PROJECT: 26860 REGENCY WAY, MORENO VALLEY, CA 92555

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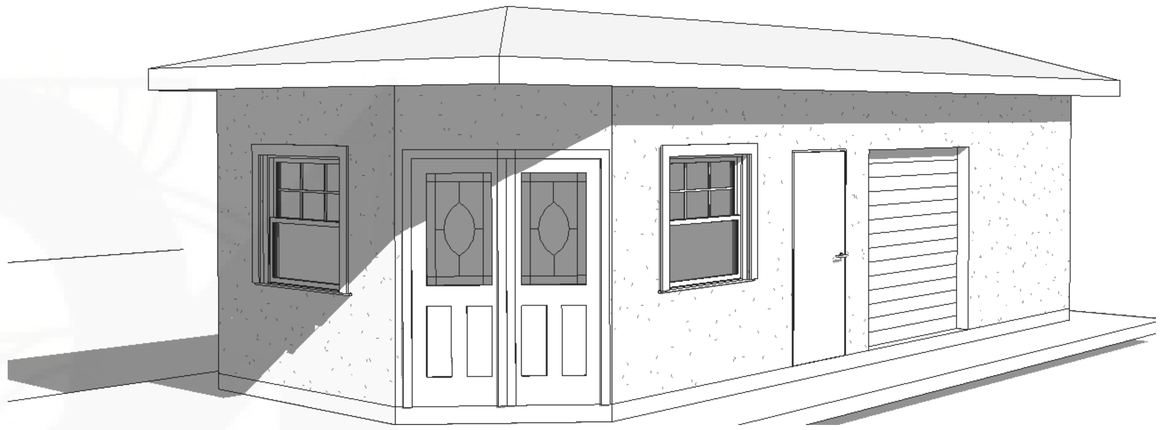

THE GENERAL CONTRACTOR SHALL FULLY COMPLY WITH THE FOLLOWING INTERNATIONAL CODES, 2016
CALIFORNIA BUILDING STANDARDS CODE (CAL. CODE REGS., TITLE 24)
COMPLIANCE WITH CITY OF SANTA CLARA MUNICIPAL CODES.
CALGREEN CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11 OF TITLE 24
CBC CALIFORNIA BUILDING CODE (PART 2 OF TITLE 24)
CCR CALIFORNIA CODE OF REGULATIONS
CEBC CALIFORNIA EXISTING BUILDING CODE (PART 10 OF TITLE 24)
CEC CALIFORNIA ELECTRICAL CODE (PART 3 OF TITLE 24)
CEC CALIFORNIA ENERGY CODE (PART 6 OF TITLE 24)
CEC CALIFORNIA ENERGY COMMISSION
CMC CALIFORNIA MECHANICAL CODE (PART 4 OF TITLE 24)
CPC CALIFORNIA PLUMBING CODE (PART 5 OF TITLE 24)
CRSC CALIFORNIA REFERENCED STANDARDS CODE (PART 12 OF TITLE 24)
DPH IDENTIFIES CODE PROVISIONS BY THE DEPARTMENT OF PUBLIC HEALTH
IBC INTERNATIONAL BUILDING CODE
IFC INTERNATIONAL FIRE CODE
IEBC INTERNATIONAL EXISTING BUILDING CODE
IRC INTERNATIONAL RESIDENTIAL CODE
NEC NATIONAL ELECTRICAL CODE
NFPA NATIONAL FIRE PROTECTION ASSOCIATION

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Project Name and Address:

WORKSHOP ADDITION

26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 22-Dec-20 11:31:10 AM

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Page No. :

A-000

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020

SPECIFICATIONS

DIVISION 00 - CONDITIONS OF CONTRACT

0.01 Terminology

- Referenced Organizations
  - a. ACI American Concrete Institute (www.concrete.org)
  - b. AISC American Institute of Steel Construction (www.aisc.org)
  - c. AITC American Institute of Timber Constructio (www.aitc-glulam.org)
  - d. ANSI American National Standard Institute (www.ansi.org)
  - e. APA American Plywood Association (www.apawood.org)
  - f. ASHRAE American Society of Heating, Refrigeration, and Air Conditioning Engineering (www.ashrae.org)
  - g. ASTM American Society for Testing and Materials (www.astm.org)
  - h. AWI Architectural Woodwork Institute (www.awinet.org)
  - i. AWS American Welding Society (www.aws.org)
  - j. AAMA Architectural Aluminum Manufacturers' Association (www.aamanet.org)
  - k. CRI Carpet and Rug institute (www.carpet-rug.org)
  - l. CEC California Energy Commission (www.energy.ca.gov)
  - m. CRSI Concrete Reinforcing Steel Institute (www.crsi.org)
  - n. FS Federal Specification (http://apps.fss.gsa.gov/pub/fedspecs/)
  - o. GA Gypsum Association (www.gypsum.org)
  - p. GANA Glass association of North America (www.glasswebsite.com)
  - q. ICC International Code Council (www.iccsafe.org)
  - r. NIST PS National Institute of Standards and Technology, Product Standards (www.nist.org)
  - s. NEMA National Electrical Manufacturers Association (www.nema.org)
  - t. NFPA National Fire Protection Association (www.nfpa.org)
  - u. NFRC National Fenestration Rating Council (www.nfrc.org)
  - v. NOFMA National Oak Flooring Manufacturers Association (www.nofma.org)
  - w. NPCA National Paint and Coatings Association (www.npca.org)
  - x. NRCA National Roofing Contractors Association (www.nrca.net)
  - y. WDMA National Wood Window and Door Association (www.wdma.com)
  - z. PDCA Painting and Decorating Contractors of America (www.pdca.org)
  - aa. SDI Steel Door Institute (www.steeldoor.org)
  - ab. SMACNA Sheet Metal and Air Conditioning Contractors National Association (www.smacna.org)
  - ac. TCNA Tile Council of North America (www.tcna.org)
  - ad. TPI Truss Plate Institute (www.tpinst.org)
  - ae. TRI Tile Roofing Institute (www.tileroofing.org)
  - af. UL Underwriters' Laboratories Inc. (www.ul.com)
  - ag. WCLIB West Coast Lumber Inspection Bureau (www.wclib.org)
  - ah. WI Woodwork Institute (www.woodworkinstitute.com)
  - ai. WWPA Western Wood Products Association (www.wwpa.org)
- Definitions
  1. Contract Documents: The Contract Documents shall include the drawings, specifications, structural calculations, soils report, and California Energy Code compliance forms. These documents are intended to supplement and complement each other. In case of conflict, contact the Architect.
  2. Owner: The term "Owner" shall mean the Owner or the Owner's authorized representative(s).
  3. Contractor: The term "Contractor" shall mean the general contractor or the general contractor's authorized representative(s).
  4. Architect: The term "Architect" shall mean PixelArch ltd. authorized representative(s).
  5. Engineer: The term "Engineer" shall mean the structural engineer or the structural engineer's authorized representative(s).
  6. Builder: The term "Builder" shall mean a person or entity who is both an Owner and Contractor, and whose responsibilities are for both Owner and Contractor.

DIVISION 01 - GENERAL REQUIREMENTS

1.01 Scope of Work:

- Contractor shall provide all labor, materials, equipment, permits, and services necessary for construction of the building and site improvements conforming to the contract documents. Drawings and specifications represent finished structure.
- The contractor shall be responsible for means and methods of construction including shoring and temporary bracing and shall take all necessary measures to insure the safety of all persons and structures near or adjacent to the site.
- Care shall be taken to protect from any damage all trees and vegetation on the site and on adjoining properties. Any trimming or other alteration done to trees shall be done so only by approval of the Owner.
- The Architect will not be providing the Owner with regular on site contract administration and is available only at request of the Owner. The Contractor is solely responsible for the quality control and construction standards for this project.
- These plans are for general construction purposes only. They are not exhaustively detailed nor fully specified. The drawings were prepared to a level of completion satisfactory for building permit purposes and for construction by a knowledgeable and experienced contractor. The Contractor is responsible for preparation of any supplemental details, product specifications, coordination and installation of all materials and equipment.
- Mechanical, electrical, and plumbing systems are shown for intent only. These systems shall be design/build by the Contractor. The Contractor shall be responsible for all necessary permits, drawings, calculations, and California Energy Code.
- These drawings and specifications are divided into sections for convenience only. Contractors, subcontractors and materials suppliers shall refer to all relevant sections in bidding and performing their work and shall be responsible for all aspects of the work regardless of where the information occurs in the drawings.
- Clean-Up: The Contractor will remove all debris from the building site and in general keep the work as clear of rubbish as possible during the course of the work. Before filing the Notice of Completion, the building will be fully cleaned, including all glass polished, floors scrubbed and cleaned, and the building shall be suitable for immediate occupancy by Owner.

1.02 Quality Control

- All work shall comply with applicable requirements of all governing codes, regulations and ordinances. These shall include the latest adopted editions of: The California Building Code (CBC), California Residential Code (CRC), California Electric Code (CEC), California Plumbing Codes (CPC), California Mechanical Code (CMC), California Energy Code (CENC), California Green Building Standards Code (CAL Green), OSHA regulations, and all other health and safety codes, ordinances and requirements adopted by governing agencies. In the case of conflicts between these regulations and the contract documents, the most restrictive shall apply.
- The Contractor shall verify, at the site, all conditions affecting work and shall review the contract documents for any areas of question affecting cost, construction and warranty and any drawing dimensional or note conflict, discrepancy, illegibility or omission. All areas of question shall be brought to the attention of the Architect in writing before commencing any work and/or submitting any bid. Commencement of any work shall constitute acceptance by the Contractor of all conditions affecting work.
- Workmanship throughout shall be of the highest quality of each trade involved.
- The Contractor, before commencing work, shall notify the Owner in writing of any work that cannot be fully guaranteed or executed within the intent of the drawings prior to the bid submittal.
- All construction shall be in strict conformance with manufacturers' latest written specifications. All discrepancies between these specifications and the contract documents prepared by the Architect and his consultants shall be brought to the attention of the Architect before commencing work.
- Reference to product manufacturer or trade names are for minimum performance standards only. Submittal equals may be allowed upon approval by the Architect. Material and detail substitutions made by the Contractor without written approval by the Architect shall void any responsibility or liability of the Architect as to performance, repair cost, ancillary damage or the performance of related materials and details.
- Cutting and patching includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and patching required to restore surfaces to their original condition. Use materials for cutting and patching that are identical to existing materials.
- Do not cut and patch structural work in a manner that would result in a reduction of load carrying capacity or load-deflection ratio. Submit proposal and obtain Architect's and Engineer's approval before proceeding with cut and patch of structural work.
- Quality control services include inspections and tests performed by independent agencies and governing authorities, as well as by the Contractor. Inspection and testing services are intended to determine compliance of the work and the requirements specified. Approval by a building official does not mean approval or failure to comply with the contract documents. Inspections and testing shall be performed at the request of the Owner, the Architect and/or governing agencies and as set forth in these documents. Quality control services are the Contractor's responsibility, including those specified to be performed by an independent agency and not by the contractor. The Contractor shall employ and pay any independent agency, testing laboratory or other qualified firm to perform quality control services specified. Where results of inspections or tests do not indicate compliance with the contract documents, the Contractor shall be responsible for any repair, replacement, correction and re- test that is required.
- All dimensions shall take precedence over scale shown on the plans, sections, and details. Dimensions are to face of studs, face of foundation, face of concrete block, top of sheathing, top of slab, or center of openings, U.O.N. Do not scale drawings. Contractor shall verify all dimensions and review any conflicts or discrepancies with the Architect prior to commencement of work.

DIVISION 02 - SITEWORK

2.01 Soils Report:

- All work shall be in conformance with the Soils, Compaction and Geological Report.
- The Contractor shall have the Soils Engineer review and approve in writing to the Building Official and Architect that the foundation and site design are in conformance with the Soils Report prior to commencement of work.
- The Contractor shall be solely responsible for compliance with all recommendations of the Soils Report.
- Prior to the contractor requesting a foundation inspection by the building department, the Soils Engineer shall advise the Building Official and Architect in writing that:
  - a. Site grading, subgrade preparation, cutting slopes, excavation, placement of engineered fill material and compaction is in accordance with the Soils Report.
  - b. The utility trenches have been properly backfilled and compacted.
  - c. The foundation excavations, forming, footing and pier depths, and reinforcement comply with the soils report and approved plans.

2.02 General Requirements

- The site plan is not a survey. It is based on site information provided by the Owner and is for building and site work layout only. The Contractor shall verify on site all grades, soil conditions, ground water, existing improvements, property lines, easements, setbacks, utilities and substructures. Where discrepancies with the drawings occur, contact Architect.
- Grade surface of fill under concrete slabs shall be smooth and even, free of voids, compacted as specified and to required elevation.
- At raised foundations, pad grade under building shall have positive slope to a perforated drain set in gravel trench. Extend pipe to all portions of underfloor area. The drain shall discharge into the street or approved drainage facility.
- Unless otherwise detailed or noted, a perforated drain set in a gravel trench shall be installed around the entire perimeter of the foundation. The drain shall discharge into the street or approved drainage facility. Use only rigid pipe, flexible pipe will not be allowed.
- It shall be the responsibility of the Contractor to take proper erosion control measures. The Contractor shall be responsible for proper surface and subsurface drainage of the site. Slope all finish grading away from buildings, walks, drives or decks and provide catch basins where required.
- Finish grades shall be held down in planting areas. The Contractor shall provide and install a 6" minimum thickness of clean select top soils in these areas.
- Rough grading for slabs-on-grade shall be within 2/10th of one foot, plus or minus.
- Site grading shall be within 5/10th of one foot, plus or minus.
- All roof drainage shall be piped in a closed pipe system to street or approved drainage facility (U.O.N.).
- Builder shall provide landscape development guidelines to Owner that shall include information on site maintenance and development and state such items as "Irrigation system shall be designed to prevent saturation of soil adjacent to building".
- All utilities unless indicated otherwise shall be installed under ground. The Contractor shall be responsible to insure that all trenching within building area shall be backfilled and compacted with structural soils material free of any rocks or other sharp objects which may damage underground utilities.
- Underground piping shall be laid to a minimum 24" depth below finished grade. When utilities are placed in a common trench, all utilities shall maintain separations and coverage both vertically and horizontally, as required by applicable codes.

DIVISION 03 - CONCRETE

3.01 Quality Control

- In addition to complying with all pertinent codes and regulations, comply with all applicable provisions of the latest editions of:
  - a. ACI 301 "Specifications for Structural Concrete for Buildings"
  - b. ACI 318 "Building Code Requirements for Reinforced Concrete"
  - c. CRSI "Manual of Standard Practice"
  - d. See Structural Engineer's drawings for additional requirements.

3.02 General Requirements

- Provide underfloor vents as per CBC 1203.3 or CRC R408.1. Add two 6 x 14 vents to garage. All first floor double framed areas shall be vented.
- Provide expansion and control joints in all exterior concrete slabs. Spacing of joints shall be per industry standard (U.O.N.). Verify joint layout with Architect.
- Refer to architectural, structural, mechanical, plumbing and electrical drawings for all moulds, grooves and ornamental clips, location of sleeves, inserts, etc. to be cast in concrete and for extent of depressions, curbs and ramps.
- Finishes:
  - a. All interior slabs shall receive trowel smooth finish (U.O.N.).
  - b. All driveways, sidewalks, and stairs shall receive broom-smooth finish (U.O.N).
  - c. Garage slabs and other interior slabs that will remain unfinished shall be treated with Lipidolith Hardner by Sonneborn, or equal.

DIVISION 04 - MASONRY

4.01 Quality Control

- Glass Block: Minimum performance specifications shall be as Pittsburgh Corning glass block units. The units shall be the pattern and size indicated on the plans.
- Precast architectural concrete columns and trims: Concrete Designs Inc. (CDI) U.O.N.
- Grout for precast concrete: ASTM A 118.6, Latex Portland Cement, color to match precast concrete.
- Epoxy Grout: ANSI A 108.6 and A118.3. 4.02

4.02 General Requirements

- Concrete Block
  - a. Mortar joints to be "flush" (U.O.N.).
  - b. Bond shall be "running" (U.O.N.).
- Brick:
  - a. Mortar joints shall be "raked" (U.O.N.). Raked joints shall be not more than 3/8" deep, and where exposed to weather, shall be tooled. Brick joints shall be concaved where subject to freezing.
  - b. Bond shall be "running" (U.O.N.).
- Stone:
  - a. Field Sample: A sample panel shall be built approximately 4 feet by 6 feet. This sample panel may be a part of the project. Veneer installation shall not proceed until the sample panel is accepted by the Architect and Owner. Full size units which have been selected and approved by the Architect and the Owner to show color range, maximum texture range, bond, mortar, tooling of joints, and quality of workmanship shall be used in the sample panel. The remainder of the veneer installation shall be consistent with the approved sample panel.
- Glass Block:
  - a. Mortar for glass block installed on exterior walls and other damp location shall be waterproofed with Laticrete 8510 or equal.

DIVISION 05 - METALS

5.01 General Requirements

- All bolt heads and nuts that bear on wood shall have malleable iron washers if exposed or cut washers if concealed.
- Exposed welds shall be ground smooth.
- Shop paint structural steel work , except those members or portions of members to be embedded in concrete or mortar. Paint the initial 2" of embedded areas only. Do not paint surfaces which are to be welded or high strength bolted with friction type connections. After installation is completed, all welded and other abraded areas shall be touched up. On surfaces inaccessible after assembly or erection, apply two (2) coats of the specified primer.
- All exterior steel, exposed, concealed or embedded, or where called for on the Drawings, shall be thoroughly zinc-coat galvanized after fabrication by the hot-dipped method. Touch- up field welds with similar galvanizing product.
- Dissimilar Materials in contact with each other shall be protected to prevent galvanic or corrosive action. Use vinyl pressure tape, polyisobutylene tape, or similar product.
- All metals in contact with pressure treated wood shall be hot dipped galvanized, see Simpson Strong-Tie for recommended finishes for their connectors. Also see structural engineering specifications for further information.

DIVISION 06 - WOOD AND PLASTICS

6.01 Quality Control:

- Materials shall meet or exceed the following standards:
  - a. Lumber:
    - A. Structural lumber and their wood fasteners shall conform with CBC Chapter 23 and/or relevant chapters of the CRC.
    - B. All wood in contact with concrete or masonry or located within 8" of finish grade shall be pressure treated Douglas or Hem Fir with an approved preservative.
    - C. All timbers 6 x 8 and larger exposed to view shall be free of heart center (FOHC), with moisture content of 22% maximum.
    - D. Max. deflection (DL + LL) shall be: Floor with Tile = L/ 720
- All wood shall be nontropical, reused, reclaimed, or FSC Certified

6.02 General Framing Requirements:

- Blocking:
  - a. Block floor joists at all supports, line up double joists under all walls parallel to floor joists and space double joists under plumbing walls.
  - b. Provide solid full width blocking or post below all structural posts - continuous to foundation.
  - c. Provide blocking and nailers for all finishes and fixtures as required.
  - d. Provide blocking in walls at ceiling lines.
  - e. Corbles, knee braces, etc., shall be construction select materials. At double framed floors "sleepers" shall be perpendicular to framing below.

6.03 Attic Ventilation Requirements:

- Provide attic and soffit ventilation as per CBC 11203.2 or CRC R806. Vent all double framed areas. See Roof Plan for calculations.

6.04 Finish Carpentry:

- All millwork and case work shall be in accordance with AWI/AWMAC "Architectural Wood Standards" custom or premium grade standards, latest edition.
- All cabinets and millwork shall be selected by the owner.
- Provide 30" clear above kitchen range to unprotected underside of upper cabinetry or 24" clear to metal hood as per CMC Section 916.1 & 916.2.
- Plastic laminates and solid surfacing products shall meet or exceed ANSI/NEMA standards LD.
- Install and anchor all cabinetry to preclude movement, overturning, or distortion to other materials or finishes. Install level and plumb. Comply with manufacturer's instructions for support of supplied units.
- Install all trim in as long of lengths as possible. All splices in finish members shall be bevel splices. Where joints within a piece are required they shall be as unapparent as possible.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

7.01 Quality Control

Materials shall meet or exceed the following standards:

- Insulation:
  - a. Insulation shall be installed per the California Energy Code requirements.
  - b. Thermal Batt/Blanket Insulation: Mineral-Fiber Blanket complying with ASTM C 665, Type I (blankets without membrane facing).
  - c. Thermal insulation/blown-in blanket insulation glass fiber loose-fill complying with ASTM C 764 Type I (for pneumatic) or Type II (for poured) in attic.
  - d. Sound Insulation: Unfaced mineral fiber blanket/batt insulation complying with ASTM C 665, Type I, minimum thickness equal to stud depth to entirely fill the void space, nominal 0.70 to 2.50 -pcf density.
  - e. All plumbing walls adjacent to interior living spaces shall be sound insulated with fiberglass batts.
- Concrete Tile Roofing:
  - a. All work shall comply with the TRI "Concrete and Clay Tile Installation Manual for Moderate Climate Regions and CBC 1507.3 or CRC 905.3
  - b. Concrete Tile Roofing shall be applied according to manufacturers specifications.
  - c. The minimum performance standards for concrete tile roofing shall be Eagle Roofing Products (ICC ESR-1900) or equal as approved by Owner and bear a UL Class A fire proof rating. Installed weight shall be a maximum of 900 lbs. per square.
  - d. Trim units shall include manufacturer's standard ridge, hip and rake pieces. Color as selected by Owner (U.O.N.). Minimum one nail per tile, two nailes on all rake tile. Minimum pitch shall be as per manufacturer's specifications. Underlayment for concrete or clay tile roofing shall be one layer of 30 lb. asphalt-saturated organic roofing felt, complying with ASTM D 226, 36" wide applied per manufacturer's recommendations. 3-ply built up roof underlayment required for pitch less than 3:12.
  - e. Roofing nails shall be aluminum or hot dip galvanized 11 or 12 GA sharp, pointed conventional roofing nails with barbed shanks, min. 3/8" dia. head and or sufficient length to penetrate min. 3/4" into solid decking or to penetrate through plywood sheathing (U.O.N.).
  - f. The roofing contractor shall supply to the Owner a written guarantee to repair without cost to the Owner, any leaks due to faulty materials or workmanship, which develop within 1 year from the date of acceptance by Owner of completed building. During this time period, any repair work required because of Act of God, abuse, alterations, or failure to the substrate and/or supporting structure (other than that caused by defects in the roofing work) shall be completed by the contractor and paid for by the Owner, promptly after compeltion of the required repair work in each instance. The roofing contractor shall furnish the manufacturer's standard limited material warranty for a minimum of 10 years from the date of completion of the roof.
- Asphalt Shingle Roofing:
  - a. All work shall comply with the NCRA "Roofing and Waterproofing Manual" and CBC 1507.2 or CRC R905.2.
  - b. Asphalt shingles shall be applied according to manufacturers specifications.
  - c. The minimum performance standard for asphalt shingles shall be Elk Premium Roofing - Prestigue Two or equal as approved by Owner and bear a UL Class A fire proof rating. Trim units shall include manufacturer's standard ridge and hip pieces. Color as selected by Owner (U.O.N.). Minimum pitch as per manufacturer's recommendations.
  - d. For asphalt shingle underlayment shall be 15 lb. felt, 2 layers at pitch less than 4:12.
  - e. Roofing nails shall be aluminum or hot dip galvanized 11 or 12 GA sharp, pointed conventional roofing nails with barbed shanks, min. 3/8" dia. head and or sufficient length to penetrate min. 3/4" into solid decking or to penetrate through plywood sheathing (U.O.N.).
  - f. The roofing contractor shall supply to the Owner a written guarantee to repair without cost to the Owner, any leaks due to faulty materials or workmanship, which develop within 1 year from the date of acceptance by Owner of completed building. During this time period, any repair work required because of Act of God, abuse, alterations, or failure to the substrate and/or supporting structure (other than that caused by defects in the roofing work) shall be completed by the contractor and paid for by the Owner, promptly after compeltion of the required repair work in each instance. The roofing contractor shall furnish the manufacturer's standard limited material warranty for a minimum of 10 years from the date of completion of the roof.
- Built-up Roofing:
  - a. All work shall comply with the NCRA "Roofing and Waterproofing Manual" and CBC 1507.10 or CRC R905.11.
  - b. Built-up roofing shall be applied according to manufacturers specifications.
  - c. The minimum performance standard for built up roofing for nailable decks shall be Johns Manville 4GNC or equal as approved by Owner and bear a Class A fire proof rating. All products and components shall be by same manufacture. Color as selected by Owner (U.O.N.).
  - d. The roofing contractor shall supply to the Owner a written guarantee to repair without cost to the Owner, any leaks due to faulty materials or workmanship, which develop within 1 year from the date of acceptance by Owner of completed building. During this time period, any repair work required because of Act of God, abuse, alterations, or failure to the substrate and/or supporting structure (other than that caused by defects in the roofing work) shall be completed by the contractor and paid for by the Owner, promptly after compeltion of the required repair work in each instance. The roofing contractor shall furnish the manufacturer's standard limited material warranty for a minimum of 10 years from the date of completion of the roof.
- Metal roof panels:

Deck requirements.

Metal roof panel roof panels shall applied to a solid or closely fitted deck. Except where the roof covering is specially designed to be applied to spaced supports.

Deck slope

Minimum slopes for metal roof panels shall comply with following:

1. The minimum slope for lapped, no soldered seam metal roof panels without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope).
2. The minimum slope for lapped. No-soldered seam metal roof panels with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions.
3. The minimum slope for standing-seam metal roof panel systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope).

Material standards.

Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with chapter 22. Metal-sheet roof coverings installed over structural decking shall comply with Table 1507.4.3(1). The materials used for metal -sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table 1507.4.3(2).

TABLE 1507.4.3(1) METAL ROOF COVERINGS

ROOF COVERING TYPE	STANDARD APPLICATION RATE/THICKNESS
Aluminum	ASTM B209. 0.024 inch minimum thickness for roll-formed panels and 0.019 inch minimum thickness for press-formed shingles
Aluminum-zinc Alloy coated steel	ASTM A792 AZ 50
Cold-rolled copper	ASTM B370 minimum 16 oz./sq ft and 12 oz./sq ft high yield copper for metal-sheet roof covering systems. 12 oz./sq ft for preformed metal shingle systems.
Copper	16 oz./sq ft for metal-sheet roof-covering systems, 12 oz./sq ft for preformed metal shingle system
Galvanized steel	ASTM A653 G-90 zinc-coated
Hard lead	2 lbs./sq ft
Lead-coated copper	ASTM B101
Prepainted steel	ASTM A755
Soft lead	3 lbs./sq ft
Stainless steel	ASTM A240. 300 Series Alloys
Steel	ASTM A924
Terne and terne-coated stainless	Terne coating of 40 lbs. per double base box. Field painted where applicable in accordance with manufacturer's installation instructions.
Zinc	.0277 inch minimum thickness. 99.995% electrolytic high grade zinc with alloy additives of copper (0.08%-0.20%). Titanium (0.07%-0.12%) and aluminum (0.015%).

TABLE 1507.4.3(2) MINIMUM CORROSION RESISTANCE

55% Aluminum-zinc alloy coated steel	ASTM A792 AZ 50
5%Aluminum alloy-coated steel	ASTM A875 GF60 50
Aluminum-coated steel	ASTM A463 T2 65
Galvanized steel	ASTM A653 G-90
Prepainted steel	ASTM 755

Metal roof panels shall be secured to the supports in accordance with the approved manufacturer's fasteners. In the absence of manufacturer recommendations, the following fasteners shall be used:

1. Galvanized fasteners shall be used for steel roofs.
2. Copper, brass, bronze, copper alloy or 300 series stainless-steel fasteners shall be used for copper roofs.
3. Stainless-steel fasteners are acceptable for all types of metal roofs.
4. Aluminum fasteners are acceptable for aluminum roofs attached to aluminum supports.

Underlayment and high wind:

Underlayment applies in areas subject to high winds [*V*ult greater than 110mph (49 m/s) as determined in accordance with section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacture's installation instructions. Fasteners are to be applied along the overlap not more than 36" (914 mm) on center.

Underlayment installed where *Vasd* in accordance with section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D226 type II, ASTM D4869 type IV , or ASTM D1970. The underlayment shall be attached in grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gage [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gage [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or minimum of 3/4" (19.1 mm) into the roof sheathing.

Exception: As an alternative, underlayment complying with ASTM D 1970 shall be permitted.

f. The roofing contractor shall supply to the Owner a written guarantee to repair without cost to the Owner, any leaks due to faulty materials or workmanship, which develop within 1 year from the date of acceptance by Owner of completed building. During this time period, any repair work required because of Act of God, abuse, alterations, or failure to the substrate and/or supporting structure (other than that caused by defects in the roofing work) shall be completed by the contractor and paid for by the Owner, promptly after compeltion of the required repair work in each instance. The roofing contractor shall furnish the manufacturer's standard limited material warranty for a minimum of 10 years from the date of completion of the roof.

- Flashing:
  - a. All work shall comply with the SMACNA "Architectural Sheet Metal Manual".
  - b. All metal flashing to conform to ASTM A 653, commercial grade (zinc coated G 90).
  - c. All metal flashing shall be 26 gauge for work less than 8" wide, 20 gauge for work over 8" wide or as indicated on the drawings. Use 20 gauge minimum for clips.
  - d. Sheet metal flashing shall be installed at all locations where different material intersect such as roof to wall, roof to roof, deck/balcony/landing to wall, penetrations into walls, chimneys and as detailed. Flash and counterflash as required to make watertight.
  - e. The center of all flashing for all through vents and all electrical service connections, shall not be less than 16" from center of any valley. See manufacturer's printed installation instructions recommendations for roofing tile.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION (CONTINUED)

- Sheathing Paper:
  - a. Provide sheathing paper under exterior metal lath and plaster, under wood siding, under masonry veneer, under metal flashings and where indicated or detailed.
  - b. Use Tyvek House Wrap.
  - c. Lapping: Horizontal Joints: Lap paper as detailed and not less than 3 inches; Wall Corners: Wrap paper to overlap not less than 18 inches each side of corner; Vertical Joints: Lap paper not less than 6 inches.
  - d. Lap paper over head flashings and base screeds, roof and waterproof membranes, and under sill flashings. Treat penetrations and other details as necessary for adequate weather protection.
  - e. Wall openings: Individually flash all exterior openings for fixtures such as windows, doors and vents as detailed to make them water tight.
- Flexible Flashings:
  - a. Fortifiber system.
  - b. Moiststop E-Z seal adhesive flashing for dampproofing at all exterior door window heads and jambs.
  - c. Fortiflash 40 mil waterproof flashing for waterproofing at all horizontal plaster surfaces, horizontal penetrations, and windowsills.
  - d. Moiststop sealant for sealing around windows.
- Deck Waterproofing:
  - a. The minimum performance standard for waterproof sheet membrane at waterproof decks with tile or concrete finish shall be WR Grace "Bituthene 3000". All products and components shall be by same manufacturer. Install in strict accordance with manufacturer's written instructions to assure waterproof integrity.
  - b. The minimum performance standard for traffic coatings at waterproof decks shall be Excel-Coat pedestrian membrane system or Excel-Coat Fire System for fire-rated decks by Excellent Coatings Inc.. All products and components shall be by same manufacturer. Install in strict accordance with manufacturer's written instructions to assure waterproof integrity.
  - c. Quality Assurance. Pre-installation conference: A pre-installation conference shall be held prior to commencement of field operations to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work. Agenda for meeting shall include review of special details and flashing. This meeting shall include the representatives of the General Contractor, Applicator, Manufacturer, and Architect. A trained employee of the manufacturer shall be on site periodically during membrane waterproofing work to review installation procedures.
  - d. Water test: Deck membranes shall be water tested and approved immediately before installation of finish materials. Water tests shall be witnessed by the Architect. A water test is conducted by closing any deck drains and erecting temporary dams where required to retain water on the waterproofing material surface, then flooding the surface to a minimum depth of 2". Care must be taken so that the weight of water retained does not exceed the load carrying capacity of the structural deck, and that the height of the water does not exceed the lowest flashing. For well sloped decks, tests should be segmented to avoid deep water near drains. The water tests should be conducted on a warm day (i.e. 65 degrees F. minimum). The water should be allowed to remain on the deck for 24 hours minimum, during and after which the areas beneath the membrane should be inspected for leaks. If leaks are detected, the test should be stopped, repairs made, and the area retested. When the test is successful, the drains should be opened and the temporary dams should be removed. Temporary protections boards should be installed over the tested area, and the area roped off to prevent construction traffic across the surface until drainage composite or permanent protections board has been installed.
- Roof Accessories
  - a. The minimum performance standard for prefabricated acrylic skylights shall be Bristolite "AL-CM- 2" (ICC ER-2469) or equal as approved by Owner. Color as selected by owner. Install as per manufacturer's instructions.
- Firestopping
  - a. Furnish UL Design No. from the "Fire Resistance Directory - Volume II" for each required penetration type and configuration. Indicate which materials will be used in firestopping the penetration.
  - b. Firestopping materials shall conform to CBC Section 713 for fire resistance standards and requirements for penetrations in walls and partitions and floors.
  - c. Through-Penetration Firestopping Materials: Hilt Construction Chemicals, Inc., International Protective Coatings Corp., Specified Technologies, Inc., The ReclorSeal Corporation, Tremco, Inc., 3M Fire Protection Products. Provide mortar, sealants and caulk, putty, wrap strips, pillows, bags, and other types required for UL Design No. for each penetration to receive firestopping.
  - d. Mineral Fiber Firestopping Materials: Semirigid mineral fiber insulation, nominal 4-pcf density; complying with ASTM C612, Type IA and IB.
  - e. Firestopping at Electrical Boxes and Utility Outlets: Utility penetrations in walls, ceilings, or floors requiring protected openings shall be firestopped and sealed with an approved material securely installed, capable of maintaining its integrity when subjected to test temperature was specified in ASTM E814. Steel electrical outlet boxes which exceed 16-square inches in area shall be protected by 3M "Moldable Putty Pads", Specified Technologies, Inc. "SpecSeal Series SSP Putty Pads."
  - f. Provide solid continuous firestopping wherever the penetration or addition of a construction element through or adjacent to a fire-rated floor, wall or partition creates a discontinuity of such a rates separation. Application limited in size and configuration to tested systems.
  - g. Penetrations: Penetrations include conduit, cable, wire, pipe, duct and other elements which pass through one or both outer surfaces of a fire-rated floor, roof, wall, or partition. Fill penetrations as indicated in applicable UL Design No. Verify that annular space around sprinkler pipes through fire-rated walls and floors is provided as required by NFPA 13.
  - h. Fire Rated Partitions: Fire-rated or smoke-rated partitions shall be firestopped with a firestop sealant as listed in UL "Fire Resistant Directory." Apply minimum 3/8-inch bead at intersection of finish material and adjacent surface, both sides and along entire perimeter.
  - i. Identify firestop systems after installation. Identify the firestop system that has been installed and include the appropriate UL Design Number.
- Caulking and Sealants/Locations:
  - a. Sealant Locations: Locations such as ceramic tile, plumbing fixtures, and other where mildew resistant sealant is required. Location where high degree of movement is anticipated. Joints and cracks around windows, thresholds, door frames, wall penetrations, connections and other joints necessary to seal off building from outside air and moisture. Between exterior wall sole plate and slab on grade. All joints necessary to make the building watertight and to prevent the passage of dirt, dust, wind, air or water. At interior insulated sound walls. Fire stopping at penetrations of fire rated assemblies.
  - b. Minimum product standards for sealants shall be as follows:
    Exterior Window and Door Frames and Masonry to Cement Plaster: Sonolastic NP 2, by Sonneborn or equal.
    Color to match wall surface.
    Interior Sound Walls at Sill: Tremco Acoustical Sealant or equal.
    Wood Sole Plate to Concrete, Window Sills and Door thresholds: Dow Corning 790 Silicone Building Sealant or equal.
    Color: Natural Stone.
    Painted Exterior Windows Frames to Metal Frames or Flashing: Dow Corning 999A Glazing Sealant or equal.
    Color: Clear.
    Caulking for Joints in Floor Slabs on Grade: PRC Rubber Caulk 230, two-part self-leveling polyurethane, Shore A hardness 35.
    Joint Fillers: Closed cell inert polyurethane or polyethylene as recommended by caulking manufacturer. Width or diameter of preformed backing material to be 1-1/4 to 1-1/3 times the width of the joint to be sealed. Fire stopping at penetrations of fire rated assemblies: 3M Fire Protection Products CP 25WB Caulk (U.O.N.), see details.
  - c. Caulking and sealants shall be installed per manufacturer's written specifications. Consult manufacturer when sealant cannot be applied within recommended temperature ranges. All exposed caulking shall be free of wrinkles, sags, air pockets, ridges and embedded impurities. After joints are completely filled, they shall be tooled to a slight, neat concave joint.
  - d. Sealants shall be compatible with all materials they are in contact with.

