMENTS, ALL DOMESTIC HOT WATER PIPES THAT ARE BURIED BELOW GRADE SHALL BE INSTALLED IN A WATERPROOF, NON-CRUSHABLE CASING OR SLEEVE THAT ALLOWS FOR INSTALLATION, REMOVAL, AND REPLACEMENT OF THE ENCLOSED PIPE AND INSULATION.
18. THE DOOR BETWEEN THE GARAGE AND THE DWELLING UNIT SHALL BE A SOLID CORE WOOD, OR SOLID OR HONEYCOMB CORE STEEL DOOR NOT LESS THAN 1⅜" THICK, OR 20 MINUTE RATED, SELF-CLOSING AND SELF-LATCHING. IF GARAGE AND DWELLING CONTAIN AN AUTOMATED FIRE SPRINKLER SYSTEM, THE DOOR NEED ONLY BE SELF-CLOSING AND SELF LATCHING.
19. THE LANDING ON EACH SIDE OF THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1½" LOWER THAN THE TOP OF THE THRESHOLD, EXCEPT THE EXTERIOR LANDING SHALL NOT BE MORE THAN 7¾" BELOW THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING.
20. THE LANDING ON EACH SIDE OF DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 7¾" BELOW THE THRESHOLD, EXCEPT A LANDING IS NOT REQUIRED WHERE A STAIRWAY OF 2 OR FEWER RISERS IS LOCATED AT THE EXTERIOR SIDE OF THE DOOR AND THE DOOR DOES NOT SWING OVER THE STAIRWAY.
21. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH SHOWERS AND SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A HEIGHT OF 6' ABOVE FINISHED FLOOR (R307.2 CRC).
22. MECHANICAL AND GRAVITY AIR INTAKE VENTS SHALL BE LOCATED A MINIMUM OF 10' FROM CHIMNEYS.

WINDOW EGRESS NOTE:

WINDOW SUPPLIER SHALL BE RESPONSIBLE FOR VERIFYING THAT THEIR SUPPLIED WINDOWS FOR THIS PROJECT SHALL MEET MINIMUM WIDTH & HEIGHT REQUIREMENTS PER CURRENT C.R.C. FOR EGRESS FROM BEDROOM WINDOWS AS SHOWN ON THESE PLANS.

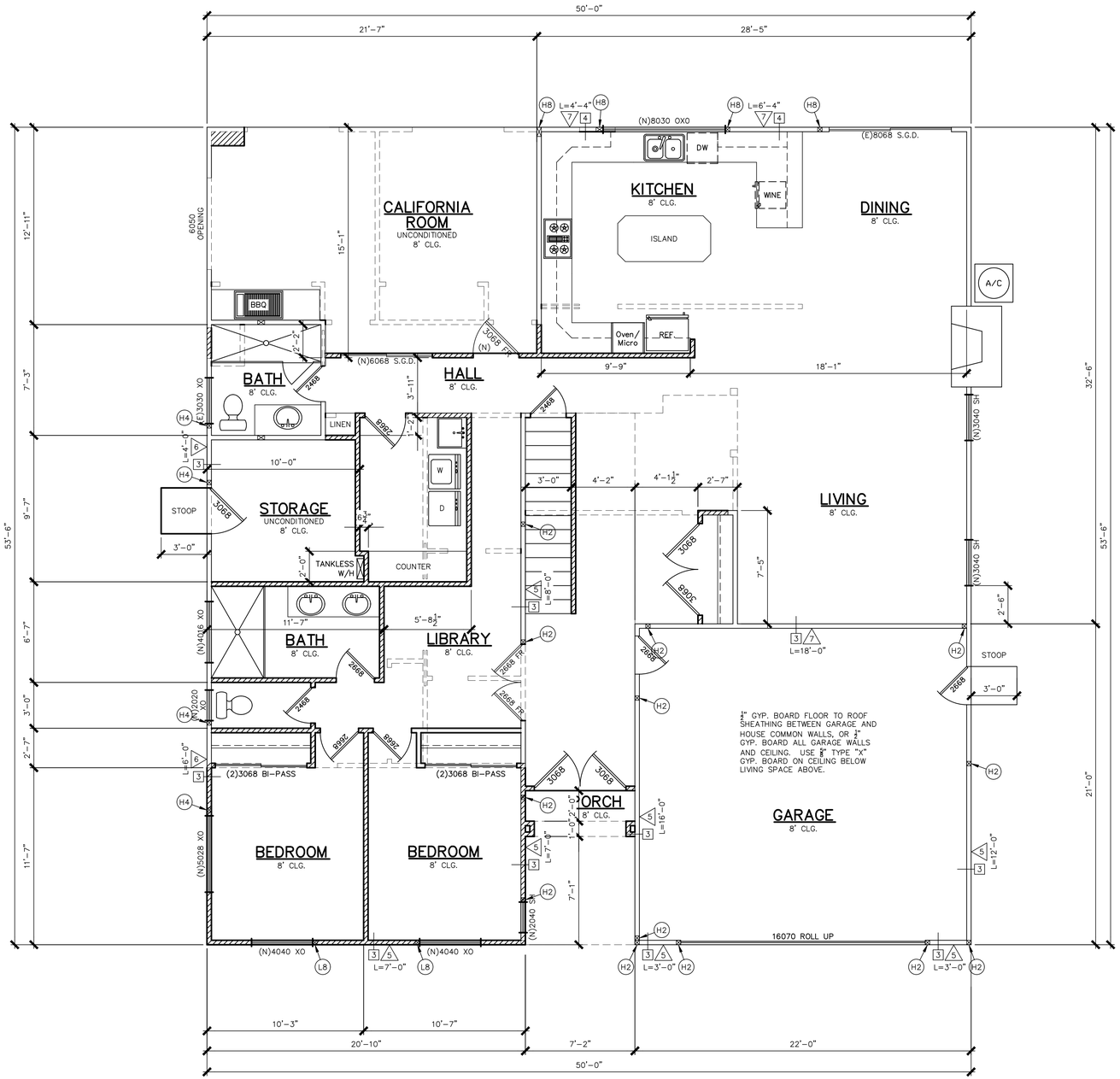
THE ELECTRICAL PANEL MAY NOT BE LOCATED WITHIN A SHEAR WALL

HOLDDOWN SCHEDULE

SIMPSON

- L8 = LSTHD8
- S10 = STHD10
- S14 = STHD14
- M48 = MST48 FLOOR TO FLOOR
- M60 = MST60 FLOOR TO FLOOR
- M72 = MST72 FLOOR TO FLOOR
- H2 = HDU2 (OR PHD2) & SSTB24 (ALT: ⅝" ALL-THREAD EPOXIED 10" MIN. W/ SIMPSON SET-XP EPOXY. SPECIAL OBSERVATION REQUIRED.)
- H4 = HDU4 (OR PHD5) & SSTB24 (ALT: ⅝" ALL-THREAD EPOXIED 10" MIN. W/ SIMPSON SET-XP EPOXY. SPECIAL OBSERVATION REQUIRED.)
- H5 = HDU5 (OR PHD5) & SSTB24 (ALT: ⅝" ALL-THREAD EPOXIED 10" MIN. W/ SIMPSON SET-XP EPOXY. SPECIAL OBSERVATION REQUIRED.)
- H8 = HDU8 & SSTB28 (ALT: ⅝" ALL-THREAD EPOXIED 15" MINIMUM W/ SIMPSON SET-XP EPOXY, SPECIAL OBSERVATION REQUIRED.)
- H11 = HHDQ11 W/1"ø x 24" A.B.
- H14 = HHDQ14 W/1"ø x 24" A.B.
- H15 = HD15 W/6x POST & 1⅜" DIA. x 30" A.B.

ALL HOLDDOWNS SHALL BE INSTALLED WITH 4x POST U.O.N.



PROPOSED LOWER LEVEL FLOOR PLAN 1/4" = 1'-0"

NO.	DATE	REVISIONS	BY/CHK.

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268-2204_rev1.dwg

January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C52602 CIVIL STATE OF CALIFORNIA

SHEET	OF
5	17

JOB NO. 268-2204

SHEARWALL SCHEDULE

		SILL PLATE NAILING	SHEAR VALUE
1	3/8" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@6" O.C. EDGES, 12" O.C. FIELD.	16d @ 6" o.c.	280 plf
2	3/8" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@4" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 4" o.c.	430 plf
3	3/8" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@3" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 3" o.c.	550 plf
4	7/16" STRUC. I WOOD STRUCTURAL PANEL WITH 8d@6" O.C. EDGES, 12" O.C. FIELD.	16d @ 6" o.c.	280 plf
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8	15/32" STRUC. I WOOD STRUCTURAL PANEL WITH 10d@2" O.C. EDGES, 12" O.C. FIELD. USE 3x FRAMING AT ADJOINING PANEL EDGES.	16d @ 2" o.c.	870 plf
9	7/8" STUCCO PER CRC R703.6, (NO FOAM) OR CBC TABLE 2306.3.3 (NO FOAM).	16d @ 8" o.c.	180 plf
C	6" MINIMUM CONCRETE SHEARWALL OR 8" C.M.U. WALL		2135 plf

- ASSUMES STUD FRAMING AT 16" o.c. FOR FRAMING AT 24" o.c. USE 15/32" WOOD STRUCTURAL PANEL IN PLACE OF 3/8" WOOD STRUCTURAL PANEL.
- SHEARWALLS SHALL BE CONTINUOUS FROM FOOTING OR FLOOR SHEATHING TO SHEATHING OF ROOF OR FLOOR LEVEL ABOVE, U.O.N.
- DRAG TRUSSES, IF USED, WILL ADEQUATELY TRANSFER SHEAR FROM TOP PLATE TO ROOF SHEATHING.

SEE FOUNDATION PLAN FOR ANCHOR BOLT AND HOLD DOWN SCHEDULES

GENERAL NOTES

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2. 8' PLATE HEIGHT (TYPICAL U.O.N.)
3. PLATE HEIGHTS ARE FROM CONCRETE SLAB F.F.
4. STUCCO EXTERIOR FINISH
5. ½" GYP BOARD WALL AND CEILING COVER
6. SEE CONTRACTOR / OWNERS FOR ALL FIXTURES, APPLIANCES, CABINETS, AND FLOOR COVERING PREFERENCES.
7. GLASS MAT GYPSUM BACKING PANEL (ASTM C1178), FIBER-REINFORCED GYPSUM PANELS (ASTM C1278), NON-ASBESTOS FIBER-CEMENT BACKER BOARD (ASTM 1288 OR ISO 8336, CATEGORY C), OR NON-ASBESTOS FIBER MAT REINFORCED CEMENTITIOUS BACKER UNITS (ASTM C1325) SHALL BE USED AS A BASE FOR WALL TILES IN TUB AND SHOWER AREAS. GREEN BOARD IS NOT ACCEPTABLE.
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10. ALL NOTED HARDWARE IS SIMPSON U.O.N.
11. ATTIC ACCESS MUST BE A MINIMUM 22" X 30" WITH 30" CLEAR HEADROOM. ATTIC ACCESS DOOR SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE.
12. PER C.R.C. R302.5.2, DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING UNIT FROM THE GARAGE SHALL BE A MINIMUM OF 26 GAUGE STEEL (0.019" SHEET STEEL) AND SHALL HAVE NO OPENING INTO THE GARAGE.
13. PROVIDE A SIX SQUARE INCH AREA INTAKE FROM THE EXTERIOR AT THE FIRE BOX (UNLESS THE FIRE BOX IS ON A SLAB AND IT IS NOT LOCATED ON AN EXTERIOR WALL).
14. SAFETY GLAZING SHALL BE REQUIRED WHEN BOTH WITHIN 24" OF EITHER EDGE OF A DOOR AND WITHIN 60" OF A WALKING SURFACE, OR IN A TUB OR SHOWER ENCLOSURE WITHIN 60" VERTICALLY OF A WALKING OR STANDING SURFACE OR DRAIN.
15. PER R703.2 15# FELT SHALL BE ATTACHED TO STUDS OR SHEATHING BEHIND EXTERIOR WALL VENEER.
16. PROVIDE A MINIMUM 1" AIR GAP BETWEEN ROOF SHEATHING AND INSULATION AT VENT LOCATIONS.
17. IN ADDITION TO INSULATION REQUIREMENTS, ALL DOMESTIC HOT WATER PIPES THAT ARE BURIED BELOW GRADE SHALL BE INSTALLED IN A WATERPROOF, NON-CRUSHABLE CASING OR SLEEVE THAT ALLOWS FOR INSTALLATION, REMOVAL, AND REPLACEMENT OF THE ENCLOSED PIPE AND INSULATION.
18. THE DOOR BETWEEN THE GARAGE AND THE DWELLING UNIT SHALL BE A SOLID CORE WOOD, OR SOLID OR HONEYCOMB CORE STEEL DOOR NOT LESS THAN 1⅜" THICK, OR 20 MINUTE RATED, SELF-CLOSING AND SELF-LATCHING. IF GARAGE AND DWELLING CONTAIN AN AUTOMATED FIRE SPRINKLER SYSTEM, THE DOOR NEED ONLY BE SELF-CLOSING AND SELF LATCHING.
19. THE LANDING ON EACH SIDE OF THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 1½" LOWER THAN THE TOP OF THE THRESHOLD, EXCEPT THE EXTERIOR LANDING SHALL NOT BE MORE THAN 7¾" BELOW THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING.
20. THE LANDING ON EACH SIDE OF DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 7¾" BELOW THE THRESHOLD, EXCEPT A LANDING IS NOT REQUIRED WHERE A STAIRWAY OF 2 OR FEWER RISERS IS LOCATED AT THE EXTERIOR SIDE OF THE DOOR AND THE DOOR DOES NOT SWING OVER THE STAIRWAY.
21. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH SHOWERS AND SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A HEIGHT OF 6' ABOVE FINISHED FLOOR (R307.2 CRC).
22. MECHANICAL AND GRAVITY AIR INTAKE VENTS SHALL BE LOCATED A MINIMUM OF 10' FROM CHIMNEYS.

WINDOW EGRESS NOTE:

WINDOW SUPPLIER SHALL BE RESPONSIBLE FOR VERIFYING THAT THEIR SUPPLIED WINDOWS FOR THIS PROJECT SHALL MEET MINIMUM WIDTH & HEIGHT REQUIREMENTS PER CURRENT C.R.C. FOR EGRESS FROM BEDROOM WINDOWS AS SHOWN ON THESE PLANS.

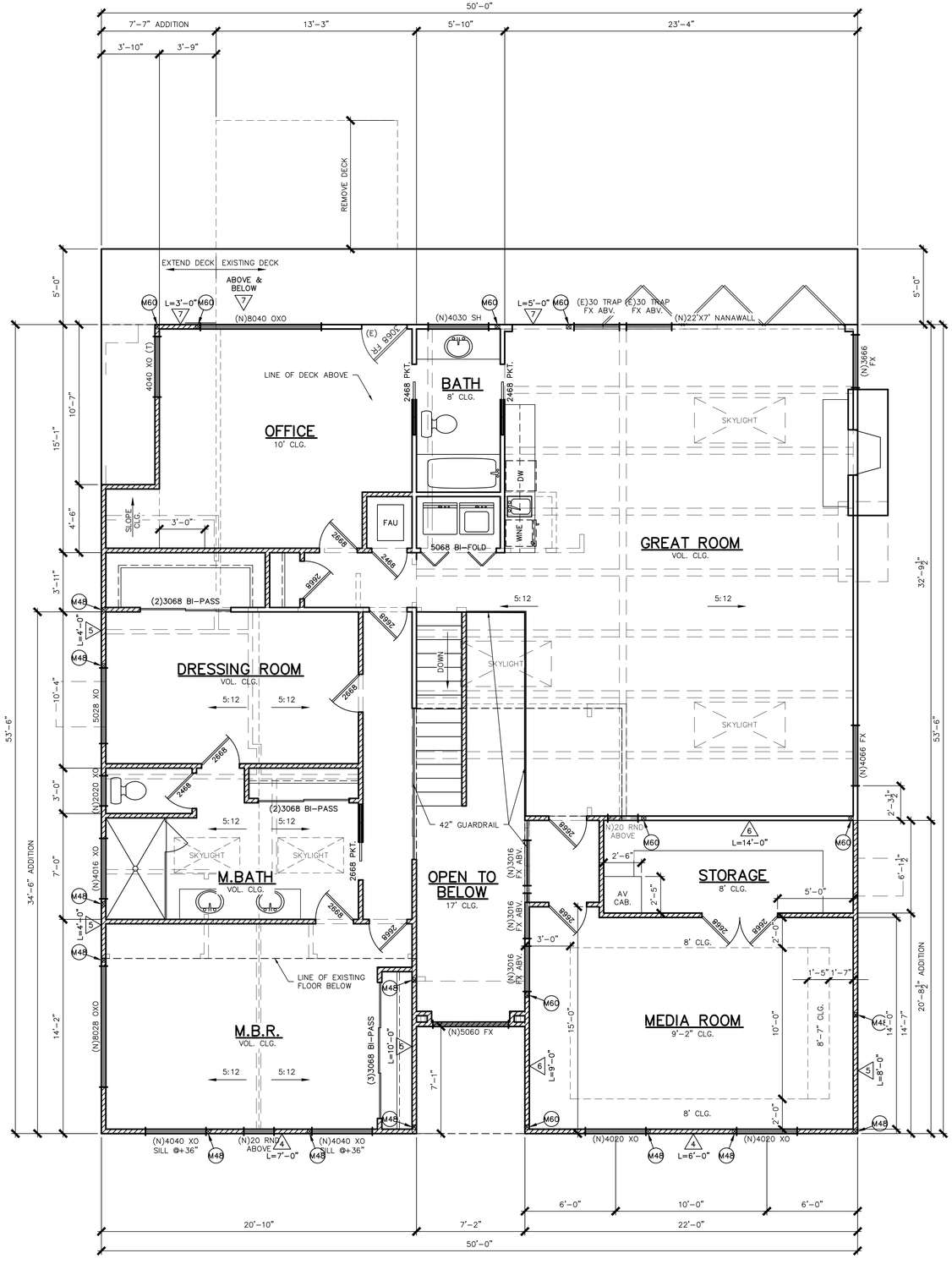
THE ELECTRICAL PANEL MAY NOT BE LOCATED WITHIN A SHEAR WALL.