DIVISION 08 - DOORS AND WINDOWS

8.01 Quality Control

Material shall meet or exceed the following standards:

- Wood Doors:
  - a. Doors shall meet or exceed the standards of the AWI/AWMAC "Architectural Wood Standards", Section 9, Custom Grade (U.O.N.).
  - b. Wood doors shall be 1-3/4" thick solid core at exterior doors and where noted at selected interior doors. 8' interior doors shall be 1-3/4" thick, 6'-8" interior doors shall be 1 3/8" thick.
- Stile & Rail Wood Doors:
  - a. Masonite International Corporation, molded panel series, or equal. See Window & Door schedule. Final windows and doors style to be selected by owner.

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Project Name and Address:

WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 1-17-2021 11:58:30 AM

Scale:

DRAWING TITLE: ARCHITECTURAL GENERAL NOTES (1)

Sheet :

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No.	Revision/Issue	Date
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2	FOR CITY SUBMITTAL	
3		
4		

SPECIFICATIONS

b. Factory fit doors to suit frame-opening sizes indicated.
c. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3.
d. Comply with final hardware schedules, door frame Shop Drawings, DHI A 115-W Series standards, and hardware templates.
e. Doors for Opaque Finish: Apply one coat of wood primer specified in Division 09 "Painting" to faces and edges of doors.

- Fiberglass Doors & Frames
  a. Performance Requirements:
     A. Door opening assemblies: Maximum flame spread 25 in accordance with ASTM E 84, self-extinguishing in accordance with ASTM D 635.
     B. Fire rated assemblies: Comply with requirements of UL 10B, NFPA 252, and ASTM E 152; UL ratings indicated on drawings with doors and frames bearing rating labels.
  b. Therma-Tru Corporation, Fiber-Classic Door System, or equal.
  c. Door Faces: 1/16 inch minimum thickness, fiberglass-reinforced thermoset composite, wood-grained in natural northern red oak patterns, stainable and paintable.
  d. Door Edges: Machinable kiln-dried pine, primed to match color of faces, lock edge reinforced with engineered lumber core, lockset area reinforced with solid blocking for hardware backup.
  e. Door Bottom Edge: Moisture-proof and decay-proof composite.
  f. Core: Foamed-in-place polyurethane, CFC-free, density 2.0 pcf minimum, K-factor of 0.14 for minimum thermal transmittance. Standard factory sizes may be edge trimmed or end trimmed in shop or field to suit replacement door size requirements.
  g. Weatherstripping: Jacketed thermoset closed-cell foam, press-fit in kerfs at jamb stops in frames. Extruded thermoplastic elastomer, finned and chambered design, press-fit into bottom edge of doors. Corner pads at bottom margin corners from jacketed thermoset closed-cell foam.
  h. Hinges & Strikes: Steel, zinc-plated, brass or chrome finish. Screws plated and finished to match hardware. Minimum hinge size 4 x 4 x .098 inches. Strikes are proprietary adjustable type, permitting in-out adjustment of door in frame, up to 3/16 inch. Final hardware to be determined by owner.
  i. Frames: Milled from 5/4 kiln-dried pine, profiled with ½ inch stop.
- Fire Ratings:
  a. Frame assemblies and fire rated doors shall carry equal rating. Fire rated doors and frames indicated shall carry Underwriters Laboratory Label for exposures indicated. Construct and install assemblies to comply with NFPA Standard No. 80. Hardware shall include smoke gasketing and self closures and be UL listed.
- Doors, General Requirements
  a. Accessible under-floor areas shall be provided with a minimum 18-inch by 24-inch opening unobstructed by pipes, ducts, and similar construction per CBC 1209.1.1 or CRC R408.4.
  b. Provide attic access opening (22" x 30" min.) readily accessible with a 30" min. clear head room above access in all attic spaces with a minimum vertical height of 30" per CBC 1209.2 or CRC R807. See CMC 904.11.1 for FAU's in attics.
  c. Doors between conditioned and unconditioned spaces shall be fully weatherstripped.
  d. All hardware shall be located per industry recognized standards and shall comply with applicable fire and building code requirements.
  e. Door stops shall be furnished wherever an open door or any item of hardware thereon strikes a wall, column, or part of the building construction.
  f. All swinging doors shall be accurately hung to fit snug against all stops and shall hang free from hinge bind.
- Sectional Doors
  a. Insulated Steel Sectional Doors: Overhead Door Corporation, 297 Series, or equal.
     A. Five (5) section doors, 19 1/8" ht
     B. Panel thickness: 1"
     C. Panel: Galvanized embossed smooth steel skin
     D. Insulation: CFC Free Polyurethane, R = 9/31
     E. Finish: Epoxy Primer and 2-coat baked on polyester paint.
     F. Weather Seal: EPDM Premium bulb-type bottom 2" Hot-dipped Galvanized vertical and horizontal tracks
     G. Rollers: Self-lubricating nylon
     H. Struts: Three (3) minimum per door.
  b. Door opener: Overhead Door Corporations, Signature Screw Drive, Model 250, or equal
     A. Motor: ½ hp
     B. Controller: Multi-function remote
- Metal and Vinyl Windows and Sliding Glass Doors
  a. Metal and vinyl units shall meet or exceed ANSI/AAMA 101 specifications.
  b. All units shall have a nail on flange (U.O.N.).
  c. Frame color as selected by Owner.
  d. The minimum performance standard shall be Milgard.
- Wood and Clad Windows and Doors
  a. Wood and clad units shall meet or exceed the following AAMA/WDMA/CSA 101/I.S.2/A440.
  b. Frame color as selected by Owner.
  c. The minimum performance standard shall be "Anderson."
- Glazing and Windows, General Requirements:
  a. Provide tempered glass where required by the C.B.C. in all hazardous areas such as sliding glass doors, French doors, glass panels adjacent to doors and walking surfaces, glass panels in tub and shower enclosures, etc.
  b. Provide screens at all operable sash.
  c. All escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet. The minimum net clear openable height dimension shall be 24 inches. The minimum net clear openable width dimension shall be 20 inches when windows are provided as a means of escape or rescue they shall have a finished sill height not more than 44 inches above the floor.
  d. U-valves shall be determined in accordance to NFRC 100.
  e. Air infiltration shall meet the air infiltration requirements of the CEC.
  f. Water infiltration shall be tested in accordance with ASTM E 331.
  g. Window system manufacturer shall certify that its system can structurally perform to the following criteria for the local project wind conditions:
     A. Maximum deflection of 1/175 of the span
     B. Allowable stress with safety factor of 1.65.
  h. Test reports certified by an independent test laboratory must be made available upon request.
  i. Mirrors shall be float glazing select silvering quality, electrically deposited copper- backed mirror glass. Joint locations to be approved by Architect prior to commencement of work.
  j. All windows and doors shall be certified and labeled in accordance with California Energy Commission requirements and the National Fenestration Rating Council and comply with the California Energy Code compliance documentation.

DIVISION 09 - FINISHES
9.01 Quality Control
Materials shall meet or exceed the following standards:
- Stucco - 1 coat system
  a. 1" polystrene system shall be La-Habra-Wall (ICC-ES ER- 4226) or approved equal.
- Stucco - 3 coat system
  a. Application shall be in compliance with applicable sections of ANSI A 42.2 "Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior'" and ANSI A 42.3 "Lathing and Furring for Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior.
  b. In addition, materials shall meet or exceed the following:
     A. Portland cement: ASTM C 150, Type I, natural color.
     B. Special finishing hydrated lime: ASTM C 206, Type S. Aggregates: ASTM C 144, all sand to pass No. 8 sieve.
     C. Cement Plaster Finish Coat: A packaged blend of Portland cement (ASTM C 150), hydrated lime (ASTM C 206), and properly graded quality 20 mesh aggregate, with integral color and paint finish.
     D. Mixes: Job-mixed cement plaster mix, Bondcrete or Mortaseal Mason's Lime with Portland Cement and Sand in accordance with ANSI A 42.2, Type L.
     E. Proportions:
        1. Scratch Coat: 1 bag Portland cement, 3/4 to 1 bag lime to 6 cu. ft. sand.
        2. Brown Coat: 1 bag Portland cement, 1 bag lime, 6 to 7 cu. ft. sand.
        3. Finish Coat: 1 bag Portland cement, 2 bags lime, 7 to 10 cu. ft. sand. See drawings for location of cement plaster finish coat.
     F. Maximum Slump: 2-1/2 in. using Slump test ASTM C 143, modified slump cone 2 in. x 4 in. x 6 in.

  G. Wall Metal Lath: At vertical surface: No. 17 gauge galvanized stucco netting meeting Federal specification QQ-L-101 with two horizontal No. 19 gauge galvanized wires at 6 inches O.C. over two layesr s of Grade 'D' paper (60 min.).
  H. See Division 07.
  I. Lath at horizontal soffit: Galvanized mesh, 3.4 lbs/sq. yd. over 1 layer of Grade 'D' paper (60 min.).
  J. Staples: 14 gauge wire staples, divergent points, 3/4 inch crown, lin. legs.
  K. Nails (if soffit supported by wood framing): 1 3/4 inch 11 gauge, 3/8" head, 3/4" washer.
  L. Stucco accessories shall meet or exceed the cirteria of ASTM C 1063
- Cement Plaster, General
  a. Finish texture and color shall be as approved by Owner.
  b. Climate conditions: Air temperature must be 40°F. minimum and rising when applying cement plaster or exterior finish coat. Air temperature must remain above 40°F. for a minimum of 24 hours. Consult National Weather Service before beginning work. Protect cement plaster and exterior finish coat from uneven and excessive evaporation during hot, dry weather.
  c. Allowable Tolerances: Maximum deviation from true plan 1/8 inch in 10 feet as measured by straight edge placed at any location on surface.
  d. Field Sample: A sample panel shall be prepared approximately 2 feet by 2 feet. This sample panel will be a separate part of the project. Installation shall not proceed until the sample panel is accepted by the Architect and Owner. The sample shall show color, texture, and workmanship of finished work. The sample panel shall remain on the project for comparison purposes with the actual work.
  e. Other materials where applicable:
     A. Polystyrene Board and Architectural Moldings:
        1. ASTM C-578 Type 1. Nominal 1 lb/c.f. cured expanded polystyrene.
        2. Flame spread and smoke development equal to or less than 24 and 450 respectively per ASTM E-84/UL listed.
        3. Insulation board shall carry the seal of the RADCO testing agency.
     B. Fabric: A balanced, open weave, glass fiber fabric, complying with ASTM D 1682, standard mesh, as recommended for wrapping polystyrene board and moldings.
     C. Primer/Adhesive Mixture: A field-mixed blend of standard polymer-based primer adhesive and Portland cement. For use as a primer and leveler over cement plaster brown coat and for use as an adhesive for fabric and polystyrene board and moldings.
     D. Acrylic Resin Bonding Agent: Bonsel, Tammsway, or approved equal. For use on concrete or masonry before application of cement plaster.
     E. Add Mixtures: No add mixtures or plastic cements will be allowed without approval of the Architect.
     F. Synthetic Exterior Finish Coating: A 100% pure acrylic resin based, textured, factory-mixed coating having integral color, for exterior use. Minimum standards shall be Dry-Vit Systems Inc., or approved equal.
  f. Curing: Wet base as necessary before application with fine fog spray to produce uniform moist condition.
     A. When required, apply bond coat to concrete base and moist cure for minimum of 24 hours before applying first coat of cement plaster.
     B. Do not apply brown coat sooner than 48 hours after application of scratch coat.
     C. Do not apply cement plaster finish coat sooner than 14 days after application of brown coat.
     D. Inspect and repair base coats before application of finish coat.
     E. Cure base coats minimum of 48 hours after application.
     F. Maintain moist conditions by fine fog spray.
     G. Cure finish coat for minimum of 7 days.
- Siding
  a. Fiber-Cement Siding & Soffit: Siding & soffit made from fiber-cement board that does not contain asbestos fibers; complies with ASTM C 1186, Type A, Grade II; is classified as noncombustible when tested according to ASTM E 136; & has a flame-spread index of 25 or less when tested according to ASTM E 84.
  b. The minimum performance standard for Fiber-Cement Siding shall be CertainTeed Corp. Simulated Shingle and Lap Siding: Product as specified in the drawings; .Exposure as per Manufacturer's recommendation; Finish Factory Sealed.
     Soffit: Cedar texture, 16" wide x 12' long; Finish shall be Factory Sealed.
  c. Siding Accessories: Provide starter strips, edge trim, corner cap, & other items as recommended by siding manufacturer for bldg. configuration.
  d. Nails: Length as required to penetrate minimum 1-¼ inch (32 mm) into solid backing; hot-dipped galvanized or stainless steel.
  e. Install in accordance with manufacturer's instructions & drawing details.
     A. Read warranty & comply with all terms necessary to maintain warranty coverage.
     B. Use trim details indicated on drawings.
     C. Touch up all field cut edges before installing.
     D. Pre-drill nail holes, if necessary, to prevent breakage.
  f. Siding Installation:
     A. Starting: Install a minimum ¼ inch thick lath starter strip @ the bottom course of the wall. Apply planks

horizontally with minimum 1-¼ inch wide laps @ the top. The bottom edge of the first plank overlaps the starter strip.

Allow minimum 1-inch vertical clearance between roofing & bottom edge of siding.
Align vertical joints of the planks over framing members.
Maintain clearance between siding & adjacent finished grade.
Locate splices at least one stud cavity away from window & door openings.
Allow 1/8" space between both ends of siding panels that butt against trim for thermal movement; seal joint between panel & trim with exterior grade sealant.

Joints: Avoid joints in lap siding except at corners; where joints are inevitable stagger joints between successive courses.

Place fasteners no closer than ¾ inch & no further than 2 inch from side edge of trim board & no closer than 1 inch from end. Fasten maximum 16 inch on center.

g. Completion:

After installation, seal all joints except lap joints of lap siding. Seal around all penetrations.
Paint all exposed cut edges.

Finish Painting: Specified in Division 09, Section "Painting".

SECTION PAINTING
1.5. PAINTING
A. COATINGS SCHEDULE: The consultant shall prepare a schedule listing all surfaces in generic terms, all coating or finish operations, the types of finish materials and the number of coats of each material. Preferred finishes for certain locations or surfaces are as follows:
1. INTERIOR WOODWORK: Natural finish - stain, 2 coats sanding sealer, 2 coats semigloss varnish. If polyurethane varnish is used, delete sanding sealer. Painted finish - primer and 2 coats semi-gloss alkyd enamel.
2. METAL DOORS AND FRAMES: Shop coat, touch up and 2 coats semi-gloss enamel.
3. NEW GYPSUM WALLBOARD OR INTERIOR PLASTER: Spackle as required, primer and 2 coats semi-gloss alkyd enamel or 2 coats semi-gloss latex.
4. EXISTING PREVIOUSLY PAINTED GYPSUM WALLBOARD OR INTERIOR PLASTER: Primer and 1 coat semi-gloss alkyd enamel or semi-gloss latex. If surface is poor, remove finish to substrate, repair and finish the same as new gypsum wallboard or plaster. Refer to Section 09 00 00, Miscellaneous Requirements, Subparagraph 1.3.A.2, Surface Preparation.
5. INTERIOR CONCRETE OR CONCRETE BLOCK (Unpainted): 1 coat self-sealing heavy filler-type primer and 2 coats semi-gloss alkyd enamel or 2 coats semi- gloss latex. For laboratories requiring chemical resistance, replace the alkyd or latex paint with epoxy two-component finish.
6. EXTERIOR WOOD PLATFORMS OR BENCHES: Use Behr Plus 10 Solid Color Stain or approved equal in accordance with manufacturer's directions.
7. EXTERIOR PORTLAND CEMENT PLASTER (STUCCO): Use integral color, or paint.
1.6. ITEMS TO BE NOTED IN SPECIFICATIONS

A. TOP AND BOTTOM EDGES OF WOOD DOORS: Shall be sanded and sealed after fitting and finished with at least 2coats of varnish or paint.
B. TOPS AND BOTTOMS OF METAL DOORS: Shall be painted with the same materials and number of coats as used on the door faces.
C. DRY FILM THICKNESS: Shall be specified for all coats of paint on metals.
D. ACCENT COLORS: If it is anticipated 5%or more of the scheduled finishes will be in accent colors, attention should be called to this fact. Estimated percentage of accent colors should be given as an aid to bidders in preparation of bids. A statement should be made to the effect that the information given in no way restricts the consultant in his final selection of colors.
E. COLOR CODING FOR PIPING: Include finish painting of insulated and uninsulated piping in the General Contract documents and include color banding of finished piping in the appropriate contract documents.
.1.7 INTERIOR PAINTING
A. Finish coat to be semi-gloss in all corridors and stairwells. Use washable type of finish material on walls for ease of maintenance and cleaning.
.1.1 WALL COVERING & GRAPHICS
A. No vinyl wall covering on the interior face of exterior walls.
B. Materials must conform to ASTM E. 84-Research code carefully to determine class of fire and smoke resistance required for the specific application.
C. Vinyl wall covering must satisfactorily pass class A physical requirements for type II wall covering as listed in G.S.A. CCC-W408-A and CFFA Quality Standards for vinyl coated fabric wall covering.

DIVISION 10 - SPECIALTIES This Section not used.

DIVISION 11 - EQUIPMENT
11.01 Quality Control
- All appliances will be selected by the Owner. All appliances shall be Energy Star rated.
- Gas fired appliance shall be equipped with intermittent type ignition devices (except tank type water heaters).
- All combustion equipment, except range hoods and dryers, shall be closed combustion.
- Provide recessed connections in wall for water and waste at clothes washer space and water shut off for refrigerator icemaker. If washer is located on a second floor or above, provide a G.S.M. pan under washer with drain to outside. Washer standpipe shall extend between 18 and 30 inches above its trap. The trap shall be between 6 and 10 inches above the floor (CPC Section 804).
- Clothes dryer exhaust duct will be limited to 14' maximum length including 2, 90° elbows and 4" minimum diameter CMC 504).
- Kitchen hood and clothes dryer ducts shall be of metal and have a smooth interior surface. Kitchen hood ducts for downdraft grill-range may be Schedule 40 PVC when installed below concrete slab floors (CMC 504.2). Dryer duct may have six feet (maximum) of approved flexible duct (CMC 504.3).
- Makeup air equal to exhaust rate shall be provided for all kitchen range hoods exceeding 400 CFM.
- Rooms containing bath tubs, showers, spas and simular bathing fixtures shall be mechanically ventilated in accordance with the CMC (CBC 1203.4.2.1).
- Environmental air ducts (vent fans, range hoods, dryers, etc.) shall not terminate less than 3 feet from property line, or 3 feet from opening into the building (CMC 504.5).
- Dishwasher shall be connected to a drainage system or food waste disposer with the use of an approved dishwasher airgap fitting (CPC Section 807.4).
- Solar PV Systems shall provide a minimum of 10% of the Title 24 Proposed TDV energy.

15.01 General Requirements
- Mechanical and plumbing systems shown on archetctural drawings are shown for location intent only. These systems shall be engineered by others. The contractor shall be responsible for proper installation, placement, and performance.
- Fire sprinkler system when required shall be "design-build" and are not a part of the architectural documents. Layout of sprinkler heads shall be submitted to the Architect for revision. Fire sprinkler plans and calculations shall be submitted to the Building Department for review and approval prior to installation. Automatic fire sprinkler system shall be designed and installed in accordance with NFPA 13D or CRC R313.3 as a minimum.
- Anchor or strap water heater and HVAC units to structure to resist earthquake motion (CPC Section 508.2 and CMC Section 303.4).
- Water heater and HVAC units shall be accessible for inspection, service, repair, and placement without removing permanent construction (CMC Section 304.7)
- Furnaces and water heaters shall not be installed in or be accessible through rooms designed as bedrooms, bathrooms or wardrobe closets (CMC Section 304.5 and CPC Section 509).
- Water heating and HVAC units installed in garages where they may be subjected to damage shall be suitably guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles. Such equipment when located in a garage shall be installed so that the pilots or burners are at least 18" above the floor level (CMC Section 307 & CPC 508.14).
- Warm-air furnaces installed in attics or furred spaces shall be installed as per CMC Section 904.11 and include the following:
  a. A minimum 22 inch by 30 inch access but large enough to accommodate the removal of the largest component of FAU (maximum 20 feet from furnace unless passageway height is over 6 feet).
  b. Continuous solid flooring not less than 24 inches wide from access to furnace.
  c. A level working platform minimum 30 inches in depth along entire firebox side of furnace.
  d. A permanent 110V electrical outlet and lighting fixture (controlled by switch located at required access) at or near furnace.
  e. FAU shall be listed for installation in attics and on combustible flooring - clearances shall be as specified in the listing and as per CMC Section 303.
  f. Provide G.S.M. pan and drain below FAU with cooling coil at attic installed furnaces.

15.02 Heating, Ventilation and Air Condition (HVAC) *Requirements for On-demand Water Heater as this house will use on-demand type water heaters.*

- All work shall comply to the applicable standards of the ASHRAE handbooks and the SMACNA standards.
- A concrete pad shall be provided for grade mounted condensers.
- HVAC installer shall be NATE or part of n EPA-recognized HVAC installer training organization.
- All recirculating space conditioning systems shall have filters rated a minimum of MERV 8.
- HVAC supply flow rates shall be tested and shall be within ± 20% or ±CFM of ACCA J calculated rates.
- Pressure differences between bedrooms and the est of the house shall be less than 3 Pa.
- HVAC systems shall have at least 2 space-conditioned zones with independent thermostats.

15.03 Plumbing
- American Standard Inc. plumbing products shall be the minimum performance product standard for plumbing fixtures. The Owner will select all plumbing fixtures. Water closets shall be 1.28 gallon/flush maximum (U.O.N.). Shower heads 2.5 and faucets shall be 2.2 gallons per minute (GPM) maximum flow rate (U.O.N.).
- Waste and Vent System: All soil, waste and vent piping shall be approved ABS per local code (U.O.N.). All soil pipes penetrating or within rated fire walls shall be cast iron. All sewer pipes under driveway shall be cast iron. Provide minimum of 1/4" per foot slope for horizontal drainage pipe. (CPC Section 718). Cleanouts shall be installed as per CPC Section 719. Cleanout locations shall be located in least visible areas. All plumbing vents shall be combined into a minimum amount of roof penetrations. All roof penetrations shall occur to the rear of the main ridge.
- Domestic Water Piping System: All hot water lines shall be insulated with R- 4 insulation. Water service main piping shall be one inch minimum or larger as per load and pressure requirements. Provide shut-off valve at foundation wall. Hot and cold water supply shall be copper. No water supply will be allowed under concrete building slab. All runs shall be made so that branch connections occur at fixture locations where fittings can be installed. System shall be as free as possible from fittings and sharp turns. Provide hose bibs as per drawings with tee fittings above ground for future sprinklers installation at front and rear of house (U.O.N.). Provide a non-removeable backflow preventor or vacuum breaker at all hose bibbs (CPC Section 603).
- Water Heating System: Water heater shall be size and type as specified in the California Energy Code. Water heater shall have R-12 insulation blanket (U.O.N.). Insulate the first 5 feet of the hot and cold water pipes with R-4 insulation. If water heater is located on a second floor or above, provide a G.S.M. pan under water heater with drain to outside. Water heaters shall be provided with a pressure relief valve as per CPC Section 505.4.
- Domestic Gas Service: All gas piping shall be new and shall be black steel or galvanized (U.O.N.). No gas piping shall be installed in or on the ground under any building or structure and all exposed gas piping shall be securely supported and located where it will be protected from physical damage (CPC Section 1211).
- Plumbing projecting through or embedded in concrete or masonry shall be protected during the placing of concrete and placed in an oversized sleeve or approved expansion wrap to allow for expansion, contraction and structural movement (CPC Section 313).
- All copper pipe connections to ferrous piping shall be made with dielectric couplings or isolation flanges.
- Each house shall receive a whole house water meter, Assured Automation WM-PC- 100 Series Water Meter, or equivalent.

DIVISION 16 - ELECTRICAL
16.01 General Requirements
- Electrical systems shown on architectural drawings are shown for intent only. These systems shall be engineered by others. The contractor shall be responsible for proper installation, placement, and performance.
- Materials and equipment shall be new and listed by Underwriter's Laboratories, Inc. (U.L.) and bear their label wherever standards have been established and their label service is regularly furnished.
- Service Distribution:
  a. Main electrical service shall be 200 AMP minimum (U.O.N.)
  b. Main service panel electrical load calculations shall conform to CEC Section 220.
  c. Install a main service disconnect as per CEC 230-70.
  d. Provide grounding at service entrance to comply with CEC Section 250.
  e. Branch circuit load distribution shall conform to CEC Section 210.
  f. Panels and sub-panels shall not be located in closets or similar confined spaces. (CEC 110-26).
  g. Aluminum wire smaller than No. 6 A.W.G. shall not be used in electrical wiring.
  h. Protection of wiring shall be as per CEC Sections 320-334.
- Receptacle Outlets:
  a. Outlet boxes on opposite sides of rated walls (wall separating garage from dwelling) shall be separated by a horizontal distance of 24 inches (CBC Section 713.3.2).
  b. Provide GFCI (GFI) protection per CEC Section 210-8(a).
  c. Outlet locations shall comply with CEC Sections 210-50 and 210-52.
  d. Switched outlets shall be one-half hot (U.O.N.).
- Lighting:
  a. All light fixtures shall be LED (U.O.N.).
  b. All light fixtures shall comply to CEC Section 410 for type, ratings, and installation.
  c. Fixture locations shall comply to CEC Section 210-70 and 410.
  d. Ceiling mounted junction boxes shall be capable of supporting 60# minimum (U.O.N.) and supported as per CEC Section 410-36.
  e. Fixtures installed in closets shall comply to CEC Section 410-16.
  f. Install switches at 47" above finished floor to top of switch box (U.O.N.).
- Smoke Detectors: Install 110 volt smoke detectors with battery backup as per CBC Section 907.2.11.2 or CRC R314 and conforming to NFPA 72. Install the detector in strict accordance with the manufacturer's printed installation instructions.
- Provide combustion air to HVAC units as per CMC Section 703; and to water heaters as per CPC Sec. 507.
- Installation of HVAC and plumbing systems shall insure properly balanced and quiet operation.
- All work shall comply to the California Energy Code.
- Vibration isolation of mechanical equipment shall be incorporated into the installation.
- Carbon Monoxide Detectors: Locate carbon monoxide alarms as per CBC 420.4 or CRC R315.
- All exterior lighting shall be Dark Sky qualified and shall have either a PV cell, motion sensor, or photo sensor controls.

FLOOR PLAN SHEET NOTES

1. GENERAL CONTACTOR TO BE RESPONSIBLE FOR ADEQUATELY FRAMING, BRACING, AND STRUCTURING ALL WALLS AND OTHER GYPSUM BOARD CONSTRUCTION IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS CONTAINED IN THESE DRAWINGS. WHETHER OR NOT SPECIFICALLY REFERENCED IN THE PLANS, ALL PARTITIONS SHALL BE BRACED IN ACCORDANCE WITH SEISMIC CODE REQUIREMENTS.
2. COORDINATE AND INSTALL BACKING AS REQUIRED FOR ALL NEW MILLWORK, MARKERBOARDS, EQUIPMENT, FURNITURE, PROJECTION SCREENS, ETC.
3. ALL PARTITIONS ARE DIMENSIONED FROM FACE OF FINISH TO FACE OF FINISH, U.O.N.
4. PARTITIONS SHOWN TO ALIGN WITH FACE OF EXISTING CONSTRUCTION OR NEW PARTITIONS SHOULD ALIGN FINISHED FACE TO FINISHED FACE.
5. DIMENSIONS INDICATED TO BE "CLEAR" OR TO HOLD SHALL BE MAINTAINED AND DISCREPANCIES OR VARIATIONS ON THESE DIMENSIONS SHALL BE REVIEWED WITH ARCHITECT BEFORE BEGINNING CONSTRUCTION.
6. PATCH AND REPAIR (E) WALLS & CEILINGS AS REQUIRED AND PREPARE TO RECEIVE (N) FINISHES AS SCHEDULED, VERIFY EXTEND OF WORK IN THE FIELD.
7. (E) LIFE SAFETY DEVICES TO BE RELOCATED WHERE REQUIRED BY NEW CONSTRUCTION. CONTRACTOR TO VERIFY CONDITIONS IN FIELD. SEE G 2.00 FOR TYPICAL MOUNTING HEIGHTS.
8. PREPARE ALL GYP. BD. WALL SURFACES TO RECEIVE PARTITIONS, AND WALL FINISHES.
9. PROVIDE SIGNAGE AS REQUIRED BY APPLICABLE CODES. SEE G 2.01 FOR TYPES, LOCATIONS, AND TYPICAL MOUNTING HEIGHTS OF SIGNAGE.
10. SEE G0.00 FOR ABBREVIATIONS AND SYMBOLS USED ON THESE SHEETS.
11. FLOOR TOLERANCE: FINISHED FLOOR TO BE LEVELED TO A TOLERANCE OF 1/4" SLOPE IN 10 FEET. GENERAL CONTRACTOR TO IMMEDIATELY VERIFY SLOPE AND REPORT ANY DEVIATIONS FROM ABOVE STATED TOLERANCE TO PIXELARCH LTD.
12. PRIOR TO COMMENCING WORK ALIGNMENT OF DOOR HEADS AND OTHER CRITICAL HORIZONTAL ELEMENTS SHALL BE MAINTAINED AT A CONSTANT LEVEL AND SHALL NOT FOLLOW VARIATIONS IN THE FLOOR PLATES.
13. NEW WALLS TO ALIGN WITH CENTER OF (E) WINDOW MULLIONS U.O.N.
14. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2-A-10B:C SHALL BE PROVIDED WITHIN 75 FEET MAXIMUM TRAVEL DISTANCE FOR EACH 3,0000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR. LOCATIONS INDICATED ON THE DRAWINGS SHALL BE VERIFIED WITH THE FIRE MARSHALL AS BEING ACCEPTABLE.
15. REFER TO SHEET G 2.01 FOR TYPICAL MOUNTING HEIGHTS OF LIGHT STROBES, LIGHT SWITCHES, THERMOSTATS, OUTLETS, FIRE EXTINGISHER CABINETS, ETC.
16. THERMOSTATS TO BE LOCATED ABOVE LIGHT SWITCHES, TYP. SEE G 2.00.
17. MULTIPLE LIGHT SWITCHES TO BE GANGED WITHIN A SINGLE COVER-PLATE TO MAXIMUM EXTENT POSSIBLE. WHERE MULTIPLE SWITCHES CANNOT BE GANGED WITHIN A SINGLE COVER-PLATE, SWITCHES ARE TO BE ADJACENT TO EACH OTHER OR AS CLOSE AS POSSIBLE.
18. GC TO PROVIDE ALL APPLIANCES AND FIXTURES, U.O.N.
19. THE CONTRACTOR SHALL "STRIKE OUT" LOCATION OF ALL WALLS, DOORS, MULLIONS, SOFFITS, RAISED FLOOR GRIDS, HOUSEKEEPING AND UTILITY EQUIPMENT PADS, AND OTHER MAJOR ELEMENTS, OR AS DIRECTED BY ARCHITECT AT THE BEGINNING OF THE PROJECT BEFORE PROCEEDING WITH CONSTRUCTION. IF DISCREPANCIES EXIST BETWEEN FIELD CONDITIONS AND THE DRAWINGS NOTIFY ARCHITECT.
20. ALL FURRED WALLS SHALL EXTEND VERTICALLY THRU THE CEILING WHERE INDICATED ON THE DRAWINGS OR TO THE STRUCTURE ABOVE WHERE NO CEILING OCCURS. U.O.N.
21. HINGE SIDE OF DOORS TO BE LOCATED PER DETAILS FROM THE FACE OF ADJACENT PERPENDICULAR PARTITIONS, U.O.N.
22. REFER TO ENLARGED PLANS FOR DIMENSIONS AND INFORMATION WHEN DESIGNATED.
23. THE GENERAL CONTRACTOR SHALL COORDINATE AND PROVIDE APPROPRIATE STRUCTURAL BACKING AND REINFORCING IN PARTITIONS BEHIND ALL WALL-MOUNTED, WALL ANCHORED OR SUPPORTED ITEMS. ALL CONCEALED WOOD USED FOR SUCH SUPPORT SHALL BE FIRE RETARDANT TREATED.
24. IN THE EVENT OF CONFLICT BETWEEN DATA SHOWN ON DRAWINGS AND DATA SHOWN ON THE SPECIFICATIONS, THE DRAWINGS SHALL TAKE PRECEDENCE. DETAIL DRAWINGS TAKE PRECEDENCE OVER DRAWING OF SMALLER SCALE. SHOULD THE CONTRACTOR AT ANY TIME DISCOVER AN ERROR IN A DRAWING OR SPECIFICATION OR A DISCREPANCY OR VARIATION BETWEEN DIMENSIONS ON DRAWINGS AND MEASUREMENTS AT THE SITE OR LACK OF DIMENSIONS OR OTHER INFORMATION, THE GENERAL CONTRACTOR SHALL NOT PROCEED WITH THE WORK AFFECTED UNTIL CLARIFICATION HAS BEEN MADE.
25. REFER TO DOOR SCHEDULE ON SHEET A 9.00 FOR MORE INFORMATION ON SCOPE OF WORK RELATED TO DOORS.
26. PROVIDE BACKING AS REQUIRED PER FURNITURE REQUIREMENTS.
27. THE CONSTRUCTION PLANS INDICATE THE TYPE AND LOCATION OF NEW INTERIOR PARTITIONS, DOORS, WINDOWS, CABINETWORK, ETC. THE BUILDING SHELL AN EXISTING CONDITION.
28. THE FOLLOWING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS DESIGN-BUILD SYSTEMS (*IF SUCH SYSTEMS ARE REQUIRED BY THE CITY*):
    A. AUTOMATIC FIRE SPRINKLER SYSTEM.
    CONTRACTOR SHALL FULLY COORDINATE THE DESIGN/ENGINEERING PROCESS OF THE ABOVE REFERENCED SYSTEMS AND THE COMPLETE AND PROPERLY FUNCTIONING INSTALLATION THEREOF.
29. THE FOLLOWING MAYBE PROVIDED BY THE OWNER'S VENDORS BUT THE INSTALLATION OF THOSE SYSTEMS SHALL BE COORDINATED BY THE GENERAL CONTRACTOR WITH EACH OF HIS SUBCONTRACTORS FOR THE SYSTEMS NOTED BELOW:
    A. TELECOMMUNICATIONS
    B. SECURITY
    THE GENERAL CONTRACTOR SHALL PROVIDE ELECTRICAL RACEWAY AND POWER TO ALL POINTS DESIGNATED BY THE VENDOR'S FOR EACH OF THE OWNER'S FURNISHED SYSTEMS.
30. ALL PARTITIONS, DOORS, GLAZED OPENINGS, SOFFITS, ETAL., SHALL BE STRUCTURALLY BRACED IN ACCORDANCE WITH SEISMIC CODE REQUIREMENTS.
31. COORDINATE LOCATION AND PROVIDE BLOCKING, BACKINGS AND/OR REINFORCEMENT IN PARTITIONS FOR ALL CABINETS, COUNTERTOPS AND ANY WALL-MOUNTED ITEMS. REFER TO THE PLANS, ELEVATIONS AND DETAILS FOR LOCATION OF ITEMS WHICH MAY REQUIRE SUPPORT. REFER TO DETAIL 1, SHEET A11.01.
32. THE CONTRACTOR IS RESPONSIBLE FOR VERIFING THE DIMENSIONS AND ELEVATIONS AT THE SITE. THE CONTRACTOR AND SUB-CONTRACTORS SHALL COORDINATE THE LAYOUT AND EXACT LOCATIONS OF ALL PARTITIONS, DOORS, ELECTRICAL/TELEPHONE OUTLETS, LIGHTSWITCHES AND THERMOSTATS WITH THE ARCHITECT IN THE FIELD PRIOR TO PROCEEDING.
33. WHEREVER DIAGONAL BRACING IS INDICATED OR OTHERWISE REQUIRED, INSTALL BRACING UNEXPOSED TO VIEW, PARTICULARLY AT SUSPENDED OR DRYWALL CEILING AREAS. IF EXPOSED TO VIEW CONDITIONS EXIST IN THE DESIGN, DO NOT BRACE INTO THE AREA WHERE NO CEILING IS TO BE INSTALLED, OR INTO THE "MORE OPEN"AND VISIBLE SIDE OF BULKHEAD/SOFFIT WHERE BOTH SIDES SHALL BE WITHOUT A CEILING.
34. FOR TYPICAL PARTITIONS, AND PARTITION DETAILS REFER TO SHEET A 9.10.
35. WHERE NEW PARTITIONS MEET EXISTING MULLIONS OR COLUMNS INSTALL THE NEW PARTITION PERPENDICULAR TO THE EXISTING MULLION OR COLUMN AND ALIGN THE CENTERLINE OF THE NEW PARTITION WITH THE MULLION OR COLUMN U.O.N.
36. WHERE A GYPSUM BOARD PARTITION MEETS FLUSH WITH THE FACE OF AN EXISTING PARTITION, REMOVE THE EXISTING METAL CORNER BEAD BEFORE INSTALLING THE NEW PARTITION.
37. ALIGN NEW PARTITION SURFACES WITH THE EXISTING ADJACENT OR ADJOINING SURFACES WHERE INDICATED. TAPE AND SAND THE JOINTS TO SMOOTH WITHOUT ANY VISIBLE JOINTS. PATCH AND REPAIR SURFACES TO MATCH ADJACENT OR ADJOINING SURFACES.
38. PATCH EXISTING DAMAGED PARTITIONS THROUGHOUT ENTIRE PROJECT AREA TO MATCH ADJACENT SURFACES.
39. CUT AND FIT COMPONENTS AS REQUIRED TO ALTER EXISTING WORK FOR INSTALLATION OF NEW WORK. PATCH DAMAGED AREAS TO MATCH ADJACENT SURFACES.
40. AT OPENINGS IN GYPSUM BOARD WALLS FOR DUCT WORK, RETURN AIR, WRAP HEAD, JAMBS AND SILL OF OPENING WITH GYPSUM BOARD. U.O.N.
41. VERTICAL DIMENSIONS ARE FROM TOP OF FLOOR SLAB, EXCEPT WHERE OTHERWISE NOTED TO BE ABOVE FINISH FLOOR.
42. DIMENSION ARE NOT ADJUSTABLE WITHOUT APPROVAL OF THE ARCHITECT UNLESS NOTED +/- OR VIF.
43. THE GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICT EXIST IN THE LOCATION OF ANY MECHANICAL, HVAC, TELEPHONE, ELECTRICAL, PLUMBING AND SPRINKLER EQUIPMENT (TO INCLUDE ALL PIPING, DUCTWORK, CONDUIT, CABLES, ETC.) AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE EQUIPMENT ARE PROVIDED. ELEMENTS TO BE EXPOSED TO VIEW SHALL BE REVIEWED WITH THE ARCHITECT AND COORDINATED BY AND BETWEEN THE GENERAL CONTRACTOR AND PERTINENT SUB-CONTRACTORS PRIOR TO CONSTRUCTION OR FABRICATION PROCEEDING.

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Project Name and Address:
WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 1-17-2021 11:58:30 AM
Scale:
DRAWING TITLE: ARCHITECTURAL GENERAL NOTES (2)
Sheet :
Page No. : A-002

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 20
2	FOR CITY SUBMITTAL	
3		
4		

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 1 of 9)**

Calculation Description: Title 24 Analysis **Input File Name:** 26860_Regency_workshop_r1_v3.ribd19

GENERAL INFORMATION					
01	**Project Name**	26860 Regency WorkShop			
02	**Run Title**	Title 24 Analysis			
03	**Project Location**	26860 Regency Way			
04	**City**	Moreno Valley, CA	05	**Standards Version**	2019
06	**Zip code**	92555	07	**Software Version**	CBECC-Res 2019.1.3 SP1
08	**Climate Zone**	10	09	**Front Orientation (deg/ Cardinal)**	225
10	**Building Type**	Single family	11	**Number of Dwelling Units**	1
12	**Project Scope**	NewConstruction	13	**Number of Bedrooms**	0
14	**Addition Cond. Floor Area (ft^2)**	0	15	**Number of Stories**	1
16	**Existing Cond. Floor Area (ft^2)**	n/a	17	**Fenestration Average U-factor**	0.29
18	**Total Cond. Floor Area (ft^2)**	424	19	**Glazing Percentage (%)**	15.41%
20	**ADU Bedroom Count**	n/a	21	**ADU Conditioned Floor Area**	n/a
22	**Is Natural Gas Available?**	No			

COMPLIANCE RESULTS	
01	**Building Complies with Computer Performance**
02	**This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.**
03	**This building incorporates one or more Special Features shown below**

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 2 of 9)**

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ENERGY DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency[1] (EDR)	**Total[2] (EDR)**	**Efficiency[1] (EDR)**	**Total[2] (EDR)**
Standard Design	48.9	31.1		
Proposed Design	48.8	31	0.1	0.1

RESULT: [3] COMPLIES

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.37 kWdc
- PV System resized to 1.37 kWdc (a factor of 1.001) to achieve 'Standard Design PV' PV scaling

ENERGY USE SUMMARY

Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	10.67	9.55	1.12	10.5
Space Cooling	51.29	51.73	-0.44	-0.9
IAQ Ventilation	3.77	3.77	0	0
Water Heating	85.4	85.4	0	0
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**151.13**	**150.45**	**0.68**	**0.4**

REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
1.37	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	100

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

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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.

- PV System: 1.37 kWdc
- Cool roof
- Insulation above roof deck
- Insulation below roof deck
- Window overhangs and/or fins
- Slab Edge Insulation

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:
- Indoor air quality ventilation

Cooling System Verifications:
- -- None --

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- -- None --

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**
26860 Regency WorkShop	424	1	0	1	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**
WorkShop	Conditioned	HVAC new	424	9	DHW new	N/A

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 4 of 9)**

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OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Gross Area (ft^2)**	**Window and Door Area (ft2)**	**Tilt (deg)**
Wall-n-F	WorkShop	Wall new	225	Front	56	33.35	90
Wall-n-45 deg	WorkShop	Wall new	270	n/a	78	16	90
Wall-n-135 deg	WorkShop	Wall new	0	n/a	301	0	90
Wall-n-225 deg	WorkShop	Wall new	90	n/a	117	0	90
Wall-n-315 deg	WorkShop	Wall new	180	n/a	261	82.8	90
Ceiling-n	WorkShop	Ceiling attic new	n/a	n/a	424	n/a	n/a

ATTIC

01	02	03	04	05	06	07	08
Name	**Construction**	**Type**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Radiant Barrier**	**Cool Roof**
Attic-new	Roof new	Ventilated	4	0.5	0.93	Yes	Yes

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	**Type**	**Surface**	**Orientation**	**Azimuth**	**Width (ft)**	**Height (ft)**	**Mult.**	**Area (ft^2)**	**U-factor**	**U-factor Source**	**SHGC**	**SHGC Source**	**Exterior Shading**
GlDoor-n-D1	Window	Wall-n-F	Front	225	5	6.67	1	33.35	0.29	NFRC	0.22	NFRC	Bug Screen
Wind-n-W1	Window	Wall-n-45 deg		270	4	4	1	16	0.29	NFRC	0.22	NFRC	Bug Screen
Wind-n-W2	Window	Wall-n-315 deg		180	4	4	1	16	0.29	NFRC	0.22	NFRC	Bug Screen

OPAQUE DOORS

01	02	03	04
Name	**Side of Building**	**Area (ft^2)**	**U-factor**
Door-n-D2	Wall-n-315 deg	17.8	0.2
Door-n-D3 roller up	Wall-n-315 deg	49	0.5

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 5 of 9)**

Calculation Description: Title 24 Analysis **Input File Name:** 26860_Regency_workshop_r1_v3.ribd19

OVERHANGS AND FINS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Window	**Overhang**					**Left Fin**				**Right Fin**			
	Depth	**Dist Up**	**Left Extent**	**Right Extent**	**Flap Ht.**	**Depth**	**Top Up**	**Dist L**	**Bot Up**	**Depth**	**Top Up**	**Dist R**	**Bot Up**
GlDoor-n-D1	2.6	1.75	1.5	1.5	0	0	0	0	0	0	0	0	0
Wind-n-W1	1.5	1.75	4	8	0	0	0	0	0	0	0	0	0
Wind-n-W2	1.5	1.75	8	24	0	0	0	0	0	0	0	0	0

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	**Zone**	**Area (ft^2)**	**Perimeter (ft)**	**Edge Insul. R-value and Depth**	**Edge Insul. R-value and Depth**	**Carpeted Fraction**	**Heated**
Slab On Grade-n	WorkShop	424	90	R-5	48	80%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	**Surface Type**	**Construction Type**	**Framing**	**Total Cavity R-value**	**Interior / Exterior Continuous R-value**	**U-factor**	**Assembly Layers**
Wall new	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / R-8	0.041	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: R-8 Sheathing Exterior Finish: 3 Coat Stucco

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 6 of 9)**

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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**
Roof new	Attic Roofs	Wood Framed Ceiling	2x4 Top Chord of Roof Truss @ 24 in. O. C.	R-13	None / R-5	0.052	Roofing: 10 PSF (RoofTileAirGap) Tile Gap: present Above Deck Insulation: R-5 Sheathing Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-13.0 / 2x4 Top Chrd Under Roof Joists: R-0.0 insul.
Ceiling attic new	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-3.1 / 2x4 Inside 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**
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07
Name	**System Type**	**Distribution Type**	**Water Heater Name (#)**	**Solar Heating System**	**Compact Distribution**	**HERS Verification**
DHW new	Domestic Hot Water (DHW)	Standard Distribution System	Tankless (1)	n/a	None	n/a

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 7 of 9)**

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WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12
Name	**Heating Element Type**	**Tank Type**	**# of Units**	**Tank Vol. (gal)**	**Energy Factor or Efficiency**	**Input Rating or Pilot**	**Tank Insulation R-value (int/Ext)**	**Standby Loss or Recovery Eff**	**1st Hr. Rating or Flow Rate**	**NEEA Heat Pump Brand or Model**	**Tank Location or Ambient Condition**
Tankless	Propane	Consumer Instantaneous	1	0	0.81-UEF	200000-Btu/Hr	0	n/a	n/a	n/a	n/a

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 new - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

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 new	Heat pump heating cooling	MiniSplit HP	MiniSplit HP	n/a	n/a	Setback	New	NA	1	1

01	02	03	04	05	06	07	08	09	10	11
HVAC - HEAT PUMPS										
Name	**System Type**	**Number of Units**	**Heating**			**Cooling**		**Zonally Controlled**	**Compressor Type**	**HERS Verification**
			HSPF/COP	**Cap 47**	**Cap 17**	**SEER**	**EER/CEER**			
MiniSplit HP	Ductless MiniSplit HP	1	8.2	18000	14400	14	11.7	Not Zonal	Single Speed	MiniSplit HP-hers-ltpump

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 8 of 9)**

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HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	**Verified Airflow**	**Airflow Target**	**Verified EER**	**Verified SEER**	**Verified Refrigerant Charge**	**Verified HSPF**	**Verified Heating Cap 47**	**Verified Heating Cap 17**
MiniSplit HP-hers-ltpump	Not Required	0	Not Required	Not Required	No	No	No	No

IAQ (INDOOR AIR QUALITY) FANS

01	02	03	04	05	06
Dwelling Unit	**IAQ CFM**	**IAQ Watts/CFM**	**IAQ Fan Type**	**IAQ Recovery Effectiveness (%)**	**IAQ Recovery Effectiveness - SRE/IAQ Recovery Effectiveness - SRE**
SFam IAQVentRpt	27	0.25	Default	0	n/a

PROJECT NOTES

due to reporting system doesn't work without WH, standard WH (tank-less with UEF=0.81) should be modeled (no credit/no penalty).

CERTIFICATE OF COMPLIANCE **CF1R-PRF-01E**

Project Name: 26860 Regency WorkShop **Calculation Date/Time:** 2021-04-07T11:22:08-07:00 **(Page 9 of 9)**

Calculation Description: Title 24 Analysis **Input File Name:** 26860_Regency_workshop_r1_v3.ribd19

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Igor Pichko	Documentation Author Signature: Igor Pichko
Company: Energy Consult LLC	Signature Date: 2021-04-07 15:53:01
Address: 1252 w 22nd st #2	CEA/ HERS Certification Identification (if applicable): R19-14-30005
City/State/Zip: San Pedro, CA 90731	Phone: 424-247-7658

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Darren Asad	Responsible Designer Signature: Darren Asad
Company: Pixel Arch LTD	Date Signed: 2021-04-08 01:29:51
Address: 4525 Carpinteria Ave #636	License: na
City/State/Zip: Carpinteria, CA 93014	Phone: 909-939-2585

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Easy to Verify at CalCERTS.com

PixelArch ltd.
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Canada Office 3313 Plateau Blvd. Coquitlam BC V3E 3B8
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Project Name and Address:

WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 1-17-2021 11:58:30 AM

Scale:

DRAWING TITLE: CERTIFICATE OF COMPLIANCE TITLE-24

Sheet :

Page No. :

A-003

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020
2	FOR CITY SUBMITTAL	
3		
4		

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 or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**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 alteration. 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 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 compression heating is higher than the cut-off temperature for supplementary heating.*
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)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 bibbs 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

§ 150.0(i)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 609.11 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(n)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-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to 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)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, 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 retardant 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 and duct leakage tested, as confirmed through field verification 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 ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. 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

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 not sharing ceilings or floors with 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 dwelling-unit envelope leakage 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.(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.(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.(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.(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.(k)1C.
§ 150.(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.(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.(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 150.(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.(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.(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.(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.*
§ 150.(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.(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.(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.(k).
§ 150.(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.(k)2G:	**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(e); and meets all other requirements in § 150.0(k)2.
§ 150.(k)2H:	**Interior Switches and Controls.** A multiscene 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.(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.(k)2C.
§ 150.(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.(k)2K:	**Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.(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)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii (astronomical time clock), or an EMCS.
§ 150.(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.(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, 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.(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.(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.(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.(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 horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) 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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Project Name and Address:

WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 1-17-2021 11:58:30 AM
Scale:

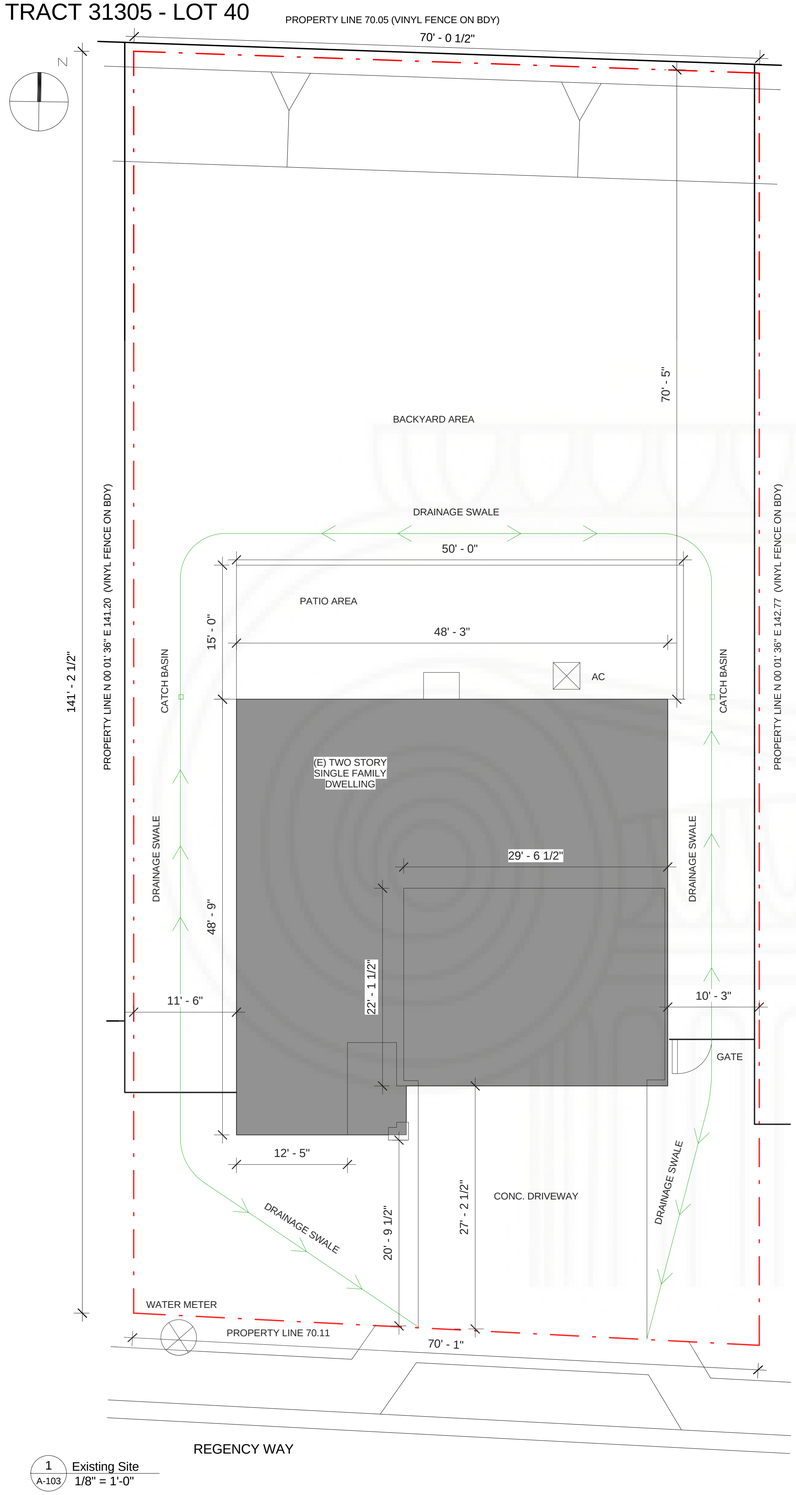
DRAWING TITLE: 2019 LOW-RISE RESIDENTIAL MANDATORY MEASURES SUMMERY

Sheet :

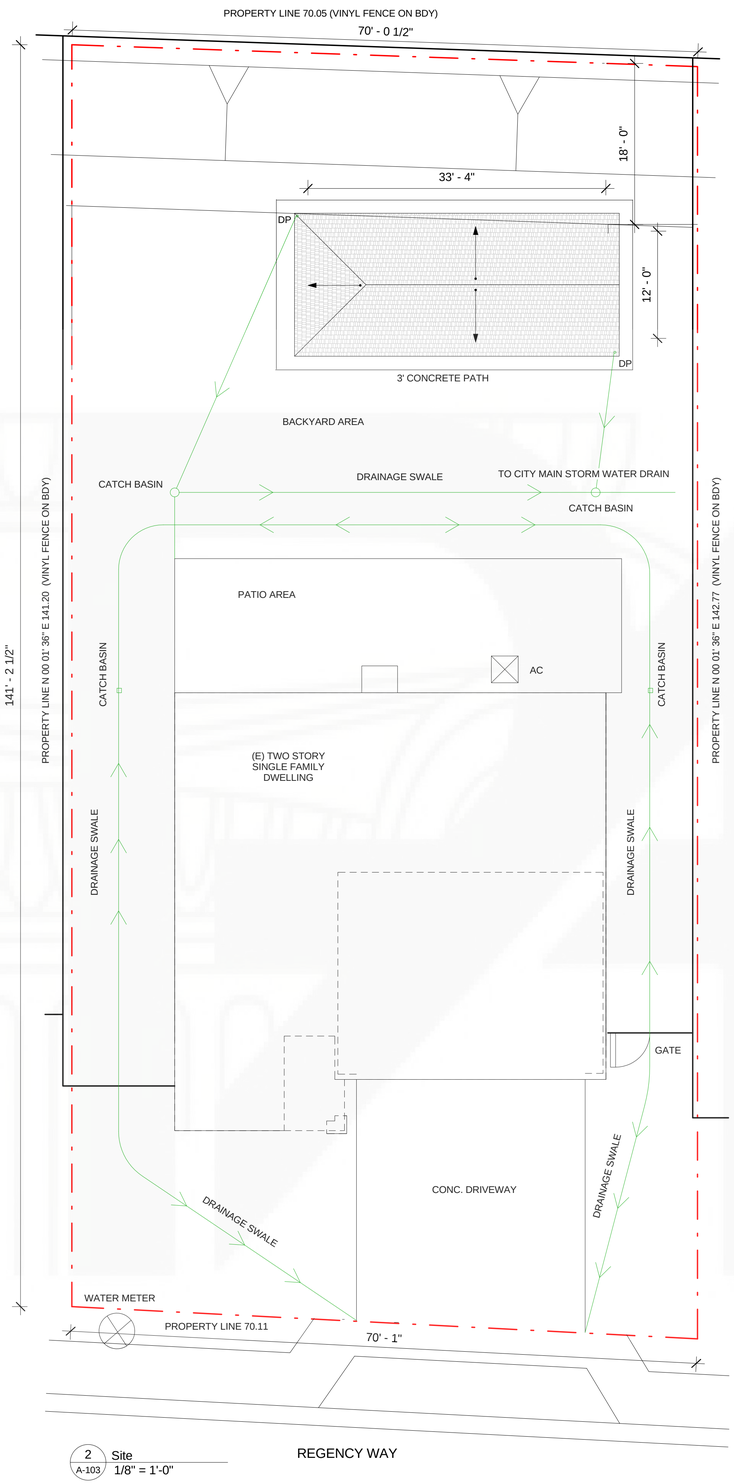
Page No. : A-004

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020
2	FOR CITY SUBMITTAL	
3		
4		

TRACT 31305 - LOT 40



1 A-103 Existing Site
1/8" = 1'-0"



2 A-103 Site
1/8" = 1'-0"

PROJECT INFORMATION

PROJECT DESCRIPTION: NEW ONE STORY
DETACHED WORKSHOP ADDITION

PROJECT ADDRESS:
26860 REGENCY WAY, MORENO VALLEY, CA 92555

OWNER

TEL.:

LEGAL DESCRIPTION:
LOT 40,
TRACT N : 313005
CONSTRUCTION TYPE: -
ZONING CODE: -
GENERAL PLAN: -
AREA: -
FEMA PANEL: -
FLOOD ZONE: -
ZONE INFO: -

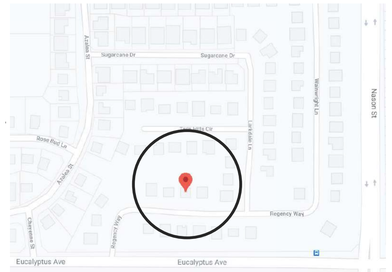
DESIGNER:
PIXELARCH LTD
4525 CARPINTERIA CA 93014
TEL. (909) 939 2585
E-MAIL: info@pixelarchltd.com

AREA TABULATIONS:
LOT SIZE: - 9922.97 SQUARE FEET

EXISTING:
EXISTING SINGLE FAMILY DWELLING HEATED AREA TOTAL: 2191.99 SF
EXISTING GARAGE: 653.61 SF

EXISTING LOT COVERAGE:
EXISTING SFD + NEW ADDITION: 2191.99 + 423.98 = 2615.97 SQUARE FEET
PROPOSED LOT COVERAGE: 2615.97/9922.97 = 26 %
PERMITTED - %
BACKYARD AREA : - SF
BACKYARD COVERAGE: - = - % PERMITTED - %

AERIAL PHOTO



VICINITY MAP

FINISH GRADE AROUND THE STRUATURA SHALL SLOPE AWAY FROM THE FOUNDATION A MINIMUM OF 5% FOR A MINIMUM DISTANCE OF 10 FEET. THE ROOF DRAINAGE SYSTEM SHALL DISCHARGE TO 5 FEET MINIMUM FROM FOUNDATION TO AN APPROVED DRAINAGE SYSTEM.

IMPERVIOUS SURFACE AREA TABLE	
IMPERVIOUS SURFACE AREA (SQUARE FEET)	EXISTING
EXISTING SINGLE FAMILY DWELLING	2191.99 SF
NEW WORKSHOP ADDITION	423.98 SF
OTHER STRUCTURES (SHEDS,PORCHES,DECKS,PATIOS,ETC.)	466.25 SF
GRAVEL	-
PERVIOUS PAVEMENT	750.00 SF
DRIVE WAY/ ROAD	724.25 SF
OTHER	
TOTAL(S)	**4556.47 SF**

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Project Name and Address:

WORKSHOP ADDITION

26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 22-Dec-20 11:31:11 AM
Scale: @ Arch D 1/8" = 1'-0"

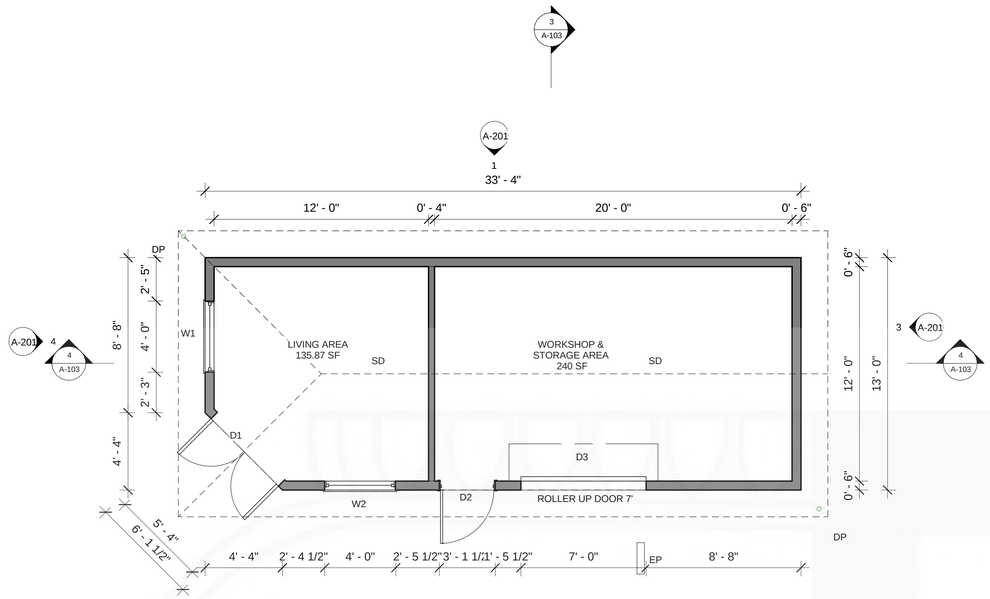
DRAWING TITLE:
SITE PLAN

Sheet :

Page No. :

A-101

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020



1 A-103 Ground Floor
1/4" = 1'-0"

NOTE:

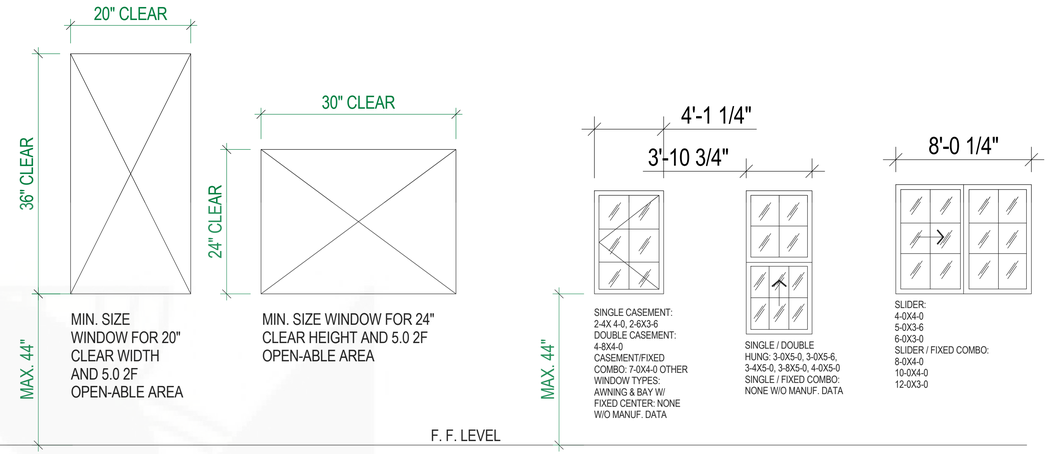
- ALL FLOORING TO BE HARDWOOD EXCEPT BATHROOM TO BE TILES.
- CEILING HEIGHT 9'

2 A-201 / 3 A-103

SYMBOLS

- BATHROOM FAN (MAY INCLUDE LIGHT UNIT).
- SD — SMOKE DETECTOR - HARD WIRED TO ELECTRICAL SYSTEM W/BATTERY BACKUP PROVIDED IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE, SECTION R314.
- CC — COMBINATION SMOKE & CARBON MONOXIDE DETECTOR, HARD WIRED TO ELECTRICAL SYSTEM W/BATTERY BACKUP PROVIDED IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE, SECTION R315.

EMERGENCY ESCAPE / RESCUE OPENING (R310)



NOTE: SIZES ARE TAKEN FROM DATA SUPPLIED BY WINDOW MANUFACTURES. HOWEVER, THESE ARE GENERAL DIMENSIONS AND MUST BE VERIFIED WITH ACTUAL WINDOWS INSTALLED TO MEET MIN. EGRESS REQUIREMENTS.

FLOOR PLAN SHEET NOTES

GENERAL CONTACTOR TO BE RESPONSIBLE FOR ADEQUATELY FRAMING, BRACING, AND STRUCTURING ALL WALLS AND OTHER GYPSUM BOARD CONSTRUCTION IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS CONTAINED IN THESE DRAWINGS. WHETHER OR NOT SPECIFICALLY REFERENCED IN THE PLANS, ALL PARTITIONS SHALL BE BRACED IN ACCORDANCE WITH SEISMIC CODE REQUIREMENTS.
COORDINATE AND INSTALL BACKING AS REQUIRED FOR ALL NEW MILLWORK, MARKERBOARDS, EQUIPMENT, FURNITURE, PROJECTION SCREENS, ETC.
ALL PARTITIONS ARE DIMENSIONED FROM FACE OF FINISH TO FACE OF FINISH, U.O.N.
PARTITIONS SHOWN TO ALIGN WITH FACE OF EXISTING CONSTRUCTION OR NEW PARTITIONS SHOULD ALIGN FINISHED FACE TO FINISHED FACE.
DIMENSIONS INDICATED TO BE "CLEAR" OR TO HOLD SHALL BE MAINTAINED AND DISCREPANCIES OR VARIATIONS ON THESE DIMENSIONS SHALL BE REVIEWED WITH ARCHITECT BEFORE BEGINNING CONSTRUCTION.
PREPARE ALL GYP. BD. WALL SURFACES TO RECEIVE PARTITIONS, AND WALL FINISHES.
FLOOR TOLERANCE: FINISHED FLOOR TO BE LEVELED TO A TOLERANCE OF 1/4" SLOPE IN 10 FEET. GENERAL CONTRACTOR TO IMMEDIATELY VERIFY SLOPE AND REPORT ANY DEVIATIONS FROM ABOVE STATED TOLERANCE TO PIXELARCH LTD.
PRIOR TO COMMENCING WORK ALIGNMENT OF DOOR HEADS AND OTHER CRITICAL HORIZONTAL ELEMENTS SHALL BE MAINTAINED AT A CONSTANT LEVEL AND SHALL NOT FOLLOW VARIATIONS IN THE FLOOR PLATES.
THERMOSTATS TO BE LOCATED ABOVE LIGHT SWITCHES, TYP.
MULTIPLE LIGHT SWITCHES TO BE GANGED WITHIN A SINGLE COVER-PLATE TO MAXIMUM EXTENT POSSIBLE. WHERE MULTIPLE SWITCHES CANNOT BE GANGED WITHIN A SINGLE COVER-PLATE, SWITCHES ARE TO BE ADJACENT TO EACH OTHER OR AS CLOSE AS POSSIBLE.
GC TO PROVIDE ALL APPLIANCES AND FIXTURES, U.O.N.
THE CONTRACTOR SHALL "STRIKE OUT" LOCATION OF ALL WALLS, DOORS, MULLIONS, SOFFITS, RAISED FLOOR GRIDS, HOUSEKEEPING AND UTILITY EQUIPMENT PADS, AND OTHER MAJOR ELEMENTS, OR AS DIRECTED BY ARCHITECT AT THE BEGINNING OF THE PROJECT BEFORE PROCEEDING WITH CONSTRUCTION. IF DISCREPANCIES EXIST BETWEEN FIELD CONDITIONS AND THE DRAWINGS NOTIFY ARCHITECT.
ALL FURRED WALLS SHALL EXTEND VERTICALLY THRU THE CEILING WHERE INDICATED ON THE DRAWINGS OR TO THE STRUCTURE ABOVE WHERE NO CEILING OCCURS. U.O.N.
HINGE SIDE OF DOORS TO BE LOCATED PER DETAILS FROM THE FACE OF ADJACENT PERPENDICULAR PARTITIONS, U.O.N.
REFER TO ENLARGED PLANS FOR DIMENSIONS AND INFORMATION WHEN DESIGNATED.
THE GENERAL CONTRACTOR SHALL COORDINATE AND PROVIDE APPROPRIATE STRUCTURAL BACKING AND REINFORCING IN PARTITIONS BEHIND ALL WALL-MOUNTED, WALL ANCHORED OR SUPPORTED ITEMS. ALL CONCEALED WOOD USED FOR SUCH SUPPORT SHALL BE FIRE RETARDANT TREATED.
IN THE EVENT OF CONFLICT BETWEEN DATA SHOWN ON DRAWINGS AND DATA SHOWN ON THE SPECIFICATIONS, THE DRAWINGS SHALL TAKE PRECEDENCE. DETAIL DRAWINGS TAKE PRECEDENCE OVER DRAWING OF SMALLER SCALE. SHOULD THE CONTRACTOR AT ANY TIME DISCOVER AN ERROR IN A DRAWING OR SPECIFICATION OR A DISCREPANCY OR VARIATION BETWEEN DIMENSIONS ON DRAWINGS AND MEASUREMENTS AT THE SITE OR LACK OF DIMENSIONS OR OTHER INFORMATION, THE GENERAL CONTRACTOR SHALL NOT PROCEED WITH THE WORK AFFECTED UNTIL CLARIFICATION HAS BEEN MADE.
PROVIDE BACKING AS REQUIRED PER FURNITURE REQUIREMENTS.
THE FOLLOWING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS DESIGN-BUILD SYSTEMS (*IF SUCH SYSTEMS ARE REQUIRED BY THE CITY*):
AUTOMATIC FIRE SPRINKLER SYSTEM.