HOLDDOWN SCHEDULE

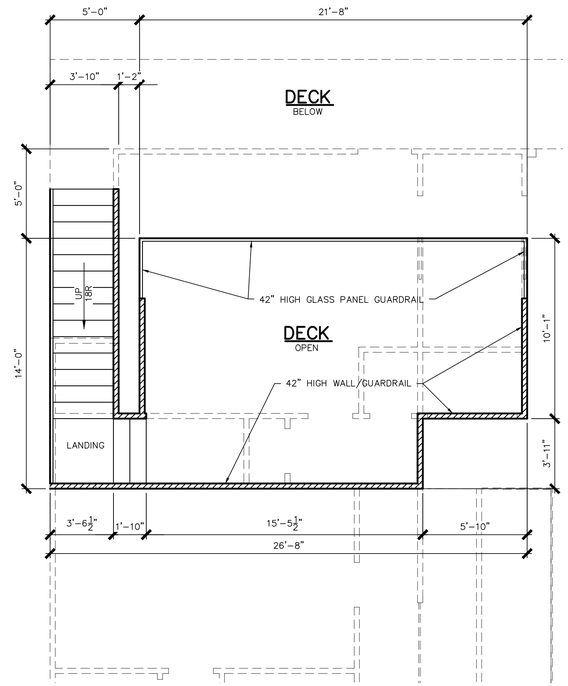
SIMPSON

- L8 = LSTHD8
- S10 = STHD10
- S14 = STHD14
- M48 = MST48 FLOOR TO FLOOR
- M60 = MST60 FLOOR TO FLOOR
- M72 = MST72 FLOOR TO FLOOR
- H2 = HDU2 (OR PHD2) & SSTB24 (ALT: ⅝" ALL-THREAD EPOXIED 10" MIN. W/ SIMPSON SET-XP EPOXY. SPECIAL OBSERVATION REQUIRED.)
- H4 = HDU4 (OR PHD5) & SSTB24 (ALT: ⅝" ALL-THREAD EPOXIED 10" MIN. W/ SIMPSON SET-XP EPOXY. SPECIAL OBSERVATION REQUIRED.)
- H5 = HDU5 (OR PHD5) & SSTB24 (ALT: ⅝" ALL-THREAD EPOXIED 10" MIN. W/ SIMPSON SET-XP EPOXY. SPECIAL OBSERVATION REQUIRED.)
- H8 = HDU8 & SSTB28 (ALT: ⅝" ALL-THREAD EPOXIED 15" MINIMUM W/ SIMPSON SET-XP EPOXY, SPECIAL OBSERVATION REQUIRED.)
- H11 = HHDQ11 W/1"ø x 24" A.B.
- H14 = HHDQ14 W/1"ø x 24" A.B.
- H15 = HD15 W/6x POST & 1⅛" DIA. x 30" A.B.

ALL HOLDDOWNS SHALL BE INSTALLED WITH 4x POST U.O.N.



PROPOSED UPPER LEVEL FLOOR PLAN 1/4" = 1'-0"



PROPOSED DECK FLOOR PLAN
1/4" = 1'-0"

WALL LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- NEW WALL

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FOR
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January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C58692 CIVIL STATE OF CALIFORNIA

SHEET	OF
6	17

JOB NO. 268-2204

ANCHOR BOLT SCHEDULE

PER CRC R403.1.6 MINIMUM ANCHOR BOLT EMBEDMENT 7" INTO FOUNDATION FOOTING.

		1/2"x10" SPACING	5/8"X10" SPACING	SHEAR VALUE (lb/ft)
1	2X SILL PLATE	48" o.c.	72" o.c.	205
2		36" o.c.	48" o.c.	308
3		16" o.c.	24" o.c.	617
4		11" o.c.	16" o.c.	926
5		8" o.c.	12" o.c.	1235
		1/2"x12" SPACING	**5/8"X12" SPACING**	**SHEAR VALUE (lb/ft)**
6	2X SILL PLATE	10" o.c.	16" o.c.	1182
7		-----.	12" o.c.	1576
8		1"x10" A.B. @ 12" o.c		2042
9		1"x10" A.B. @ 12" o.c.		3204

SEE FLOOR PLAN FOR SHEAR SCHEDULE

PAD FOOTING SCHEDULE

A	18"SQ. x 24"DP. w/3-#4 EA. WAY
B	24"SQ. x 24"DP. w/3-#4 EA. WAY
C	27"SQ. x 24"DP. w/4-#4 EA. WAY
D	30"SQ. x 24"DP. w/4-#4 EA. WAY
E	33"SQ. x 24"DP. w/5-#4 EA. WAY
F	36"SQ. x 24"DP. w/5-#4 EA. WAY
G	39"SQ. x 24"DP. w/5-#4 EA. WAY
H	42"SQ. x 24"DP. w/5-#5 EA. WAY
J	45"SQ. x 24"DP. w/5-#5 EA. WAY
K	48"SQ. x 24"DP. w/5-#5 EA. WAY

HOLDDOWN SCHEDULE

SIMPSON

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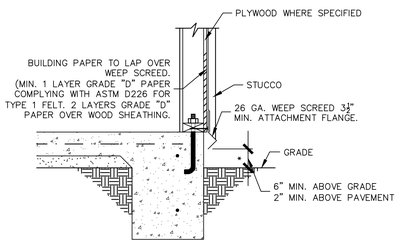
- H11 = HHDQ11 W/1"ø x 24" A.B.
- H14 = HHDQ14 W/1"ø x 24" A.B.
- H15 = HD15 W/6x POST & 1 3/4" DIA. x 30" A.B.

ALL HOLDDOWNS SHALL BE INSTALLED WITH 4x POST U.O.N.

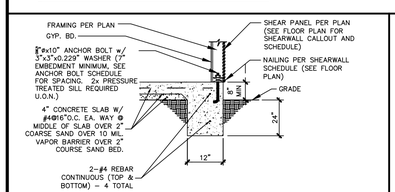
FOUNDATION NOTES

1. ANCHOR BOLTS SHALL BE 5/8" x 10" A.B. AT 72" o.c. U.O.N. (MAX)
2. ANCHOR BOLTS SHALL BE LOCATED AS FOLLOWS:
   - 2.1. WITHIN 12" OF A PLATE SPLICE ON EXTERIOR WALLS.
   - 2.2. WITHIN 12" OF THE END OF A SHEAR PANEL(INTERIOR AND EXTERIOR).
   - 2.3. MINIMUM OF TWO BOLTS PER PIECE.
3. RETRO-FIT BOLT REQUIREMENTS:
   - 3.1. EXTERIOR WALLS-USE ONLY AN APPROVED EPOXY SYSTEM, NO EXPANDING ANCHORS ALLOWED. ALT: 5/8"X6" TITEN-HD.
   - 3.2. INTERIOR WALLS-EXPANDING ANCHORS ARE ACCEPTABLE.
   - 3.3. ALL EPOXIED RETRO-FIT ANCHORS SHALL BE INSTALLED IN THE PRESENCE OF A BUILDING INSPECTOR, ENGINEER, ARCHITECT OR APPROVED INSPECTION COMPANY. REPORT SHALL BE FORWARDED TO ENGINEER & BUILDING INSPECTOR.
4. ALL BOLTS SHALL USE 3"x3"x0.229" STEEL PLATE WASHERS PER C.R.C. R602.11. SLOTTED WASHERS MAY BE USED PROVIDED STANDARD CUT WASHERS ARE USED IN CONJUNCTION WITH THE SLOTTED WASHERS.
5. ALL BOLT HOLES SHALL BE DRILLED 1/16"-1/8" OVERSIZED.
6. ALL LUMBER IN CONTACT w/CONCRETE OR MASONRY TO BE PRESSURE TREATED.
7. ALL SSTB/STB ANCHORS & H15/TD15 A.B. TO HAVE EXTENDED DEPTH FOOTINGS AS NECESSARY PER MANUFACTURER'S SPECIFICATIONS.
8. ALL HOLD DOWNS AND HOLD DOWN BOLTS SHALL BE IN PLACE PRIOR TO FOUNDATION INSPECTION/POURING TO VERIFY SIZE, TYPE AND LOCATION.
9. HOLD DOWN LOCATIONS ASSUME WINDOW AND DOOR SIZES TO BE AS CALLED OUT ON PLANS. CONTRACTOR TO VERIFY ACTUAL LOCATION PRIOR TO CONCRETE POUR.
10. ACTUAL LOCATION OF HOLD DOWNS MAY VARY DEPENDING ON ROUGH OPENINGS REQUIRED BY WINDOW AND DOOR MANUFACTURER. VERIFY LOCATION WITH FRAMING CONTRACTOR.
11. ALL NOTED HARDWARE IS SIMPSON U.O.N.
12. PER C.B.C./C.R.C., CONCRETE IN FOOTINGS SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 2,500 PSI IN 28 DAYS.
13. REBAR SHALL BE GRADE 40 (40000 PSI).

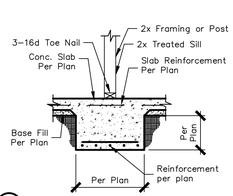
THE ELECTRICAL PANEL MAY NOT BE LOCATED WITHIN A SHEAR WALL.



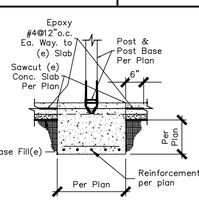
WEEP SCREED DETAIL



1 TYP. PERIMETER FOOTING DTL.

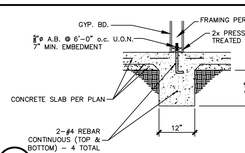


5 PIER FOOTING IN SLAB

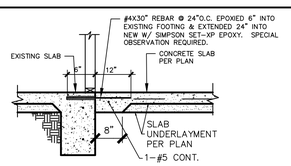


5B PIER FOOTING RETROFIT

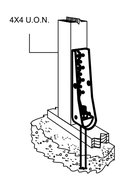
Note: Epoxy shall be Simpson SET-XP (ESR#2508). Continuous special inspection required.



3 TYP. INTERIOR FOOTING DTL.

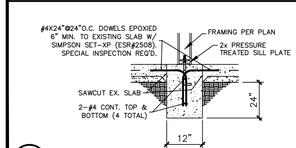


4 SHOVEL FOOTING W/DOWEL

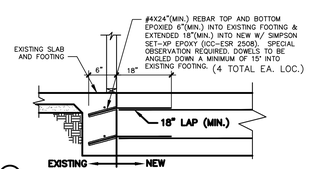


HDU5 (HDU2, HDU4, HDU8, HDU11, and HDU14 similar)

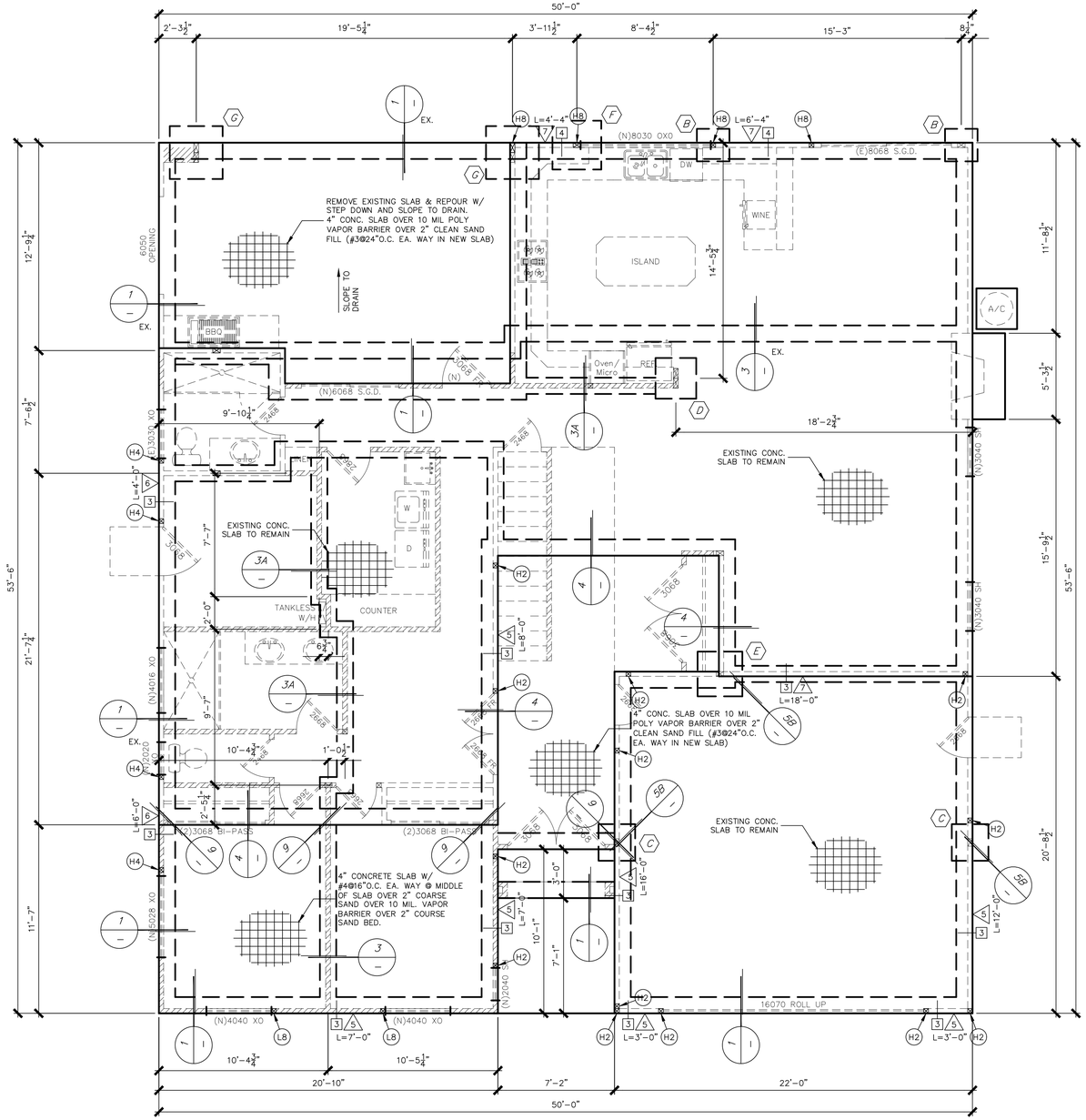
6 HOLD DOWN DETAIL



3A INTERIOR SAWCUT FOOTING DTL.



9 NEW FOOTING CONNECTION TO EXISTING



FOUNDATION PLAN 1/4" = 1'-0"

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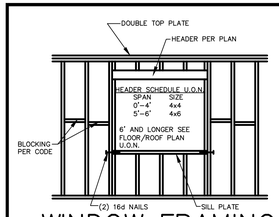
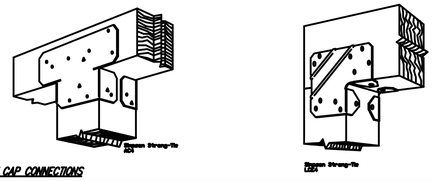
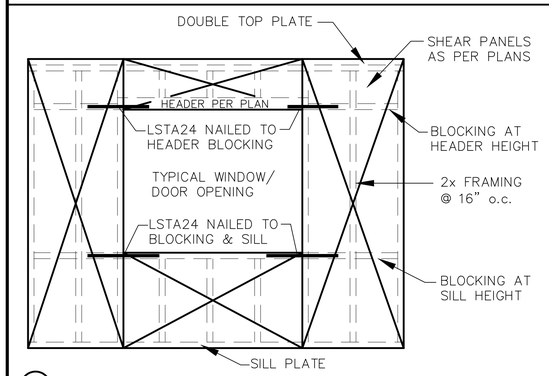


WINDOW FRAMING



TYPICAL POST CAP CONNECTIONS

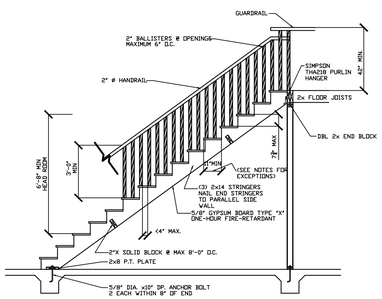


Ⓒ SHEAR TRANSFER AT WINDOW / DOOR OPENINGS

(WHERE OCCURS AS CALLED OUT ON PLANS)

FLOOR FRAMING GENERAL NOTES:

1. 2X10@12"O.C. MAX. SPAN = 16'-4".
2. 2X10@16"O.C. MAX. SPAN = 14'-1".
3. 2X10@24"O.C. MAX. SPAN = 11'-6".
4. $\frac{3}{4}$" T&G SUB-FLOOR WITH 8D@6"O.C. BOUNDARY & EDGES, 12"O.C. FIELD.
5. SUB-FLOOR TO BE GLUED AND NAIL WITH RINGSHANK NAILS.
6. DOUBLE FLOOR JOISTS BELOW PARALLEL WALLS.
7. INSTALL BLOCKING BELOW PERPENDICULAR WALL.
8. 2X10 DF#2 RIM JOIST.



STAIRWAY DETAIL

HEADROOM: STAIRS SHALL HAVE A MINIMUM HEADROOM CLEARANCE OF 6'-8" MEASURED VERTICALLY FROM THE EDGE OF THE NOSING TO THE CEILING DIRECTLY ABOVE. THE MINIMUM CLEARANCE SHALL BE MAINTAINED THE FULL WIDTH OF THE STAIRWAY AND LANDING.

RISE & RUN: STAIR RISER HEIGHT SHALL BE 7$\frac{3}{4}$" MAXIMUM (IN R3 AND R2 CONSTRUCTION ONLY) AND 4" MINIMUM. STAIR TREAD DEPTHS SHALL BE 11" MINIMUM.

EXCEPTION—A STAIR TREAD DEPTH OF 10" MINIMUM IS ALLOWED WITH THE ADDITION OF A NOSING NO LESS THAN $\frac{3}{4}$" BUT NOT EXCEEDING 1$\frac{1}{4}$". STAIR TREADS AND RISERS SHALL BE OF UNIFORM SIZE AND SHAPE. THE TOLERANCE BETWEEN THE LARGEST AND SMALLEST TREAD DEPTH AND RISER HEIGHT SHALL NOT EXCEED $\frac{3}{8}$".

WIDTH: STAIRWAYS SERVING AN OCCUPANCY LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36".