CONTRACTOR SHALL FULLY COORDINATE THE DESIGN/ENGINEERING PROCESS OF THE ABOVE REFERENCED SYSTEMS AND THE COMPLETE AND PROPERLY FUNCTIONING INSTALLATION THEREOF.
THE FOLLOWING MAYBE PROVIDED BY THE OWNER'S VENDORS BUT THE INSTALLATION OF THOSE SYSTEMS SHALL BE COORDINATED BY THE GENERAL CONTRACTOR WITH EACH OF HIS SUBCONTRACTORS FOR THE SYSTEMS NOTED BELOW:
TELECOMMUNICATIONS
SECURITY
THE GENERAL CONTRACTOR SHALL PROVIDE ELECTRICAL RACEWAY AND POWER TO ALL POINTS DESIGNATED BY THE VENDOR'S FOR EACH OF THE OWNER'S FURNISHED SYSTEMS.
ALL PARTITIONS, DOORS, GLAZED OPENINGS, SOFFITS, ETAL., SHALL BE STRUCTURALLY BRACED IN ACCORDANCE WITH SEISMIC CODE REQUIREMENTS.
COORDINATE LOCATION AND PROVIDE BLOCKING, BACKINGS AND/OR REINFORCEMENT IN PARTITIONS FOR ALL CABINETS, COUNTERTOPS AND ANY WALL-MOUNTED ITEMS. REFER TO THE PLANS, ELEVATIONS AND DETAILS FOR LOCATION OF ITEMS WHICH MAY REQUIRE SUPPORT.
THE CONTRACTOR IS RESPONSIBLE FOR VERIFING THE DIMENSIONS AND ELEVATIONS AT THE SITE. THE CONTRACTOR AND SUB-CONTRACTORS SHALL COORDINATE THE LAYOUT AND EXACT LOCATIONS OF ALL PARTITIONS, DOORS, ELECTRICAL/TELEPHONE OUTLETS, LIGHTSWITCHES AND THERMOSTATS WITH THE ARCHITECT IN THE FIELD PRIOR TO PROCEEDING.
WHEREVER DIAGONAL BRACING IS INDICATED OR OTHERWISE REQUIRED, INSTALL BRACING UNEXPOSED TO VIEW, PARTICULARLY AT SUSPENDED OR DRYWALL CEILING AREAS. IF EXPOSED TO VIEW CONDITIONS EXIST IN THE DESIGN, DO NOT BRACE INTO THE AREA WHERE NO CEILING IS TO BE INSTALLED, OR INTO THE 'MORE OPEN'AND VISIBLE SIDE OF BULKHEAD/SOFFIT WHERE BOTH SIDES SHALL BE WITHOUT A CEILING.
WHERE NEW PARTITIONS MEET EXISTING MULLIONS OR COLUMNS INSTALL THE NEW PARTITION PERPENDICULAR TO THE EXISTING MULLION OR COLUMN AND ALIGN THE CENTERLINE OF THE NEW PARTITION WITH THE MULLION OR COLUMN U.O.N.
WHERE A GYPSUM BOARD PARTITION MEETS FLUSH WITH THE FACE OF AN EXISTING PARTITION, REMOVE THE EXISTING METAL CORNER BEAD BEFORE INSTALLING THE NEW PARTITION.
ALIGN NEW PARTITION SURFACES WITH THE EXISTING ADJACENT OR ADJOINING SURFACES WHERE INDICATED. TAPE AND SAND THE JOINTS TO SMOOTH WITHOUT ANY VISIBLE JOINTS.
PATCH AND REPAIR SURFACES TO MATCH ADJACENT OR ADJOINING SURFACES.
PATCH EXISTING DAMAGED PARTITIONS THROUGHOUT ENTIRE PROJECT AREA TO MATCH ADJACENT SURFACES.
CUT AND FIT COMPONENTS AS REQUIRED TO ALTER EXISTING WORK FOR INSTALLATION OF NEW WORK. PATCH DAMAGED AREAS TO MATCH ADJACENT SURFACES.
AT OPENINGS IN GYPSUM BOARD WALLS FOR DUCT WORK, RETURN AIR, WRAP HEAD, JAMBS AND SILL OF OPENING WITH GYPSUM BOARD. U.O.N.
VERTICAL DIMENSIONS ARE FROM TOP OF FLOOR SLAB, EXCEPT WHERE OTHERWISE NOTED TO BE ABOVE FINISH FLOOR.
DIMENSION ARE NOT ADJUSTABLE WITHOUT APPROVAL OF THE ARCHITECT UNLESS NOTED +/- OR VIF.
THE GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICT EXIST IN THE LOCATION OF ANY MECHANICAL, HVAC, TELEPHONE, ELECTRICAL, PLUMBING AND SPRINKLER EQUIPMENT (TO INCLUDE ALL PIPING, DUCTWORK, CONDUIT, CABLES, ETC.) AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE EQUIPMENT ARE PROVIDED.
ELEMENTS TO BE EXPOSED TO VIEW SHALL BE REVIEWED WITH THE ARCHITECT AND COORDINATED BY AND BETWEEN THE GENERAL CONTRACTOR AND PERTINENT SUBCONTRACTORS PRIOR TO CONSTRUCTION OR FABRICATION PROCEEDING.

CARPENTRY:

SAWN LUMBER DESIGN IS BASED ON THE NATIONAL DESIGN SPECIFICATION, LATEST EDITION. SAWN LUMBER SHALL CONFORM TO WEST COAST LUMBER INSPECTION BUREAU OR WESTERN WOOD PRODUCTS ASSOCIATION GRADING RULES. ALL LUMBER NOT SPECIFICALLY NOTED TO BE D.F. #2 OR BETTER. ALL WOOD IN PERMANENT CONTACT WITH CONCRETE OR CMU SHALL BE PRESSURE TREATED UNLESS AN APPROVED BARRIER IS PROVIDED. FRAMING ACCESSORIES AND STRUCTURAL FASTENERS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY (OR ENGINEER APPROVED EQUAL) AND OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. HANGERS NOT SHOWN SHALL BE SIMPSON HU OF SIZE RECOMMENDED FOR MEMBER. ALL HANGERS AND NAILS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE SIMPSON Z-MAX HANGERS OR STAINLESS STEEL. ALL SHEAR WALL SHEATHING NAILS SHALL BE COMMON NAILS ALL FRAMING NAILS SHALL BE COMMON NAILS. OR HOT DIPPED GALVANIZED BOX NAILS. FRAMING NAILS SHALL BE PER IBC TABLE 2304.9.1 OR IRC TABLE R602.3(1).

PLYWOOD PANELS SHALL CONFORM TO THE REQUIREMENTS OF "U.S. PRODUCT STANDARD PS 1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" OR APA PRP-108 PERFORMANCE STANDARDS. UNLESS NOTED, PANELS SHALL BE APA RATED SHEATHING, EXPOSURE 1, OF THE THICKNESS AND SPAN RATING SHOWN ON THE DRAWINGS. PLYWOOD INSTALLATION SHALL BE IN CONFORMANCE WITH APA RECOMMENDATIONS. ALLOW 1/8" SPACING AT PANELS ENDS AND EDGES, UNLESS OTHERWISE RECOMMENDED BY THE PANEL MANUFACTURER.

ALL ROOF SHEATHING AND SUB-FLOORING SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS, EXCEPT AS INDICATED ON THE DRAWINGS. ROOF SHEATHING SHALL EITHER BE BLOCKED, TONGUE-AND-GROOVE, OR HAVE EDGES SUPPORTED BY PLYCLIPS. SHEAR WALL SHEATHING SHALL BE BLOCKED WITH 2X FRAMING AT ALL PANEL EDGES. NAILING NOT SPECIFICALLY IDENTIFIED ON THE DRAWINGS TO CONFORM WITH IRC TABLE R602.3(1).

GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH U.S. PRODUCT STANDARD PS 56, "STRUCTURAL GLUED LAMINATED TIMBER" AND AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, AITC 117. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND BE ACCOMPANIED BY A CERTIFICATE OF CONFORMANCE. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER SHOP OR FIELD. GLULAM HANGERS NOT SHOWN SHALL BE SIMPSON EG. BEAMS SHALL BE VISUALLY GRADED WESTERN SPECIES INDUSTRIAL GRADE, AND OF THE STRENGTH INDICATED BELOW:

DEPTH	COMBINATION SYMBOL	SPECIES	USE
ALL	24F - V4	DF/DF	(SIMPLE SPAN)
ALL	24F - V8	DF/DF	(CONT. OR CANTILEVER)

PREMANUFACTURED WOOD JOISTS: PREMANUFACTURED WOOD JOISTS SHALL BE OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS, MANUFACTURED BY THE TRUS JOIST COMPANY, OR AN ENGINEER APPROVED EQUAL. PROVIDE BRIDGING IN CONFORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS. JOISTS AND BRIDGING SHALL BE CAPABLE OF RESISTING THE WIND UPLIFT NOTED ON THE DRAWINGS. THE JOIST MANUFACTURER SHALL VISIT JOB SITE AS REQUIRED AND VERIFY THE PROPER INSTALLATION OF JOISTS IN WRITING TO THE ARCHITECT/ENGINEER. PREMANUFACTURED WOOD JOIST ALTERNATES WILL BE CONSIDERED, PROVIDED THE ALTERNATE IS COMPATIBLE WITH THE LOAD CAPACITY, STIFFNESS, DIMENSIONAL, AND FIRE RATING REQUIREMENTS OF THE PROJECT, AND IS ICBO APPROVED.

LUMBER SPECIES:
A. POSTS, BEAMS, HEADERS, JOISTS, AND RAFTERS TO BE DF-#2
B. EXPOSED ARCH BEAMS TO BE DF-#1 OR BETTER
C. SILLS, PLATES BLOCKING, AND BRIDGING TO BE DF-#2.
D. ALL STUDS TO BE DF#2 OR BETTER.
E. PLYWOOD SHEATHING SHALL BE AS FOLLOWS:
ROOF SHEATHING SHALL BE 1/2" CDX INT-APA RATED 32/16.
WALL SHEATHING SHALL BE 1/2" INT-APA RATED 32/16 OR 7/16" OSB.
FLOOR SHEATHING SHALL BE 3/4" T & G INT-APA RATED OSB.
F. ' I ' JOISTS SHALL BE MANUFACTURED BY TRUS JOIST OR ENGINEER APPROVED EQUAL.
G. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.

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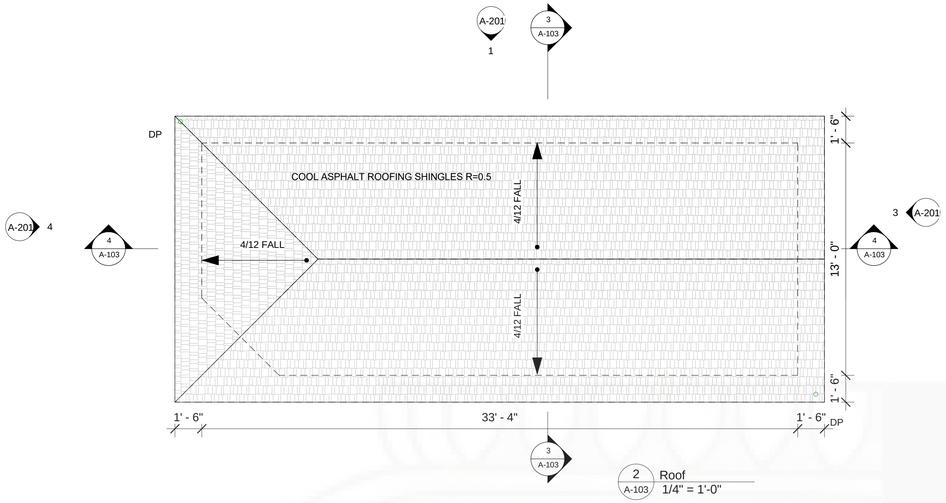
Project Name and Address:

WORKSHOP ADDITION

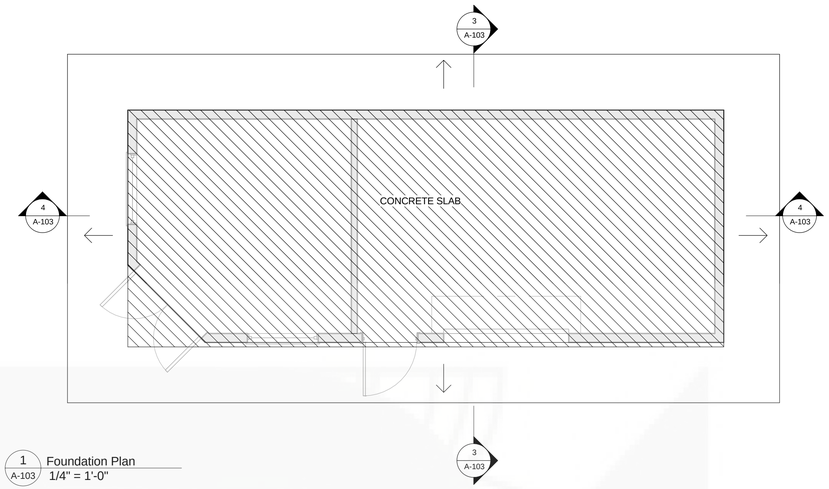
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 22-Dec-20 11:31:14 AM
Scale: @ Arch D As indicated
DRAWING TITLE: **PROPOSED GROUND FLOOR**
Sheet :
Page No. :
A-102

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020



2 A-103 Roof 1/4" = 1'-0"



1 A-103 Foundation Plan 1/4" = 1'-0"

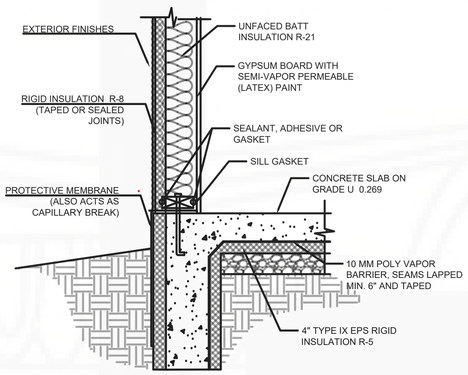
Total roof area(main roof)= 433.33 sq.ft Rainfall rate = 2.1
pipe size required : 2"

sq. ft. covered per drain= 1150 TWO DRAIN IS REQUIRED FOR MAIN ROOF
Total roof area(main roof)= 792 sq.ft ONE DRAIN IS ENOUGH FOR ADU ROOF

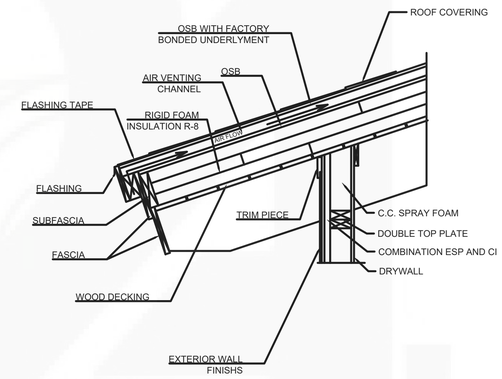
****For improvement of drainage, the size of pipe upgraded to 4" and the number of drain pipe determined regarding the shape of the roof.

Leader / Pipe Size (in.)	Hourly Rainfall (in.) 1	1.5	2	2.5	3	4	5	6	7	8
	Total Sq. Ft. Covered Per Drain									
2	2,880	1,920	1,440	1,150	960	720	575	480	410	360
3	8,800	5,860	4,400	3,520	2,930	2,200	1,760	1,470	1,260	1,100
4	18,400	12,700	9,200	7,360	6,130	4,600	3,680	3,070	2,630	2,300
5	34,600	23,050	17,300	13,840	11,530	8,650	6,920	5,765	4,945	4,325
6	54,000	36,000	27,000	21,600	18,000	13,500	10,800	9,000	7,715	6,750
8	116,000	77,400	58,000	46,400	38,660	29,000	23,200	19,315	16,570	14,500

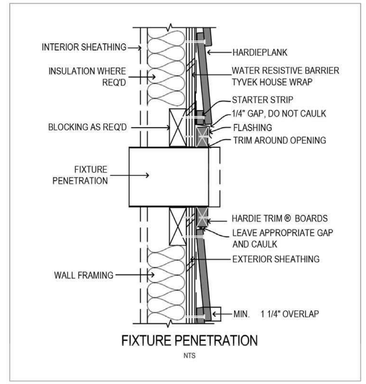
CALIFORNIA LOCATION	REQUIREMENT TYPE	SRI MINIMUM
City of Los Angeles[1]	Mandatory	16
Unincorporated areas of Los Angeles County[2]	Mandatory	20
All other regions in Climate Zones 10-15 (Title 24, Part 6)[3]	Tradeoff	16
All other regions in Climate Zones 1-9, 16 (Title 24, Part 6)[3]	Tradeoff	None



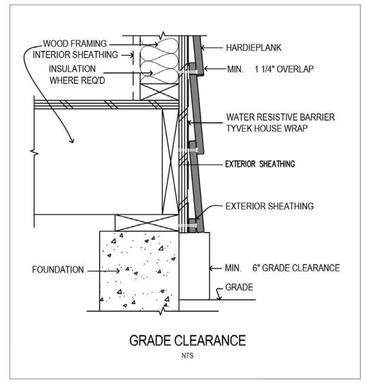
TYPICAL EXTERIOR WALL DETAILS



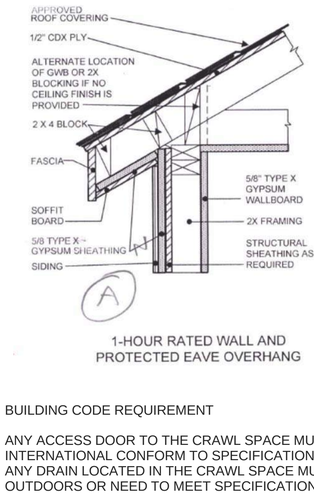
TYPICAL ROOF INSULATION DETAILS



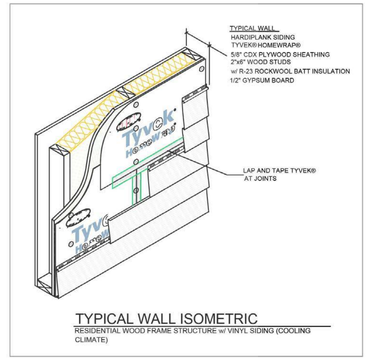
FIXTURE PENETRATION
NTS



GRADE CLEARANCE
NTS



1-HOUR RATED WALL AND PROTECTED EAVE OVERHANG

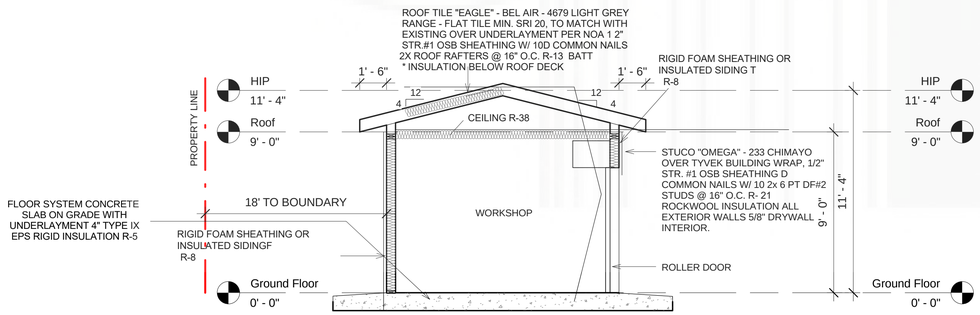


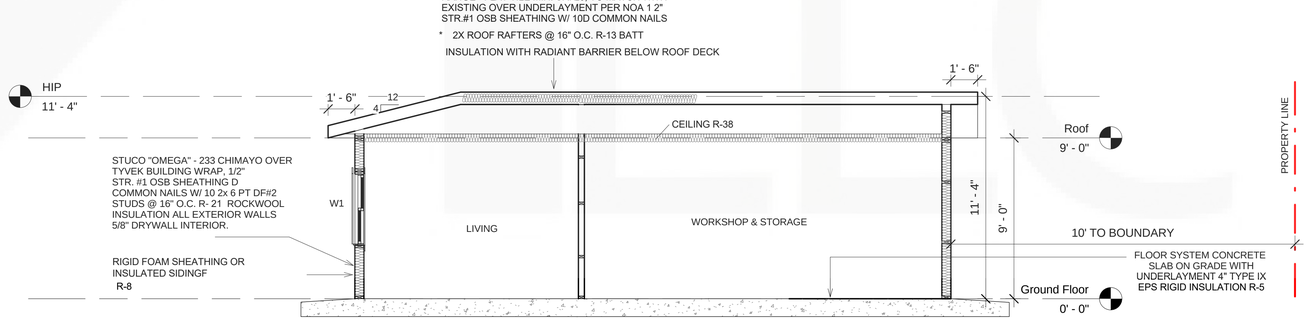
TYPICAL WALL ISOMETRIC
RESIDENTIAL WOOD FRAME STRUCTURE w/ VINYL SIDING (COOLING CLIMATE)

BUILDING CODE REQUIREMENT

ANY ACCESS DOOR TO THE CRAWL SPACE MUST BE AT LEAST 18X24 INCHES (2015 INTERNATIONAL CONFORM TO SPECIFICATIONS RESIDENTIAL CODE (IRC) - SECTION R408.4). ANY DRAIN LOCATED IN THE CRAWL SPACE MUST BE ALLOWED TO RUN OFF AND TERMINATE OUTDOORS OR NEED TO MEET SPECIFICATIONS TO AN INTERIOR CRAWL SPACE DRAIN OR SUMP PUMP. CRAWL SPACE DRAINS MAY NOT RUN OFF TO GUTTERS OR FOUNDATION PERIMETER DRAINS, AND DRYER VENTS MUST BE TERMINATED OUTDOORS (2015 IRC ï SECTIONS R405 AND P2719).

(R408.1), 2009 IRC- OPENINGS FOR UNDER-FLOOR VENTILATION:
THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT (0.0929 M2) FOR EACH 150 SQUARE FEET (14 M2) OF UNDER-FLOOR SPACE AREA.
600/150= 4 SF
(8"X16") VENT DIMENSION=.88 SF
4/.88= 4.5
5 VENTS REQUIRED 9 VENTS DESIGNED





3 A-102 Section 1 1/4" = 1'-0"

4 A-102 Section 2 1/4" = 1'-0"

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WORKSHOP ADDITION

26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 22-Dec-20 11:31:18 AM
Scale: @ Arch D 1/4" = 1'-0"

DRAWING TITLE:
FLOOR FRAMING, ROOF PLAN & SECTIONS

Sheet :
Page No. :
A-103

No.	Revision/Issue	Date
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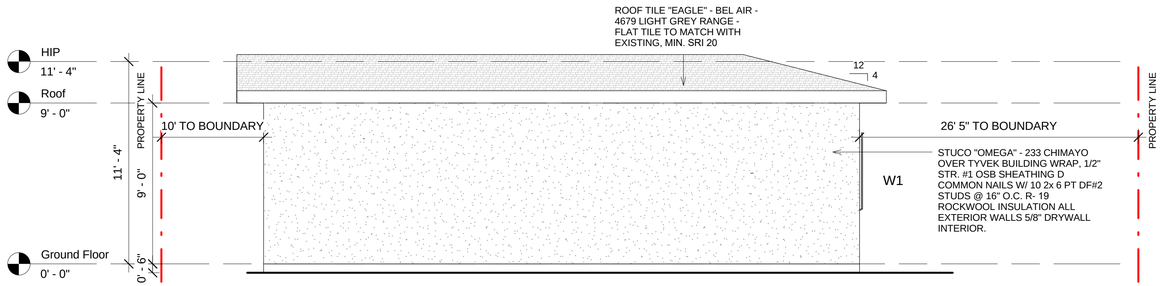
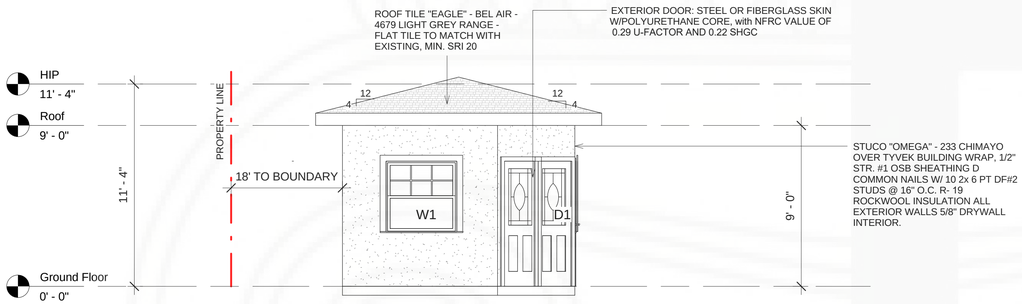


1 A-102 North
1/4" = 1'-0"



2 A-102 South
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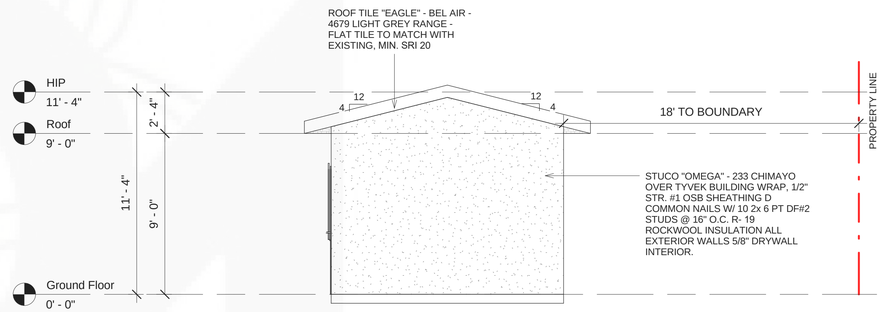
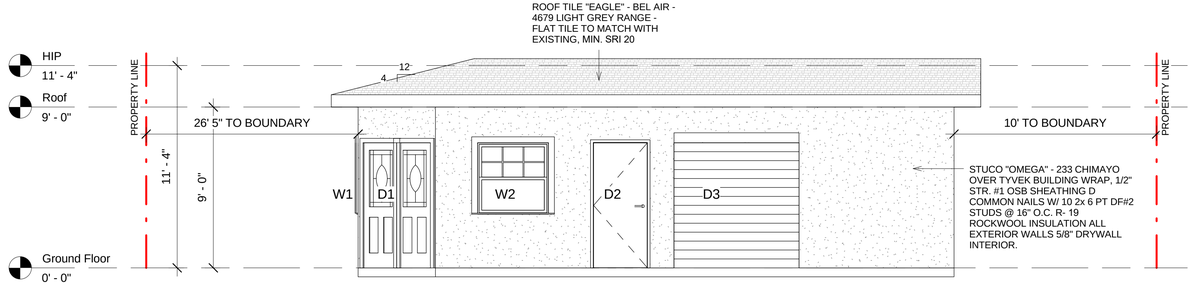




4 A-102 West
1/4" = 1'-0"

3 A-102 East
1/4" = 1'-0"

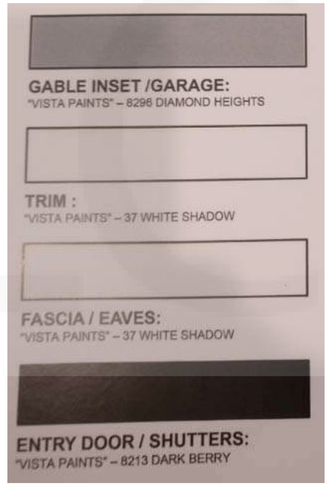
NOTES

1. ATTICS; ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.10 & R502.12 AND VENTILATION PER R806 & R408.1.
2. WHERE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE PROVIDED, THEY SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44" MEASURED FROM THE FLOOR.
3. PER CRC 310.1.
4. GLAZING IN ENCLOSURES FOR WALLS FACING HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 600MEASURED VERTICALLY ABOVE A STANDING OR WALKING SURFACE. PER CRC R308, R303.1 7 R301.2.1.2.
5. FACTORY-BUILT FIREPLACES AND CHIMNEYS PER CRC R1004, R1005, R1006, A.Q.M.D. RULE 445, AND CAL-GREEN SECTION 4.503.1.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 507.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 307.
10. PER THE BUILD IT GREEN PROGRAM'S "GREENPOINT RATING CHECKLIST" SECTION P(D)2, MOISTURE MATERIALS SHALL BE USED IN WET AREAS (i.e. KITCHEN, BATHROOM, UTILITY ROOMS, ETC.)EXTERIOR DOOR LANDING SHALL BE A MAX. OF 7-3 4" BELOW DOOR THRESHOLD PER CRC R311.3.2.
11. GRADE NEEDS TO FALL 6" WITHIN THE FIRST 10'
12. CONCRETE SLAB THICKNESS FOR PORCH AND PATIO SLAB SHALL BE 3 1 2" MIN. REQUIRED PER R506.1

EXTERIOR ELEVATION NOTES

1. NOTES AND SYMBOLS ARE TO APPLY AT ALL AREAS OF SIMILAR GRAPHIC REPRESENTATION. SUCH INDICATIONS MAY BE LIMITED TO PROMOTE CLARITY OR AVOID REDUNDANCY.
2. SLOPE FINISH GRADE 2% MINIMUM AWAY FROM BUILDING FOR 5'-0" MINIMUM, DIRECT DRAINAGE AWAY FROM BUILDING WALLS TO ELIMINATE PONDING.
3. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR GRILLES, REGISTERS, HORNS, SPEAKERS, PANELS, PULL STATIONS AND OTHER FEATURES NOT OTHERWISE SHOWN
4. FLASH AND SEAL ALL PENETRATIONS THROUGH EXTERIOR ROOFS AND WALLS, AND FLOORS WEATHER TIGHT AND WATERPROOF. PACK ALL PENETRATIONS THROUGH THE BUILDING INSULATION ENVELOPE WITH INSULATION.
5. FLASH ALL WINDOWS, DOORS, LOUVERS, ACCESS PANELS AND SIMILAR WALL OPENINGS PER DETAILS ON SHEET A401.
6. FIREBLOCKING, CBC 717.2.: PROVIDE MATERIALS COMPLYING WITH CBC 717.2.1 AT CONCEALED SPACES, FURRED SPACES, CEILING/FLOOR LEVELS AND 10'-0" INTERVALS ALONG LENGTH OF WALL, SOFFITS, DROP CEILINGS, AND COVE CEILINGS, CONCEALED PLACES BETWEEN STAIR STRINGERS & BETWEEN STUDS IN LINE WITH STAIR RUN, AND ALL LOCATIONS LISTED IN CBC 717.2.2 THROUGH 717.2.2.7.
7. FLOOR/CEILING DRAFTSTOPPING, CBC 717.3: PROVIDE MATERIALS COMPLYING WITH CBC 717.3.1. AT FLOOR/CEILING ASSEMBLIES AS REQUIRED BY CBC 717.3.2 THROUGH 717.3.3. -GROUP R-1, R-2, R-3, R-4
EXCEPTION: DRAFTSTOPPING NOT REQUIRED IN BUILDINGS SPRINKLERED PER CBC 903.3.1.1.
EXCEPTION: DRAFTSTOPPING NOT REQUIRED IN BUILDINGS SPRINKLERED PER CBC 903.3.2.1 WHEN SPRINKLERS ARE INSTALLED IN THE COMBUSTIBLE CONCEALED SPACES
8. ATTIC DRAFTSTOPPING, CBC 717.4: PROVIDE MATERIALS COMPLYING WITH CBC 717.3.1. IN ATTICS AND CONCEALED ROOF SPACES AS REQUIRED BY CBC 717.4.2 THROUGH 717.4.3. PROVIDE SELF-CLOSING DOORS WITH AUTOMATIC LATCHES CONSTRUCTED AS REQUIRED FOR DRAFTSTOPPING PARTITIONS.
9. REFER TO REFLECTED CEILING PLAN FOR LOCATION OF CLERESTORY WINDOWS, TYPICAL.
10. ELEVATIONS SHOWN ARE MEASURED FROM FINISHED FLOOR DATUM FOR THIS BUILDING.
11. NEW WORK PROVIDE BLOCKING, BACKING, FRAMING, SHEATHING, UTILITIES OR OTHER CONCEALED WORK, WHETHER SPECIFICALLY SHOWN OR INFERRED. REFER TO STRUCTURAL DRAWINGS FOR CONCEALED WORK NOT SHOWN ON ARCHITECTURAL DRAWINGS.
12. REMODEL/ADDITION WORK NEATLY CUT AND REMOVE SURFACES AND FINISHES AS REQUIRED OR TO A NATURAL POINT OF DIVISION TO ENABLE INSTALLATION OF BLOCKING, BACKING, FRAMING, SHEATHING, UTILITIES OR OTHER CONCEALED WORK, WHETHER SPECIFICALLY SHOWN OR INFERRED FOR SUPPORT OR RENOVATION. REFER TO STRUCTURAL DRAWINGS FOR CONCEALED WORK NOT SHOWN ON ARCHITECTURAL DRAWINGS.
13. REPAIR AND REPLACE ALL EXISTING SURFACES AND FINISHES TO MATCH EXISTING UNDISTURBED WORK.
14. ALL NEW ADDITION WORK FINISHES AND COLORS FOR SIDING, TRIM, WINDOWS, ROOFING, ETC. ARE TO MATCH EXISTING FINISHES AND COLORS.

FINISH NOTES:
RENDERINGS ARE NOT TO SCALE; ALL RENDERINGS ARE FOR ARTISTIC DEPICTION ONLY. PLAN UPDATES MAY NOT BE REFLECTED IN RENDERINGS. RENDERINGS SHALL NOT BE USED FOR CONSTRUCTION.
BASE BOARDS SHALL BE 6" IN ALL ROOMS, UNO.
FINAL FINISHES SHALL BE CONFIRMED WITH THE HOME OWNER PRIOR TO APPLICATION.
EXTERIORFINISHNOTES:
EXTERIOR FINISH TO BE FIBER CEMENT SIDING OVER 5/8 CDX PLYWOOD. WINDOW & DOOR TRIM CEDAR. MATERIAL AND COLOR BY OWNER.
ROOFING TO BE EXPOSED FASTENER METAL ROOFING OVER 30# FELT, 5/8 CDX PLYWOOD.
DECKING TO BE TREX OR WOOD. FINAL MATERIAL AND COLOR BY OWNER.
CHIMNEYS ARE DECORATIVE AND PROVIDE FOR VENTING OF GAS FIREPLACES ONLY.
DOWNSPOUTS TO BE COLLECTED AND ROOF RUN OFF TO BE DIRECTED AWAY FROM STRUCTURE PER THE SITE PLAN.
FINISH GRADE SHALL SLOPE AWAY FROM STRUCTURE MIN. 1/2" PER FOOT OF RUN FOR 4' MIN.
BASALT RETAINING WALLS TO MATCH EXISTING RETAINING WALL.



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WORKSHOP ADDITION

26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 22-Dec-20 11:31:19 AM
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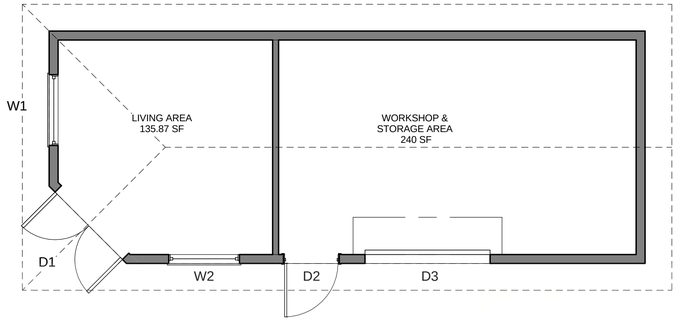
DRAWING TITLE:
ELEVATIONS

Sheet :

Page No. :
A-201

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020



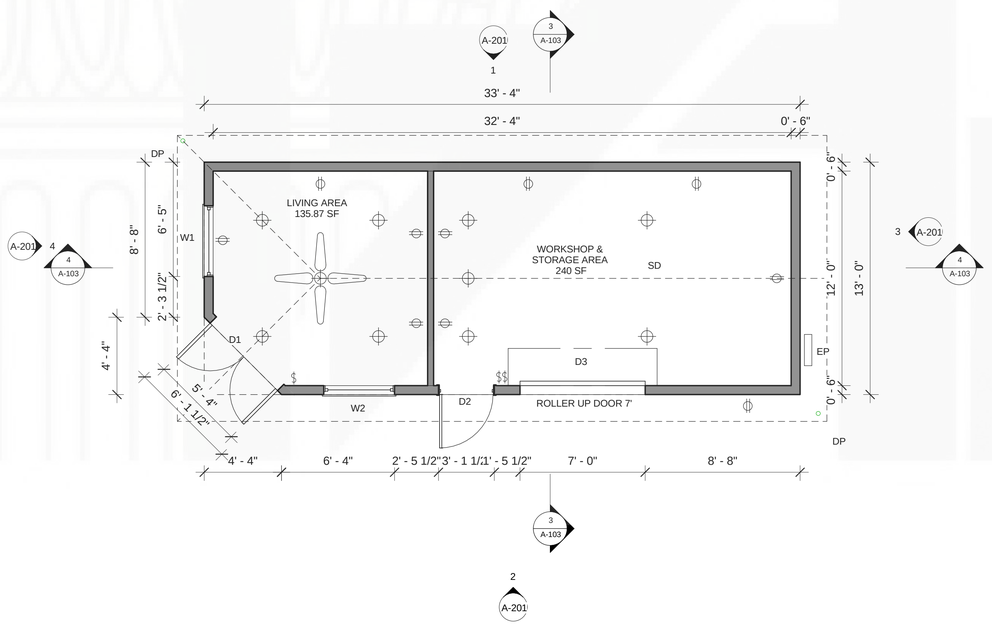
1 / A-103 DOORS & WINDOWS LOCATION PLAN
1/4" = 1'-0"

DOOR SCHEDULE															
NUMBER	LEBEL	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	DESCRIPTION	HEADER	THICKNESS	MANUFACTURE	ROOM NAME	SHGC	SWING SIDE	U-FACTOR
D1	-	1	1	2838 R EX	60"	80"	63" x 83"	EXT. HINGED-DOOR	2"x6"x41" (2)	1 3/4"	To be chosen by owner	LIVING	0.22	IN	0.29
D2	-	1	1	3068 R EX	32"	80"	35" x 83"	EXT. HINGED-DOOR	2"x6"x35" (2)	1 3/8"	To be chosen by owner	WORKSHOP	0.22	IN	0.2
D3	-	1	1	2668 R EX	84"	90"	84" x 90"	ROLLER-DOOR	2"x6"x35" (2)	1 3/8"	To be chosen by owner	WORKSHOP	0.22	IN	0.5

WINDOWS SCHEDULE															
NUMBER	LEBEL	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	EGRESS	DESCRIPTION	HEADER	MANUFACTURE	COMMENTS	SHGC	U-FACTOR	TEMPERED
W1, W2	2838 DH	2	1	2838 DH	48"	48"	49" x 49"		DOUBLE HUNG	2"x6"x39" (2)	To be chosen by owner		0.22	0.29	

ENERGY NOTES

ALL OPENABLE WINDOWS AND SLIDING DOORS SHALL LIMIT AIR LEAKAGE AND BE CERTIFIED AND LABELED TO COMPLY WITH ANSI STANDARD AIS 4.2-1972.
FIXED WINDOWS SHALL BE SEALED TO LIMIT AIR INFILTRATION.
ALL EXTERIOR DOORS AND WINDOWS ARE TO BE WEATHERSTRIPPED.
SITE BUILT DOORS MOUNTED ON THE INSIDE OR THE OUTSIDE OF EXTERIOR WALLS SHALL HAVE A MIN. 1" LAP AT JAMBS.
OPEN EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES BETWEEN WALLS, FOUNDATIONS, ROOFS, PANELS, AND AT PENETRATION OF UTILITIES THRU THE ENVALOPE, SHALL BE SEALED, CAULKED, OR WEATHERSTRIPPED TO LIMIT AIR LEAKAGE.
PROVIDE A "CERTIFICATE OF COMPLIANCE" SIGNED BY THE OWNER, G.C., ARCHITECT, OR ENGINEER TO THE BLDG. DEPARTMENT STATING THAT THE WORK HAS BEEN PERFORMED AND MATERIALS INSTALLED ACCORDING TO THE PLANS AND SPECIFICATIONS AFFECTING NONRESIDENTIAL ENERGY.
INSULATION SHALL BE INSTALLED TO MEET FLAME SPREAD AND SMOKE DENSITY REQUIREMENTS OF 5311 AND TITLE 24.



SYMBOLS

BATHROOM FAN (MAY INCLUDE LIGHT UNIT).

SD SMOKE DETECTOR - HARD WIRED TO ELECTRICAL SYSTEM W/BATTERY BACKUP PROVIDED IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE, SECTION R314.

CC COMBINATION SMOKE & CARBON MONOXIDE DETECTOR, HARD WIRED TO ELECTRICAL SYSTEM W/BATTERY BACKUP PROVIDED IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE, SECTION R315.

4 / A-103 MEP PLAN
1/4" = 1'-0"

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WINDOWS & DOORS SCHEDULE - MEP PLAN

Sheet :

Page No. :

A-301

No.	Revision/Issue	Date
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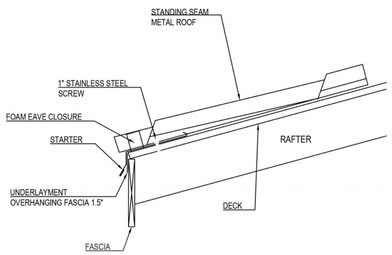

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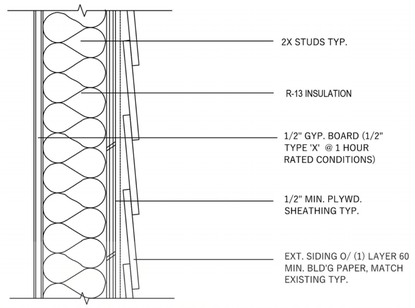
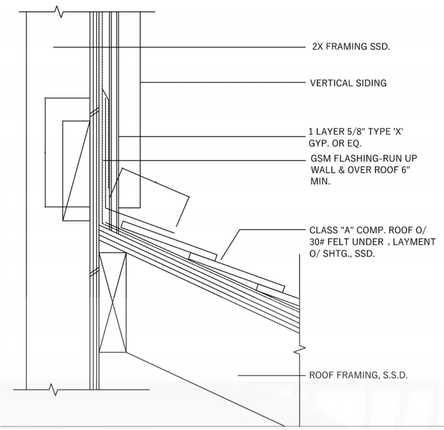


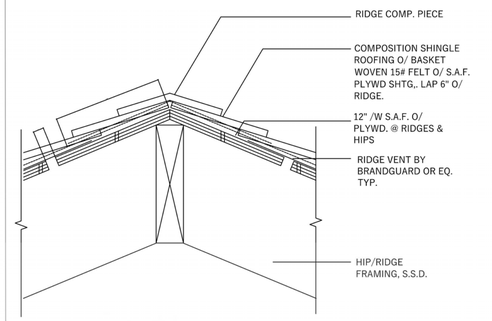
HORIZONTAL LAP SIDING

19



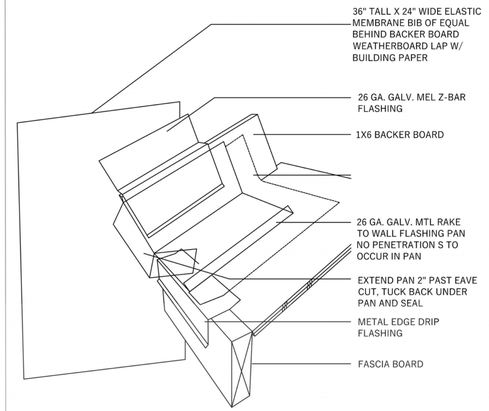
ROOF TO WALL PERP.

16



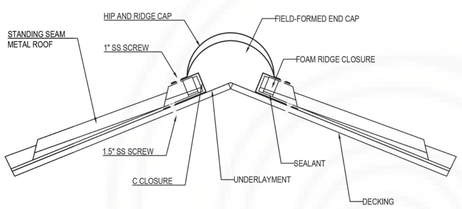
RIDGE

13



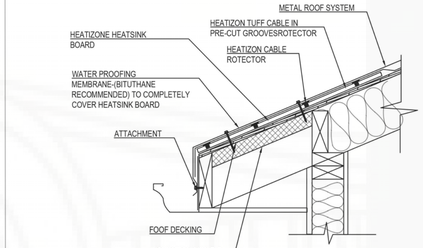
RAKE TO WALL DIVERTER

10



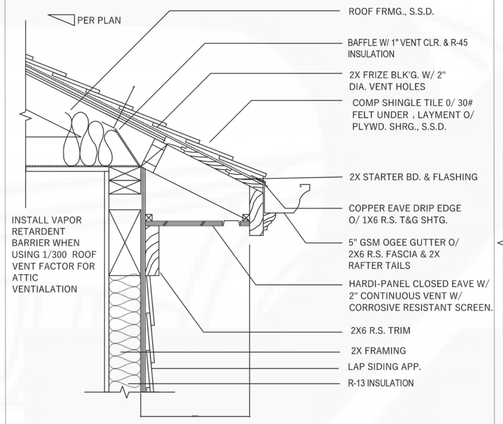
RIDGE CAP DETAIL

23



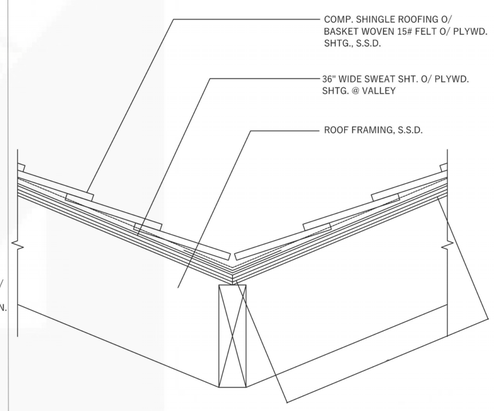
EAVE DETAIL-TUFF CABLE IN HEATSINK UNDER METAL ROOF

20



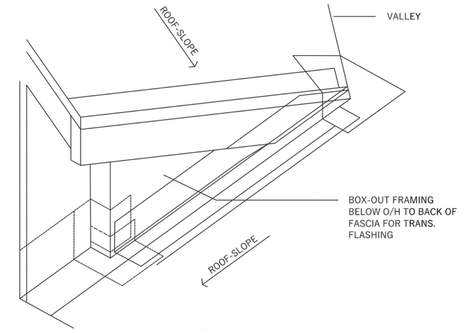
EAVE

17



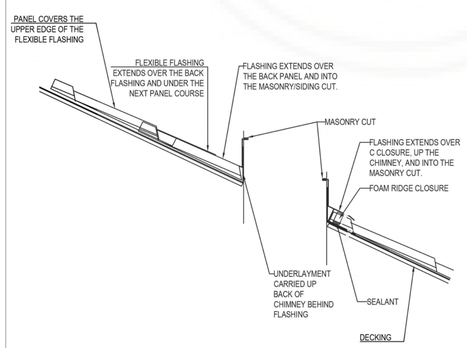
VALLEY

14



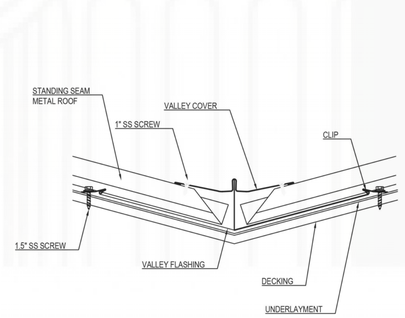
RAKE TO EAVE TRANSITION

11



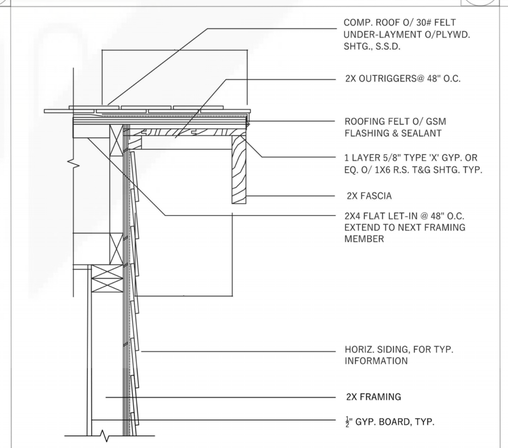
METAL ROOF CHIMNEY FLASHING DETAILS

24



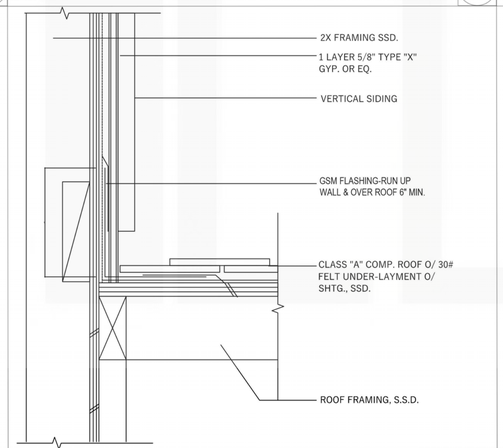
METAL ROOF VALLEY DETAIL

21



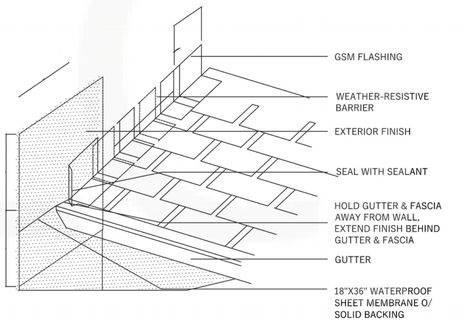
RAKE

18



ROOF TO WALL PARALLEL

15



ISOMETRIC EAVE PERP. TO WALL @ COMP.

12

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Sheet :

Page No. : A-401

No.	Revision/Issue	Date
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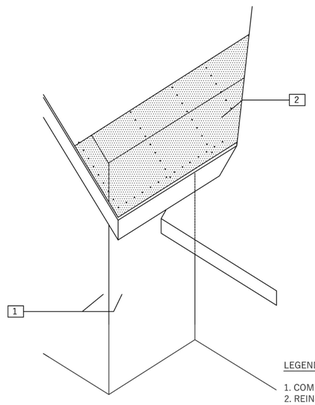
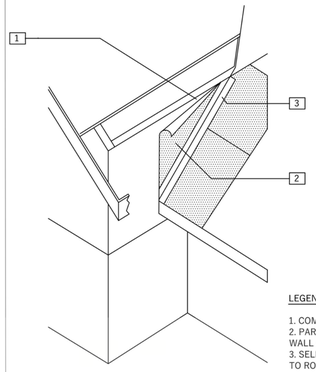


LEGEND

1. COMPLETE INSTALL OF STUCCO.
2. REINSTALL PLY AFTER STUCCO IS INSTALLED.

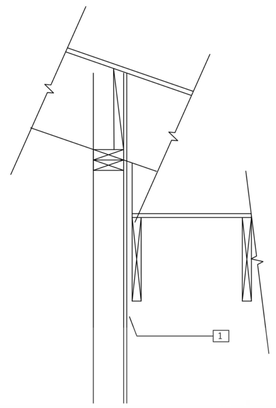
FINAL ROOF SHEATHING 7



LEGEND

1. COMPLETE PAPERING OF WALL.
2. PARTIAL INSTALL 30# ROOF FELT 18" UP WALL AND 24" ON ROOF TOP.
3. SELF-ADHERING MEMBRANE 3" ON WALL TO ROOF.

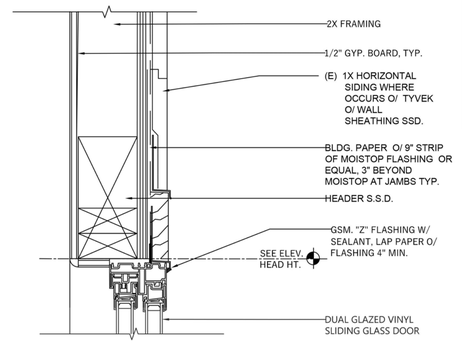
BUILDING PAPER TO WALL 4



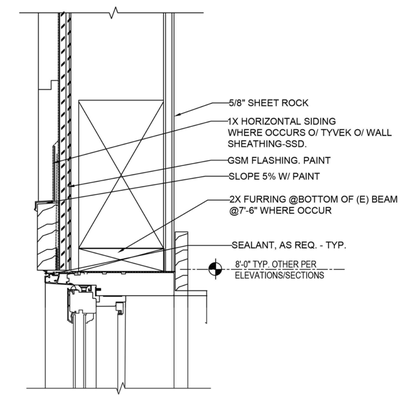
LEGEND

1. 1/2" CLEARANCE BETWEEN WALL AND ROOF SHEATHING.

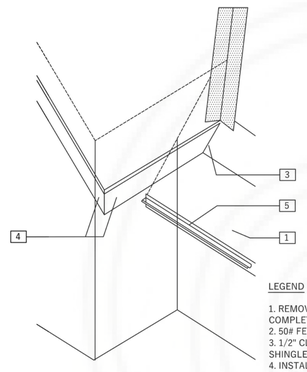
ROOF TO WALL 1



SLIDING GLASS DOOR HEAD/JAMB 18



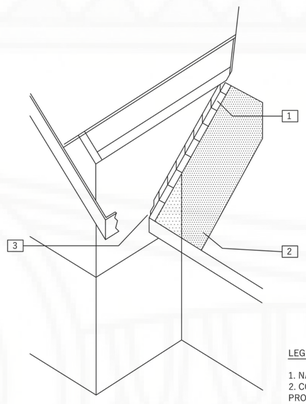
TYP. DOOR HEAD @ HORIZONTAL WD. SIDING 15



LEGEND

1. REMOVE PROTECTION BOARD & COMPLETE ROOFING FELT.
2. 50# FELT OVER WOVEN 30# VALLEY.
3. 1/2" CLEARANCE BETWEEN ROOF SHINGLES AND FASCIA.
4. INSTALL FINISH FASCIAS.
5. INSTALL GUTTERS.

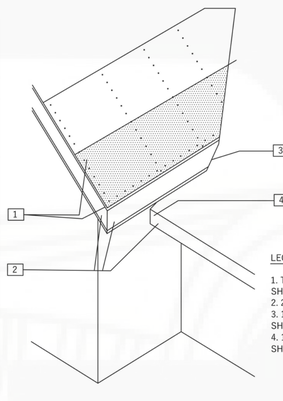
FINISH APPLICATION 8



LEGEND

1. NAIL G.I. FLASHING TO WALL.
2. COVER ROOF FELT WITH PROTECTION BOARD.
3. DIVERTER STEP FLASHING.

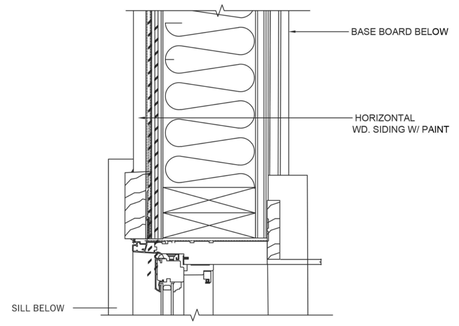
STEP FLASHING 5



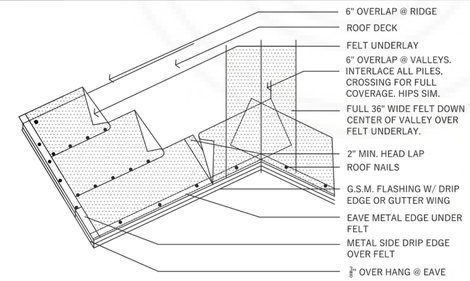
LEGEND

1. TACK NAIL LOWER EPIC OF ROOF SHEATHING.
2. 2X ROUGH FASCIA.
3. 1 1/2" CLEARANCE BETWEEN FASCIA AND SHEATHING.
4. 1 1/2" CLEARANCE BETWEEN WALL SHEATHING & ROOF RAFTER.

ROUGH FRAMING 2



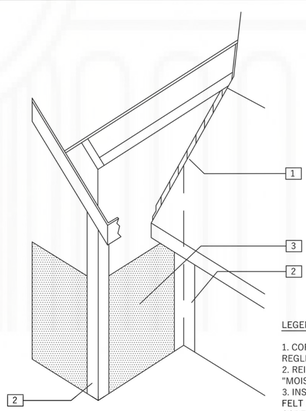
TYP. DOOR JAMB @ HORIZONTAL WD. SIDING 16



APPLICATION NOTES FOR LOW SLOPE, 2:12 TO LESS THAN 4:12 :

1. START W/ 1-19" WIDE SHEET OF FELT ALONG EAVE W/ ¾" OVERHANG.
2. TROWEL A CONTINUOUS LAYER OF ROOFING CEM. (@ A RATE OF 2 GAL. PER 100 SQ. FT) ON TO THE FELT.
3. PRESS 1-36" WIDE SHEET OF FELT FIRMLY ONTO THE CEM., & NAIL DOWN W/ GALV. ROOFING NAILS @ 12" O.C. ALONG A LINE 18" ABOUT THE BTM. EDGE OF THE FELT.
4. APPLY ROOFING CEM. TO THE UPPER 19" OF THE EXPOSED FELT.
5. COVER THE CEMENTED PORTION W/ THE NEXT SHEET OF FELT & NAILS.
6. REPEAT PROCESS UNTIL 24" INSIDE THE INTERIOR WALL LINE.
7. COVER THE REMAINING ROOF W/ DBL. LAYERS OF FELT, W/O CEM., UP TO THE RIDGE.

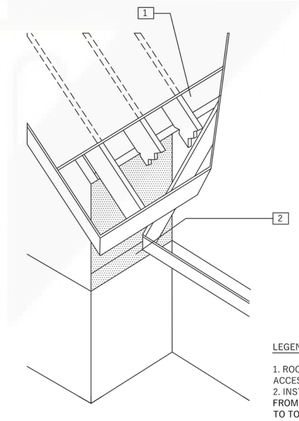
FELT UNDERLAYMENT 9



LEGEND

1. CORNER FLASH FLASHING WITH G.I. REGLET.
2. REINFORCE CORNERS WITH 12" "MOISTOP".
3. INSTALL SECOND COURSE OF 60 MINUTE FELT OVER REGLET AND STUCCO WEEP SCREED.

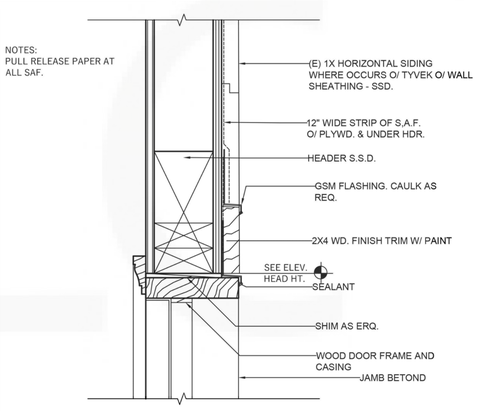
CORNER FLASHING 6



LEGEND

1. ROOF PLY TEMPORARILY MOVED FOR ACCESS.
2. INSTALL CONTINUOUS PIECE OF FELT FROM CORNER TO CORNER EXTENDING UP TO TOP PLATE.

FELT APPLICATION 3



DOOR HEAD/JAMB 17

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Page No. : A-402

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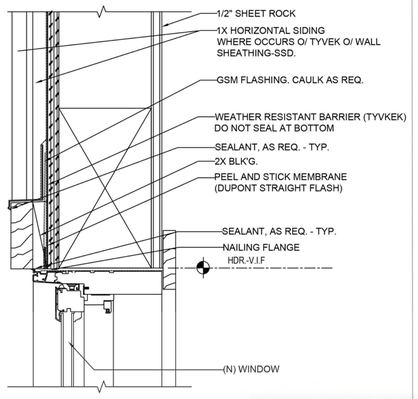
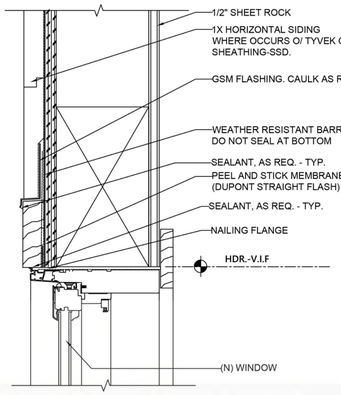
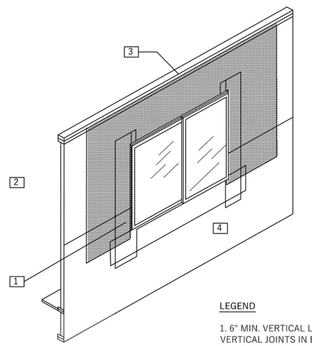


WINDOW HEAD @ WD. BOARD & BATTEN SIDING 12



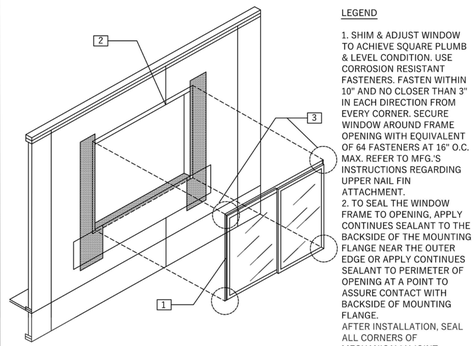
WINDOW HEAD @ HORIZONTAL SIDING 9



LEGEND

1. 6" MIN. VERTICAL LAP FOR ALL HORIZONTAL & VERTICAL JOINTS IN BUILDING PAPER.
2. LAP SUBSEQUENT COURSES OVER "MOISTOP".
3. CARRY PAPER TO UPPER EDGE OF TOP PLATE.
4. HOLD PAPER BACK 1" FROM WINDOW.

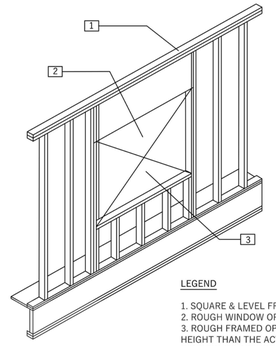
BUILDING PAPER-SECOND COURSE 7



LEGEND

1. SHIM & ADJUST WINDOW TO ACHIEVE SQUARE PLUMB & LEVEL CONDITION. USE CORROSION RESISTANT FASTENERS. FASTEN WITHIN 10" AND NO CLOSER THAN 3" IN EACH DIRECTION FROM EVERY CORNER. SECURE WINDOW AROUND FRAME OPENING WITH EQUIVALENT OF 64 FASTENERS AT 16" O.C. MAX. REFER TO MFG.'S INSTRUCTIONS REGARDING UPPER NAIL FIN ATTACHMENT.
2. TO SEAL THE WINDOW FRAME TO OPENING, APPLY CONTINUES SEALANT TO THE BACKSIDE OF THE MOUNTING FLANGE NEAR THE OUTER EDGE OR APPLY CONTINUES SEALANT TO PERIMETER OF OPENING AT A POINT TO ASSURE CONTACT WITH BACKSIDE OF MOUNTING FLANGE.
AFTER INSTALLATION, SEAL ALL CORNERS OF MECHANICALLY JOINT FRAMES TO SEAL FRAME SEAM JUNCTURE.

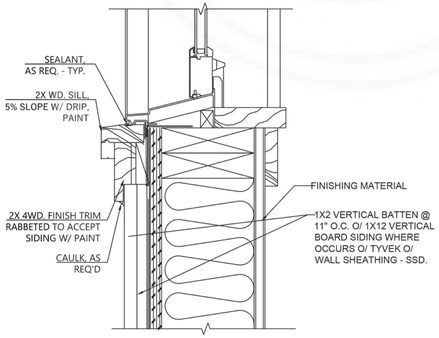
WINDOW INSTALLATION 4



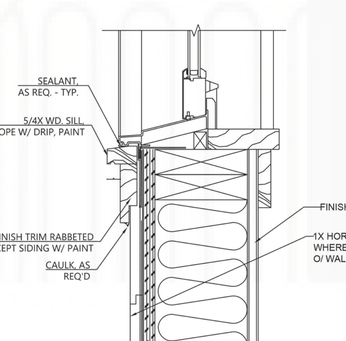
LEGEND

1. SQUARE & LEVEL FRAMING.
2. ROUGH WINDOW OPENING.
3. ROUGH FRAMED OPENING SUFFICIENTLY IN WIDTH & HEIGHT THAN THE ACTUAL FRAME DIMENSIONS OF THE WINDOW. TO ASSURE ADEQUATE CLEARANCE CONSULT THE WINDOW MANUFACTURED'S LITERATURE FOR THE RECOMMENDED ROUGH OPENING DIMENSIONS.

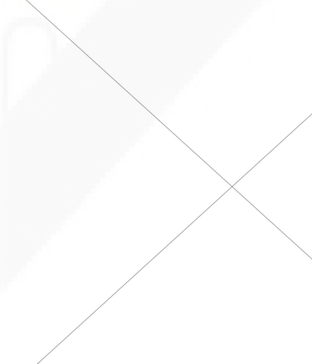
ROUGH WINDOW OPENING 1



WINDOW JAMB @ WD. BOARD & BATTEN SIDING 13



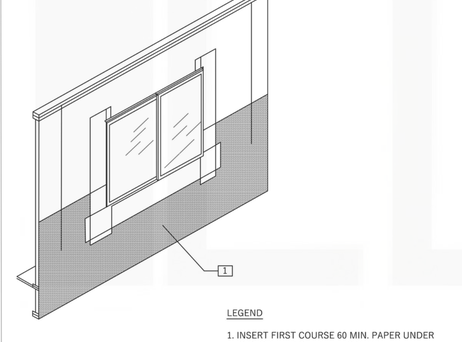
WINDOW JAMB@HORIZONTAL SIDING 10



LEGEND

1. STUCCO WEED
2. INSTALL SECOND LAYER OF 60 MIN. PAPER OVER EVERYTHING.
3. FIRST COURSE OF BUILDING PAPER, 18" IN HEIGHT.
4. SECOND COURSE OF BUILDING PAPER, 36" IN HEIGHT.
5. THIRD COURSE OF BUILDING PAPER, 36" IN HEIGHT.
6.INSTALL WINDOW HEAD FLASHING. PROTECTION LAYER LAPS OVER FLASHING FLANGE.
7. EXTERIOR WALL FINISH: INSTALL PER WALL FINISH MFG.'S RECOMMENDATION.
8. 6" VERTICAL/HORIZONTAL LAPS.

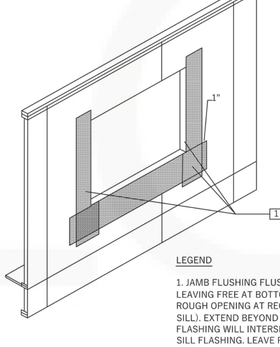
TRIM-FLASHING-PROTECTION COURSE 8



LEGEND

1. APPLY 6" SELF-ADHERING "E-Z SEAL" MEMBRANE OVER "MOISTOP" AND 3" BEYOND WINDOW FLANGE.
2. APPLY 6" "E-Z SEAL" MEMBRANE AT JAMBS OVER "MOISTOP", EXTEND 3" BEYOND WINDOW FLANGE.
3. APPLY 12" "E-Z SEAL" MEMBRANE AT HEADER OF WINDOW, EXTEND 1" BEYOND "MOISTOP".
4. APPLY FIRM PRESSURE TO SELF-ADHERING MEMBRANE TO ASSURE ADHERENCE TO WINDOW FINS.
5. CECH ALL CORNERS FOR PROPER SEAL OF SELF-ADHERING MEMBRANE.

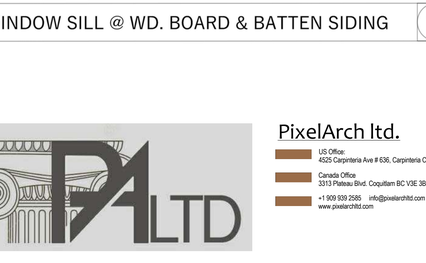
SELF-ADHESIVE MEMBRANE 5



LEGEND

1. WALL SHEATHING (WHERE OCCURS). VERIFY SHEATHING EDGES FLUSH WITH FRAME OPENING AND COMPLETION OF STRUCTURAL NAILING & REINFORCEMENT BEFORE PROCEEDING.
2. APPLY 9" "MOISTOP" OR APPROVED EQUIVALENT SILL FLASHING HORIZONTALLY BELOW THE SILL. (WRAP FLASHING INTO ROUGH OPENING TO PROTECT FRAMING , AT RECESSED WINDOWS ONLY.) FASTEN THE TOP EDGE OF THE SILL FLASHING TO THE FRAMING. BUT DO NOT FASTEN THE LOWER EDGE, SO WEATHER RESISTANT BUILDING PAPER APPLIED LATER MAY BE SLIPPED UP & UNDERNEATH THE FLASHING IN WEATHER BOARD FASHION.
3. EXTEND "MOISTOP" OR APPROVED EQUIVALENT SILL FLASHING HORIZONTALLY 1" BEYOND VERTICAL JAMB FLASHING APPLIED LATER.

SILL FLASHING 2



WINDOW SILL @ WD. BOARD & BATTEN SIDING 14

WINDOW SILL @ HORIZONTALN SIDING 11

LEGEND

1. INSERT FIRST COURSE 60 MIN. PAPER UNDER "MOISTOP" AND STAPLE "MOISTOP".

BUILDING PAPER- FIRST COURSE 6

LEGEND

1. JAMB FLUSHING FLUSH AT BOTH SIDES OF OPENING LEAVING FREE AT BOTTOM. (WRAP JAMB FLASHING INTO ROUGH OPENING AT RECESSED WINDOWS ONLY. SIMILAR AT SILL). EXTEND BEYOND SILL FLASHING ABOVE WHERE HEAD FLASHING WILL INTERSECT. LAP JAMB FLASHING OVER TOP SILL FLASHING. LEAVE PAPER FLASHING UNATTACHED FROM SILL DOWN.