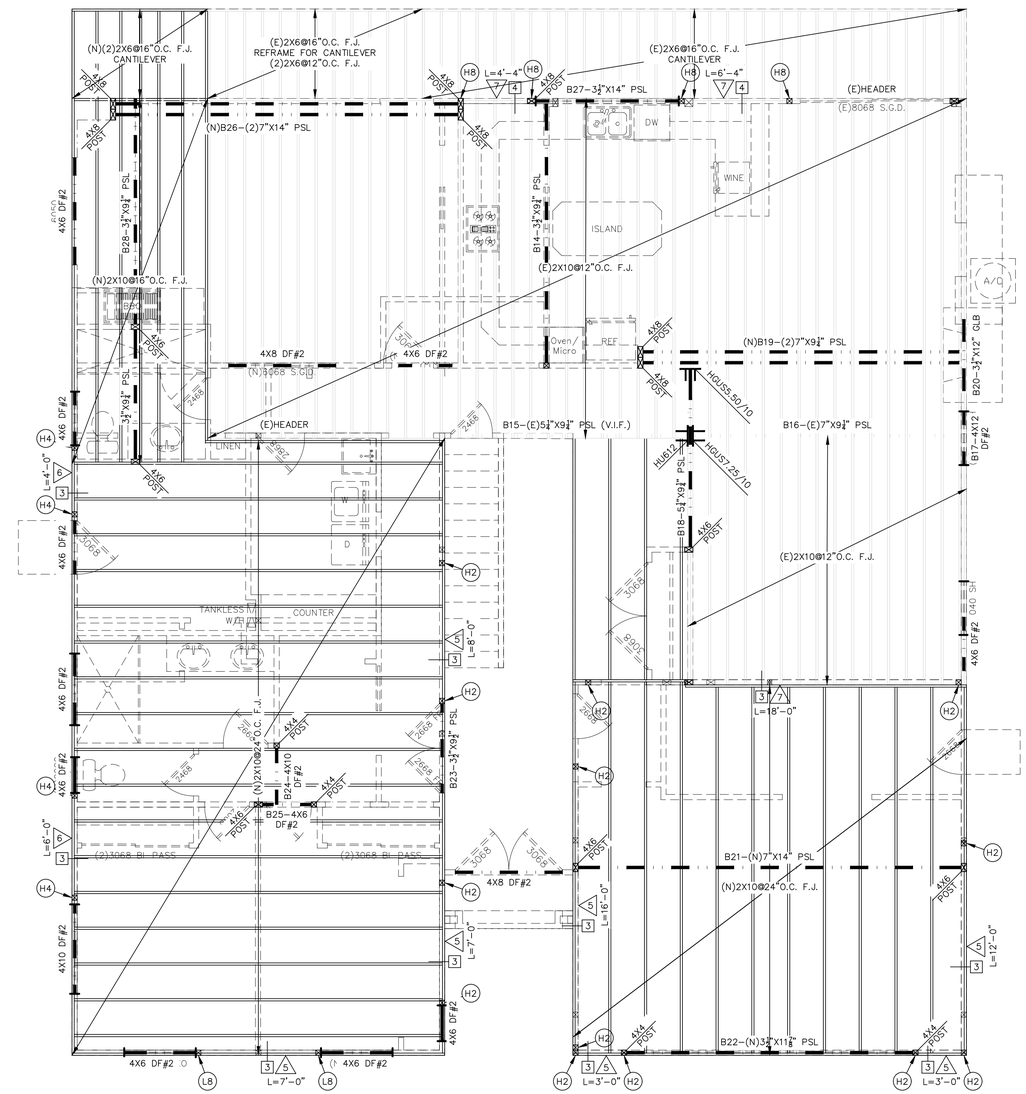
LANDINGS: A FLOOR OR LANDING SHALL BE PROVIDED AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE WIDTH OF THE LANDING AND LENGTH OF LANDING IN THE DIRECTION OF TRAVEL SHALL NOT BE LESS THAN THE WIDTH OF THE STAIRWAY, EXCEPT THE DIMENSION IN THE DIRECTION OF TRAVEL NEED NOT EXCEED 48". MAXIMUM VERTICAL RISE BETWEEN LEVELS OR LANDINGS IS 151".

EXCEPTION—A FLOOR OR LANDING IS NOT REQUIRED AT THE TOP OF AN INTERIOR FLIGHT OF STAIRS INCLUDING STAIRS IN AN ENCLOSED GARAGE, PROVIDED A DOOR DOES NOT SWING OVER THE STAIRS.

HANDRAILS: A HANDRAIL SHALL BE PROVIDED ON AT LEAST ONE SIDE OF THE STAIRWAY AND SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRWAY. HANDRAIL HEIGHT, MEASURED ABOVE STAIR TREAD NOSINGS SHALL BE UNIFORM, NOT LESS THAN 34" AND NOT MORE THAN 38". HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1$\frac{1}{4}$" AND NOT GREATER THAN 2" IF THE HAND RAIL IS NOT CIRCULAR IT SHALL HAVE A PERIMETER OF 4" AND NOT GREATER THAN 6$\frac{1}{4}$" WITH A MAXIMUM CROSS SECTION DIMENSION OF 2$\frac{1}{4}$" EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01".

HANDRAILS PROJECTING FROM A WALL SHALL BE PROVIDED WITH A CLEARANCE OF 1$\frac{1}{2}$".

GUARDRAILS: THE TOP OF GUARDRAILS SHALL NOT BE LESS THAN 36" IN HEIGHT WHEN ALSO SERVING AS A HANDRAIL. GUARDRAILS SHALL BE 42" MIN. ALL OTHER CONDITIONS. GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR AN ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH. THE TRIANGULAR OPENING FORMED BY THE STAIRWAY RISER TREAD AND BOTTOM ELEMENT OF THE GUARDRAIL SHALL BE OF SUCH SIZE THAT A 6" SPHERE CANNOT PASS THROUGH.



FLOOR FRAMING PLAN 1/4" = 1'-0"

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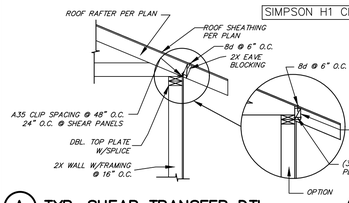
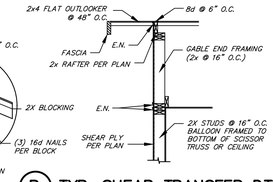
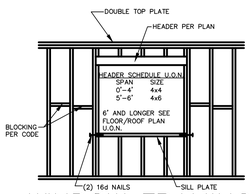


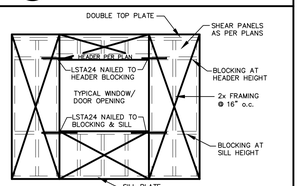
(A) TYP. SHEAR TRANSFER DTL.



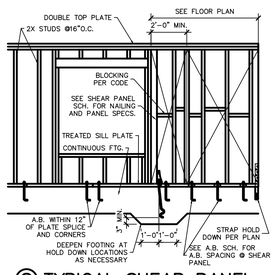
(B) TYP. SHEAR TRANSFER DTL.



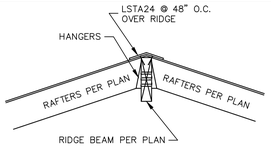
WINDOW FRAMING



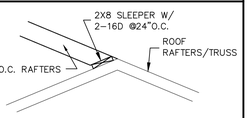
(C) SHEAR TRANSFER AT WINDOW / DOOR OPENINGS
(WHERE OCCURS AS CALLED OUT ON PLANS)



(S) TYPICAL SHEAR PANEL



(D) ROOF RIDGE DETAIL

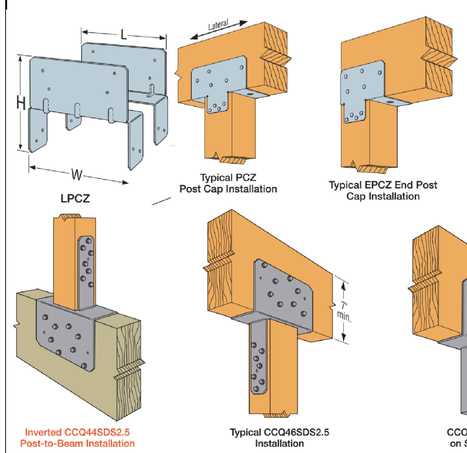


(E) CALIF. FRAMING DETAIL

ROOF GENERAL NOTES

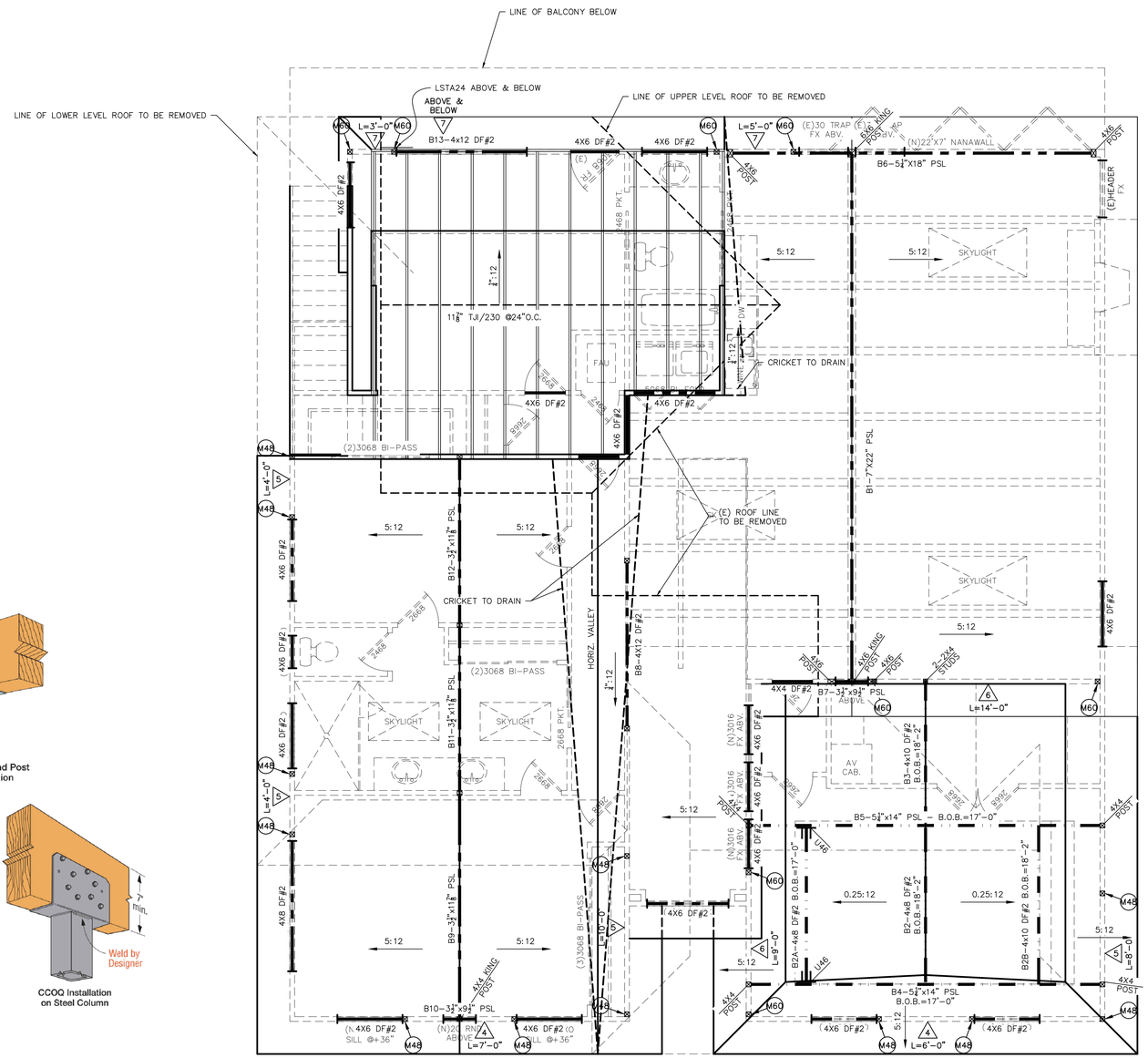
1. 2x6 R.R. @ 16"o.c. – MAXIMUM UNBRACED SPAN: 13'–0"
   2x6 R.R. @ 24"o.c. – MAXIMUM UNBRACED SPAN: 11'–1"
   2x8 R.R. @ 24"o.c. – MAXIMUM UNBRACED SPAN: 14'–0"
   2X12 R.R. @ 24"o.c. –MAXIMUM UNBRACED SPAN: 17'–6"
2. 2x6 C.J. @ 16" O.C. – MAX. SPAN = 14'–9"
   2x6 C.J. @ 16" O.C. (STUCCO LID) – MAX. SPAN = 12'–7"
   2x8 C.J. @ 16" O.C. (STUCCO LID) – MAX. SPAN = 16'–6"
3. PURLIN BRACING @ 48" o.c. (AS NECESSARY)
4. PURLIN BRACES OVER 8' LONG SHALL BE DOUBLE 2x6's STRONGBACKED WITH 16d @ 12" o.c.
5. $\frac{7}{16}$" WOOD STRUCTURAL PANEL ROOF SHEATHING (STRUC. I GRADE), UNBLOCKED, WITH 8d@6" O.C. BOUNDARY & EDGES, 12" O.C. FIELD. P.I.=24/0 MIN. USE SHEATHING CLIPS AT UNSUPPORTED EDGES. OMIT CLIPS FOR P.I. 24/16 OR $\frac{15}{32}$" THICK PANELS.
6. 24" OVERHANG (MATCH EX.)
7. 2x10 FASCIA (MATCH EX.)
8. VALLEY, HIPS, AND RIDGES SHALL BE AT LEAST THE DEPTH OF THE CUT END OF THE RAFTERS (2x8 TYP.)
9. 26 GAUGE FLASHING AS NECESSARY.
10. 5:12 PITCH (MATCH EX.)
11. CONCRETE ROOF TILES OVER 30# FELT (CLASS B)(MATCH EX.).
12. ROOF OVERHANG GUTTERS SHALL BE OPTIONAL. IF USED, DOWNSPOUTS SHALL BE DRAINED TO CONCRETE SPLASH APRONS AND AWAY FROM STRUCTURE. PER CRC SECTION R903.4, ROOF DRAINS SHALL BE SIZED AND INSTALLED PER THE CALIFORNIA PLUMBING CODE.
13. PER CRC SECTION R905.2.8.5, A DRIP EDGE SHALL BE PROVIDED AT EAVES AND GABLES OF SHINGLE ROOFS. ADJACENT PIECES OF DRIP EDGE SHALL BE OVERLAPPED A MINIMUM OF 2 INCHES.
14. 2x4 @ 16" o.c. CHIMNEY WALLS WITH $\frac{1}{2}$" WOOD STRUCTURAL PANEL WITH 8d @ 6" o.c. EDGES, 12" o.c. FIELD.
15. PROVIDE 2x10 F.J. @ 16" o.c. w/ $\frac{3}{8}$" T & G SUBFLOOR FOR ATTIC MOUNTED F.A.U. PROVIDE SECONDARY DRAIN PLAN WITH DRAIN TO VISIBLE LOCATION AS REQUIRED.
16. 2 LAYERS OF GRADE "D" PAPER TO BE INSTALLED UNDER CEMENT PLASTER COVERING WHEN APPLIED OVER WOOD SHEATHING PER CBC 2506.6
17. ALL POSTS AND BEAMS TO BE DF#2 U.O.N. ALL STUDS TO BE STUD GRADE U.O.N.
18. GLULAM BEAMS TO BE GRADE 24F.
19. PROVIDE HORIZONTAL FIRE STOPS AT 10'–0" MAXIMUM INTERVALS, AND VERTICAL AT CEILING AND FLOOR LEVELS, AND ELSEWHERE AS REQUIRED.
20. PER CRC SECTION R602.7.5, THE NUMBER OF FULL HEIGHT KING STUDS REQUIRED AT EACH END OF HEADERS MUST AGREE WITH CRC TABLE R602.7.5.

TABLE R602.7.5		
	Ultimate Design Wind Speed and Exposure Category	
Max. Header Span (ft.)	<140 mph, Exp. B or <130 mph, Exp. C	≤115 mph, Exp. B
4'	1	1
6'	2	1
8'	2	1
10'	3	2
12'	3	2
14'	3	2
16'	4	2
18'	4	2



ROOF LEGEND

- EXISTING ROOF TO REMAIN
- EXISTING ROOF TO BE REMOVED
- NEW ROOF LINE



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

NO.	DATE	REVISIONS	BY/CHK.

DES. S.D.M. | DRW. S.D.M. | CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS
FOR
MICHAEL HOPKINS & IRENE MORCOS
LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
LOT 208, TRACT 3903

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268-2204_rev1.dwg

January 9, 2023

REGISTERED PROFESSIONAL ENGINEER – STEPHEN MILLER – No. C58692 – CIVIL – STATE OF CALIFORNIA

SHEET 9 OF 17

JOB NO. 268-2204

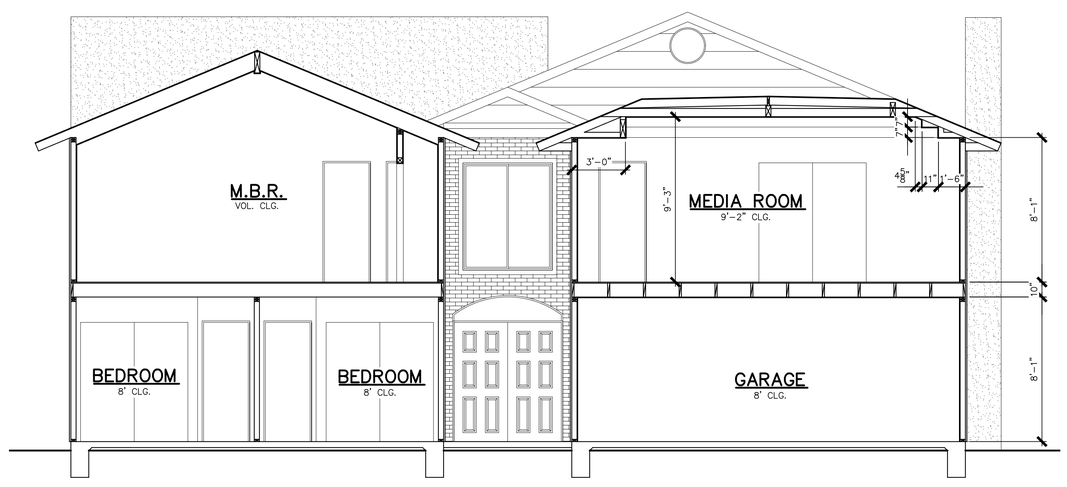
FASTENING SCHEDULE – TABLE R602.3(1)

DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER	SPACING AND LOCATION
	ROOF	
BLOCKING BETWEEN CEILING JOISTS OR RAFTERS TO TOP PLATE.	4–8d box (2½"x0.113") or 3–8d common (2 ½"x0.131"); or 3–10d box (3"x0.128"); or 3–3"x0.131" nails	Toe nail
CEILING JOISTS TO TOP PLATE.	4–8d box (2½"x0.113") or 3–8d common (2 ½"x0.131"); or 3–10d box (3"x0.128"); or 3–3"x0.131" nails	Per joist, toe nail
CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS {SEE SECTIONS R802.3.1, R802.3.2, AND TABLE R802.5.1(9)}	4–10d box (3"x0.128"); or 3–16d common (3½"x0.131"); or 4–3"x0.131" nails	Face nail
CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) {SEE SECTIONS R802.3.1 AND R802.3.2 AND TABLE R802.5.1(9)}	Table R802.5.1(9)	Face nail
COLLAR TIE TO RAFTER, FACE NAIL OR 1¼"X20GA RIDGE STRAP TO RAFTER.	4–10d box (3"x0.128"); or 3–16d common (3½"x0.131"); or 4–3"x0.131" nails	Face nail each rafter
RAFTER OR ROOF TRUSS TO PLATE.	3–16d box nails (3½"x0.135"); or 3–10d common nails(3"x0.148"); or 4–10d box (3"x0.128"); or 4–3"x0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAM.	4–16d (3½"x0.135"); or 3–10d common (3 ½"x0.148"); or 4–10d box (3"x0.128"); or 4–3"x0.131" nails	Toe nail
	3–16d box 3½"x0.135"); or 2–16d common (3 ½"x0.162"); or 3–10d box (3"x0.128"); or 3–3"x0.131 nails	End nail
	WALL	
STUD TO STUD (NOT AT BRACED WALL PANELS).	16d common 3½"x0.162")	24"o.c. face nail
	10d box (3"x0.128"); or 3"x0.131" nails	16"o.c. face nail
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS).	16d box (3½"x0.135"); or 3"x0.131" nails	12"o.c. face nail
	16d common (3½"x0.162")	16"o.c. face nail
BUILT–UP HEADER (2" TO 2" HEADER WITH ½" SPACER).	16d common (3½"x0.162")	16"o.c. each edge face nail
	16d box (3 ½"x0.135")	12"o.c. each edge face nail
CONTINUOUS HEADER TO STUD.	5–8d box (2½"x0.113"); or 4–8d common (2½"x0.131"); or 4–10d box (3"x0.128")	Toe nail
TOP PLATE TO TOP PLATE	16d common (3 ½"x0.162")	16"o.c. face nail
	10d box (3"x0.128"); or 3"x0.131" nails	12"o.c. face nail
DOUBLE TOP PLATE SPLICE FOR SDC's A–D2 WITH SEISMIC BRACED WALL LINE SPACING <25'.	8–16d common (3½"x0.162"); or 12–16d box (3½"x0.135"); or 12–10d box (3"x0.128"); or 12–3"x0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
DOUBLE TOP PLATE SPLICE SDC's D0, D1, D2; AND BRACED WALL LINE SPACING >=25'.	12–16d (3½"x0.135")	
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d common (3½"x0.162")	16"o.c. face nail
	16d box (3½"x0.135"); or 3"x0.131" nails	12"o.c. face nail
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (AT BRACED WALL PANEL).	3–16d box (3½"x0.135"); or 2–16d common (3 ½"x0.162"); or 3"x0.131" nails	3 each 16"o.c. face nail 2 each 16"o.c. face nail 4 each 16"o.c. face nail
TOP OR BOTTOM PLATE TO STUD.	4–8d box (2½"x0.113"); or 3–16d box (3½"x0.135"); or 4–8d common (2½"x0.131"); or 4–10d box (3"x0.128"); or 4–3"x0.131" nails	Toe nail
	3–16d box (3½"x0.135"); or 2–16d common (3½"x0.162"); or 3–10d box (3"x0.128"); or 3–3"x0.131" nails	End nail
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS.	3–10d box (3"x0.128"); or 2–16d common (3½"x0.162"); or 3–3"x0.131" nails	Face nail
1" BRACE TO EACH STUD AND PLATE.	3–8d box (2½"x0.113"); or 2–8d common (2½"x0.131"); or 2–10d box (3"x0.128"); or 2 staples 1¾"	Face nail
1"x6" SHEATHING TO EACH BEARING	3–8d box (2½"x0.113"); or 2–8d common (2½"x0.131"); or 2–10d box (3"x0.128"); or 2 staples, 1" crown, 16ga., 1¾" long 3–8d box (2½"x0.113"); or 3–8d common (2½"x0.131"); or 3–10d box (3"x0.128"); or 3 staples, 1" crown, 16ga., 1¾" long	Face nail
1"x8" AND WIDER SHEATHING TO EACH BEARING.	Wider than 1"x8" 4–8d box (2½"x0.113"); or 3–8d common (2½"x0.131"); or 3–10d box (3"x0.128"); or 4 staples, 1" crown, 16 ga., 1¾" long	Face nail
	Floor	
JOIST TO SILL, TOP PLATE OR GIRDER	4–8d box (2½"x0.113"); or 3–8d common (2½"x0.131"); or 3–10d box (3"x0.128"); or 3–3"x0.131" nails	Toe nail
RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO)	8d box (2½"x0.113")	4"o.c. toe nail
	8d common (2½"x0.131"); or 10d box (3"x0.128"); or 3"x0.131" nails	6"o.c. toe nail
1"x6" SUBFLOOR OR LESS TO EACH JOIST	3–8d box (2½"x0.131"); or 2–8d common (2½"x0.131"); or 3–10d box (3"x0.128"); or 2 staples, 1" crown, 16 ga., 1¾" long	Face nail
2" SUBFLOOR TO JOIST OR GIRDER	3–16d box (3½"x0.135"); or 2–16d common (3½"x0.162")	Blind and face nail
2" PLANKS (PLANK & BEAM–FLOOR & ROOF)	3–16d box (3½"x0.135"); or 2–16d common (3½"x0.162")	At each bearing, face nail
BAND OR RIM JOIST TO JOIST	3–16d box (3½"x0.135"); or 4–10d box (3"x0.128"); or 4–3"x0.131" nails; or 4–3"x14 ga. staples, 7/16" crown	End nail
BUILT–UP GIRDERS AND BEAMS, 2–INCH LUMBER LAYERS	20d common (4"x0.192"); or	Nail each layer as follows: 32"o.c. at top and bottom and staggered.
	10d box (3"x0.128"); or 3"x0.131" nails	24"o.c. face nail at top and bottom staggered on opposite sides
	And: 2–20d common (4"x0.192"); or 3–10d box (3"x0.128"); or 3–3"x0.131" nails	Face nail at ends and at each splice
LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4–16d box (3½"x0.135"); or 3–16d common (3½"x0.162"); or 4–10d box (3"x0.128"); or 4–3"x0.131" nails	At each joist or rafter, face nail
BRIDGING TO JOIST	2–10d (3"x0.128")	Each end, toe nail

DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER	SPACING OF FASTENERS Edges (inches)	Intermediate supports
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]			
3/8" – ½"	6d common (2"x0.113") nail (subfloor, wall) 8d common (2½"x0.131") nail (roof)	6	12
19/32" – 1"	8d common nail (2½"x0.131")	6	12
1⅛" – 1¼"	10d common (3"x0.148") nail; or 8d(2½"x0.131) deformed nail	6	12
½" structural cellulosic fiberboard sheathing	1½" galvanized roofing nail, 7/16" head diameter, or 1" crown staple 16 ga., 1⅛" long	3	6
25/32" structural cellulosic fiberboard sheathing	1¾" galvanized roofing nail, 7/16" head diameter, or 1" crown staple 16 ga., 1⅛" long	3	6
½" gypsum sheathing	1½" galvanized roofing nail; staple galvanized, 1½" long; 1⅛" screws, Type W or S	7	7
⅝" gypsum sheathing	1¾" galvanized roofing nail; staple galvanized, 1⅝" long; 1⅝" screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing			
¾" and less	6d deformed (2"x0.120") nail; or 8d common (2½"x0.131") nail	6	12
⅞" – 1"	8d common (2½"x0.131") nail; or 8d deformed (2½"x0.120") nail	6	12
1⅛" – 1¼"	10d common (3"x0.148") nail; or 8d deformed (2½"x0.120") nail	6	12

FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM, 1 MILE PER HOUR = 0.447 M/S; 1KSI = 6.895 MPA.

a. ALL NAILS ARE SMOOTH–COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN: 80 KSI FOR SHANK DIAMETER OF 0.192 INCH (20D COMMON NAIL), 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. STAPLES ARE 16 GAGE WIRE AND HAVE A MINIMUM 7/16–INCH ON DIAMETER CROWN WIDTH.
c. NAILS SHALL BE SPACED AT NOT MORE THAN 6 INCHES ON CENTER AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR GREATER.
d. FOUR–FOOT–BY–8–FOOT OR 4–FOOT–BY–9–FOOT PANELS SHALL BE APPLIED VERTICALLY.
e. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON TABLE R602.3(2).
f. FOR REGIONS HAVING BASIC WIND SPEED OF 110 MPH OR GREATER, 8D DEFORMED (2½" ×0.120) NAILS SHALL BE USED FOR ATTACHING PLYWOOD AND WOOD STRUCTURAL PANEL ROOF SHEATHING TO FRAMING WITHIN MINIMUM 48–INCH DISTANCE FROM GABLE END WALLS, IF MEAN ROOF HEIGHT IS MORE THAN 25 FEET, UP TO 35 FEET MAXIMUM.
g. FOR REGIONS HAVING BASIC WIND SPEED OF 100 MPH OR LESS, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING SHALL BE SPACED 6 INCHES ON CENTER. WHEN BASIC WIND SPEED IS GREATER THAN 100 MPH, NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6 INCHES ON CENTER FOR MINIMUM 48–INCH
h. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 1396 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO ASTM C 208.
i. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING AND AT ALL 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
j. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE, PROVIDE TWO 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.



CROSS SECTION 1/4" = 1'–0"

NO.	DATE	REVISIONS	BY/CHK.

DES. S.D.M. | DRW. S.D.M. | CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS
FOR
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LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
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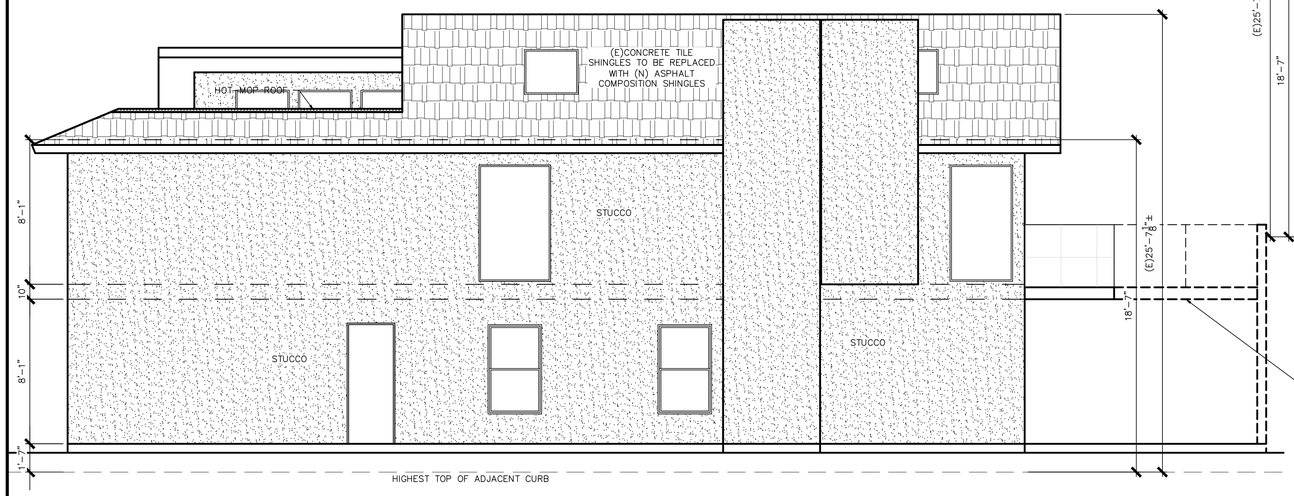
January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C58692 CIVIL STATE OF CALIFORNIA

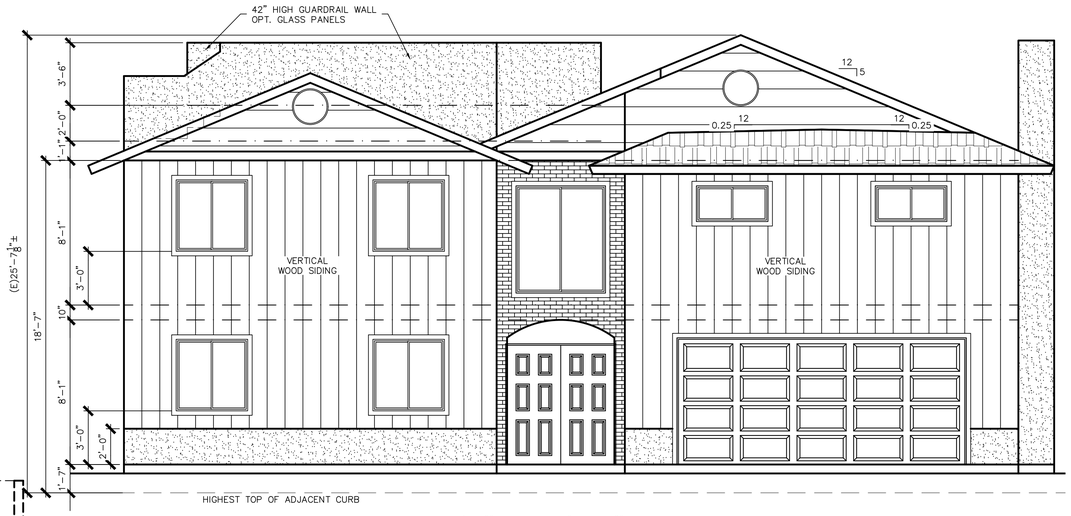
SHEET	OF
10	17

JOB NO. 268–2204



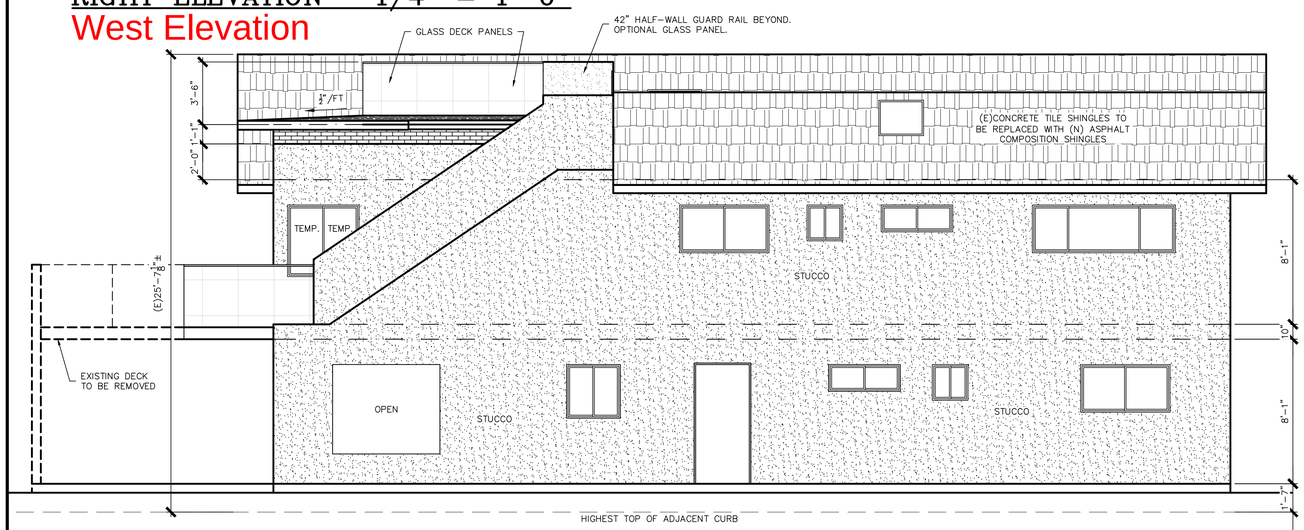
RIGHT ELEVATION 1/4" = 1'-0"

West Elevation



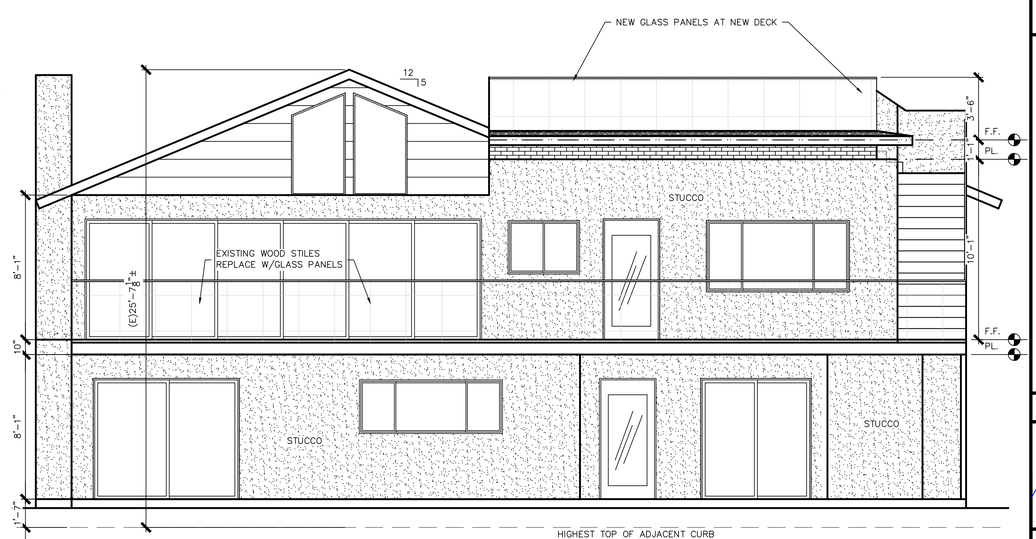
FRONT ELEVATION 1/4" = 1'-0"

North Elevation



LEFT ELEVATION 1/4" = 1'-0"

East Elevation



REAR ELEVATION 1/4" = 1'-0"

South Elevation

STUCCO TO BE 7/8" THICK 3-COAT PER CBC 2512.1.2 OR PROVIDE ICC REPORT FOR ALTERNATIVE APPLICATION.