JAMB FLASHING 3

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No.	Revision/Issue	Date
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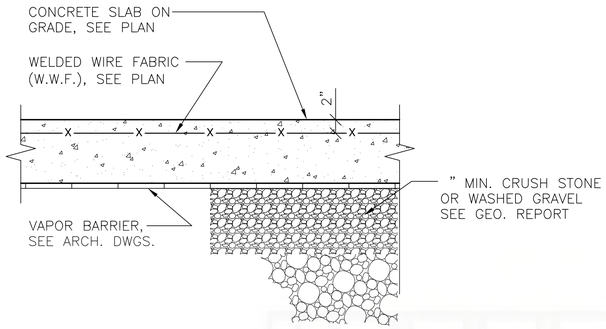
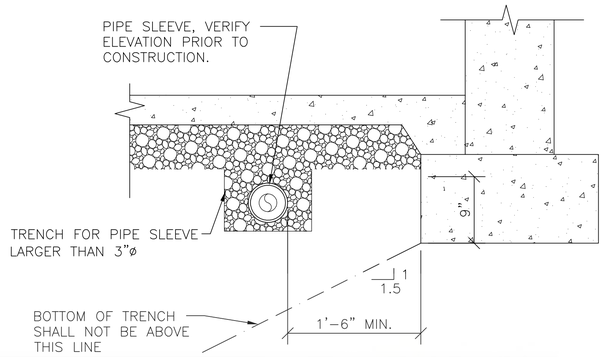


TYP.SLAB ON GRADE

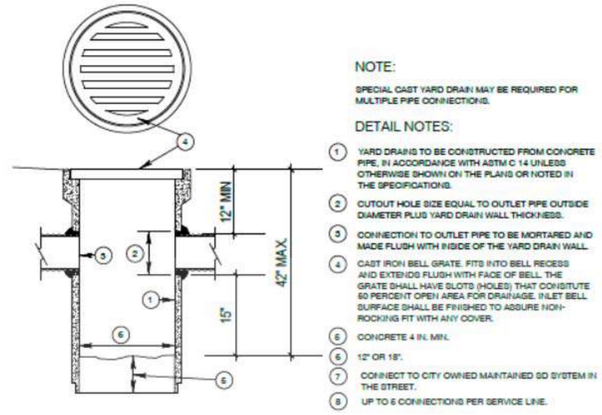


PIPE PENETRATION PARALLEL FOOTING

TYPICAL PIPE PENETRATION AT FNDN. WALL DETAILS

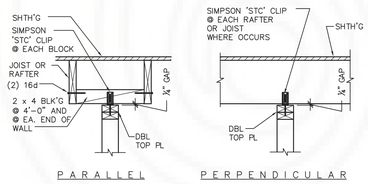
NOT TO SCALE

NOTE:
PROVIDE WALL OPENING REINFORCEMENT FOR PENETRATIONS GREATER THAN 12". SEE TYPICAL CONC. WALL OPENING DETAIL THIS SHEET



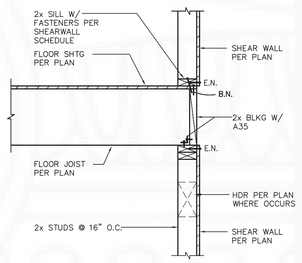
2 YARD DRAIN

TYPICAL CONSTRUCTION DETAILS

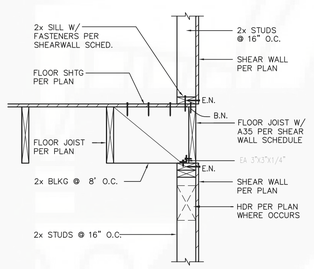


TYP. NON–BEARING PARTITIONS

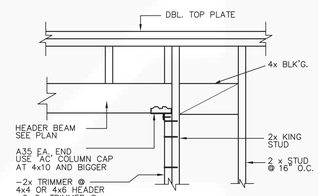
FLOOR FRAMING DETAIL
SCALE NTS



FLOOR FRAMING DETAIL
SCALE NTS



FLOOR FRAMING DETAIL
SCALE NTS



HEADER DETAIL
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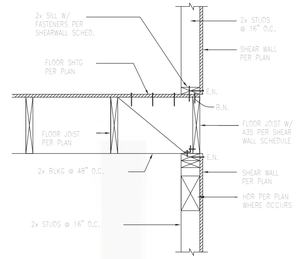

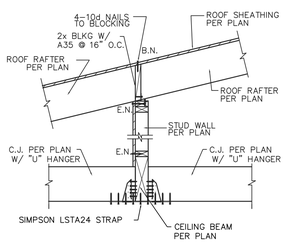

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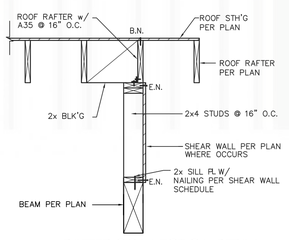

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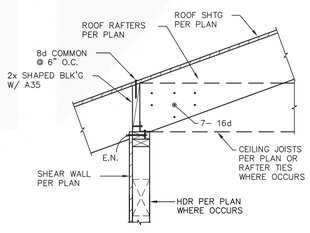

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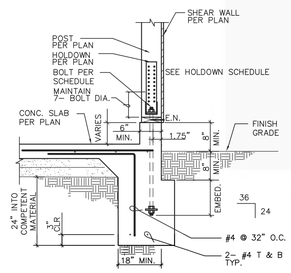

TYP.FOUNDATION DETAILS
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No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020

ELECTRICAL LEGEND

(ALL RECEPTICALS TO BE TAMPER-RESISTANT) PER 2018 IRC : (R 4002.14)

- 110 VOLT RECEPTACLE
- WP — WATERPROOF RECEPTACLE
- CLG. — 110 VOLT IN CLG.
- GFI. — 110 VOLT W/ GROUND FAULT INTERRUPTER
- FLR. — 110 VOLT IN FLOOR
- 220 VOLT RECEPTACLE
- TELEVISION ANTENNA
- GAS OUTLET
- HOSE BIB
- TELEPHONE OUTLET
- $ — SINGLE POLE SWITCH
- $3 — THREE WAY SWITCH
- $4 — FOUR WAY SWITCH
- $DIM — DIMMER SWITCH
- PB — PUSH BUTTON
- SD — SMOKE DETECTOR
- SD/CO — SMOKE DETECTOR/CARBON MONOXIDE
- CEILING MOUNTED LIGHT FIXTURE
- HANGING LIGHT
- RECESSED CAN LIGHT
- WP — WATERPROOF RECESSED CAN LIGHT
- RECESSED EYEBALL SPOT LIGHT
- 6" LED LIGHT FIXTURE
- WP — 6" WATER PROOF LED LIGHT FIXTURE
- WALL MOUNTED LIGHT FGTURE
- PC — PORCELAIN FGTURE W/ PULL CORD
- FLOOD LIGHTS
- EXHAUST FAN
- LT — EXHAUST FAN W/ LIGHT
- EXHAUST FAN W/ HEAT LAMP
- LT — EXHAUST FAN W/ HEAT LAMP & LT.
- KEYLESS CEILING MOUNTED LIGHT FGTURE
- UNDER COUNTER LIGHT
- ZONE SENSOR
- CEILING FAN W/LED LIGHT
- CEILING FAN
- CEILING FAN W/ LIGHT
- CEILING LIGHT W/ FUTURE FAN
- CEILING LED LIGHT W/ FUTURE FAN
- FLUORESCENT LIGHT

GENERAL ELECTRICAL NOTES

#	DESCRIPTION
1	GENERAL CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE SUBMITTING BID.
2	ALL WORK SHALL BE DONE IN ACCORDANCE WITH 2019 NEC, AS AMENDED BY 2019 ELECTRICAL CODE, 2019 ENERGY CODE AND ANY ADDITIONAL STATE OR LOCAL CODES WHICH MAY APPLY.
3	GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, CERTIFICATES, ETC. REQUIRED.
4	GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR BOTH ROUGH AND FINAL UNDER-WRITERS OR OTHER APPROVED INSPECTION AGENCY CERTIFICATES "ELECTRICAL INSPECTION". THESE CERTIFICATES SHALL BE PRESENTED WITH REQUEST FOR FINAL PAYMENT.
5	IT IS THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE OPERATING ELECTRICAL SYSTEM. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING, EQUIPMENT, MATERIAL, ETC. REQUIRED, EXCEPT WHERE SPECIFICALLY NOTED AS BEING FURNISHED BY OTHERS. SHOULD THERE BE ANY QUESTIONS CONCERNING RESPONSIBILITY, THEY SHALL BE ADDRESSED TO ARCHITECT PRIOR TO BID. NO EXTRA CHARGES WILL BE ALLOWED.
6	ELECTRICAL SERVICE SHALL BE COORDINATED WITH THE EXISTING FIELD CONDITIONS.
7	CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO ALL CONTROLS, OWNER-SUPPLIED EQUIPMENT, MECHANICAL AND PLUMBING EQUIPMENT AS REQUIRED.
8	REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATION DETAILS. ALL FIXTURE AND DEVICE LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS SUPERSEDE THOSE SHOWN ON ELECTRICAL PLANS.
9	CIRCUIT NUMBER ON THE DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT INDICATE THE POSITION ON THE PANEL BOARD. CONNECT THE CIRCUITS WITH THE LIGHTEST LOADS AND THE RECEPTACLE CIRCUITS NEAR THE TOP OF THE PANEL, AND THE MORE HEAVILY LOADED CIRCUITS NEAR THE BOTTOM. BALANCE ALL CIRCUITS EVENLY BETWEEN PHASE SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. ALL PHASES MUST BE BALANCED WITHIN 10% OR LESS. G.C. SHALL REBALANCE IF NECESSARY.
10	BRANCH CIRCUIT CONDUCTOR INSULATION SHALL BE COLOR CODED AND SHALL BE 600 VOLT. TYPE THHN/THWN.
11	CABLES IN HIGH TEMPERATURE AREAS SHALL HAVE INSULATION TYPE SUITABLE FOR THE TEMPERATURE. CABLES USED IN SPACES FOR ENVIRONMENTAL AIR SHALL CONFORM WITH APPLICABLE N.E.C REQUIREMENTS.
12	ALL WIRING USED IN RETURN OR DISCHARGE AIR PLENUMS SHALL BE PLENUM RATED OR INSTALLED PER METHODS APPROVED BY THE LATEST EDITION OF THE N.E.C. FOR SUCH APPLICATION.
13	ALL WIRE AND CABLE CONDUCTORS SHALL BE COPPER WITH INSULATION RATED 600V. CONDUCTORS SIZED #10 AWG AND SMALLER SHALL BE SOLID OD STRANDED, AND CONDUCTORS SIZED LARGER THAN #10 AWG SHALL BE STRANDED WIRE.
14	BRANCH CIRCUITS FOR POWER AND LIGHTING SHALL NOT BE LESS THAN #12 AWG. OR AS NOTED. WIRES ARE TO BE SIZED FOR THE APPROPRIATE VOLTAGE DROPS. SEE WIRE SIZE SCHEDULE ON THIS SHEET.
15	ALL DATA CABLES SHALL BE CAT6, PLENUM RATED. TO BE PROVIDED BY OWNER SELECTED VENDOR. ELECTRICAL WORK SHALL BE TO PROVIDE OUTLET BOXES AND "RING AND STRING" FOR PULLING OF CABLES IN CONCEALED SPACES.
16	CONTROL WIRING SHALL NOT BE LESS THAN #14 AWG UNLESS OTHERWISE NOTED.
17	HOMERUNS SHOWN ARE SCHEMATIC. CONTRACTOR MAY ORIGINATE HOMERUNS FROM DIFFERENT LOCATIONS. ALL WIRE INCLUDING HOMERUNS SHALL BE DELINEATED ON AS-BUILT DRAWINGS.
18	ALL WIRING INSTALLED UNDER THIS CONTRACT SHALL BE TESTED FOR PROPER CONNECTIONS AND SHORT CIRCUITS PRIOR TO THE TURNING OVER OF WORK AS A COMPLETE UNIT.
19	PROVIDE ALL ELECTRICAL SYSTEM GROUNDING IN ACCORDANCE WITH N.E.C. REQUIREMENTS EVEN IF IT IS NOT SHOWN ON THE DRAWINGS. INCLUDE ADDITIONAL GROUNDING CONDUCTORS IN ALL RACEWAYS EVEN THOUGH THE DRAWINGS SHOW ONLY CIRCUIT AND/OR NEUTRALS CONDUCTORS. THE PLUMBING AND PIPING SYSTEM SHALL NOT BE USED AS A GROUND. ALL TRANSFORMER NEUTRALS SHALL BE GROUNDED TO BUILDING STEEL IN ACCORDANCE WITH NEC 250-70.
20	ALL CONDUITS PASSING THROUGH PARTITIONS ARE TO BE APPROPRIATELY SLEEVED AND SEALED.
21	FURNISH AND INSTALL ALL CONDUIT WITH PULL WIRES AS REQUIRED. ALL OUTLET BOXES SHALL BE STEEL, EXTRA DEEP WITH GROUNDING PIGTAILS. GROUNDING PUSH-CLIPS ARE NOT ACCEPTABLE.
22	ALL PENETRATIONS SHALL BE INSTALLED AND SEALED PER NATIONAL STATE AND LOCAL CODES
23	DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
24	GUARANTEE ALL WORK, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE YEAR FROM THE DATE OF APPROVAL AND FINAL ACCEPTANCE.
25	THIS DESIGN IS BASED ON INITIAL DESIGN DATA. GENERAL CONTRACTOR TO SUPPLY AND INSTALL FEEDERS, FUSES AND CIRCUIT BREAKERS TO MATCH THE NAMEPLATE RATING OF ALL EQUIPMENT. THIS SHALL BE INCLUDED IN THE INITIAL BID PROPOSAL AND NO EXTRAS SHALL BE ENTERTAINED.
26	LABEL ALL JUNCTION BOXES, OUTLETS, LIGHT SWITCH, ETC. WITH CIRCUIT NUMBER ON INTERIOR ON COVER PLATE. USE SELF-ADHESIVE "DYMO" LABEL 1/8" HIGH LETTERS.
27	GENERAL CONTRACTOR SHALL PROVIDE SEISMIC RESTRAINTS AND SUPPORTS FOR ALL FLOOR, WALL, AND CEILING MOUNTED ELECTRICAL EQUIPMENT TO RESIST EARTHQUAKE EFFECTS DETERMINED IN ACCORDANCE WITH THE BUILDING CODE.
28	THE G.C. SHALL PROVIDE ALL EQUIPMENT, MATERIALS AND LABOR TO COMPLETE ALL ELECTRICAL WORK IN A NEAT AND WORKMANLIKE MANNER AND IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE INCLUDING THE INSTALLATION OF ALL THE EQUIPMENT MATERIALS AND SYSTEMS AND THE FINAL CONNECTIONS TO THE OWNER'S EQUIPMENT AND FIXTURES AS REQUIRED BY THE OWNER. THE G.C. SHALL ALSO FURNISH TEMPORARY WIRING AND LIGHTING TO PROVIDE A MINIMUM OF 25 FC IN WORK AREAS FOR USE OF ALL THE TRADES DURING CONSTRUCTION AND THE INSTALLATION OF THE OWNERS FIXTURES. THE G.C. IS RESPONSIBLE TO REMOVE ALL TEMPORARY WIRING UPON COMPLETION OF CONSTRUCTION OF ALL TRADES.
29	THIS CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL SUPPLEMENTARY SUPPORT, INCLUDING SUPPORT STEEL AS REQUIRED TO HANG ALL EQUIPMENT AND LIGHTING FROM THE EXISTING STRUCTURE IN ACCORDANCE WITH THE ARCHITECTURAL/STRUCTURAL SUPPORT AND LOADING CRITERIA.
30	IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE FULLY DIMENSIONED COORDINATION DRAWINGS FOR ALL OF HIS RESPECTIVE WORK. THESE DRAWINGS MUST BE FULLY COORDINATED WITH ALL EXISTING CONDITIONS. ALL HVAC, PLUMBING, FIRE PROTECTION, ELECTRICAL, LIGHTING, STRUCTURAL AND ARCHITECTURAL SYSTEMS PRIOR TO PREPARING COMPOSITE MULTI DISCIPLINE COORDINATION DRAWINGS.
31	ALL DISCONNECTING MEANS AND EQUIPMENT INDICATED ON THE DRAWING SHALL BE IDENTIFIED BY NAMEPLATE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE 110-22.
32	ALL WIRING FOR THE EMERGENCY LIGHTING AND EMERGENCY SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 700.
33	THE WIRING METHODS AND MATERIALS INDICATED IN THE SPECIFICATIONS AND ON THE DRAWINGS SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 300.

GENERAL ELECTRICAL NOTES

#	DESCRIPTION
33	THE WIRING METHODS AND MATERIALS INDICATED IN THE SPECIFICATIONS AND ON THE DRAWINGS SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 300.
34	THE ELECTRICAL SERVICE AND DISTRIBUTION SYSTEM AS INDICATED ON THE RISER DIAGRAM AND MATERIALS INDICATED IN THE SPECIFICATIONS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE ARTICLE 230, SERVICES.
35	ALL OVER CURRENT PROTECTION SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE SECTION 240, OVERCURRENT PROTECTION.
36	ALL GROUNDING REQUIREMENTS OF THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM AND AS INDICATED IN THE SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ARTICLE 250, GROUNDING AND BONDING.
37	PRIOR TO ANY REQUIRED CUTTING AND PATCHING OF CONCRETE FLOOR AND/OR CUTTING OF ROOF, CONTRACTOR SHALL COORDINATE WITH BUILDING ENGINEER.
38	FOR ALL LIGHTING FIXTURES MOUNTED IN HUNG CEILING THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL INDIVIDUAL SUPPORT AT EACH CORNER OF RECESSED LIGHTING TROFFER CONNECTED TO BUILDING STEEL ABOVE ALL CONDUIT AND MC CABLE MOUNTED ABOVE HUNG CEILING SHALL BE INDIVIDUALLY SUPPORTED IN THE SAME FASHION AS PER NEC REQUIREMENTS.
39	DO NOT SCALE FROM THESE DRAWINGS.
40	PLANS ARE PREPARED WITH REQUIRED BRANCH CIRCUITS INDICATED BY CIRCUITS NUMBERS. PROVIDE AND INSTALL ALL CONDUITS. CONDUCTORS, BOXES, MISCELLANEOUS FITTINGS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM (HOME RUN SHOWN). BRANCH CIRCUIT INSTALLATION SHALL COMPLY WITH SPECIFICATIONS AND N.E.C.
41	ELECTRICAL RECEPTACLE, SWITCH AND CONTROL HEIGHTS (CBC-1136A.1.) RECEPTACLE HEIGHTS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES (1219MM) MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES (381MM) MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF FINISHED FLOOR OR WORKING FLATFORM. IF THE REACH IS OVEN AN OBSTRUCTION (FOR EXAMPLE, A KITCHEN BASE CABINET) BETWEEN 20 AND 25 INCHES (508 AND 635MM) IN DEPTH, THE MAXIMUM HEIGHT MEASURED AT THE BOX IS REDUCED TO 44 INCHES (1118MM) FOR FORWARD APPROACH, OR 46 INCHES (1168MM) FOR SIDE APPROACH, PROVIDED THE OBSTRUCTION IS NO MORE THAN 24 INCHES (610MM) IN DEPTH. OBSTRUCTION SHALL NOT EXCEED MORE THAN 25 INCHES (635MM) FROM THE WALL BENEATH THE RECEPTACLE.
42	SWITCH AND CONTROL HEIGHTS: (CBC 1136A.2.) CONTROL OR SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, ALARMS OR COOLING, HEATING AND VENTILATING EQUIPMENT SHALL BE LOCATED NO MORE THAN 48 INCHES (1219MM) MEASURED FROM THE TOP OF THE OUTLET BOX NOR LESS THAN 15 INCHES (381MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISHED FLOOR OR WORKING PLATFORM. IF THE REACH IS OVER A PHYSICAL BARRIER OR AN OBSTRUCTION (FOR EXAMPLE, A KITCHEN BASE CABINET) BETWEEN 20 AND 25 INCHES (508 AND 635MM) IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44 INCHES (1118MM) FOR FORWARD APPROACH, OR 46 INCHES (1168MM) FOR SIDE APPROACH, PROVIDED THE OBSTRUCTION IS NO MORE THAN 24 INCHES (610MM) IN DEPTH. PHYSICAL BARRIERS OR OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25 INCHES (635MM) FROM THE WALL BENEATH A CONTROL.

WIRE SCHEDULE AND NOTES

LOAD PER PH (KVA)	WIRE SIZE (AWG)	MAXIMUM LENGTH OF BRANCH CIRCUIT PER UTILIZATION VOLTAGE (120, 1PH, MAX V.D. 3%)	(240, 1PH, MAX V.D. 3%)	(240, 3PH, MAX V.D. 3%)	NOTES AND REMARKS
< 1.92	#12	56 FT	85 FT	98 FT	5
	#10	94 FT	141 FT	163 FT	5
	#8	144 FT	217 FT	250 FT	5
	#6	230 FT	345 FT	398 FT	5
< 1.44	#12	75 FT	113 FT	130 FT	5
	#10	125 FT	188 FT	217 FT	5
	#8	192 FT	289 FT	334 FT	5
	#6	306 FT	460 FT	531 FT	5
< 1.26	#12	86 FT	129 FT	149 FT	
	#10	143 FT	215 FT	248 FT	
	#8	220 FT	330 FT	381 FT	
< 1.08	#12	100 FT	150 FT	173 FT	
	#10	167 FT	250 FT	289 FT	
	#8	256 FT	385 FT	445 FT	
< 0.9	#12	120 FT	180 FT	240 FT	
	#10	200 FT	300 FT	347 FT	
<0.72	#12	150 FT	225 FT	260 FT	
	#10	250 FT	376 FT	434 FT	

#	NOTES
1	CONTRACTOR SHALL REFER TO THIS TABLE PRIOR TO START OF BRANCH CIRCUIT ROUGH-IN.
2	CONTRACTOR SHALL USE THE APPROPRIATE WIRE SIZE IN CONJUNCTION WITH THE LENGTH OF THE PROPOSED FIELD VERIFIED ROUTING OF BRANCH CIRCUIT WIRING (INCLUDING VERTICAL & LATERAL RUN, ROUTED PARALLEL/PERPENDICULAR TO THE BUILDING STRUCTURE).
3	SEE PANEL SCHEDULE FOR THE CORRESPONDING KVA LOAD PER PHASE OF A PARTICULAR BRANCH CIRCUIT.
4	RESISTANCE VALUES USED ARE FOR UNCOATED COPPER WIRES IN STEEL CONDUIT. 75 DEGREE C., OPERATING AT 60HZ.
5	THE VALUES IN "120V, 1PH" COLUMN IS TO BE USED FOR GENERAL PURPOSE RECEPTACLE LOADS.

ABBREVIATIONS AND TAGS

ABB.	DESCRIPTION	ABB.	DESCRIPTION
EWH	ELECTRIC WATER HEATER	SD	SMOKE DETECTOR
(E)	EXISTING TO REMAIN	TEL	TELEPHONE
EC	ELECTRICAL CONTRACTOR	TX	TRANSFORMER
ELV	ELECTRICAL VEHICLE CHARGER	TV	TELEVISION
FMT	FLEXIBLE METALLIC TUBING	UAC	UNDER ANOTHER CONTRACT
GC	GENERAL CONTRACTOR	UAS	UNDER ANOTHER SECTION
GFI	GROUND FAULT INTERUPTER	UON	UNLESS OTHERWISE NOTED
IG	ISOLATED GROUND	V.D.	VOLTAGE DROP
LL	LANDLORD	W	WIRE
LV	LOW VOLTAGE	WP	WEATHERPROOF
AC/1	MECHANICAL UNIT TAG. SEE MECHANICAL DRAWINGS FOR ADDITIONAL DESCRIPTION.	E-4/4	DETAIL TAG. REFER TO DETAIL 4 ON SHEET NUMBER E-4.

ELECTRICAL DRAWING SCHEDULE

#	TITLE
E1.0	ELECTRICAL LEGEND, NOTES, SCHEDULES & ABBREVIATIONS
E2.0	ELECTRICAL SPECIFICATIONS
E3.0	ELECTRICAL LIGHTING AND POWER PLAN

GENERAL NOTES

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
3. NEW MECHANICAL EQUIPMENT AND DUCTWORK ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
5. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
6. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF (INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS GOTTEN WET AT ANY TIME DURING CONSTRUCTION, DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST. AN INDEPENDENT, PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS, MINIMUM MERV-8, ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO THE OWNER.
7. INSTALL DUCTWORK PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
8. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
9. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
10. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
11. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.
12. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
13. LOCATE AND SET THERMOSTATS AND TEMPERATURE SENSORS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL THERMOSTATS WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS AND TEMPERATURE SENSORS AT 72" AFF, UNLESS NOTED OTHERWISE ON PLANS. INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 16.
14. PROVIDE A MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.
15. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.
16. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
17. RIGID DUCTWORK INSULATION: PROVIDE 3/4 LB DENSITY, 2" (R-6) THICK, INSULATION WRAP ON RIGID ROUND, CONCEALED, SUPPLY AND RETURN AIR DUCTS. PROVIDE 1-1/2" (R-6) THICK 1-1/2 LB DENSITY INTERNAL DUCT LINER ON RECTANGULAR SUPPLY AND RETURN AIR DUCTS. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS, INCREASE SHEET METAL SIZES ACCORDINGLY.
18. PROVIDE THERMAFLEX TYPE M-KE, FLEXMASTER TYPE 8, OR APPROVED EQUAL FLEXIBLE DUCTWORK. FLEXIBLE DUCTWORK SHALL BE LISTED UNDER UL 181 AS CLASS 1 AIR DUCT AND BE PROVIDED WITH INTEGRAL R-6, 3/4 LB DENSITY FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING.

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1	FOR CLIENT APPROVAL	DEC. 02. 2020
2	FOR CITY SUBMITTAL	
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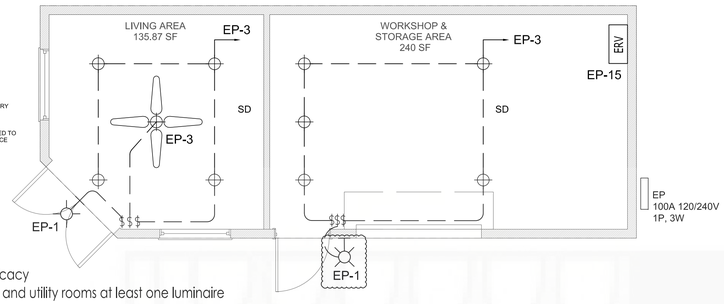
SYMBOLS

BATHROOM FAN (MAY INCLUDE LIGHT UNIT).

SD SMOKE DETECTOR - HARD WIRED TO ELECTRICAL SYSTEM W/BATTERY BACKUP PROVIDED IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE, SECTION R314.

CC COMBINATION SMOKE & CARBON MONOXIDE DETECTOR, HARD WIRED TO ELECTRICAL SYSTEM W/BATTERY BACKUP PROVIDED IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE, SECTION R315.

NOTE: OUTDOOR LIGHTING FIXTURES SHALL BE CONTROLLED BY A MOTION SENSOR W/ AN INTEGRAL PHOTOSENSOR, TYP. ALSO MANUALLY ON/OFF CONTROLLED



PLAN DESIGN NOTES

All installed luminaires shall be high-efficacy

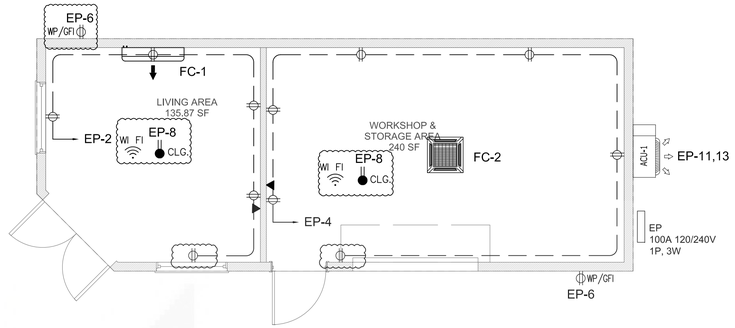
In bathrooms, garages, laundry rooms, and utility rooms at least one luminaire shall be controlled by a vacancy sensor.

Dimmers or vacancy sensors shall control all LED style luminaires. Two exceptions: Fixtures installed in hallways or (closets under 70 square feet).

Recessed Can Light High Efficiency fixtures shall be IC listed, air-tight labeled, and not be equipped with a standard medium base screw shell lamp holder.

Outdoor lighting fixtures that are attached to a building are required to be high efficacy, be manually on/off switch controlled and have both motion sensor and photocell control.

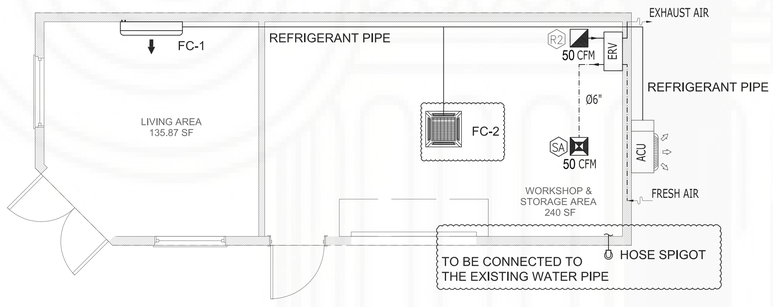
LIGHTING PLAN



Provide Tamper Resistant Receptacles for all locations in dwelling as described in NEC 210.52

Arc-Fault Protection for all outlets (not just receptacles) located in rooms described in NEC 210.12(A): Kitchens, Laundry areas, Family, Living, Bedrooms, Dining, Halls, etc.

POWER PLAN



CONTRACTOR VERIFICATION RESPONSIBILITIES:

CONTRACTOR SHALL REPORT ANY DISCREPANCIES, OMISSIONS OR INCONSISTENCIES ON THE DRAWINGS TO THE ENGINEER FOR VERIFICATION BEFORE STARTING CONSTRUCTION. OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR ANY ERRORS IN CONSTRUCTION WHERE SUCH DISCREPANCIES, OMISSIONS OR INCONSISTENCIES HAVE NOT BEEN PROPERLY REPORTED IN A TIMELY MANNER

MECHANICAL PLAN

OUTDOOR DUCTLESS UNIT SCHEDULE

NAME MARK	MANUFACTURER/ MODEL	COOLING CAP.(BTU/H)	HEATING CAP.(BTU/H)	S.P. W.C	MCA	BREAKER SIZE	VOLT/ PHASE / HZ
CONDENSING UNIT ACU	MITSUBISHI/ MXZ-2C20NAHZ	18,000	22,000	0.50	28.9	40	208/230 , 1-PH , 60

INDOOR DUCTLESS UNIT SCHEDULE

NAME MARK	MANUFACTURER/ MODEL	COOLING CAP.(BTU/H)	HEATING CAP.(BTU/H)	S.P. W.C	SEER	EER
FC-1	MITSUBISHI/ MSZGL06NA	6,000	7400	0.50	17	13.5
FC-2	MITSUBISHI/ SLZ-KF09NA	9,000	11000	0.50	22.4	13.4

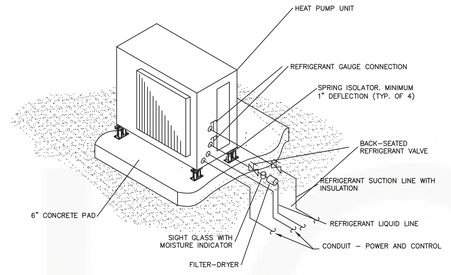
DIFFUSER SCHEDULE

SYMBOL	ADAPTOR/ NECK SIZE	FACE SIZE	MAX CFM	MAX TP	MAX NC	THROW
SA	6"Ø	12"X12"	118	0.041	_	4-WAY
R2	6"Ø	12"X12"	118	0.041	_	4-WAY

1. SA THRU SB ARE TITUS MODEL OMNI STEEL DIFFUSERS.
2. R1S TITUS MODEL OMNI STEEL DIFFUSERS.
3. ALL SUPPLY DIFFUSERS SHALL BE PROVIDED W/2" INSULATION BLANKET ON BACK OF DIFFUSER. ALL DIFFUSERS SHALL HAVE OPPOSED BLADE DAMPERS (OBD).
* RUNOUTS ARE DUCTS SERVING ONLY ONE SUPPLY DIFFUSER.

Energy Recovery Ventilator

TAG	MODEL	CFM	Power Consumption (Watts)	Power Rating (V/Hz)
ERV	PANASONIC FV-10VE2	100	81	120/60



HEAT PUMP MOUNTING DETAIL

MECHANICAL SCHEDULE

PixelArch ltd.
US Office:
4525 Carpinteria Ave # 636, Carpinteria CA 93014
Canada Office
3313 Pkhlebu Blvd. Coquitlam BC V3E 3B8
+1 805 881 7390 info@pixelarchltd.com
www.pixelarchltd.com

Project Name and Address:

WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 1-17-2021 11:58:30 AM

Scale:

DRAWING TITLE: **MECHANICAL AND ELECTRICAL PLAN**

Sheet :

Page No. : ME-2

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02, 2020
2	FOR CITY SUBMITTAL	
3		
4		

*	LOAD SUMMARY	CL	DF	CONNECTED LOAD A	CONNECTED LOAD B	DEMAND TOTAL
L	Lighting	0.24	1.25	0.24		0.30
R	Convenience Recept	2.34		1.08	1.26	2.34
H	Heating (Space)	0.90	1.25		0.90	1.13
C	Cooling	7.11	1.00	3.01	4.11	7.11
A	HVAC		1.00			
P	Process		1.00			
O	Other Continuous		1.25			
K	Kitchen		0.65			
N	Noncontinuous	0.60	1.00	0.60		0.60
			1.00			
	Total	**11.19**		4.93	6.27	11.48

Total Demand Load (KVA)	11.48
Total Demand Current (A)	47.82
Min. Feeder Ampacity (A)	59.77

PANEL EP	
SYSTEM VOLTAGE	240/120V, 1Φ, 3W
BUS SIZE	100A
SYSTEM TYPE	NORMAL
FEEDER PROT	100A - 3P C/B BUSPLUG
CONDUCTOR SIZE	2 AWG - #6G CU
CONDUCTOR/PHASE	1
MAINS	100A MCB
SCCR	SERIES RATED
MCB RATING	80%
GROUND FAULT	NO
FEEDER LENGTH (FT)	50
FEEDER V. DROP (%)	0.810
FAULT CURRENT	
KAIC RATING	22
ENCLOSURE	TYPE 3R

	DESCRIPTION	*	CB	KVA	A	B	KVA	CB	DESCRIPTION	*	
1	OUTDOOR LIGHT	L	20A-1P	0.15	0.87		0.72	20A-1P	OUTLET AT LIVING	R	2
3	LIGHT	C	20A-1P	0.60		1.50	0.90	20A-1P	OUTLET AT WORKSHOP	R	4
5	SMOKE DETECTOR	N	20A-1P	0.60	0.96		0.36	20A-1P	WP / GFCI OUTLET AT OUTDOOR	R	6
7	SPARE	H	20A-1P	0.90		1.26	0.36	20A-1P	CIELING OUTLET AT WORKSHOP	R	8
9	SPARE	L	20A-1P	0.09	0.09			20A-1P	SPARE		10
11	ACU	C	40A-2P	3.01		3.01		20A-1P	SPARE		12
13		C		3.01	3.01			20A-1P	SPARE		14
15	ERV	C	20A-1P	0.50		0.50		20A-1P	SPARE		16
17	SPARE		20A-1P					20A-1P	SPARE		18
19	SPARE		20A-1P					20A-1P	SPARE		20
21	SPARE		20A-1P					20A-1P	SPARE		22
23	SPARE		20A-1P					20A-1P	SPARE		24
			(KVA)								
			Total Connected Load		4.93	6.27					

Available Fault Current Calculation

Utility Fault Current 83,357 amperes kVA = 10.98
E = 240

$I = \frac{kVA \times 1000}{E}$ = trans. FLA trans. FLA = 46

$I_{sca} = \frac{trans.\ FLA \times 100 \times PF}{transformer\ Z}$ = PF = 95%
Z = 4.00%

I_{sca} = ampere short-circuit current RMS symmetrical. I_{sca} 1,204 amperes

Point to Point Method — Single Phase 240/120

'f' factor = $\frac{2 \times L \times I}{N \times C \times E_{L\text{-}N}}$

Length (distance) FEET L = 75 — Copper in Metal Raceway
(ASC) I_{sca} = 83,357
conductors per phase N = 1
Phase conductor constant C = 5,907 **Phase Conductor** 2
Volt Line to Line $E_{L\text{-}L}$ = **240** Volt
f = 8.820
Neutral conductor constant C = 5,907 **Neutral Conductor** 2
Multiplier — Volt Line to Neutral $E_{L\text{-}N}$ = **120** Volt
f = 26.459

$M = \frac{1}{1+f}$
Line to Line M = 0.102
Line to Neutral M = 0.036

I_{sca} x **M** = fault current at terminals of main disconnect **L-L** = → **8,489 amperes**
I_{sca} x **M** = fault current at terminals of main disconnect **L-N** = → **4,553 amperes**

Fault Current from Service Equipment to Panel EP — Copper in Metal Raceway — Single Phase

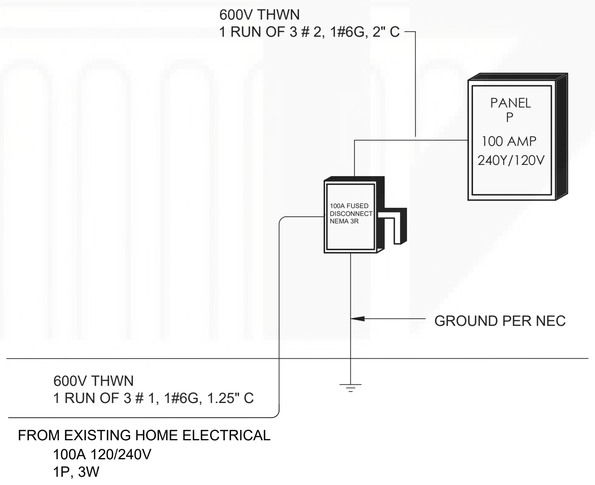
'f' factor = $\frac{2 \times L \times I}{N \times C \times E_{L\text{-}N}}$

Length (distance) L = 50
(ASC) I_{sca} = 8,489 Phase 4,553 Neutral
conductors per phase N = 1
Phase conductor constant C = 5,907 **Phase Conductor** 2
Volt Line to Line $E_{L\text{-}L}$ = **240** Volt
f = 0.599
Neutral conductor constant C = 5,907 **Neutral Conductor** 2
Multiplier — Volt Line to Neutral $E_{L\text{-}N}$ = **120** Volt
f = 0.642

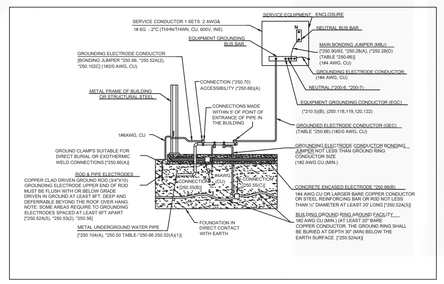
$M = \frac{1}{1+f}$
Line to Line M = 0.625
Line to Neutral M = 0.609

Isca x M = fault current at terminal of the panel L-L **5,309 amperes**
Isca x M = fault current at terminal of the panel L-N **2,772 amperes**

Calculation does not include motor contribution



UFER GROUND NOTE :
ALL STEEL REBARS MEASURING 1/2 " OR MORE IN DIAMETER AND 20 ' OR LONGER IN LENGTH THAT IS ENCASED IN NOT LESS THAN 2 INCHES OF CONCRETE SHALL BE BONDED TO THE BUILDING'S GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH CEC 250 (ELECTRICAL SUB CODE) SECTION 250.52(A)(3). THE "UFER" GROUND CAN BE 20 L.F. OF #3 OR #4 COPPER WIRING LAID INSIDE THE FOOTING AND THE SAME WIRE IS LONG ENOUGH TO REACH TO THE LOCATION OF THE MAIN ELECTRICAL PANEL OF THE HOUSE. UFER GROUND CAN BE (1) L-SHAPED PIECE OF #4 STEEL REBAR CONNECTED TO THE OTHER STEEL REBAR IN THE FOOTING AND STICKING OUT IN SUFFICIENT LENGTH FOR CONNECTION AT THE LOCATION OF THE MAIN ELECTRICAL PANEL OF THE HOUSE



DETAIL "G" OF GROUNDING ELECTRODE SYSTEM (*250.50) & GROUNDING ELECTRODES (*250.52) AS SERVICE
CALE: NTS

PixelArch ltd.
US Office:
4525 Carpinteria Ave # 636, Carpinteria CA 93014
Canada Office
3313 Plateau Blvd. Coquitlam BC V3E 3B8
+1 805 881 7390 info@pixelarchltd.com
www.pixelarchltd.com

Project Name and Address:

WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 1-17-2021 11:58:30 AM
Scale:

DRAWING TITLE: **SINGLE LINE DIAGRAM AND PANEL BOARD SCHEDULE**

Sheet :

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No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020
2	FOR CITY SUBMITTAL	
3		
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Intelli-Balance 100

Ventilation Fans

FV-10VE2 Intelli-Balance Temperate Climate 50-60-70-80-90-100 ERV

Architectural Specifications:

ERV shall be ceiling or wall mount type with built-in speed selectors for both Supply and Exhaust air. Select from 50/60/70/80/90/100 CFM. ERV shall have 100 Net CFM on the exhaust ports and 100 Net CFM on the supply ports as tested in accordance with HVI 915 and 916 standards at 0.1 static pressure in inches water gauge. ERV shall have 100 Net CFM on the exhaust ports and Net 100 CFM on the supply ports at 0.4" w.g. static pressure. ERV shall have Hi/Lo Speed Occupant Controlled Boost Capability. Power consumption shall be no greater than 81 watts at 0.1" w.g. and 100 watts at 0.4" w.g. static pressure. Apparent Sensible Effectiveness for heating shall be no less than 84% at 53 CFM net air flow under 32°F (0°C) as tested in accordance with CSA-C439. Total Recovery Efficiency for cooling shall be no less than 60% at 49 CFM net air flow under 95°F (35°C). The supply port damper shall close when outdoor temperatures are < 14°F (-10°C) to prevent freezing of the core. The (2) motors shall be totally enclosed DC brushless motors rated for continuous run. DC motor speed shall automatically increase when the fan senses static pressure to maintain selected CFM. ERV shall incorporate an ASHRAE 62.2 Intermittent Timing function for code compliance. ERV shall have standby/low speed to high speed control airflow capability as desired by occupant. Power rating shall be 120v/60Hz. Duct diameters shall be no less than 4". ERV can be used to comply with ASHRAE 62.2, LEED, IAP, California Title-24, and WA Energy Code

Intelli-Balance 100 **Energy Recovery Ventilator**

FV-10VE2
Temperate Climate ERV

Specification Submittal Data / Panasonic ERV

Description

Ceiling or wall mount Cold Climate Energy Recovery Ventilator (ERV) provides a tempered air supply, humidity control, and a balanced amount of exhaust to help maintain balanced, positive or negative pressure throughout the home. The Panasonic Intelli-Balance ERV is engineered for use in any North America climate zone. Version 2 includes new Hi/Lo Occupant Controlled Boost Capability. Built-in ASHRAE 62.2 Timing function helps ensure code compliance.