PER CRC 703.7.3, PROVIDE 2 LAYERS OF GRADE D PAPER WATER-RESISTIVE BARRIER FOR STUCCO EXTERIOR APPLICATION WHEN APPLIED TO WOOD BASED SHEATHING.

NO.	DATE	REVISIONS	BY/CHK.

DES. S.D.M. | DRW. S.D.M. | CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS
FOR
MICHAEL HOPKINS & IRENE MORCOS
LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
LOT 208, TRACT 3903

AGAPE CIVIL ENGINEERING, INC.
STEPHEN D. MILLER – Registered Civil Engineer
CIVIL ENGINEERING – COMMERCIAL & RESIDENTIAL DESIGN & ENGINEERING
P.O. BOX 8504, LONG BEACH, CALIFORNIA 90808 – (661) 472-9575
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268-2204_rev1.dwg

January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C56472 CIVIL STATE OF CALIFORNIA

SHEET	OF
11	17

JOB NO. 268-2204

ELECTRICAL LEGEND

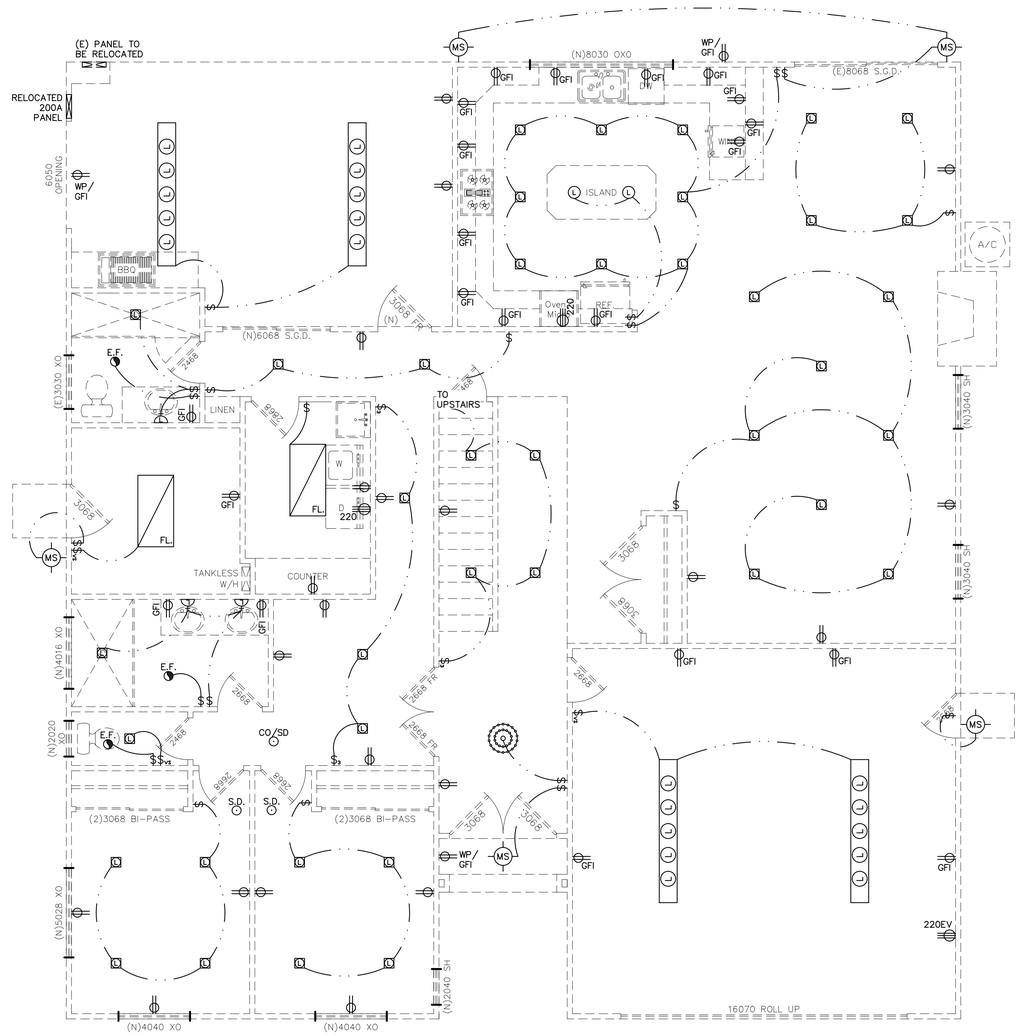
	DUPLEX RECEPTACLE @ +16" ; HALF SWITCHED
	220v OUTLET
GFI	GROUND FAULT INTERRUPTOR OUTLET
	FLOOR OUTLET
	SURFACE MOUNTED L.E.D./FLUORESCENT FIXTURE
	SURFACE MOUNTED FIXTURE ON MOTION SENSOR
	WALL MOUNTED L.E.D./FLUORESCENT FIXTURE
	RECESSED (CAN) L.E.D./DISK L.E.D./FLUORESCENT FIXTURE
	RECESSED L.E.D./FLUORESCENT EYEBALL
P $P	PHOTO CELL / PHOTO CONTROL SWITCH
/n	FLUORESCENT LIGHT
$ $P $3 $4	SWITCH/DIMMER SWITCH/OCCUPANCY SENSOR/3 WAY/4 WAY
	WIRE RUN TO FIXTURE
	PENDANT LIGHTS (L.E.D., DIMMER, FLUOR.)
	T.V. OUTLET / TELEPHONE JACK / ETHERNET
	PUSH BUTTON SWITCH
T	THERMOSTAT – AUTO SETBACK
WR/ED-WR	WEATHER RESISTANT / EXTRA DUTY WEATHER RESISTANT
	EXHAUST FAN – 50 CFM MINIMUM
	GAS HOOKUP w/ SHUT OFF
	HOSE
/ MS	FLOOD LIGHTS WITH MOTION SENSOR
S.D.	SMOKE DETECTOR HARD WIRED WITH BATTERY BACKUP
CO/SD	CO/SMOKE DETECTOR COMBO HARD WIRED W/ BATTERY B/U
J	J BOX
VS/OS/HS	VACANCY SENSOR/OCCUPANCY SENSOR/HUMIDITY SENSOR

ELECTRICAL SERVICE NOTES

1. AT LEAST ONE WALL SWITCH–CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED IN EVERY HABITABLE ROOM AND BATHROOM.
2. AT LEAST ONE WALL SWITCH–CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED TO PROVIDE ILLUMINATION ON THE EXTERIOR SIDE OF OUTDOOR ENTRANCES OR EXITS WITH GRADE LEVEL ACCESS.
3. RECEPTACLES SHALL BE SPACED SO THAT NO POINT ALONG THE FLOOR LINE IS MORE THAN 6' FROM AN OUTLET.
4. RECEPTACLES IN BATHROOMS, GARAGES, LAUNDRY ROOMS, LOCATED OUTDOORS, OR WITHIN 6' OF ANY SINK SHALL BE PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTION SYSTEM (G.F.C.I.)
5. SMOKE DETECTORS SHALL BE PLACED A MINIMUM OF 20' FROM COOKING APPLIANCES, 3 HORIZONTAL FEET FROM BATHROOM DOOR, 3' FROM AIR SUPPLY REGISTERS, 3' FROM THE TIP OF A FAN BLADE, AND NO MORE THAN 12" FROM THE CEILING. SMOKE DETECTORS SHALL BE PERMANENTLY WIRED, INTERCONNECTED, AND HAVE A BATTERY BACKUP.
6. CARBON MONOXIDE ALARM SHALL BE INSTALLED IN ALL DWELLING UNITS PER CRC R315.3. ALARM SHALL BE HARD–WIRED WITH BATTERY BACKUP. CO ALARMS SHALL BE INSTALLED IN ROOMS LEADING TO AND IMMEDIATELY ADJACENT TO ALL SLEEPING ROOMS (HALLWAYS). WHERE MORE THAN ONE CO ALARM IS REQUIRED, THE DEVICES SHALL BE INTERCONNECTED (WIRED OR WIRELESS) SUCH THAT ACTIVATION OF ONE ALARM WILL ACTIVATE ALL THE OTHERS.
7. OUTLETS IN WALL BETWEEN GARAGE AND DWELLING SHALL BE METAL OR U.L. APPROVED PLASTIC AND SHALL BE OFFSET MIN. 24" HORIZONTALLY. SWITCH PLATES AT 42" A.F.F. TO CENTER.
8. ALL LIGHTING IN CLOSETS SHALL BE LOCATED MINIMUM 18" FROM ALL SHELVES.
9. PROVIDE A MINIMUM OF (2) 20 AMP SMALL APPLIANCE CIRCUITS FOR THE KITCHEN COUNTER TOPS. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS. LOADS SHALL BE BALANCED.
10. ALL KITCHEN COUNTER OUTLETS SHALL BE 42" A.F.F.
11. ALL KITCHEN OUTLETS SHALL BE SPACED SO THAT NO POINT ALONG THE COUNTER IS MORE THAN 24" FROM AN OUTLET
12. ALL KITCHEN COUNTER OUTLETS MUST BE G.F.C.I. PROTECTED.
13. ALL DWELLING UNIT OUTLET DEVICES INCLUDING KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, AND LAUNDRY AREAS AND SIMILAR SPACES, SHALL BE LISTED AS TAMPER RESISTANT AND SHALL HAVE A.F.C.I. PROTECTION.
14. ALL INSTALLED LUMINARIES SHALL BE HIGH EFFICACY LIGHTING.
15. ANY JA8 COMPLIANT LAMP/LUMINAIRE SHALL BE CONTROLLED BY A VACANCY SENSOR OR DIMMER.
16. UNDER CABINET LIGHTING MUST BE SWITCHED SEPARATELY FROM OTHER LIGHTING.
17. RECESSED DOWNLIGHTS SHALL BE INSULATION CONTACT RATED, SHALL NOT CONTAIN SCREW BASED SOCKETS, AND ONLY CONTAIN JA8–2016–E (E FOR ELEVATED TEMPERATURE) RATED BULBS.
18. ENCLOSED LUMINAIRES MUST CONTAIN JA8–2016–E (E FOR ELEVATED TEMPERATURE) RATED BULBS.
19. ALL EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM ANY/ALL LIGHTING.
20. ALL BATHROOMS SHALL BE EQUIPPED WITH 1 EXHAUST FAN, MINIMUM 50 CFM, REGARDLESS OF WINDOWS.
21. KITCHEN SHALL BE EQUIPPED WITH MINIMUM 100 CFM EXHAUST FAN.
22. IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS AT LEAST ONE LUMINAIRE SHALL BE CONTROLLED BY VACANCY SENSORS.
23. A PERMANENT ELECTRICAL OUTLET AND LIGHTING FIXTURE, CONTROLLED BY A SWITCH LOCATED AT THE ATTIC ACCESS SHALL BE PROVIDED AT OR NEAR THE ATTIC FURNACE. EQUIPMENT DISCONNECT SHALL BE PROVIDED ADJACENT THE EQUIPMENT.
24. AT LEAST ONE 20–AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLETS. OTHER EQUIPMENT WITHIN THE SAME BATHROOM MAY BE SUPPLIED BY THE SAME BRANCH CIRCUIT WHERE THE BRANCH CIRCUIT SUPPLIES A SINGLE BATHROOM ONLY.
25. LIGHT FIXTURES LOCATED IN TUB OR SHOWER ENCLOSURES SHALL BE LABELED "SUITABLE FOR WET LOCATIONS" OR "SUITABLE FOR DAMP LOCATIONS".
26. AT LEAST ONE 20–AMP DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY THE LAUNDRY ROOM.
27. CLOTHES DRYERS AND ELECTRIC RANGES SHALL HAVE A 4–WIRE GROUNDED ELECTRICAL OUTLET.
28. PROVIDE EV CHARGING SUPPLY. PROVIDE 1" MIN. I.D. LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240V BRANCH CIRCUIT TO THE MAIN ELECTRICAL PANEL. RACEWAY SHALL ORIGINATE AT THE MAIN PANEL AND TERMINATE IN A LISTED BOX AND IDENTIFIED AND LABELED PER 4.106.4.1.1. SERVICE PANEL SHALL PROVIDE CAPACITY TO INSTALL A 40A MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.
29. THE NUMBER OF BLANK ELECTRICAL BOXES WHICH ARE MORE THAN 5' ABOVE THE FINISHED FLOOR SHALL BE NO GREATER THAN THE NUMBER OF BEDROOMS. THE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR, OR FAN SPEED CONTROL.
30. ALL OUTDOOR LIGHTING SHALL BE CONTROLLED BY A MANUAL ON/OFF SWITCH AND ALSO ONE OF THE FOLLOWING:
    - 30.1. PHOTOCELL WITH MOTION SENSOR
    - 30.2. PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL
    - 30.3. ASTRONOMICAL TIME CLOCK
    - 30.4. ENERGY MANAGEMENT CONTROL SYSTEM.
31. HVAC EQUIPMENT SHALL BE SUPPLIED BY AN INDIVIDUAL BRANCH CIRCUIT.
32. RANGE HOOD SHALL BE SUPPLIED BY AN INDIVIDUAL BRANCH CIRCUIT.
33. A DEDICATED 125V, 20A ELECTRICAL RECEPTACLE THAT IS CONNECTED TO THE ELECTRIC PANEL WITH A 120V/240V 3–CONDUCTOR, 10AWG COPPER BRANCH CIRCUIT SHALL BE PROVIDED WITHIN 3' FROM THE WATER HEATER AND ACCESSIBLE TO THE WATER HEATER WITH NO OBSTRUCTIONS

ELECTRICAL GENERAL NOTES

1. ALL BEDROOMS, LIVING ROOM, DEN, PATIO, AND KITCHEN TO BE WIRED FOR CABLE AND TELEPHONE JACKS. GARAGE TO BE WIRED FOR PHONE JACK. HOMEOWNER TO APPROVE ALL LOCATIONS FOR SUCH.
2. PRE–WIRE FOR ALARM SYSTEM AND SURROUND SOUND (OPTIONAL).
3. HOMEOWNER TO APPROVE ALL LIGHT FIXTURES, APPLIANCES, SWTICHES, STYLE, LOCATIONS, ETC. WITH ELECTRICAL CONTRACTOR.
4. SEE OWNER ALSO FOR ANY ADDITIONAL SWITCHES FOR YARD LIGHTING, POOL EQUIPMENT, MOTION DETECTORS, AND IRRIGATION EQUIPMENT.



THE ELECTRICAL PANEL MAY NOT BE LOCATED WITHIN A SHEAR WALL.

LOWER LEVEL ELECTRICAL PLAN 1/4" = 1'–0"

MECHANICAL NOTES:

1. PER CMC SECTION 504.4.2.1, DRYER MOISTURE EXHAUST DUCT SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14 FEET, INCLUDING TWO 90–DEGREE ELBOWS. LONGER RUNS SHALL BE EQUIPPED WITH A BOOSTER FAN TO ADEQUATELY VENT DRYER EXHAUST.
2. PER TABLE 4–4 C.M.C., PROVIDE EXHAUST FAN WITH 50 CFM INTERMITTENT OR 25 CFM CONTINUOUS CAPACITY FOR ANY BATHROOM OR LAUNDRY ROOM.
3. MECHANICAL SYSTEMS WITH DUCTWORK EXCEEDING 10' IN LENGTH SHALL BE PROVIDED WITH AIR FILTER DEVICES. PROVIDE MERV 6 FILTER OR EQUIVALENT.
4. PER CEC 150.1(C)12, ONE OR MORE WHOLE HOUSE FANS (WHF) SHALL BE INSTALLED, WHOSE TOTAL AIR FLOW IS 2CFM/S.F.C.F.A. MINIMUM (4782 CFM) AND SHALL HAVE AT LEAST 1 SQ. FT. OF ATTIC VENT FREE AREA PER 375 CFM OF RATED WHF AIR FLOW CFM. PROVIDE HOMEOWNERS WHO HAVE A WHF WITH A ONE PAGE "HOW TO OPERATE YOUR WHOLE HOUSE FAN" INFORMATIONAL SHEET.
5. PER SECTION 150.0(N)1, SYSTEMS USING GAS OR PROPANE WATER HEATERS TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING COMPONENTS:
   - 5.1. A 120V ELECTRICAL RECEPTACLE; AND
   - 5.2. A CATEGORY III OR IV VENT, OR A TYPE B VENT WITH STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINATION AND THE SPACE WHERE THE WATER HEATER IS INSTALLED; AND
   - 5.3. A CONDENSATE DRAIN THAT IS NO MORE THAN 2 INCHES HIGHER THAN THE BASE OF THE INSTALLED WATER HEATER; AND
   - 5.4. A GAS SUPPLY LINE WITH A CAPACITY OF AT LEAST 200,000 BTU/HR.
6. MECHANICAL AND GRAVITY OUTDOOR AIR INTAKE OPENINGS SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINANTS, SUCH AS CHIMNEYS, VENTS, PLUMBING VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS.

PLUMBING NOTES:

1. PER SECTION 150.0(J)2a, ALL DOMESTIC HOT WATER SYSTEM PIPING CONDITIONS LISTED BELOW MUST BE INSULATED:
   - 1.1. THE FIRST 5 FEET OF HOT AND COLD WATER PIPES FROM THE STORAGE TANK.
   - 1.2. ALL PIPING WITH A NOMINAL DIAMETER OF ¾" OR LARGER.
   - 1.3. ALL PIPING ASSOCIATED WITH A DOMESTIC HOT WATER RECIRCULATION SYSTEM REGARDLESS OF THE PIPE DIAMETER.
   - 1.4. PIPING FROM THE HEATING SOURCE TO STORAGE TANK OR BETWEEN TANKS.
   - 1.5. PIPING BURIED BELOW GRADE.
   - 1.6. ALL HOT WATER PIPES FROM THE HEATING SOURCE TO THE KITCHEN FIXTURES.
2. PER SECTION 150.0(J)2b, IN ADDITION TO INSULATION REQUIREMENTS, ALL DOMESTIC HOT WATER PIPES THAT ARE BURIED BELOW GRADE MUST BE INSTALLED IN A WATER PROOF AND NONCRUSHABLE CASING OR SLEEVE THAT ALLOWS FOR INSTALLATION, REMOVAL, AND REPLACEMENT OF THE ENCLOSED PIPE AND INSULATION.

NOTE FOR ALL BATHROOM FANS:

THIS FAN IS TO BE USED FOR LOCAL VENTILATION EXHAUST. MINIMUM 50 CFM FAN TESTED AT A STATIC PRESSURE OF 0.25 WC AND RATED AT 3 SONES OR LESS REQUIRED TO BE INSTALLED.

FAN MUST BE ATTACHED TO A MINIMUM 4" DUCT AND NO LONGER THAN 70' OF FLEX DUCT. SUBTRACT 15' OF ALLOWED LENGTH FOR EACH ELBOW.

NOTE FOR ALL KITCHEN RANGE HOODS:

THIS FAN IS TO BE USED FOR LOCAL VENTILATION EXHAUST. MINIMUM 100 CFM FAN TESTED AT A STATIC PRESSURE OF 0.25 WC AND RATED AT 3 SONES OR LESS (UNLESS THE MAXIMUM RATED AIRFLOW IS GREATER THAN 400 CFM) REQUIRED TO BE INSTALLED.

FAN MUST BE ATTACHED TO A MINIMUM 5" SMOOTH DUCT AND NO LONGER THAN 85'. SUBTRACT 15' OF ALLOWED LENGTH FOR EACH ELBOW.

NOTE FOR WHOLE BUILDING VENTILATION:

THIS FAN IS TO BE USED FOR WHOLE BUILDING VENTILATION. MINIMUM 156 CFM FAN TESTED AT A STATIC PRESSURE OF 0.25 WC AND RATED AT 1 SONE OR LESS REQUIRED TO BE INSTALLED.

FAN MUST BE ATTACHED TO A MINIMUM 5" DUCT AND NO LONGER THAN 70'. SUBTRACT 15' OF ALLOWED LENGTH FOR EACH ELBOW.

SWITCH FOR FAN MUST BE LABELED TO INDICATE THE FAN'S REQUIRED FUNCTION. SUCH AS "FAN IS TO BE LEFT ON TO ENSURE INDOOR AIR QUALITY"

Q=0.03(4189 S.F.)+7.5(3 BR +1) = 155.67 – USE 156 CFM

THE KITCHEN VENT FAN WILL BE USED FOR THIS PURPOSE.

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REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C55892 CIVIL STATE OF CALIFORNIA

SHEET	OF
12	17

JOB NO. 268–2204

ELECTRICAL LEGEND

	DUPLEX RECEPTACLE @ +16" ; HALF SWITCHED
	220v OUTLET
GFI	GROUND FAULT INTERRUPTOR OUTLET
	FLOOR OUTLET
	SURFACE MOUNTED L.E.D./FLUORESCENT FIXTURE
	SURFACE MOUNTED FIXTURE ON MOTION SENSOR
	WALL MOUNTED L.E.D./FLUORESCENT FIXTURE
	RECESSED (CAN) L.E.D./DISK L.E.D./FLUORESCENT FIXTURE
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P $P	PHOTO CELL / PHOTO CONTROL SWITCH
/n	FLUORESCENT LIGHT
$ $P $3 $4 $	SWITCH/DIMMER SWITCH/OCCUPANCY SENSOR/3 WAY/4 WAY
— · · —	WIRE RUN TO FIXTURE
	PENDANT LIGHTS (L.E.D., DIMMER, FLUOR.)
	T.V. OUTLET / TELEPHONE JACK / ETHERNET
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T	THERMOSTAT – AUTO SETBACK
WR/ED-WR	WEATHER RESISTANT / EXTRA DUTY WEATHER RESISTANT
	EXHAUST FAN – 50 CFM MINIMUM
	GAS HOOKUP w/ SHUT OFF
	HOSE
/ MS	FLOOD LIGHTS WITH MOTION SENSOR
S.D.	SMOKE DETECTOR HARD WIRED WITH BATTERY BACKUP
CO/SD	CO/SMOKE DETECTOR COMBO HARD WIRED W/ BATTERY B/U
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VS/OS/HS	VACANCY SENSOR/OCCUPANCY SENSOR/HUMIDITY SENSOR

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9. PROVIDE A MINIMUM OF (2) 20 AMP SMALL APPLIANCE CIRCUITS FOR THE KITCHEN COUNTER TOPS. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS. LOADS SHALL BE BALANCED.
10. ALL KITCHEN COUNTER OUTLETS SHALL BE 42" A.F.F.
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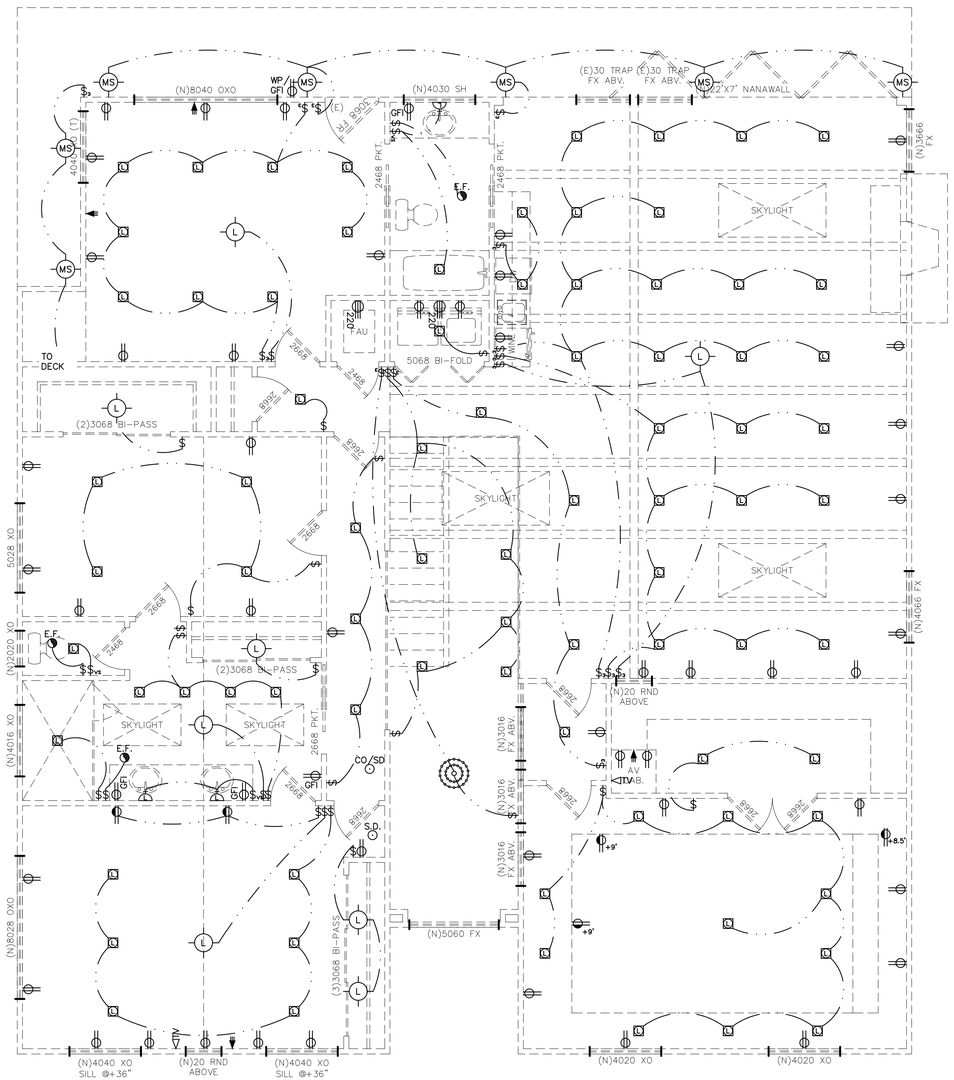
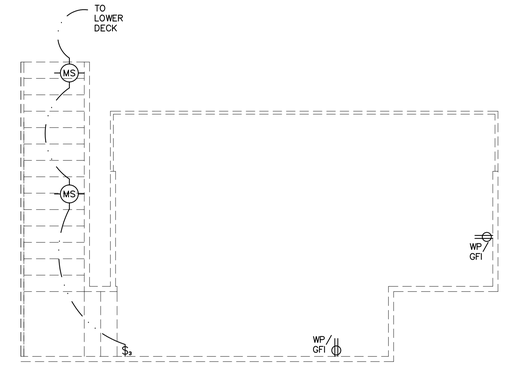


UPPER LEVEL ELECTRICAL PLAN 1/4" = 1'-0"



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

THE ELECTRICAL PANEL MAY NOT BE LOCATED WITHIN A SHEAR WALL.

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SHEET	OF
13	17

JOB NO. 268-2204

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**
Project Name: Residential Building **Calculation Date/Time:** 2023-01-09T10:05:19-08:00 **(Page 1 of 14)**
Calculation Description: Title 24 Analysis **Input File Name:** 268-2204_rev1.ribd19x

GENERAL INFORMATION			
01	Project Name	Residential Building	
02	Run Title	Title 24 Analysis	
03	Project Location	9032 Christine Drive	
04	City	Huntington Beach	05 Standards Version 2019
06	Zip code	92646	07 Software Version EnergyPro 8.3
08	Climate Zone	6	09 Front Orientation (deg/ Cardinal) 45
10	Building Type	Single family	11 Number of Dwelling Units 1
12	Project Scope	Addition/Alteration	13 Number of Bedrooms 5
14	Addition Cond. Floor Area (ft^2)	1769	15 Number of Stories 2
16	Existing Cond. Floor Area (ft^2)	2420	17 Fenestration Average U-factor 0.3
18	Total Cond. Floor Area (ft^2)	4189	19 Glazing Percentage (%) 18.22%
20	ADU Bedroom Count	n/a	21 ADU Conditioned Floor Area n/a
22	Is Natural Gas Available?	Yes	

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 USE SUMMARY				
Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	10.68	9.75	0.93	8.7
Space Cooling	5.53	5.88	-0.35	-6.3
IAQ Ventilation	3.29	3.29	0	0
Water Heating	7.08	7.08	0	0
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**26.58**	**26**	**0.58**	**2.2**

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REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Ducts with high level of insulation
- Floor has high level of insulation
- Non-standard duct location (any location other than attic)

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

Building-level Verifications:
- Quality Insulation Installation (QII)
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- Minimum Airflow
- Fan Efficiacy Watts/CFM

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- Duct leakage testing
- Ducts located entirely in conditioned space confirmed by duct leakage testing

Domestic Hot Water System Verifications:
- -- None --

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
Residential Building	4189	1	5	4	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	Water Heating System 2
Zone 1 - Existing Lower L	Conditioned	HVAC System1	1335	8	DHW Sys 1	N/A

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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	Water Heating System 2
Zone 2 - New Lower Level	Conditioned	HVAC System1	421	8	DHW Sys 1	N/A
Zone 3 - Existing Upper L	Conditioned	HVAC System1	1085	8	DHW Sys 1	N/A
Zone 4 - New Upper Level	Conditioned	HVAC System1	1348	8	DHW Sys 1	N/A

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front Wall	Zone 1 - Existing Lower L	R-13 Wall	45	Front	124.67	0	90	none	Existing	No
Left Wall	Zone 1 - Existing Lower L	R-13 Wall	135	Left	160	19	90	none	Existing	No
Rear Wall	Zone 1 - Existing Lower L	R-13 Wall	225	Back	400	137.33	90	none	Existing	No
Right Wall	Zone 1 - Existing Lower L	R-13 Wall	315	Right	347.33	40.67	90	none	Existing	No
Front Wall 2	Zone 2 - New Lower Level	R-15 Wall	45	Front	226.33	72	90	none	New	n/a
Left Wall 2	Zone 2 - New Lower Level	R-15 Wall	135	Left	92.6	13.33	90	none	New	n/a
Right Wall 2	Zone 2 - New Lower Level	R-15 Wall	315	Right	165.67	8	90	none	New	n/a
Front Wall 3	Zone 3 - Existing Upper L	R-13 Wall	45	Front	339.33	3.14	90	none	Existing	No
Rear Wall 2	Zone 3 - Existing Upper L	R-13 Wall	225	Back	339.33	248.56	90	none	Existing	No

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OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Right Wall 3	Zone 3 - Existing Upper L	R-13 Wall	315	Right	262.33	48.75	90	none	Existing	No
Front Wall 4	Zone 4 - New Upper Level	R-15 Wall	45	Front	400	81.14	90	none	New	n/a
Left Wall 3	Zone 4 - New Upper Level	R-15 Wall	135	Left	484.67	77.33	90	none	New	n/a
Rear Wall 3	Zone 4 - New Upper Level	R-15 Wall	225	Back	60.67	0	90	none	New	n/a
Right Wall 4	Zone 4 - New Upper Level	R-15 Wall	315	Right	165.67	13.5	90	none	New	n/a
Interior Surface	Zone 1 - Existing Lower L>>Zone 2 - New Lower Level	R-0 Wall	n/a	n/a	467	0	n/a		New	n/a
Interior Surface 2	Zone 3 - Existing Upper L>>Zone 4 - New Upper Level	R-0 Wall	n/a	n/a	284.33	0	n/a		New	n/a
Raised Floor	Zone 3 - Existing Upper L	R-22 Floor No Crawlspace	n/a	n/a	207.08	n/a	n/a		New	n/a
Raised Floor 2	Zone 4 - New Upper Level	R-19 Floor No Crawlspace	n/a	n/a	532.14	n/a	n/a		New	n/a
Interior Surface 3	Zone 2 - New Lower Level	R-0 Roof No Attic	n/a	n/a	241.32	n/a	n/a		New	n/a
Interior Surface 4	Zone 3 - Existing Upper L	R-0 Floor No Crawlspace	n/a	n/a	901.98	n/a	n/a		New	n/a
Interior Surface 5	Zone 4 - New Upper Level	copy of R-0 Floor No Craw	n/a	n/a	482.96	n/a	n/a		New	n/a

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OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof	Status	Verified Existing Condition	Existing Construction
Roof	Zone 3 - Existing Upper L	R-30 Roof No Attic	180	n/a	795	54	5	0.1	0.85	No	Existing	No	
Roof 2	Zone 4 - New Upper Level	R-38 Roof No Attic	0	n/a	1371	20	5	0.1	0.85	No	New	n/a	

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
2020	Window	Left Wall	Left	135			1	4	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4016	Window	Left Wall	Left	135			1	6	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3030	Window	Left Wall	Left	135			1	9	0.3	NFRC	0.23	NFRC	Bug Screen	Existing	No
6068	Window	Rear Wall	Back	225			1	40	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3068	Window	Rear Wall	Back	225			1	20	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
8030	Window	Rear Wall	Back	225			1	24	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
8068	Window	Rear Wall	Back	225			1	53.33	0.3	NFRC	0.23	NFRC	Bug Screen	Existing	No
3040	Window	Right Wall	Right	315			1	12	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3040 2	Window	Right Wall	Right	315			1	12	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4040	Window	Front Wall 2	Front	45			1	16	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4040 2	Window	Front Wall 2	Front	45			1	16	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
5028	Window	Left Wall 2	Left	135			1	13.33	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
2040	Window	Right Wall 2	Right	315			1	8	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
20rnd	Window	Front Wall 3	Front	45			1	3.14	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
8040	Window	Rear Wall 2	Back	225			1	32	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3068 2	Window	Rear Wall 2	Back	225			1	20	0.3	NFRC	0.23	NFRC	Bug Screen	Existing	No
4030	Window	Rear Wall 2	Back	225			1	12	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
30Trap	Window	Rear Wall 2	Back	225			1	15.28	0.3	NFRC	0.23	NFRC	Bug Screen	Existing	No
30Trap 2	Window	Rear Wall 2	Back	225			1	15.28	0.3	NFRC	0.23	NFRC	Bug Screen	Existing	No
22070	Window	Rear Wall 2	Back	225			1	154	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3666	Window	Right Wall 3	Right	315			1	22.75	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4066	Window	Right Wall 3	Right	315			1	26	0.3	NFRC	0.23	NFRC	Bug Screen	Existing	No
4020	Window	Front Wall 4	Front	45			1	8	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4020 2	Window	Front Wall 4	Front	45			1	8	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
5060	Window	Front Wall 4	Front	45			1	30	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4040 3	Window	Front Wall 4	Front	45			1	16	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4040 4	Window	Front Wall 4	Front	45			1	16	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
20rnd 2	Window	Front Wall 4	Front	45			1	3.14	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
8028	Window	Left Wall 3	Left	135			1	21.33	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4016 2	Window	Left Wall 3	Left	135			1	6	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
2020 2	Window	Left Wall 3	Left	135			1	4	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
5028 2	Window	Left Wall 3	Left	135			1	13.33	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
4040 5	Window	Left Wall 3	Left	135			1	16	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3016	Window	Right Wall 4	Right	315			1	4.5	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3016 2	Window	Right Wall 4	Right	315			1	4.5	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
3016 3	Window	Right Wall 4	Right	315			1	4.5	0.3	NFRC	0.23	NFRC	Bug Screen	New	n/a
6030 Skylight	Skylight	Roof		180			1	18	0.3	NFRC	0.23	NFRC	None	Existing	No
6030 Skylight 2	Skylight	Roof		180			1	18	0.3	NFRC	0.23	NFRC	None	Existing	No
6030 Skylight 3	Skylight	Roof		180			1	18	0.3	NFRC	0.23	NFRC	None	Existing	No

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
5020 Skylight	Skylight	Roof 2		0			1	10	0.3	NFRC	0.23	NFRC	None	New	n/a
5020 Skylight 2	Skylight	Roof 2		0			1	10	0.3	NFRC	0.23	NFRC	None	New	n/a

OPAQUE DOORS

01	02	03	04	05	06
Name	Side of Building	Area (ft^2)	U-factor	Status	Verified Existing Condition
2668	Right Wall	16.67	0.2	Existing	No
Door	Front Wall 2	40	0.2	New	n/a
2668 2	Left Wall 3	16.67	0.2	New	n/a

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab	Zone 1 - Existing Lower L	1335	0.1	none	0	80%	No	Existing	No
Slab 2	Zone 2 - New Lower Level	421	0.1	none	0	80%	No	New	n/a

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OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-13 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.101	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-30	None / None	0.036	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x12 Inside Finish: Gypsum Board
R-38 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-38	None / None	0.03	Roofing: 15 PSF (Heavy Ballast or Pavers) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 / 2x12 Inside Finish: Gypsum Board
R-0 Wall	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
R-22 Floor No Crawlspace	Exterior Floors	Wood Framed Floor	2x8 @ 16 in. O. C.	R-22	None / None	0.044	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-22 / 2x8
R-19 Floor No Crawlspace	Exterior Floors	Wood Framed Floor	2x10 @ 16 in. O. C.	R-19	None / None	0.047	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10

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OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x12 @ 24 in. O. C.	R-0	None / None	0.2	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board
copy of R-0 Floor No Craw	Interior Floors	Wood Framed Floor	2x12 @ 24 in. O. C.	R-0	None / None	0.2	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board
R-0 Roof No Attic	Interior Ceiling	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / None	0.202	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Required	Not Required	Not Required	n/a

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WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a	New	NA	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Flow	Tank Insulation R-value (mf/ft2)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	0.82-UEF	<=200 kBtu/hr	0	n/a	n/a	n/a	n/a	New	

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

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SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	New	No	1	1

HVAC - HEATING UNIT TYPES

01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-80

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER/CEER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	Central split AC	1	11.7	14	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC COOLING - HERS VERIFICATION

01	02	03	04	05	06
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge
Cooling Component 1-hers-cool	Required	350	Not Required	Not Required	Not Required

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HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
			Duct Ins. R-value		Duct Location		Surface Area								
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts 40 ft
Air Distribution System 1	Conditioned space-entirely	Non-Verified	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist	New	n/a	n/a	n/a

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.45

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IAQ (INDOOR AIR QUALITY) FANS

01	02	03	04	05	06	07
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness - SRE	IAQ Recovery Effectiveness - ASRE	HERS Verification
SFam IAQVentRpt	166	0.35	Exhaust	n/a	n/a	Yes

HERS RATER VERIFICATION OF EXISTING CONDITIONS

Registration Number: 222-P01012692RD-000-000-0000000-0000 Registration Date/Time: 2023-01-09 10

BUILDING ENERGY ANALYSIS REPORT

PROJECT:

Michael Hopkins & Irene Morcos
9032 Christine Drive
Huntington Beach, CA 92646

Project Designer:

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P.O. Box 8504
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Job Number:

268-2204

Date:

1/9/2023

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2019 Building Energy Efficiency Standards.

This program developed by EnergySoft Software – www.energysoft.com.

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RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type		Date
Michael Hopkins & Irene Morcos	☑ Single Family ☐ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration	1/9/2023

Project Address	California Energy Climate Zone	Total Cond. Floor Area	Addition	# of Units
9032 Christine Drive Huntington Beach	CA Climate Zone 06	4,189	1,769	1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Wall	Wood Framed	R 13	125		Existing
Wall	Wood Framed	R 13	141		Existing
Wall	Wood Framed	R 13	263		Existing
Wall	Wood Framed	R 13	307		Existing
Door	Opaque Door	R-5	17		Existing
Slab	Unheated Slab-on-Grade	- no insulation	1,335	Perim = 0'	Existing
Demising	Wood Framed	- no insulation	751		New
Wall	Wood Framed	R 15	1,330		New

FENESTRATION — Total Area: 763 | Glazing Percentage: 18.2% | New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Left (SE)	84.0	0.300	0.23	none	none	N/A	New
Left (SE)	9.0	0.300	0.23	none	none	N/A	Existing
Rear (SW)	282.0	0.300	0.23	none	none	N/A	New
Rear (SW)	103.9	0.300	0.23	none	none	N/A	Existing
Right (NW)	68.3	0.300	0.23	none	none	N/A	New
Front (NE)	116.3	0.300	0.23	none	none	N/A	New
Right (NW)	26.0	0.300	0.23	none	none	N/A	Existing
Skylight	54.0	0.300	0.23	none	none	N/A	Existing
Skylight	20.0	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	80% AFUE	Split Air Conditioner	14.0 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ducted	Ducted	Conditioned	8.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Small Instantaneous Gas	1	0.82	Standard	New

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type		Date
Michael Hopkins & Irene Morcos	☑ Single Family ☐ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration	1/9/2023

Project Address	California Energy Climate Zone	Total Cond. Floor Area	Addition	# of Units
9032 Christine Drive Huntington Beach	CA Climate Zone 06	4,189	1,769	1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Demising	Wood Framed w/Crawl Space	- no insulation	902		New
Roof	Wood Framed Rafter	R 39	1,351		New
Demising	Wood Framed w/Crawl Space	- no insulation	493		New
Floor	Wood Framed w/o Crawl Space	R 19	532		New

FENESTRATION — Total Area: 763 | Glazing Percentage: 18.2% | New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status

2019 Low-Rise Residential Mandatory Measures Summary

§ 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:	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 608.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 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(j)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use". a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 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 Measures:

§ 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 the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-005-2006 *HVAC Duct Construction Standards Metal and Flexible* 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. 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 requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, 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 cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.*
§ 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)3:	**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 exhaust shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water resistant and provides shielding from solar radiation.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer 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; duct leakage tested, as confirmed through field verifying urn and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of the conditioning 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. Pressure drops and labeling must meet the requirements in § 150.0(m)12. Filters must be accessible for regular service.*
§ 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.*

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(q)3G:	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(a); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** A multisecne programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	**Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*
§ 150.0(k)2K:	**Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.*
§ 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 meet the requirement in item § 150.0(k)3A1 (ON and OFF switch) and the requirements in either § 150.0(k)3A2 (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3A3 (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 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 Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.

Solar Ready Buildings:

§ 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) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	**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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy*.
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees 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 distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and 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) through § 110.10(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".

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RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type		Date
Michael Hopkins & Irene Morcos	☑ Single Family ☐ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration	1/9/2023

Project Address	California Energy Climate Zone	Total Cond. Floor Area	Addition	# of Units
9032 Christine Drive Huntington Beach	CA Climate Zone 06	4,189	1,769	1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Door	Opaque Door	R-5	57		New
Slab	Unheated Slab-on-Grade	- no insulation	421	Perim = 0'	New
Demising	Wood Framed Rafter	- no insulation	241		New
Floor	Wood Framed w/o Crawl Space	R 22	207		New
Wall	Wood Framed	R 13	336		Existing
Wall	Wood Framed	R 13	91		Existing
Wall	Wood Framed	R 13	214		Existing
Roof	Wood Framed Rafter	R 30	741		Existing

FENESTRATION — Total Area: 763 | Glazing Percentage: 18.2% | New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status

2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.
(01/2020)

Building Envelope Measures:

§ 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 of area 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):	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alternative. 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 continuous 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 on 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 of 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 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*

Fireplaces, Decorative Gas Appliances, and Gas Log Measures:

§ 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 Measures:

§ 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-K.*
§ 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 compressor 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)4:	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 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 bibs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 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.

2019 Low-Rise Residential Mandatory Measures Summary

Requirements for 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)1C:	**Single Family Detached Dwelling Units.** Single family detached dwelling units, and attached dwelling units, and shared living units and shared living areas in other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the rated mechanical ventilation airflow must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	**Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.

Pool and Spa Systems and Equipment Measures:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; 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 Measures:

§ 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.
§ 150.0(k)1B:	**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 must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.*
§ 150.0(k)1D:	**Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	**Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed in the manufacturer's enclosure in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 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)2C:	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name	Date
Michael Hopkins & Irene Morcos	1/9/2023
System Name: HVAC System	Floor Area: 4,189

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	0
Total Output (Btuh)	0
Output (Btuh/sqft)	0.0
Cooling System	
Output per System	1
Total Output (Btuh)	1
Total Output (Tons)	0.0
Total Output (Btuh/sqft)	0.0
Total Output (sqft/Ton)	50,268,000.0
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

SYSTEM LOAD

	COIL COOLING PEAK		COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,548	33,131	2,494	670	26,627
Return Vented Lighting		0			
Return Air Ducts		357			299
Return Fan		0			
Ventilation	0	0

City of Huntington Beach
Department of Community Development
2000 Main Street, Huntington Beach, CA 92648
Office: (714) 536 - 5241 Fax: (714) 374 – 1647

CALGreen CONSTRUCTION & DEMOLITION DEBRIS RE-USE & RECYLING PROGRAM

Construction and Demolition (C & D) Debris Re-Use and Recycling Program

When a project is covered by the updated Huntington Beach C & D Ordinance Section 8.21, it must recycle 65% of the debris it generates. Please review the table below for our current requirements.

Planned Start Date	January 1st, 2017
Covered projects	Effective January 1st, 2017 • Newly constructed building and demolition projects shall divert from landfills at least 65% of the construction materials generated during project. • All locally permitted additions and alterations to non-residential buildings or structures shall divert from landfills at least 65% of nonhazardous construction and demolition materials. • Additions and alterations to residential buildings that increase the structure's conditioned area, volume or size are also required to meet the 65% minimum diversion requirement
Materials required to be recycled	65% of all generated waste must be diverted / recycled per 2016 California Green Building Standards Code, Chapter 4, section 4.408 for all new residential and Chapter 5, section 5.408.1 – 5.408.3 and 5.713.8 – 5.713.8.3 for all non-residential new construction, additions and/or alterations. Please complete attached for C & D Debris Waste Log.
How to recycle	Mixed C & D: All debris (no wet garbage) into one bin. Source-Separated: Separate by type.
Who can haul debris	Mixed C & D: Permit-holder, self-haul or truck-haul, waste generator or franchised hauler. Source-Separated: Anyone. **Franchised Hauler: Republic Services (714) 847-3581**
Where debris may go	Mixed C & D: City of Huntington Beach approved Mixed C & D facility such as Rainbow Disposal or see attached for other approved local processing facilities. Source-Separated: any facility that accepts the material.
Processing fee	*Processing fee is currently being evaluated. Please continue to check with the Building Division counter staff for further updates.*
Security Deposit	*Required security deposit is currently being evaluated. Please continue to check with the Building Division counter staff for further updates.*
Fines	*Fines are currently being evaluated. Please continue to check with the Building Division counter staff for further updates.*
Documentation	Permit-holder must keep a waste log of all materials hauled away from project site, as well as all weight tickets of disposed and recycled material. The waste log must be submitted at permit issuance, framing inspection and prior to building final approval.

Address: City: Zip Code: ____
Phone Number: Mailing Address: _____ City: _____
State:
Phone Number: _____ _____ Fax Number:

For lines 1, 2 and 3, please check only 1 item for each:

1) Project Type: New ☐ Construction ☐ Addition /Alteration ☐ Demolition
2) Building Type: Non- ☐ residential ☐ Low-rise residential/Duplex ☐ Apartment/Multi-Family
3) Tenant Improvement (check one): ☐ Yes ☐ No
4) Size of Project: sq. ft. Project Valuation: $
5) Estimated Start Date / / Estimated Completion Date / /
6) Compliance method (Check one and provide required information)
☐ Green Halo System (Enter tracking number) ☐ Waste Diversion Plan Worksheet (if not using Green Halo)
7) Briefly describe project (i.e.: renovate warehouse, remodel office, etc.)
_____
8) How will scrap or waste material be handled to ensure salvage, re-use or recycling?
_____
9) How will employees and sub-contractors be notified of recycling proposed plan and goals?
_____

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CALGreen CONSTRUCTION & DEMOLITION DEBRIS WASTE WORKSHEET

PROJECT ADDRESS
PERMIT NUMBER
DATE

Use the following conversion factors as well as receipts from previous jobs to help you with your estimated diversion for the Waste Diversion Plan. The Waste Diversion Report is a record of your actual diversion and disposal. The Waste Diversion Report and receipts from landfills, transfer stations and recyclers must be available for review at your final building inspection.

Asphalt paving, crushed = 1,380 lbs / cubic yard	Concrete, scraps, loose = 1,855 lbs / cubic yard
Asphalt/shingles comp, loose = 418.5 lbs / cubic yard	Earth, loose = 2,052 lbs / cubic yard
Brick, laid flat = 20 lbs / square foot flat	Fiberglass insulation, loose = 17 lbs / cubic yard
Brick, loose = 120 lbs / cubic foot, 3,200 lbs / cubic yard	Sheetrock scrap, loose = 393.5 lbs / cubic yard
Ceramic tile, scrap, loose = 1,214 lbs / cubic yard	Rock, crushed = 2,570 lbs / cubic yard

Please submit three (3) copies of this worksheet with your building permit application and this worksheet shall be electronically placed / made a part of plans.

For instructions on how to fill out this form, see "Waste Diversion Worksheet Instructions" located online at the Building Division website under Frequently Requested Forms.

For more information, visit http://www.huntingtonbeachca.gov/government/departments/planning-building or contact the Building Division at (714) 536 – 5241.

DIVERSION

LOCAL RECYCLING DEALERS / FACILITIES

The categories of recyclable materials are as follows:
- Construction and Demolition Materials: Brick, concrete, dirt, granite, gravel, pavement/asphalt and sand.

How to comply	1. Register your project either online using Green Halo Systems or by completing the Waste Reduction Recycling Plan (WRRP) form attached. Make sure to enter the Green Halo project tracking number on the WRRP form. The Green Halo System is a FREE web based system that will help you create your waste management plan, upload your recycling date throughout your construction process and generate your final report for project compliance. 2. Create waste diversion plan in Green Halo and print out Project Information page. Submit (3) copies of the Waste Diversion Form and (3) copy of the waste diversion plan print-out from Green Halo with your Building Permit Application. 3. Divert debris as specified on the plan and collect required documentation. Be sure to ask for construction debris receipts from transfer stations in order to qualify for diversion requirements. Upload recycling and disposal receipts to Green Halo. 4. Pre-Building Final: show the Building Inspector final Green Halo report demonstrating diversion rate compliance. Note, the final report is not required for single family renovations. NOTE: If you are unable to use Green Halo, complete the C & D Debris Waste Diversion Worksheet instead. Fill-out the Waste Diversion Plan (non-shaded) portion of the document prior to starting your project and the Waste Diversion Report (shaded) portion of the document prior to final inspections. Assistance: For assistance with the Diversion Plan Worksheet, contact the Building Division at (714) 536 – 5241. For Green Halo Systems, please visit www.greenhalosystems.com or call (888) 525 – 1301 (M-F 8am to 5pm).

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CALGreen CONSTRUCTION & DEMOLITION DEBRIS RE-USE & RECYLING PROGRAM

Construction and Demolition (C & D) Debris Waste Reduction and Recycling Plan (WRRP)

This form must be complete for the following types of projects:
- Newly constructed building and demolition projects shall divert from landfills at least 65% of the construction materials generated during project.
- All locally permitted additions and alterations to non-residential buildings or structures shall divert from landfills at least 65% of nonhazardous construction and demolition materials.
- Additions and alterations to residential buildings that increase the structure's conditioned area, volume or size are also required to meet the 65% minimum diversion requirement

WRRP must be submitted and APPROVED prior to issuance of building permits. Incomplete forms will be returned to applicant and may delay issuance of permit(s). Each building requires a separate WRRP. Deliver WRRP with permit application to the Building Division permit counter, 2000 Main St, 3rd Floor, Huntington Beach, CA 92648. Allow 5-10 business days for WRRP processing. You may call (714) 536 – 5241 with inquiries regarding this form.

DO NOT ATTACH ADDITIONAL ITEMS

Permit Number: Permit#: Contact Name:
Company Name: Contact Name: _____ Email Address:

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CALGreen CONSTRUCTION & DEMOLITION DEBRIS WASTE WORKSHEET

PROJECT ADDRESS
PERMIT NUMBER
DATE

DIVERSION

Pre-Project Waste Diversion Plan (non-shaded portion). Indicate diversion method with an 'X' in appropriate column along with the name of vendor/facility. Calculate anticipated diversion and landfill percentage of each material type. If you are sending mixed construction debris to a transfer station for sorting, enter the same destination for all materials in the mix. List deconstructed items for reuse on-site (donated / sold), on the next page. Include the approximate weight in the column for reusable items.

Post-Project Waste Diversion Report (shaded portion). Enter actual weight in pounds for each category. Calculate weight column total and diversion rate. Keep all receipts for final report.

If applicant is using *Green Halo* online tracking system, this worksheet (including Waste Diversion Plan & Waste Diversion Report) is NOT REQUIRED! Green Halo offers a free web-based Waste Management Plan and Project Tracking System which can be found by visiting https://www.greenhalosystems.com.

WASTE DIVERSION PLAN (FOR PLAN CHECK ONLY)									WASTE DIVERSION REPORT (FOR FINAL INSPECTION ONLY)				
MATERIAL	ANTICIPATED								ACTUAL (See weight conversion factors next page)			DIVERSION RATE	
	DIVERSION					WASTE			DIVERTED MATERIALS ALL METHODS		WASTE		
	REUSE	RECYCLE	COMPOST	ESTIMATE % OF MATERIAL	VENDOR/FACILITY	LANDFILLED	ESTIMATE % OF TOTAL MATERIAL		DIVERTED lbs	VENDOR/FACILITY	LANDFILLED lbs	TOTAL DIVERTED + LANDFILLED lbs	
ASPHALT			N/A	100%									100% REQUIRED
CONCRETE			N/A	100%									100% REQUIRED
DIRT & ROCK (From previously undeveloped lots)			N/A	100%									100% REQUIRED
AT LEAST 65% DIVERSION OF THE FOLLOWING MATERIALS. DIVERSION BASED ON AMOUNT OF THE COMBINED TOTAL WEIGHT OF MATERIALS BELOW.								A			B		
CARDBOARD													
CARPET, PADDING/FOAM													

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CALGreen CONSTRUCTION & DEMOLITION DEBRIS WASTE WORKSHEET

PROJECT ADDRESS
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- Green Wastes: Compost, grass clippings, leaves, pruning, and Christmas trees.
- Glass: Beverage containers, crushed glass, and window panes.
- Wood: Bark, boards, planks, chips, pallets, plywood, sawdust and shavings.

Note: Although a company may designate the acceptance of materials in one or more categories, please call to verify the materials and quantities produced on your project are accepted. You may also visit Cal Recycle at http://www.calrecycle.ca.gov/condemo/recyclers/RecyclerSearch.aspx for other local dealers and facilities.

Franchised Waste Hauler	C & D	Metals	WGree n Waste	Glass	Wood	Recycling Facilities	C & D	Metals	Green Waste	Glass	Wood
Republic Services 17121 Nichols Ln, Huntington Beach, CA 92647 (714) 847-3581	♻	♻	♻	♻	♻	Beachside Recycling 8601 Edison Drive Huntington Beach, CA 92646 (714) 969-7638		♻			
						Republic Services 17121 Nichols Ln, Huntington Beach, CA 92647 (714) 847-3581	♻	♻	♻	♻	♻
Recycling Facilities	**C & D**	**Metals**	**Green Waste**	**Glass**	**Wood**	**Recycling Facilities**	**C & D**	**Metals**	**Green Waste**	**Glass**	**Wood**
North American Recycling & Crushing 1120 N. Richfield Road, Anaheim, CA 92807 (714) 777-6400	♻					Madison Materials 1036 East 6th Street Santa Ana, CA 92701 (714) 664-0159	♻	♻	♻	♻	♻
SA Recycling 1804 West 5th Street Santa Ana, CA 92701 (714) 667-7898		♻				Sunset Environmental 16122 Construction Cir #E, Irvine, CA 92606 (949) 654-1562	♻	♻	♻	♻	♻
Agulnaga Green Inc. 16355 Construction Cir #W, Irvine, CA 92606 (949) 786-9558			♻			R.J. Noble 15505 E. Lincoln Ave, Orange, CA 92865 (714) 637-1550	♻				

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CALGreen CONSTRUCTION & DEMOLITION DEBRIS WASTE WORKSHEET

PROJECT ADDRESS
PERMIT NUMBER
DATE

BRICK, MASONRY, TILE												
METALS												
PLANT DEBRIS												
SHEETROCK (Not painted)												
CLEAN WOOD												
CEILING TILE												
PAINTED WOOD, PAINTED,DRYWALL, PLYWOOD												
REUSABLE ITEMS									[COMPLETE REUSE LIST NEXT			
ROOFING												
OTHER DEBRIS											TOTAL (lbs)	TOTAL % DIVERTED A/(A+B) X 100
OTHER DEBRIS												
								TOTAL				

DIVERSION

Reusable items such as cabinets, built-ins, framing lumber, siding, etc. are encouraged to be reused on-site. Please list accordingly.

ITEM	USE LOCATION		OFF-SITE BENEFACTOR OR DECONSTRUCTION COMPANY
	☐ ON-SITE	☐ OFF-SITE	
	☐ ON-SITE	☐ OFF-SITE	
	☐ ON-SITE	☐ OFF-SITE	

WEIGHT CONVERSION FACTORS

City of Huntington Beach
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CALGreen CONSTRUCTION & DEMOLITION DEBRIS WASTE WORKSHEET

PROJECT ADDRESS
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Recycling Facilities	C & D	Metals	Green Waste	Glass	Wood	Recycling Facilities	C & D	Metals	Green Waste	Glass	Wood
Ewles Materials (*concrete, concrete blocks, asphalt only*) 8200 Katella Ave Stanton, CA 90680 (714) 894-1988	♻					TVI Gold Gold Recycling 7913 Marine Way Irvine, CA 92618 (949) 654-1562	♻	♻	♻	♻	♻
Sackin Metals 15201 Transistor Lane Huntington Beach, CA 92649 (714) 891-4505		♻			♻						

BY/CHK.	REVISIONS	DATE	NO.

DES. S.D.M. | DRW. S.D.M. | CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS FOR
MICHAEL HOPKINS & IRENE MORCOS
LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
LOT 208, TRACT 3903

AGAPE CIVIL ENGINEERING, INC.
STEPHEN D. MILLER – Registered Civil Engineer
CIVIL ENGINEERING – COMMERCIAL & RESIDENTIAL DESIGN & ENGINEERING
P.O. BOX 8504, LONG BEACH, CALIFORNIA 90808 – (661) 472–9575
AGAPECIVILENGINEERING@GMAIL.COM

268–2204_rev1.dwg

January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C55672 CIVIL STATE OF CALIFORNIA

SHEET	OF
16	17

JOB NO. 268–2204

CATCH BASIN / INLET PROTECTION

1. CATCH BASIN / INLET PROTECTION SHALL BE INSTALLED WHEREVER THERE IS A POTENTIAL OF STORMWATER OR NON-STORMWATER BEING DISCHARGED INTO IT.
2. INLET PROTECTION IS REQUIRED ALONG WITH OTHER POLLUTION PREVENTION MEASURES SUCH AS; EROSION CONTROL, SOIL STABILIZATION, AND MEASURES TO PREVENT TRACKING ONTO PAVED SURFACES.
3. MODIFY INLET PROTECTION AS NEEDED TO AVOID CREATING TRAFFIC HAZARDS.
4. INCLUDE INLET PROTECTION MEASURES AT HILLSIDE V-DITCHES AND MISC. DRAINAGE SWALES.
5. INLET PROTECTION SHALL BE INSPECTED AND ACCUMULATED SEDIMENTS REMOVED. SEDIMENT SHALL BE DISPOSED OF PROPERLY AND IN A MANNER THAT ASSURES THAT THE SEDIMENT DOES NOT ENTER THE STORM DRAIN SYSTEM.
6. DAMAGED BAGS SHALL BE REPLACED IMMEDIATELY.
7. ADDITIONAL SANDBAG SEDIMENT TRAPS SHALL BE PLACED AT INTERVALS AS INDICATED ON SITE PLAN.

EQUIPMENT MAINTENANCE AREAS

1. LEAKING VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED ON-SITE. EQUIPMENT AND VEHICLES SHALL BE INSPECTED FREQUENTLY FOR LEAKS AND SHALL BE REPAIRED IMMEDIATELY. CLEAN UP SPILLS AND LEAKS PROMPTLY WITH ABSORBENT MATERIALS; DO NOT FLUSH WITH WATER.
2. VEHICLES AND EQUIPMENT SHALL BE MAINTAINED, AND REPAIRED ON-SITE ONLY IN DESIGNATED AREAS. PREVENT RUN-ON AND RUN-OFF FROM DESIGNATED AREAS. CONTAINMENT DEVICES SHALL BE PROVIDED AND AREAS SHALL BE COVERED IF NECESSARY.
3. DESIGNATE ON-SITE VEHICLE AND EQUIPMENT MAINTENACE AREAS, AWAY FROM STORM DRAIN INLETS AND WATERCOURSES.
4. ALWAYS USE SECONDARY CONTAINMENT, SUCH AS A DRAIN PAN OR DROP CLOTH, TO CATCH SPILLS AND LEAKS WHEN REMOVING OR CHANGING FLUIDS.
5. LEGALLY DISPOSE OF USED OILS, FLUIDS, AND LUBRICANTS.
6. PROVIDE SPILL CONTAINMENT DIKES OR SECONDARY CONTAINMENT AROUND STORED OIL, FUEL, AND CHEMICAL DRUMS.
7. MAINTAIN AN ADEQUATE SUPPLY OF ABSORBAENT SPILL CLEANUP MATERIALS IN DESIGNATED AREA.

GENERAL NOTES

1. BEST MANAGEMENT PRACTICES (BMP'S) CONTAINED HEREIN REFLECT MINIMUM REQUIREMENTS. ALTERNATE METHODS PROVIDING EQUAL OR GREATER PROTECTION MAY BE UTILIZED. FOR ADDITIONAL BMP'S REFER TO CALIFORNIA STORMWATER BMP HANDBOOKS, AVAILABLE AT WWW.CABMPHANDBOOKS.COM.
2. ALL CONSTRUCTION ACTIVITY SHALL BE PERFORMED IN ACCORDANCE WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) DEVELOPED AND IMPLEMENTED IN COMPLIANCE WITH REQUIREMENTS OF THE LOCAL STORMWATER MANAGEMENT PROGRAM, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND THE STATE'S GENERAL PERMIT.
3. THE SWPPP SHALL:
   - 3.1. IDENTIFY POTENTIAL POLLUTANT SOURCES AND INCLUDE THE DESIGN AND PLACEMENT OF BMP'S TO EFFECTIVELY PROHIBIT THE ENTRY OF POLLUNANTS FROM THE CONSTRUCTION SITE INTO AND ONTO THE STREET AND STORM DRAIN SYSTEM DURING CONSTRUCTION.
   - 3.2. BE KEPT ON SITE AND AMENDED TO REFLECT CHANGING CONDITIONS THROUGHOUT THE COARSE OF CONSTRUCTION.
   - 3.3. BE KEPT UP TO DATE. ANY ADDITIONAL UPDATES REQUESTED BY AGENCY REPRESENTATIVES ARE TO BE MADE IMMEDIATELY.
4. NON-STORMWATER DISCHARGES ARE PROHIBITED FROM ENTERING ANY STORM DRAIN SYSTEM AND / OR STREET.
5. POLLUTANTS SHALL BE REMOVED FROM STORMWATER DISCHARGES TO THE MAXIMUM EXTENT PRACTICABLE (MEP) THROUGH DESIGN AND IMPLEMENTATION OF THE SWPPP.
6. A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (NOVEMBER 1 TO APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR DAMAGED EROSION CONTROL MEASURES OR SEDIMENT CONTROL MEASURES WHEN RAIN IS IMMINENT.
7. PORTABLE SANITARY FACILITIES SHALL BE LOCATED ON RELATIVELY LEVEL GROUND AWAY FROM TRAFFIC AREAS, DRAINAGE COURSES, AND STORM DRAIN INLETS.
8. EMPLOYEES, SUBCONTRACTORS AND SUPPLIERS SHALL BE EDUCATED ON ALL BMP'S INCLUDING CONCRETE WASTE STRORAGE AND DISPOSAL PROCEDURES.
9. SEDIMENT CONTROL PRACTICES SHALL EFFECTIVELY PREVENT A NET INCREASE OF SEDIMENT LOAD IN STORMWATER DISCHARGE.

SILT FENCE

1. CONSTRUCT THE SILT FENCE ALONG A LEVEL CONTOUR.
2. SILT FENCES SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.
3. PROVIDE SUFFICIENT ROOM FOR RUNOFF TO POND BEHIND THE FENCE AND ALLOW SEDIMENT REMOVAL EQUIPMENT TO PASS BETWEEN THE SILT FENCE AND TOE OF SLOPE OR OTHER OBSTRUCTIONS. ABOUT 122 SQ. FT. OR PONDING AREA SHALL BE PROVIDED FOR EVERY ACRE DRAINING TO THE FENCE.
4. TURN THE ENDS OF THE FILTER FENCE UPHILL TO PREVENT STORMWATER FROM FLOWING AROUND THE FENCE.
5. LEAVE AN UNDISTURBED OR STABILIZED ARE IMMEDIATELY DOWNSLOPE FROM THE FENCE.
6. DO NOT PLACE IN LIVE STREAM OR INTERMITTENTLY FLOWING CHANNELS.
7. WHEN STANDARD FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS.

MATERIAL STORAGE

1. DIRT AND OTHER CONSTRUCTION RELATED MATERIALS PLACED IN THE STREET OR ON OTHER IMPERVIOUS SURFACES MUST BE CONTAINED WITH SANDBAGS OR OTHER MEASURES TO PREVENT TRANSPORT TO THE STORMDRAIN SYSTEM.
2. ANY CONSTRUCTION MATERIAL STORED OR STOCKPILED ON-SITE SHALL BE PROTECTED FROM BEING TRANSPORTED BY THE FORCE OF WIND OR WATER.

CONCRETE WASTE MANAGEMENT

1. EXCESS AND WASTE CONCRETE SHALL NOT BE WASHED INTO THE STREET OR INTO A DRAINAGE SYSTEM.
2. FOR WASHOUT OF CONCRETE AND MORTAR PRODUCTS, A DESIGNATED CONTAINMENT FACILITY OF SUFFICIENT CAPACITY TO RETAIN LIQUID AND SOLID WASTE SHALL BE PROVIDED ON SITE.
3. SLURRY FROM CONCRETE AND ASPHALT SAW CUTTING SHALL BE VACUUMED OR CONTAINED, DRIED, PICKED UP AND DISPOSED OF PROPERLY.

VEHICLE / EQUIPMENT FUELING

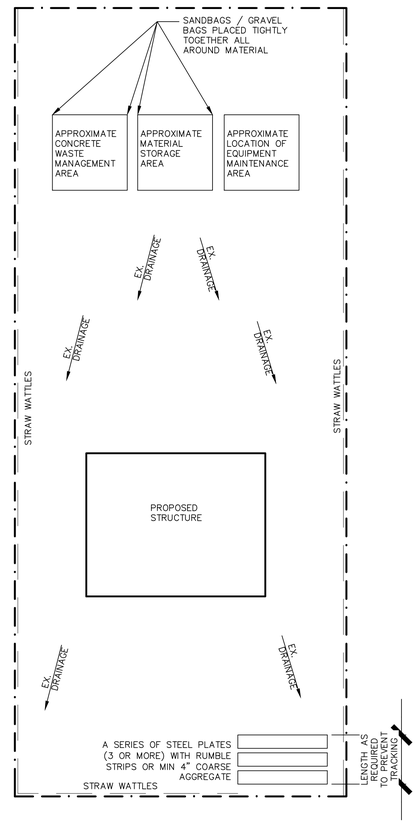
1. FUELING SHALL BE PERFORMED IN A DESIGNATED AREA, AWAY FROM DRAINAGE COURSES.
2. ABSORBENT CLEANUP MATERIAL SHALL BE ON SITE AND USED IMMEDIATELY IN THE EVENT OF A SPILL

STABILIZED CONSTRUCTION ENTRANCE

1. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO PREVENT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC ROADS. DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS INTO THE STORM DRAIN SYSTEM.
2. STABILIZED CONSTRUCTION ENTRANCE SHALL BE:
   - 2.1. LOCATED AT ANY PINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT OF WAY, STREET, ALLEY, AND SIDEWALK OR PARKING AREA.
   - 2.2. A SERIES OF STEEL PLATES WITH "RUMBLE STRIPS", AND/ OR MIN 4" COARSE AGGREGATE WITH LENGTH, WIDTH AND THICKNESS AS NEEDED TO ADEQUATLY PREVENT ANY TRACKING ONTO PAVED SURFACES.
3. ADDING A WASH RACK WITH A SEDIMENT TRAP LARGE ENOUGH TO COLLECT ALL WASH WATER CAN GREATLY IMPROVE EFFICIENCY
4. ALL VEHICLES ACCESSING THE CONSTRUCTION SITE SHALL UTILIZE THE STABILIZED CONTRUCTION ENTRANCE SITES
5. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS IMMEDIATELY.
6. SWEEP PAVED AREAS THAT RECEIVE CONSTRUCTION TRAFFIC WHENEVER SEDIMENT BECOMES VISIBLE.
7. PAVEMENT WASHING WITH WATER IS PROHIBITED IF IT RESULTS IN A DISCHARGE TO THE STORM DRAIN SYSTEM.

EROSION CONTROL

1. SOIL / SLOPE STABILIZATION PRACTICES SHALL BE DESIGNED TO PRESERVE EXISTING VEGETATION WHERE FEASIBLE AND TO REVEGETATE OPEN AREAS AS SOON AS FEASIBLE AFTER GRADING. THESE CONTROL PRACTICES SHALL INCLUDE TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, OR OTHER SOIL STABILIZATION PRACTICES.
2. SOIL STABILIZATION SHALL BE IMPLEMENTED ON ALL INACTIVE DISTURBED AREAS FROM NOVEMBER 1 THRU APRIL 15 AND ON ALL DISTURBED AREAS DURING A RAIN EVENT OR POTENTIAL RAIN.
3. STABILIZATION PRACTICES SHALL CONTROL / PREVENT EROSION FROM THE FORCES OF WIND AND WATER.
4. STABILIZATION PRACTICES SHALL BE IMPLEMENTED IN CONJUNCTION WITH SEDIMENT TRAPPING / FILTERING PRACTICES AND PRACTICES TO REDUCE THE TRACKING OF SEDIMENT ONTO PAVED ROADS.
5. WHEN USING STRAW MULCHING, THE MINIMUM APPLICATION SHALL BE 2 TONS / ACRE. MULCH MUST BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.
6. WHEN USING HYDROSEEDING / MULCHING, THE MINIMUM APPLICATION OF WOOD FIBER SHALL BE 1500 LBS / ACRE, THAT DOES NOT CONTAIN MORE THAN 50 PERCENT NEWSPRINT.
7. FOR SEEDING RECOMMENDATIONS, CONTACT; USDA, NATURAL RESOURCES CONSERVATION SERVICES AT 5000 CALIFORNIA AVENUE, BAKERSFIELD, CA 93309-0725. PHONE: (661) 336-0967.



TYPICAL SITE PLAN

CONSTRUCTION WASTE MANAGEMENT (CWM) ACKNOWLEDGEMENT

Note: This sample form may be used to assist in documenting compliance with the Waste Management Plan.

Permit # _____
Project Name: _____
Project Manager: _____
Waste Hauling Co: _____

CWM Plan Acknowledgement

The Foreman for each new Subcontractor that comes on site is to receive a copy of the Construction Waste Management Plan and complete this Acknowledgement Form.
I have read the Waste Management Plan for the project; I understand the goals of this plan, and agree to follow the procedures described in this plan.

Date	Subcontractor Company Name	Foreman Name	Signature

Contractor (Documentation Author's / Responsible Designer's Declaration Statement)

- I certify that this Certificate of Compliance documentation is accurate and complete.
- I certify that the features and performance specifications for the design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 11 of the California Code of Regulations.
- The design features identified on this Certificate of Compliance are consistent with the information documented on other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with the permit application.

Signature:	
Company:	Date:
Address:	License:
City/State/Zip:	Phone:

1/6/14

BEST MANAGEMENT PRACTICES

NO.	DATE	REVISIONS	BY/CHK.

DES. S.D.M. DRW. S.D.M. CHK. S.D.M.

PROPOSED REMODEL/ADDITION PLANS FOR
MICHAEL HOPKINS & IRENE MORCOS
LESCREW CONSTRUCTION
9032 CHRISTINE DRIVE
HUNTINGTON BEACH, CALIFORNIA 92646
LOT 208, TRACT 3903

AGAPE CIVIL ENGINEERING, INC.
STEPHEN D. MILLER – Registered Civil Engineer
CIVIL ENGINEERING – COMMERCIAL & RESIDENTIAL DESIGN & ENGINEERING
P.O. BOX 8504, LONG BEACH, CALIFORNIA 90808 – (661) 472-9575
AGAPECIVILENGINEERING@GMAIL.COM

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January 9, 2023

REGISTERED PROFESSIONAL ENGINEER STEPHEN MILLER No. C55672 CIVIL STATE OF CALIFORNIA

SHEET	OF
17	17

JOB NO. 268-2204