Motor/Blower:

- ERV shall have Hi/Lo Speed Occupant Controlled Boost Capability
- Two (2) enclosed DC brushless motors rated for continuous run.
- ERV Supply and Exhaust ventilation rates shall be manually adjustable for 50-60-70-80-90-100 CFM.
- Power rating shall be 120 volts and 60 Hz.
- Motor equipped with thermal cut-off fuse control.
- Removable, permanently lubricated, plug-in motor.

Housing:

- 22 gauge galvanized steel body.
- Four 4" or 6" intake and exhaust ducts.
- Built in damper on Outdoor Air (OA) closes during defrost function when the outdoor temperature is too cold.
- Filters on supply and exhaust air extend the life of the ERV core.
- (4) Pressure ports allow for easy airflow verification.
- Pre-drilled mounting bracket can accommodate 16", 19", or 24" on center.

Maintenance:

- MERV 8 filter included; MERV 8 (FV-FL0810VE1) and optional MERV 13 (FV-FL1310VE1) replacements available.
- Unobtrusive alarm notifies owner for filter check and maintenance.

Warranty:

- DC Motors: 6 years from original purchase date
- All Parts: 3 Years from original purchase date.

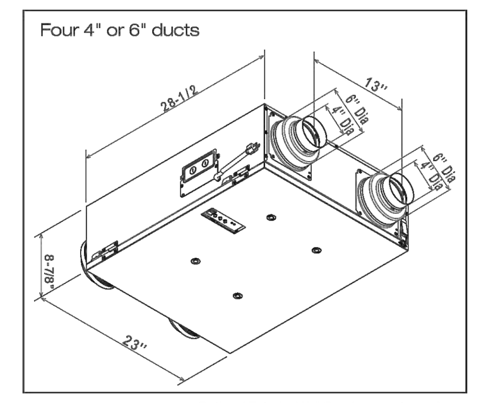
Architectural Specifications:

ERV shall be ceiling or wall mount type with built-in speed selectors for both Supply and Exhaust air. Select from 50/60/70/80/90/100 CFM. ERV shall have 100 Net CFM on the exhaust ports and 100 Net CFM on the supply ports as tested in accordance with HVI 915 and 916 standards at 0.1 static pressure in inches water gauge. ERV shall have 100 Net CFM on the exhaust ports and Net 100 CFM on the supply ports at 0.4" w.g. static pressure. ERV shall have Hi/Lo Speed Occupant Controlled Boost Capability. Power consumption shall be no greater than 81 watts at 0.1" w.g. and 100 watts at 0.4" w.g. static pressure. Apparent Sensible Effectiveness for heating shall be no less than 84% at 53 CFM net air flow under 32°F (0°C) as tested in accordance with CSA-C439. Total Recovery Efficiency for cooling shall be no less than 60% at 49 CFM net air flow under 95°F (35°C). The supply port damper shall close when outdoor temperatures are < 14°F (-10°C) to prevent freezing of the core. The (2) motors shall be totally enclosed DC brushless motors rated for continuous run. DC motor speed shall automatically increase when the fan senses static pressure to maintain selected CFM. ERV shall incorporate an ASHRAE 62.2 Intermittent Timing function for code compliance. ERV shall have standby/low speed to high speed control airflow capability as desired by occupant. Power rating shall be 120v/60Hz. Duct diameters shall be no less than 4". ERV can be used to comply with ASHRAE 62.2, LEED, IAP, California Title-24, and WA Energy Code

ERV Core Technology:

- Indoor and outdoor air passes through Panasonic's capillary core technology. This process tempers supply air while transferring moisture and energy.
- Built in Frost Prevention Mode prevents the core from freezing. Frost Prevention Mode is intuitive and operates without homeowner intervention.
- Core material permeated with anti-mold treatment.

Four 4" or 6" ducts



FV-10VE2 Optional Exterior Wall Cap (see next page)

DC Motor Technology
When the ERV senses static pressure, its speed is automatically increased to ensure that the desired CFM is not compromised.

For complete Installation Instructions visit **us.panasonic.com/ventfans**

Model	Quantity	Comments	Project:
			Location:
			Architect:
			Engineer:
			Contractor:
			Submitted by:
			Date:

Panasonic Life Solutions Company of America
IAQ Division
Two Riverfront Plaza
Newark, NJ 07102
us.panasonic.com/ventfans

IAQ19203ST
r7

Panasonic

Intelli-Balance 100 **Energy Recovery Ventilator**

FV-10VE2
Temperate Climate ERV

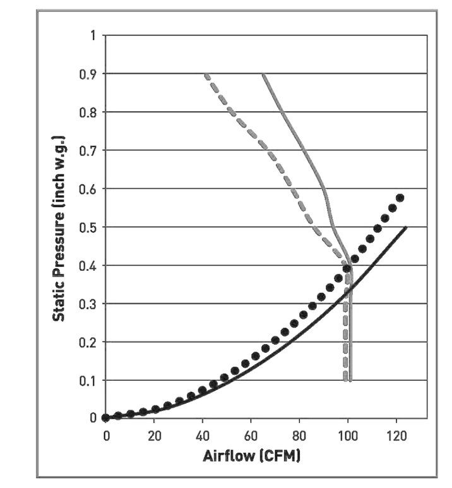
Specification Submittal Data / Panasonic ERV

(Continued)

Specifications: **Intelli-Balance 100** FV-10VE2		
Static Pressure in inches w. g.	0.1	0.4
Net Exhaust Air Volume (CFM)	100	100
Net Supply Air Volume (CFM)	100	100
Power Consumption (watts)	81	100
Power Rating (V/Hz)	120/60	
ENERGY STAR® Certified	Yes	

Energy Performance: **Intelli-Balance 100** FV-10VE2							
Supply Temperature °C	Supply Temperature °F	Net Air Flow L/S	Net Air Flow CFM	Power Consumed (Watts)	Sensible Recovery Efficiency	Apparent Sensible Effectiveness	Net Moisture Transfer
Heating							
0	32	25	53	29	81	84	81
0	32	31	66	39	77	81	75
0	32	40	85	68	75	80	74
Cooling					Total Recovery Efficiency		
35	95	23	49	32	60		

Performance Curve 4" or 6" duct



Panasonic Life Solutions Company of America
IAQ Division
Two Riverfront Plaza
Newark, NJ 07102
us.panasonic.com/ventfans

IAQ19203ST
r7

Panasonic

1STOPLIGHTING
The 1 Stop Shop for All Your Lighting Needs

CF712 - Pro Series - 50 Inch 5 Blade Ceiling Fan with Light Kit by Emerson Fans

Specs	
Family/Collection:	Pro Series
Blade Finish Shown:	Appliance White/Bleached Oak
Number of Blades:	5
Blade Pitch:	12°
Length:	18.5"
Width/Diameter (in):	50"
Height:	14.8"
Depth/Extension:	50"
Blade to Ceiling Height:	11.5"
Overall Length:	18.5"
Weight:	19 lbs.
Installation Sheet:	http://images.1stoplighting.com/supplier/Emerson-Fans/specsheets/CF712-Inst.pdf
# of Bulbs:	3
Standard Wattage:	9W
Bulb Type:	Medium Base LED
Motor Size:	153mm
Airflow (at high speed):	3683CFM
Electricity Use (at high speed - excludes lights):	64Watts
Airflow Efficiency (at high speed):	57CFM/Watt
EnergyGuide Label:	Emerson-Fans/energyguide/CF712.jpg
Downrod Included:	TRUE
Bulbs Included:	Yes
Blades Included:	Yes
Control Included:	Pull Chain
Fan Light Kit:	Included

Style and Option 1	
Style:	Antique Brass Finish with Walnut/Medium Oak Blade Finish with Opal Matte Glass
Item #:	CF712AB
Price:	$99.00

Style and Option 2	
Style:	Brushed Steel Finish with Dark Cherry/Mahogany Blade Finish with Opal Matte Glass
Item #:	CF712BS
Price:	$109.00

Style and Option 3	
Style:	Oil Rubbed Bronze Finish with Dark Cherry/Medium Oak Blade Finish with Opal Matte Glass
Item #:	CF712WORB
Price:	$109.00

Style and Option 4	
Style:	Appliance White Finish with Appliance White/Bleached Oak Blade Finish with Opal Matte Glass
Item #:	CF712WW
Price:	$99.00

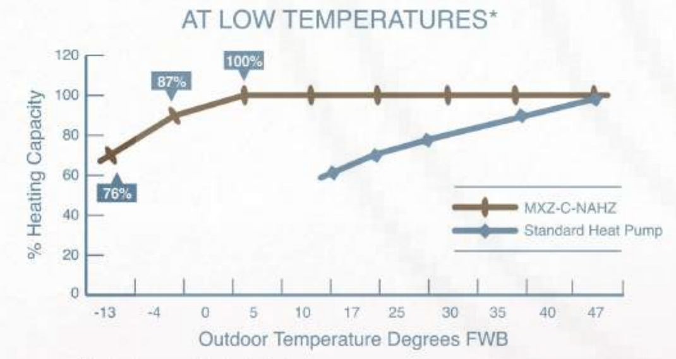
LED

HEAT, AND LOTS OF IT

Mitsubishi Electric systems feature the most advanced technology for delivering exceptional heat pump performance.

H2i® TECHNOLOGY

MXZ H2i HEATING CAPACITY AT LOW TEMPERATURES*



* Includes correction for defrost.

HEATING even when it's minus 13 degrees F outdoor ambient, producing up to 100% heating capacity at 5 degrees F.

YEAR-ROUND COMFORT in extreme climates without the need for energy-consuming indoor supplemental heating devices.

HOT-START TECHNOLOGY provides warmth from the start, reducing drafts.

MINIMAL MAINTENANCE thanks to easily accessible filters, little or no ductwork to clean, and simple wiring between the indoor and outdoor units.

MULTI-ZONE OUTDOOR UNIT (Hyper-heating Equipment)	Branch Box	MSZ-FH	MSZ-GE	MFZ-KA	MVZ	SEZ-KD	SLZ	PCA	PLA	PEAD
MXZ-2C20NAHZ	–	9, 12, 15 ✓ 18 ×	6, 9, 12, 15 ✓ 18, 24 ×	9, 12 ✓ 18 ×	12 ✓	9, 12, 15 ✓ 18 ×	✓	×	×	×
MXZ-3C24NAHZ	–	✓	6, 9, 12, 15, 18 ✓ 24 ×	✓	12, 18 ✓ 24, 30, 36 ×	✓	✓	×	18 ✓ 12, 24 ×	×
MXZ-3C30NAHZ	–	✓	✓	✓	12, 18, 24 ✓ 30, 36 ×	✓	✓	24 ✓	18, 24 ✓ 12 ×	24 ✓
MXZ-4C36NAHZ	✓	✓	✓	✓	✓	✓	✓	×	12, 18, 24, 30, 36 ✓	24, 30, 36 ✓
MXZ-5C42NAHZ	✓	✓	✓	✓	✓	✓	✓	×	12, 18, 24, 30, 36 ✓	24, 30, 36 ✓
MXZ-8C48NAHZ	✓	✓	✓	✓	✓	✓	✓	×	12, 18, 24, 30, 36 ✓	24, 30, 36 ✓

✓ COMPATIBLE × NOT COMPATIBLE

Indoor Units

MSZ-FH09, 12, 15NA
New sleek design offers many new features including new multi-functional wireless remote controller.

- Triple-action filtration including anti-allergen enzyme filter.
- Double-vane air delivery for enhanced circulation.
- i-see Sensor™ 3D senses human heat signatures.

MFZ-KA09, 12, 18NA
Floor-mounted indoor units are perfect for difficult areas that may be smaller or don't have usable wall space.

- Top and bottom discharge vanes.
- Wireless remote control with smart set feature.
- Front panel filter access for ease of cleaning.

SLZ-KA09, 12, 15NA
Ceiling-recessed indoor units offer a wide airflow pattern for better air distribution in a less obtrusive style.

- Ventilation air knockouts available.
- Offers a 2, 3, or 4 way airflow pattern.
- Built-in condensate lift mechanism (up to 20").

MSZ-GE09, 12, 15, 18, 24NA
Slim, wall-mounted units provide individual room control in a variety of applications.

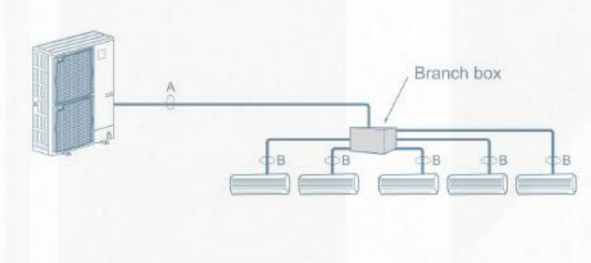
- Offers wide angle of airflow, 150 degrees from left to right.
- Quiet operation as low as 19 dB(A).
- Provides cooling and heating in a wide range of capacities.

SEZ-KD09, 12, 15, 18NA
Horizontal-ducted indoor units provide comfort and efficiency while staying hidden in ceiling or beneath the floor.

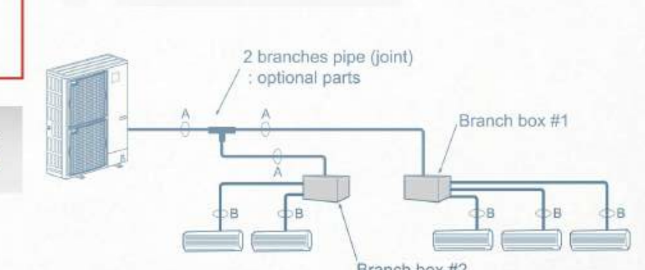
- Build-in condensate lift mechanism (up to 22").
- Static capability up to 0.20" WG.
- Optional filter box with MERV-8 filters.

BRANCH BOX CONNECTIONS

When Using One Branch Box
Flare Connection - Max. 5 indoor units



When Using Two Branch Boxes
- Max. 8 indoor units



MXZ H2i Outdoor Units | Heat Pump

Model Name			MXZ-2C20NAHZ	MXZ-3C24NAHZ	MXZ-3C30NAHZ	MXZ-4C36NAHZ
Cooling * Non-Ducted/ Ducted	Rated Capacity	Btu/h	18,000 / 20,000	22,000 / 23,600	28,400 / 27,400	36,000 / 36,000
	Capacity Range	Btu/h	6,000- 20,000	6,000- 23,600	6,000- 28,400	6,000- 36,000
	Rated Total Input	W	1,334 / 1,819	1,630 / 2,360	2,272 / 2,661	2,570 / 3,180
Heating at 47F* (Non-Ducted/ Ducted)	Rated Capacity	Btu/h	22,000 / 22,000	25,000 / 24,600	28,600 / 27,600	45,000 / 45,000
	Capacity Range	Btu/h	7,400- 25,500	7,200- 30,600	7,200- 36,000	7,200- 45,000
	Rated Total Input	W	1,612 / 1,748	1,725 / 1,871	2,096 / 2,187	3,340 / 4,250
Heating at 17F* (Non-Ducted/ Ducted)	Rated Capacity	Btu/h	13,700 / 13,700	14,000 / 14,000	18,000 / 16,500	34,000 / 36,000
	Maximum Capacity	Btu/h	22,000 / 22,000	25,000 / 24,600	28,600 / 27,600	45,000 / 45,000
	Rated Total Input	W	1,450 / 1,588	1,622 / 1,635	1,991 / 1,993	3,500 / 4,590
Heating at 5F*	Maximum Capacity	Btu/h	22,000	25,000	28,600	45,000
Efficiency	SEER (Non-Ducted/Ducted)		17.0 / 15.0	19.0 / 15.5	18.0 / 16.0	19.1 / 15.8
	EER (Non-Ducted/Ducted)		13.5 / 11.0	13.5 / 10.0	12.5 / 10.3	14.0 / 11.3
	HSPF (Non-Ducted/Ducted)		9.8 / 9.5	10.0 / 9.0	11.0 / 9.8	11.3 / 10.1
Electrical Requirements	Power Supply	V, Ph, Hz	208 / 230V,1-Phase, 60 Hz			
	Recommended Fuse/Breaker Size	A	40	40	40	50
	MCA	A	29	30	30	42
Voltage	Indoor - Outdoor S1-S2	V	AC 208 / 230			
	Indoor - Outdoor S2-S3	V	DC ± 24			
Compressor			DC INVERTER - driven Twin Rotary			
Fan Motor (ECM)		FLA	1.9	1.9	1.9	0.4 + 0.4
Sound Pressure Level	Cooling	dB(A)	54	54	54	49
	Heating		58	58	58	53
External Dimensions (H x W x D)		In / mm	41-9/32 x 37-13/32 x 13			52-11/16 x 41-11/32 x 13(+1)
Net Weight		Lbs / kg	187 / 85	189 / 86	189 / 86	276 / 125
External Finish			Munsell No. 3Y 7.8/11			
Refrigerant Pipe Size O.D.	Liquid (High Pressure)	In / mm	1/4 / 6.35			3/8 / 9.52
	Gas (Low Pressure)	In / mm	A,B: 3/8 / 9.52	A: 1/2 / 12.7; B,C: 3/8 / 9.52		5/8 / 15.88
Max. Piping Length for Each Indoor Unit		Ft / m	164 / 50	230 / 70		492 / 150
Max. Refrigerant line Length			82 / 25	82 / 25		262 / 80
Max. Refrigerant Pipe Height Difference	If IDU is Above ODU	Ft / m	49 / 15	49 / 15		164 / 50
	If IDU is Below ODU	Ft / m	49 / 15	49 / 15		131 / 40
Connection Method			Flared / Flared			
Refrigerant			R410A			

Specifications are subject to change without notice.

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DRAWING TITLE: **MECHANICAL CATALOGUE**

Sheet :

Page No. : ME-3

No.	Revision/Issue	Date
1	FOR CLIENT APPROVAL	DEC. 02. 2020
2	FOR CITY SUBMITTAL	
3		
4		

GENERAL NOTES

DESIGN DATA:
APPLICABLE DESIGN LOADS: PER ASCI/SEI 7-16

FLOOR LIVE LOAD: 40 PSF — FLOOR DEAD LOAD: 15PSF
ROOF LIVE LOAD: 20 PSF — ROOF DEAD LOAD: 15PSF
BASIC WIND SPEED: 96 MPH — EXPOSURE: D
STRUCTURAL CATEGORY: II — SEISMIC DESIGN CATEGORY = D

ALL PRESSURES SHOWN ARE BASED ON ASD DESIGN,

SHEAR WALL SCHEDULE

SHEAR WALL SCHEDULE 2019 C.B.C.

S.W. TYPE	SHEAR PANEL DESCRIPTION	ALLOWABLE SHEAR (PLF)	SILL BOLT'G @ FOUNDATION	TOP PL. TO BLK'G.	SILL NAILING UPPER STORIES
1	7/8" STUCCO OVER PAPER BACKED LATH W/ 16 GA STAPLES AT 6" O.C. AT TOP & BOTTOM PLATES, EDGE OF SHEAR WALL AND ON FIELD (CBC TABLE 2306.4.5) SEE NOTE 3 BELOW.	180 *180	5/8" @ 48" O.C. 5/8" @ 24" O.C.	A35 @ 16" A35 @ 16"	16d @ 8" O.C. 16d @ 4" O.C.
2	15/32" APA RATED PLYWOOD SHT'G. STRUCT I WITH 8d COMMON NAILS @ 6" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1 CBC) SEE NOTES 1,2,8,9, AND 10 BELOW.	280 *560	5/8" @ 32" O.C. 5/8" @ 16" O.C.	A35 @ 16" A35 @ 8"	16d @ 6" O.C. 16d @ 3" O.C.
3	15/32" APA RATED PLYWOOD SHT'G. STRUCT I WITH 8d COMMON NAILES @ 4" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1. CBC) SEE NOTES 1,2,4,5,8,9, AND 10 BELOW.	430 *860	5/8" @ 24" O.C. 5/8" @ 14" O.C.	A35 @ 8" LTP4 @ 6"	16d @ 4" O.C. 16d @ 2" O.C.
4	15/32" APA RATED PLYWOOD SHT'G STRUCT I WITH 8d COMMON NAILS @ 3" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1. CBC) SEE NOTES 1,2,4,5,8,9, AND 10 BELOW.	550 *1100	5/8" @ 20" O.C. 3/4" @ 16" O.C.	A35 @ 8" LTP4 @ 6"	16d @ 3" O.C. 1/4"Ø X 3-1/2" LAG SC. @ 2" O.C.
5	15/32" APA RATED PLYWOOD SHT'G. STRUCT I WITH 8d COMMON NAILS @ 2" O.C. AT EDGES & 12" O.C. FIELD (TABLE 2306.4.1. CBC) SEE NOTES 1,2,4,5,8,9, AND 10 BELOW.	730 *1460	5/8" @ 16" O.C. 3/4" @ 16" O.C.	A35 @ 8" LTP4 @ 6"	16d @ 2-1/2" O.C. 1/4" Ø X 3-1/2" LAG SC. @ 2" O.C.
6	15/32" APA RATED STRUCT. I SHT'G. WITH 10d COMMON NAILS @ 2" O.C. AT EDGES & 12" O.C. FIELD OVER 3 X STUDS (TABLE 2306.4.1 CBC) SEE NOTES 1,4,5,8,9, AND 10 BELOW.	870 *1740	3/4" @ 16" O.C. 3/4" @ 8" O.C.	A35 @ 6" LTP4 @ 4-1/2"	#12 X 3-1/2" WD. SC. @ 2" O.C. 1/4" Ø X 3-1/2" LAG SC. @ 1-1/2" O.C.

NOTES:

1. ALL EDGES OF PLYWOOD SHEAR WALLS MUST BE BLOCKED WITH 2X SOLID BLOCKING.
2. DESIGNATES SILL BOLTING OR NAILING WHERE SHEAR WALL PANELS ARE TO BE APPLIED TO BOTH SIDES OF WALL.
3. PAPER BACKED SELF-FURRING EXPANDED METAL OR WOVEN WIRE LATH AND PORTLAND CEMENT PLASTER.
4. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3-INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED. (USE 3X SILL PLATE @ FOUND., FOR SHEAR LOADS LESS THAN 350 PLF 2X SILL PLATE MAY BE USED.)
5. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAILS SPACING IS LESS THAN 6" O.C. ON EITHER SIDE. PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3" NOMINAL OR THICKER & NAILS ON EACH SIDE SHALL BE STAGGERED. (USE 3 X SILL PLATE @ FOUND.)
6. ALL CONTINUOUS EXTERIOR AND INTERIOR SHEAR/BEARING WALL FOOTINGS TO HAVE 5/8"Ø A.B.'S @ 48" O.C. WITH 3" X 3" X 1/4" PLATE WASHERS U.N.O. MINIMUM OF TWO BOLTS PER EACH PIECE OF SILL PLATE AT 4" TO 12" CLEARANCE TO THE END AND 7" MINIMUM EMBEDMENT.(FOR TWO POUR SYSTEM,BOLTS SHALL BE EMBEDDED 4 INCH MIN. INTO FIRST POUR.)

(SEE NOTE 12 FOR A.B. LENGTH.)

7. ALL INTERIOR NON-BEARING FTGS TO HAVE 3/16" Ø SHOT PINS AT 32" O.C., I.E., HILTI SHOT PINS (ICC ESR-1663).
8. USE APA RATED PLYWOOD SHEATHING. OR O.S.B. PANEL. ALL PLYWOOD SHALL BE DOUGLAS FIR. 4-PLY MIN. OTHER SPECIES MAY REQUIRE CHANGES.
9. USE 3 X 3 X 1/4 PLATE WASHERS WITH 5/8"Ø A.B. AT ALL SHEAR WALLS. USE 3 X 3 X 5/16 PLATE WASHERS WITH 3/4"Ø A.B. AT ALL SHEAR WALLS.
10. AT EXISTING FOOTINGS, USE THREADED RODS W/ SIMPSON "SET-XP" EPOXY 7" MIN. EMB. W/MIN. EDGE DIST. OF 1-7/8" (ICC ESR-2508) (SPECIAL INSPECTION REQ'D.)
11. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A-307 U.N.O.

12. ANCHOR BOLT SPEC.:

	BOLT LENGTH	
	SINGLE POUR	DOUBLE POUR
2X SILL	12"	16"
3X SILL	14"	18"

GENERAL NOTES:

1. CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ABIDING TO ALL APPLICABLE CALIFIORNIA BUILDING CODES, LOCAL CITY ORDINANCES, ZONING REQUIREMENTS, AND LICENSING/PERMIT REQUIREMENTS. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES INCLUDING WITHOUT LIMITATION TO DEMOLITION, EXCAVATION AND ERECTION PROCEDURES.
2. THE CONTRACTOR SHALL EXAMINE THE CONSTRICTION DOCUMENTS AND NOTIFY THE PROJECT ENGINEER & ARCHITECT OF ANY DISCREPANCIES, ERRORS, OR OMISSIONS SHE/HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
3. NOTIFY THE PROJECT ENGINEER OF ANY DESIGN CHANGES PROPOSED BY OWNER OR THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION. SUCH CHANGES AFFECTING ROOM ADDITION DESIGN MAY ALSO AFFECT STRUCTURAL DESIGN.
4. ANY SUBCONTRACTOR WHICH AGREES TO CONSTRUCT THE PROJECT PURSUANT TO THESE PLANS FULLY ASSUMES THE RISK OF ALL ERRORS AND OMISSIONS WHICH SHOULD HAVE BEEN DETECTED BY A CAREFUL REVIEW BY A KNOWLEDGEABLE LICENSED CONTRACTOR, THAT WHICH FOR ANY REASON WERE NOT RESOLVED DURING THE BIDDING OR NEGOTIATION PROCESS. FURTHER, THE CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AS THE WORK PROGRESSES IN ORDER TO IDENTIFY ANY SIGNIFICANT ERRORS AND OMISSIONS AND TO ASCERTAIN ALL NECESSARY INFORMATION BEFORE PROCEEDING WITH THE AFFECTED WORK, AND ASSUMES THE RISK OF ANY AND ALL LOSS, INCLUDING DELAY, WHICH MAY BE CAUSED OR CONTRIBUTED TO BY THE FAILURE TO ASCERTAIN CORRECT OR NECESSARY INFORMATION IN A TIMELY MANNER.
5. ALL TRADES SHALL, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR WORK, AND AT THE COMPLETION OF THE WORK SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE JOBSITE AND ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS, AND SHALL LEAVE THE JOB BROOM CLEAN, INCLUDING REMOVING ALL LABELS, STICKERS, PAINT SMEARS, ETC.., FROM LIGHTING FIXTURES, PLUMBING FIXTURES, GLASS SURFACES, FINISH HARDWARE, CABINETS, COUNTER TOPS, ETC.
6. EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED OR SHOWN ON THE PLANS, WORKMANSHIP & MATERIALS SHALL CONFORM, TO THE LATEST EDITION OF THE C.B.C. OR LOCAL CODE.
7. THE PLANS SHALL BE REVIEWED FOR DIMENSIONAL & EXISTING SITE CONFORMANCE WITH THE PLANS BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE ARCHITECT & ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
8. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD; AND ALL QUESTIONS AS TO DIMENSIONS AND FIELD CONDITIONS SHALL BE RESOLVED BEFORE THE AFFECTED WORK PROCEEDS. NO DIMENSIONS SHALL BE OBTAINED BY SCALING THESE PLANS.
9. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR DIMENSIONS AND CONDITIONS OF THE JOB.
10. THE PRECISE DIMENSIONS AND LOCATIONS OF ALL DOOR, WINDOW AND ROOF OPENINGS SHALL BE DETERMINED FROM DRAWINGS AND OTHER FLOOR, WALL OPENING REQUIRED BY MECHANICAL OR ELECTRICAL SHALL BE VERIFIED FROM SHOP DRAWINGS, EQUIPMENT DATA SHEETS, ETC. AS REQUIRED.
11. ITEMS IDENTIFIED BY TRADE NAMES MAY BE SUBSTITUTED BY APPROVED EQUALS.
12. NOTES & DETAILS ON DRAWINGS SHALL PRECEDE THESE GENERAL NOTES.
13. PROVIDE ANY SHORING & OR BRACING PRIOR TO REMOVING EXISTING WALLS, BEAMS, OR SUPPORTS FOR CONSTRUCTION. REMOVE SHORING ONLY WHEN NEW SUPPORTS ARE IN PLACE AND SECURED.
14. PROVIDE RED HEADS INTO EXISTING CONCRETE AT ALL SHEAR WALLS PER MFG. SPECIFICATIONS. SEE SHEAR WALL SCHEDULE FOR SIZE AND SPACING.
15. PROVIDE SIMPSON ST-6224 BETWEEN NEW WALLS AND EXISTING WALLS AT THE DOUBLE TOP PLATE.
16. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON DRAWINGS AND PROTECT THEM FROM DAMAGE
17. DO NOT CUT POST TENSION SLABS. CONTRACTOR TO DETERMINE EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
18. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS FOR FOOTING, BEAMS AND JOISTS, SIZES, LOCATIONS, ETC., AND SHALL NOTIFY THE ARCHITECT & ENGINEER OF ANY DISCREPANCIES.
19. DOWEL NEW INTO EXISTING SLABS W/ #4 REBAR @ 24" O.C. AND FOOTINGS W/ DOWELS TO MATCH NEW REINF. SIZE/ LOCATION.

ENGINEERING NOTES

1. CONCRETE SLABS ON GRADE HAVE NOT BEEN DESIGNED BY THE STRUCTURAL ENGINEER.
2. THE VIBRATIONAL EFFECTS OF MECHANICAL EQUIPMENT HAVE NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER.
3. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION, BRACING SHORING, TEMPORARY SUPPORTS ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING THE ENTIRE COURSE OF CONSTRUCTION. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR FIELD INSPECTION/OBSERVATION OF THE ABOVE ITEMS.
4. ALLOWABLE SOILS PRESSURE TO BE A MINIMUM OF 1500 PSF UNLESS A SOILS REPORT IS PROVIDED. SOILS IN THE BUILDING AREA & 5 FEET BEYOND SHALL BE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION PER 2019-C.B.C.

REFER TO SOIL REPORT BY: ____________

JOB NUMBER: ____________ DATED:

STRUCTURAL SYMBOLS

△ INDICATES SHEAR WALL. SEE FOUNDATION, FRAMING PLAN AND SHEAR WALL SCHEDULE FOR TYPE, SILL BOLTING, SHTG., ETC. NOTE: FOR SILL BOLTING AT EXISTING FOOTINGS, USE 5/8" Ø THREADED RODS W/ SIMPSON "SET-XP" EPOXY 7" MIN. EMB. PER ICC ESR-2508 THE SAME SIZE & SPACING AS CALLED FOR ON PLANS

☒ INDICATES POST (BELOW BEAM)

MIN. POST SIZE/TYPE AS FOLLOWS U.N.O.:

BEAM SIZE	POST SIZE
4 X 12 & SMALLER	2-2X4 W/16d NAILS @ 12" O.C.
4 X 14 & LARGER	4X4
6 X 10 & SMALLER	4X6
6 X 12 & LARGER	6X6 SEE HOLDDOWN DETAILS AND TYPICAL WALL

FRAMING FOR FURTHER POST SIZE REQUIREMENTS. POSTS ARE TO CONTINUE DOWN TO FOUNDATION.

FOUNDATION NOTES

GENERAL

1. SOIL BENEATH FOOTINGS AND SLABS SHALL BE COMPACTED PER 2019 C.B.C. (90%) RELATIVE COMPACTION MINIMUM.
2. CONTINUOUS FOOTINGS AND GRADE BEAMS SHALL BE EXCAVATED TO THE DEPTH SHOWN ON THE DRAWINGS BELOW UNDISTURBED SOIL OR COMPACTED EARTH. PROVIDE 1-#4 HORIZONTAL BARS ON TOP AND BOTTOM U.N.O. ON FOUND. PLAN.
3. ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED TO BE 1500. PSF IF NO SOILS REPORT IS PROVIDED.
4. SLAB ON GRADE: 4 INCH. NET CONCRETE SLAB WITH #3 BARS @ 18" O.C. EACH @ CENTER OF SLAB OVER 2 INCH. OF SAND OVER 6 MIL. VISQUEEN OVER 2" SAND BED OVER COMPACTED SOIL. U.N.O.
5. NO TRENCHES OR EXCAVATIONS FIVE FEET IN DEPTH OR GREATER INTO WHICH A PERSON SHALL BE REQUIRED TO DESCEND SHALL BE MADE WITHOUT PROPER PERMIT.
6. THE MINIMUM BOLTING FOR SILL PLATES TO FOUNDATION SHALL BE AS FOLLOWS: 5/8" DIAMETER ANCHOR BOLTS WITH 7" MIN EMBEDMENT IN CONCRETE WITH SPACING NO GREATER THAN 4 FEET O.C. NOR FURTHER THAN 12" FROM CORNERS (MIN 2 BOLTS PER PIECE). SEE THE FOUNDATION PLAN & SHEAR WALL SCHEDULE FOR FURTHER BOLTING REQUIREMENTS.(FOR TWO POUR SYSTEMS,BOLTS SHALL BE EMBEDDED 4 INCH MIN. INTO FIRST POUR.)
7. PIPES OR DUCTS THAT EXCEED ONE THIRD THE SLAB OR CONC. WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONC. UNLESS SPECIFICALLY DETAILED. SEE MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES, ETC.
8. PIPES MAY PASS THRU STRUCTURAL CONC. IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN.
9. PROVIDE 3/4" CAMBERS AT ALL EXPOSED CORNERS.
10. SEE ARCHITECTURAL PLANS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE CAST IN CONCRETE, AND FOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.
11. LOCATION OF POUR JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.

CONCRETE

1. UNLESS OTHERWISE NOTED ON PLANS, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS.
2. FINE & COURSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, USE 3000 P.S.I. CONC. @ GRADE BEAMS. CEMENT SHALL CONFORM TO A.S.T.M. C-150 (STANDARD BRAND PORTLAND CEMENT) TYPE II (USE TYPE V CEMENT IF NOTED IN SOILS REPORT)
3. CONCRETE SHALL BE MACHINE-MIXED USING A MAXIMUM OF '7' GALLONS OF WATER PER SACK OF CEMENT. READY MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94 MIXED AT A RATE OF 5 SACKS OF CEMENT PER CUBIC YARD. MAXIMUM SLUMP SHALL BE 4 INCH AS MEASURED BY THE ASTM "STANDARD METHOD OF TESTING FOR SLUMP OF PORTLAND CEMENT CONCRETE.
4. DRY PACK SHALL CONSIST OF 1 PART CEMENT, 4 PARTS SAND. BASED ON DRY LOOSE VOLUMES AND NOT LESS THAN 1/4 PART, NOR MORE THAN 1/2 PART, LINE PUTTY OR DRY HYDRATED LIME. DRY PACK SHALL OBTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
5. ADDING CALCIUM CHLORIDE TO CONCRETE OR GROUT IS NOT PERMITTED.
6. CONC. SHALL BE KEPT MOIST FOR 10 DAYS FOR PROPER CURING.

REQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS (ACI 4.3)

SULFATE EXPOSURE	CEMENT TYPE	WATER-CEMENT RATIO	COMPRESSIVE STRENGTH
NEGLIGIBLE	NOT REGULATED	-	2500 psi
MODERATE	I, II	0.50	4000 psi
SEVERE	V	0.45	4500 psi
VERY SEVERE	V	0.45	4500 psi

CONCRETE BLOCK MASONRY

1. CONCRETE BLOCK SHALL CONFORM TO A.S.T.M. C-90 MED. WT. GRADE N UNITS, WITH MIN. COMP. STRENGTH OF 1500 PSI. ALL CMU BLOCKS SHALL BE LAID UP IN RUNNING OR COMMON BOND CONFIGURATION.
2. MORTAR SHALL CONFORM TO ASTM C-270, TYPE S, WITH MINIMUM COMPRESSIVE STRENGTH OF 2000. PSI AT 28 DAYS.

   MIX: 1 PART PORTLAND CEMENT.
   1/2 PART LIME PUTTY.
   4 PARTS SAND.
   } BY VOLUME

3. GROUT SHALL CONFORM TO ASTM C-476, WITH MINIMUM COMPRESIVE STRENGTH OF 2000. PSI AT 28 DAYS.

   MIX: 1 PART PORTLAND CEMENT.
   3 PARTS SAND
   2 PARTS PEA GRAVEL
   } BY VOLUME

   WATER SUFFICIENT TO ALLOW GROUT TO FLOW INTO ALL JOINTS.

4. CELLS SHALL BE IN VERTICAL ALIGNMENT TO PROVIDE A MIN. UNOBSTRUCTED CORE OF 3" X 3". DOWELS FROM FOOTINGS SHALL BE SET TO ALIGN WITH CORE REINFORCING.
5. ALL CELLS BELOW FINISHED GRADE AND ALL CELLS WITH REINFORCING, ANCHORS OR INSERTS SHALL BE FILLED SOLID WITH GROUT.
6. CONCRETE SURFACES SHALL BE CLEANED OF ALL LAITANCE PRIOR TO SETTING OF BLOCKS.
7. PROVIDE VERTICAL CONSTRUCTION JOINTS AT 40 FT. O.C.
8. MINIMUM LAP FOR ALL STEEL IS 40 BAR DIAMETER, OR 24 INCHES, WHICHEVER IS GREATER.
9. IF WORK IS STOPPED FOR ONE HOUR OR LONGER, PROVIDE HORIZONTAL CONSTRUCTION JOINTS BY STOPPING GROUT 1-1/2 INCH BELOW THE TOP OF THE BLOCK.

REINFORCED MASONRY (CMU)

1. ALL MASONRY SHALL BE REINFORCED CONCRETE MASONRY UNIT IN ACCORDANCE WITH THE LATEST EDDITION OF ACI 530/ASCE 5/TMS 402.
2. INSTALL ALL BLOCKS IN RUNNING BOND.
3. MINIMUM MASONRY BLOCK (ASTM C90) STRENGTH SHALL (F'M) BE 2000 PSI.
4. TYPE "S" MORTAR (ASTM C270) SHALL BE USED USING 3/8" FULL BEDDING REINFORCED W/ 9 GAGE GALVANIZED LADDER WIRE EVERY 2ND ROW.
5. FILLED CELLS SHALL BE REINFORCED WITH #5 REBAR @ 24" O.C. (UNLESS OTHERWISE IS SPECIFIED ON THE PLANS).
6. GROUT SHALL BE PEA ROCK PUMP MIX (ASTM C476) WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI (28 DAY) (ASTM C1019). TARGETED SLUMP SHALL BE 8"-11".
7. EACH GROUTED CELL SHALL HAVE CLEANOUT OPENINGS AT THE BOTTOM. THERE SHALL BE NO LOOSE MORTAR OR OTHER DEBRIS IN THE BOTTOM OF THE CELL. USE BLAST PRESSURE WASHING FOR SURFACE PREPARATION.

REINFORCING STEEL

1. REINFORCING STEEL, #3 AND #4 GRADE 40, #5 AND LARGER GRADE 60 PER A.S.T.M. A615.
2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS.
3. BARS NOTED AS "CONT" TYPICAL WALL REINFORCING AND VERTICAL COLUMN REINFORCING SHALL HAVE A MINIMUM SPLICE OF 50 BAR DIAMETERS LAP IN MASONRY OR 40 BAR DIAMETERS MINIMUM IN CONCRETE.
4. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. OTHER SPLICES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
5. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4 FEET UNLESS OTHERWISE NOTED.
6. PROVIDE DOWELS IN FOOTINGS AND/OR GRADE BEAMS THE SAME SIZE AND NUMBER AS VERTICAL WALL OR COLUMN REINFORCING. DOWELS SHALL HAVE A MINIMUM PROJECTION EQUAL TO STANDARD LAP SPLICE UNLESS OTHERWISE NOTED.
7. ALL REINFORCING, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN PLACE PRIOR TO PLACEMENT OF CONCRETE OR GROUTING OF MASONRY.
8. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE:

BELOW GRADE (UNFORMED)	3" CLEAR
BELOW GRADE (FORMED)	2" CLEAR
WALLS	1" CLEAR
COLUMNS	1.5" CLEAR
BEAMS AND GIRDERS	1.5" CLEAR
STRUCTURAL SLAB (ABOVE GRADE)	3/4" CLEAR

9. #5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

GRADING NOTES

1. A GRADING PERMIT SHALL BE OBTAINED PRIOR TO ANY GRADING.
2. ALL FILL ONE FOOT & GREATER SHALL BE CERTIFIED AND TESTED AS TO RELATIVE COMPACTION PER U.B.C.
3. ALL FILL SHALL BE COMPACTED IN ACCORDANCE WITH ASTM D-1557, TO MAXIMUM OF 90% DENSITY.
4. ALL UTILITY TRENCH BACKFILLS SHALL BE IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS.

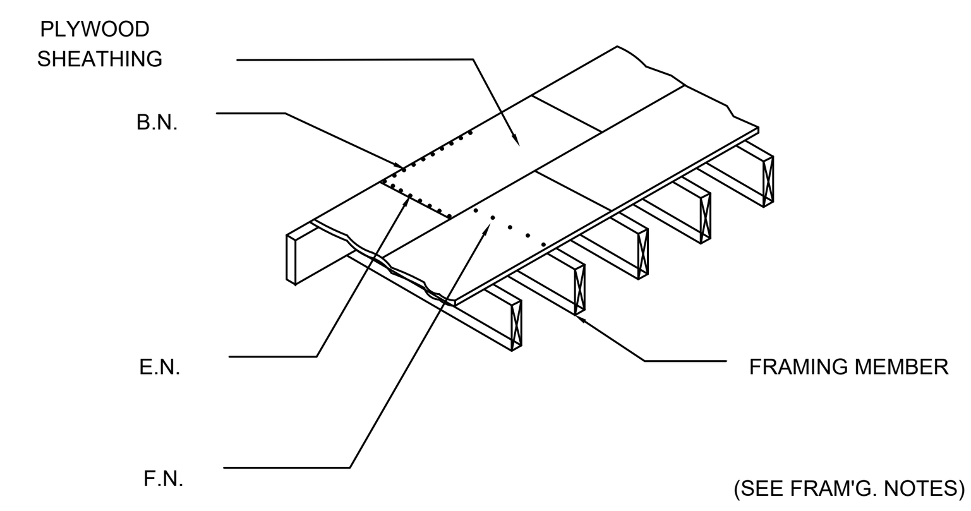
STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36,(Fy=36.KSI) FOR PLATES AND TO ASTM A992,(Fy=50.KSI) FOR W-SHAPE STEEL SECTIONS.
2. CORTEN STEEL SHALL CONFORM TO ASTM A588, Fy=50. KSI.
3. STAINLESS STEEL SHALL CONFORM TO ASTM A276 TYPE 304-HOT ROLLED, Fy=18. KSI.
4. FABRICATION, ERECTION & PAINTING SHALL COMPLY WITH THE AISC SPECS. CHAPTER M. (THIRTEENTH EDITION).
5. ALL BOLTS FOR STEEL MEMBERS SHALL CONFORM TO ASTM A325 OR A490, UNLESS OTHERWISE NOTED.
6. HIGH TENSILE BOLTS WHERE INDICATED ON THE PLANS OR DETAILS SHALL BE THE FRICTION TYPE AND THERE SHALL BE NO PAINT, OIL, LAQUER, OR GALVANIZING BETWEEN THE CONTACT SURFACES. HIGH TENSILE BOLTS SHALL CONFORM TO ASTM A325 OR A490.
7. HIGH STRENGTH BOLTS SHALL HAVE LOAD INDICATOR WASHERS TO SERVE AS A DIRECT TENSION INDICATOR INSTALLATION FOR HIGH STRENGTH BOLTS SHALL REQUIRE INSPECTION BY A DEPUTY INSPECTOR.
8. ANCHOR RODS SHALL BE ASTM F-1554 GRD. 55 KSI U.N.O. ALL ANCHOR RODS SHALL BE. HEADED RODS.ANCHOR ROD WASHER SHALL BE ASTM A436. NUTS SHALL BE ASTM A563.
9. PIPE COLUMNS SHALL CONFORM TO ASTM A-53 GRADE B.
10. STEEL TUBE SHAPED MEMBERS SHALL CONFORM TO ASTM A-501 OR OR A-500 GRADE B.
11. WHERE FINISH IS ATTACHED TO STRUCTURAL STEEL, PROVIDE HOLES FOR 1/2" WELDED STUDS AT 4 FEET O.C. FOR THE ATTACHMENT OF NAILERS. SEE ARCHITECTURAL DRAWINGS FOR FINISHES.
12. OPEN WEB JOISTS SHALL COMPLY WITH THE STANDARDS OR "THE STEEL JOIST INSTITUTE".
13. STEEL STUDS, JOIST, TRACKS & BRIDGING:
    ASTM A-570 GRADE "E" Fy = 50 KSI 12, 14 & 16 GA.
    ASTM A-570 GRADE "C" Fy = 33 KSI 18 & 20 GA.
14. SPECIAL INSPECTION OF HIGH-STRENGTH A325 AND A490 BOLTS SHALL BE IN ACCORDANCE WITH APPROVED NATIONALLY RECOGNIZED STANDARDS AND REQUIREMENT OF SECTION 1701.
15. SHOP DRAWINGS SHALL BE PROVIDED TO ENGINEER OR ARCHITECT OF RECORD FOR REVIEW PRIOR TO FABRICATION.

STRUCT. STEEL WELDING

1. WELDING SHALL BE DONE BY THE ELECTRIC SHIELDED ARC PROCESS W/E70-XX ELECTRODES AND SHALL COMPLY WITH A.W.S. SPECIFICATIONS FOR WELDING AND FABRICATION.
2. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS WHO ARE APPROVED BY THE LOCAL AUTHORITY USING ARC PROCESS WITH E70XX ELECTRODES.
3. ALL FIELD WELDS SHALL HAVE CONTINUOUS INSPECTION PER CBC (1701) UNLESS OTHERWISE NOTED.
4. ALL BUTT WELDS SHALL BE FULL PENETRATION U.N.O.
5. A CERTIFICATE OF FABRICATION FROM THE SHOP PERFORMING WELDING OR A REPORT FROM THE SPECIAL INSPECTOR MUST BE FURNISHED TO THE JOB INSPECTOR PRIOR TO FRAMING APPROVAL.
6. WELDED, FULLY RESTRAINED CONNECTION BETWEEN MEMBERS OF ORDINARY MOMENT FRAMES OR SPECIAL MOMENT-RESISTING FRAMES SHALL HAVE SPECIAL CONTINUOUS INSPECTION AND CONNECTION TESTED BY NONDESTRUCTIVE METHODS PER SECTION 1703.
7. FIELD WELDING OF REINFOCING STEEL SHALL BE DONE BY WELDERS SPECIFICALLY CERTIFIED FOR REINFORCING STEEL WELDING .BEFORE WELDING,THE "CARBON EQUIVALENT" (CE) OF STEEL SHALL BE DETERMINED. IF THE (CE) OF STEEL IS MORE THAN 0.75% , THEY SHALL NOT BE WELDED.

PLYWOOD DIAPHRAGM



NAILING: (EXCEPT WHERE NOTED OTHERWISE)

	ROOF NAIL'G	FLOOR NAIL'G
B.N. = BOUNDARY NAILING	8d @ 6" O.C.	10d @ 6" O.C.
E.N. = EDGE NAILING	8d @ 6" O.C.	10d @ 6" O.C.
F.N. = FIELD NAILING	8d @ 12" O.C.	10d @ 10" O.C.

NOTES:

1. NAILS SHALL BE GALV. COMMON(HOT-DIPPED OR TUMBLED), PLACED NOT LESS THAN 3/8" FROM PANEL EDGES AND SHALL BE FIRMLY DRIVEN.
2. NO UNBLOCKED PIECE LESS THAN 12" SHALL BE USED.
3. WOOD STRUCTURAL PANELS SHALL COMPLY WITH 2019 CBC STANDARD AND SHALL BE APA RATED EXPOSURE I.
4. WOOD STRUCTURAL PANELS, WHEN USED, SHALL COMPLY WITH THE REQUIREMENTS FOR THEIR TYPE IN DOC PSI-95 OR PS2-92.
5. ALL PANELS SHALL BE IDENTIFIED BY TRADE MARK OF AN APPROVED TESTING & GRADING AGENCIES, APA, TECO OR PITTSBURG.

FRAMING NOTES

1. FRAMING SHALL COMPLY WITH CHAPTER 23 OF THE 2019 CBC

FRAMING-GENERAL

1. USE SIMPSON U-HANGERS ON ALL JOIST/BEAM/BEAM CONNECTIONS UNLESS NOTED ON PLANS.
2. ALL POSTS SHALL HAVE SIMPSON "PC" CONNECTORS AT TOP AND SIMPSON "BC" OR "BCO" CONNECTORS AT BASES UNLESS OTHERWISE NOTED ON PLANS.
3. ALL CONNECTING HARDWARE, JOIST HANGERS, TIE STRAPS, ETC., SHALL BE SIMPSON "STRONG TIE" UNLESS OTHERWISE NOTED OR SHOWN ON PLANS.
4. FRAMING @ CHIMNEY ENCLOSURE SHALL BE 2x6 STUDS BALLOON FRAMED W/APPROVED STRAPS TO ROOF AND FLOOR DIAPHRAGMS.

FRAMING - WALL

1. SIZE, SPACING & HEIGHT LIMITS FOR WOOD STUDS ARE AS FOLLOWS (UNLESS OTHERWISE NOTED ON PLANS):

   2X4 @ 16" OC (BEARING WALL) SUPPORTING A MAXIMUM OF ONE FLOOR AND ONE ROOF SHALL HAVE A MAXIMUM HEIGHT OF 10 FEET
   2X4 @ 16" OC (NON-BEARING WALL) SHALL HAVE A MAXIMUM HEIGHT OF 14 FEET

   2X6 @ 16" OC (BEARING WALL) SUPPORTING A MAXIMUM OF TWO FLOORS AND A ROOF SHALL HAVE A MAXIMUM HEIGHT OF 10 FEET
   2X6 @ 16" OC (NON-BEARING WALL) MAXIMUM HEIGHT IS 20 FEET

2. RAKE WALLS ADJACENT TO SLOPED CEILINGS SHALL BE BALLOON FRAMED. DOUBLE TOP PLATES SHALL ALWAYS BE SUPPORTED BY A ROOF OR CEILING DIAPHRAGM.
3. SHEAR WALL PANELS MUST BE CONTINUOUS TO THE TOP PLATE AT ROOF FRAMING. SHEATHING SHALL HAVE ALL EDGES BLOCKED & THE APPROPRIATE SHEAR TRANSFER THRU CEILING OR SOFFIT FRAMING.
4. BORING AND NOTCHING OF WALL STUDS SHALL BE PER CBC (2308.9)

   NOTCHING MAXIMUM: 25% OF WIDTH OF STUDS ON BEARING WALLS
   40% OF WIDTH OF STUDS ON NON-BEARING WALLS BORING

   MAXIMUM: 40% OF WIDTH OF STUDS ON BEARING WALLS
   60% OF WIDTH OF STUDS ON NON-BEARING WALLS

NOTE: A MIN. 5/8" CLEARANCE FROM EDGE OF STUD TO HOLE SHALL BE PROVIDED.

5. DOUBLE 2X TOP PLATE SHALL BE LAPPED 48" AT ALL SPLICES AND SHALL OVERLAP AT CORNERS.
6. WALL BRACING SHALL BE PROVIDED PER CBC (2308.9.3)
7. HARDY FRAMES INSTALLATION PER MFR. SPECIFICATION (ICC ESR-2089)
8. STRONG WALL INSTALLATION PER MFR. SPECIFICATION (ICC-ESR-1267)

FRAMING - FLOOR

1. FLOOR SHEATHING (MIN) 5/8" STRUCTURAL I T & G PLYWOOD PANEL INDEX NO. 32/16 WITH EXTERIOR GLUE. USE 10d COMMON NAILS AT 6" OC AT ALL EDGES, BOUNDARIES, AND 10" O.C. FIELD. NO BLOCKING IS REQUIRED UNLESS NOTED ON PLAN. ALL EDGES BLOCKED AT DECKS.
2. PROVIDE DOUBLE FLOOR JOISTS UNDER ALL PARALLEL NON- BEARING PARTITIONS.
3. PROVIDE CONTINUOUS BLOCKING BETWEEN FLOOR JOISTS UNDER BEARING WALLS WHICH ARE PERPENDICULAR TO JOISTS.
4. FRAMING AROUND OPENINGS: TPT RIMMER AND HEADER JOISTS SHALL BE DOUBLED AND SUPPORTED BY HANGERS PER (CBC 2320.12.5).

FRAMING - ROOF

1. ROOF SHEATHING (MIN) 15/32" STRUC. I PLYWOOD SHEATHING PANEL INDEX NO. 32/16 WITH EXTERIOR GLUE. USE 8d COMMON NAILS AT 6" OC AT ALL EDGES, BOUNDARIES, AND 12" OC FIELD. NO BLOCKING IS REQUIRED UNLESS NOTED ON PLAN.
2. FRAMING AROUND OPENINGS: TPT RIMMER AND HEADER JOISTS SHALL BE DOUBLED AND SUPPORTED BY HANGERS PER CODE

FRAMING - CEILING (PER TABLE 2308.10.2)

1. CEILING JOISTS SHALL BE 2X6 @ 16" O.C. (MAX SPAN= 17'-8")
2. CEILING JOISTS SHALL BE 2X8 @ 16" O.C. (MAX SPAN= 23'-0")

FRAMING - JOISTS/RAFTERS

1. BORING AND NOTCHING OF JOISTS SHALL BE AS FOLLOWS: (CBC 2308.10) 2019 EDITION

   BORING- MAX DIA OF HOLE SHALL NOT EXCEED 1/3 OF DRESSED DEPTH OF JOIST WITH A MINIMUM EDGE CLEARANCE OF TWO INCHES.

   NOTCHING- MAX NOTCH AT ENDS SHALL NOT EXCEED 1/4 OF DEPTH. NO NOTCHING IS ALLOWED IN THE CENTER THIRD OF THE JOIST SPAN. MAX NOTCH IN TOP OR BOTTTOM OF THE JOIST SHALL NOT EXCEED 1/6 OF THE JOIST DEPTH.

2. WHERE THREE OR MORE (MULTI JOISTS) ARE USED, THE JOISTS SHALL BE BOLTED TOGETHER WITH 1/2" DIA. MACHINE BOLTS W/ WASHERS AT 24" OC STAGGERED. BOLTS SHALL BE RETIGHTENED PRIOR TO APPLYING FINISH MATERIALS.
3. JOISTS/RAFTERS SHALL LAP AT SPLICES A MIN. OF 4 INCHES WITH 3-16d NAILS OR USE SIMPSON ST 2115 @ 48 INCHES O.C.
4. CROSS BRIDGING OR 2X BLDG. SHALL BE PROVIDED @ 8'-0" O.C. MAX. FOR ALL JOISTS AND RAFTERS MORE THAN 8" IN DEPTH.
5. 2X SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.

DRAINAGE NOTES

1. MINIMUM GRADIENTS ARE AS FOLLOWS: EARTH= 2%, PAVING= .5%
2. POSITIVE DRAINAGE AWAY FROM STRUCTURES SHALL BE AS FOLLOWS:

   2% MIN. TO 21% MAX
   SWALES TO BE 3 FEET MIN. AWAY FROM STRUCTURES.

NAILING SCHEDULE

CONNECTION:(TABLE 2304.9.1)

1. JOISTS TO SILL OR GURDER, TOE NAIL — 3 - 8d
2. BRIDGING TO JOISTS, TOE NAIL EA. END — 2 - 8d
3. 1X6 SUBFLR. OR LESS TO EA. JST., FACE NAIL — 2 - 8d
4. WIDER THAN 1X6 SUBFLR. TO EA. JST., FACE NAIL — 3 - 8d
5. 2" SUBFLR. TO JST. OR GURDER, BUND & FACE NAIL — 2 - 16d
6. SILL PLATE TO JST. OR BLK'G., FACE NAIL — 16d @ 16" O.C.
7. TOP PLATE TO STUD, END NAIL — 2 - 16 d
8. RAFT. BLK'G TO TOP PLATE, FACE OR TOE NAIL — 16d @ 8" O.C.
9. STUD TO SILL PLATE, TOE NAIL — 4 - 8d
10. DOUBLE STUDS, FACE NAIL — 16d @ 24" O.C.
11. DOUBLE TOP PLATES, FACE NAIL — 16d @ 16" O.C.
12. TOP PLATES LAPS & INTERSECTIONS, FACE NAIL — 2 - 16d
13. CONTINUOUS HEADER, TWO PIECES — 16d @ 16" O.C. ALONG EA. SIDE
14. CEILING JOISTS TO PLATE, TOE NAIL — 3 - 8d
15. CONTINUOUS HEADER TO STUD, TOE NAIL — 4 - 8d
16. CEILING JOISTS, LAPS O/ PARTITIONS, FACE NAIL — 3 - 16d
17. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL — 3 - 16d
18. RAFTER TO TOP PLATE, TOE NAIL — 3 - 8d
19. 1" BRACE TO EA. STUD & PLATE, FACE NAIL — 2 - 8d
20. 1X8 SHT'G. OR LESS TO EA. BEARING WALL FACE NAIL — 2 - 8d
21. WIDER THAN 1X8 SHT'G. TO EA. BEARING WALL FACE NAIL — 3 - 8d
22. BUILT-UP CORNER STUDS — 16d @ 24" O.C.
23. BUILT-UP GRADERS & BEAMS — 20d @ 32" O.C. @ TOP & BOT. & STAGG. 2 - 20d @ END & @ EA. SPLICE
24. 2" PLANKS — 2 - 16d @ EA. BRG.
25. PARTICLE BD. - WALL SHTG. (TO FRMG.) — 8d
26. PLYWOOD -
    SUBFLR. RF. & WALL SHTG. (TO FRMG.):
    1/2" & LESS — 8d
    5/8" - 3/4" — 8d
    7/8" - 1" — 8d
    1 1/8" - 1 1/4" — 10d
    COMBINATION SUBFLR. / UNDERLAYMENT (TO FRMG.):
    3/4" & LESS — 8d
    7/8" - 1" — 8d
    1 1/8" - 1 1/4" — 10d
    FIBERBD. SHTG.:
    1/2" — NO. 11 GA. 6d, NO. 16 GA.
    25/32" — NO. 11 GA. 6d, NO. 18 GA.

NOTE:

1. ALL NAILS SHALL BE COMMON WIRE NAILS. WHERE DRIVING OF NAILS CAUSES SPLITTING HOLES FOR THE NAILS SHALL BE SUB DRILLED.
2. FASTENERS IN PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.(CBC 2304.9.5)

FRAMING-BOLTING

1. ALL BOLTS BEARING ON WOOD SHALL HAVE WASHERS UNDER HEAD OR NUT. SEE S.W. SCHEDULE.
2. ALL BOLTS SHALL BE RETIGHTENED, PRIOR TO APPLICATION OF PLYWOOD, PLASTER, ETC.
3. HOLES FOR BOLTS SHALL BE BORED 1/32" TO 1/16" LARGER THAN NOMINAL BOLT DIAMETER.
4. FASTENERS IN PRESSURE-TREATED AND FIRE-RETARDANT,TREATED WOOD SHALL BE OF HOT-DIPPED,ZINC-COATED GALVANIZED STEEL,STAINLESS STEEL,SILICON BRONZE OR COPPER.

LUMBER

1. ALL LUMBER SHALL BE DOUGLAS FIR-LARCH OR THE FOLLOWING GRADES UNLESS OTHERWISE NOTED (MAX MOISTURE CONTENT SHALL NOT EXCEED 19% & GRADED IN ACCORDANCE WITH THE (WEST COAST LUMBERMAN'S ASSOCIATION.)

   REPETITIVE USE MEMBERS

   STUDS & PLATES — NO. 2

   JOISTS & RAFTERS:

   2X4 TO 4X4 INCLUSIVE N0. 2
   2X6 TO 3X16 INCLUSIVE — NO. 2

   SINGLE USE MEMBERS

   BEAMS:
   4X — N0. 2
   6X OR LARGER — N0. 1

   POSTS & MULLION:
   4X4 & SMALLER — N0. 2
   4X6 & LARGER — N0. 2
   6X6 & LARGER — N0. 1

   BLOCKING, FURRING, ETC. — N0. 3
   DECKING & SHEATHING
   2X, 3X, 4X — CONST. GRADE

2. ALL WOOD BEARING ON CONCRETE OR MASONRY IF LESS THAN 4 FEET FROM GRADE SHALL BE PRESSURE TREATED DOUG. FIR.
3. GLUED-LAMINATED WOOD BEAMS SHALL BE DOUGLAS FIR COMB. 24F-V4 (*) DF/DF (Fb=2400 PSI, Fv=165 PSI, E=180,000 PSI) INDUSTRIAL APPEARANCE WITH EXTERIOR GLUE UNLESS OTHERWISE NOTED ON PLANS. A CERTIFICATE OF INSPECTION FOR EACH GLU-LAM BEAM FROM AN APPROVED TESTING AGENCY TO BE SUBMITTED AND APPROVED BY THE BUILDING DEPT. PRIOR TO ERECTION. (*) USE V8 FOR CANT. BEAMS AND V4 FOR SIMPLE SPANS BEAMS]
4. SHOP DRAWING SHALL BE PROVIDED TO ENGINEER OR ARCHITECT OF RECORD FOR REVIEW PRIOR TO FABRICATION.
5. ALL STRUCTURAL PLYWOOD SHALL BE IN ACCORDANCE WITH (PS 1-95)
6. PARALLAM PSL PER TRUS JOIST MACMILLAN (ICC ESR-1387) (Fb= 2900 PSI, Fv=290 PSI, E= 2,000,000 PSI)
7. TJI JOISTS INSTALLATION PER MANUFACTURE SPECIFICATION (ICC ES ESR-1153 AND ICC ES ESR-1387)

SPECIAL INSPECTION (PER CBC SECTION 1704,1706 & 1707)

1. SPECIAL INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR, APPROVED BY THE ARCHITECT AND THE CHECKING AGENCY, SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

ITEMS REQUIRE SPECIAL INSPECTION AS MARKED:

VERIFICATION & INSPECTION	CONTINUOUS	PERIODIC
1. STRUCTURAL EPOXY BOLTING.	☒	
2. WELDING.		
2a: FIELD WELDING OF MOMENT RESISTING STEEL FRAMES.	☐	
2b: STRUCTURAL STEEL OR REINFORCING	☐	
2c: STEEL DECKING.	☐	
2d: SHEAR CONNECTORES.	☐	
3. PLACEMENT OF REINFORCING STEEL IN CMU WALL.	☐	
4. HIGH STRENGTH BOLTING	☐	
5. EXPANSION TYPE ANCHOR BOLTS.	☐	
6. HIGH STRENGTH BOLTING		☐
7. CONCRETE WHERE CONCRETE STRENGTH OF 3000 PSI OR GREATER IS SPECIFIED.		☐
8. DIAPHRAGM CONNECTION TO STEEL SUPPORT MEMBERS.		☐
10. WOOD SHEAR WALLS AND WOOD DIAPHRAGMS NAILING.		☐
11. WOOD STRUCTURAL PANEL SHEATHING.		☐
12. NOMINAL SIZE OF FRAMING MEMBERS AT PANEL EDGES.		☐
13. NAIL OR STAPLE DIAMETER AND LENGTH.		☐
14. COMPACTED FILL		☐
15. FOUNDATION -ANCHOR BOLT AND HOLD DOWN.		☒
16. INSPECTION OF LATERAL FORCE RESISTING ELEMENTS.		☐

"CONTRACTOR RESPONSIBILITY:

EACH CONTRACTOR OR SUB-CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE WIND AND/OR SEISMIC RESISTING SYSTEM THAT IS LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK REQUIRING SPECIAL INSPECTION.
THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:
1) ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS;
2) ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL;
3) PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, AND THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS;
4) IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION."

ABBREVIATIONS:

A.B.	ANCHOR BOLT
ABV.	ABOVE
BAR	REINF. BAR
BD	BOARD
BLKG.	BLOCKING
BLW.	BELOW
BM	BEAM
B.N.	BOUNDARY NAIL
B.W.	BOTH WAYS
CONT.FTG.	CONTINUOUS FOOTING
C.J.	CEILING JOIST
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CLG.	CEILING
DP	DEEP
DBL	DOUBLE
D.F.	DOUGLAS FIR
DIA.	DIAMETER
DO	DITTO
(E)	EXISTING
E.W.	EACH WAY
E.J.	EXPANSION JOINT
E.N.	EDGE NAIL
EQ	EQUAL
FB	FLOOR BEAM
F.G.	FINISH GRADE
F.J.	FLOOR JOIST
FL	FLUSH
FMG.	FRAMING
F.N.	FIELD NAIL
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUDS
F.P.	FULL PENETRATION
FTG	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
GLB	GLUE-LAMINATED BEAM
GRD. BM.	GRADE BEAM
GWB	GYPSUM WALLBOARD
H	HIGH
HDR.	HEADER
HGT.	HEIGHT
HNGR.	HANGER
HORIZ.	HORIZONTAL
K.P.	KING POST
L	LENGTH
LT. WT.	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MAS.	MASONRY
M.B.	MACHINE BOLT
MLB	MICRO=LAM BEAM
(N)	NEW
N.G.	NATURAL GRADE
O.C.	ON CENTER
P.A.	POST ABOVE
PSL	PARALLAM PSL BEAM
PLWD	PLYWOOD
P.T.	PRESSURE TREATED
R.B.	RIDGE BEAM
REINF.	REINFORCING
REQ'D.	REQUIRED
RF	ROOF
R.R.	ROOF RAFTER
SIM.	SIMILAR
T.R.	THREADED ROD
TYP.	TYPICAL

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Project Name and Address:

WORKSHOP ADDITION
26860 REGENCY WAY, MORENO VALLEY, CA 92555

Date: 02-Jan-21 11:58:30 AM
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Sheet :

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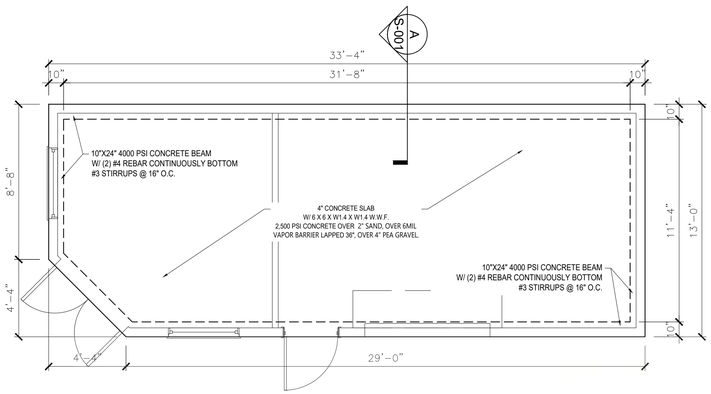
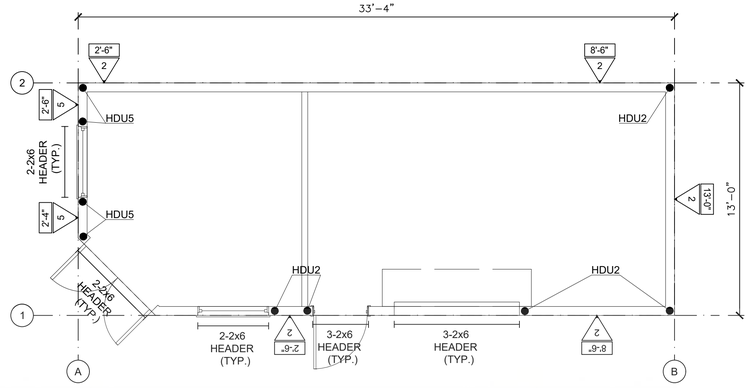


1 FOUNDATION PLAN

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



2 FIRST FLOOR SHEAR-WALLS PLAN

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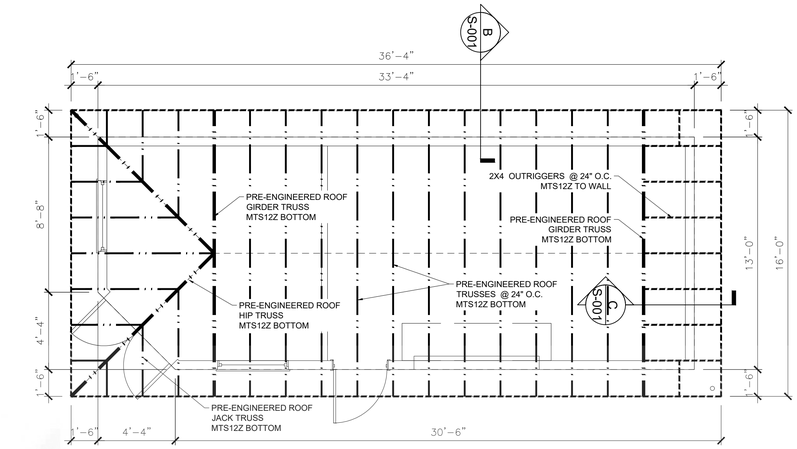


3 ROOF FRAMING PLAN

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

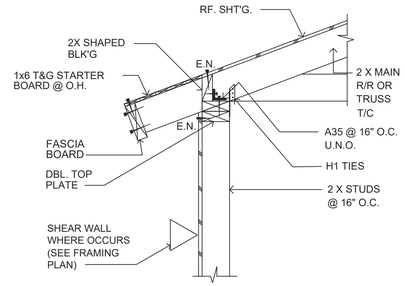
NOTES:

1. "MINIMUM MEMBER THICKNESS @ PANEL SEAM" REFERS TO FRAMING MEMBERS, INCLUDING PLATE AND BLOCKING, WHICH RECEIVE EDGE NAILING FROM ADJACENT PANELS.
2. 3x PLATES: USE 3x PLATES 5/8" DIAMETER ANCHOR BOLTS & 3"x3"x0.229" PLATE WASHERS AT ALL SHEAR WALL LOCATION
3. LTP4 FRAMING CLIPS: LTP4 CLIPS MAY BE USED IN PLACE OF A35 CLIPS SHOWN IN SCHEDULE WERE LOCATION OF RIM OR BLOCKS ABOVE DOUBLE TOP PLATE ALLOWS. USE ONE LTP4 FOR EACH A35 CLIP.

SHEAR WALL SYMBOL

SHEAR WALL LENGTH — 5'-7"

SHEAR WALL TYPE — 1



4 SECTION A-A

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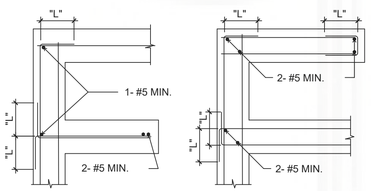


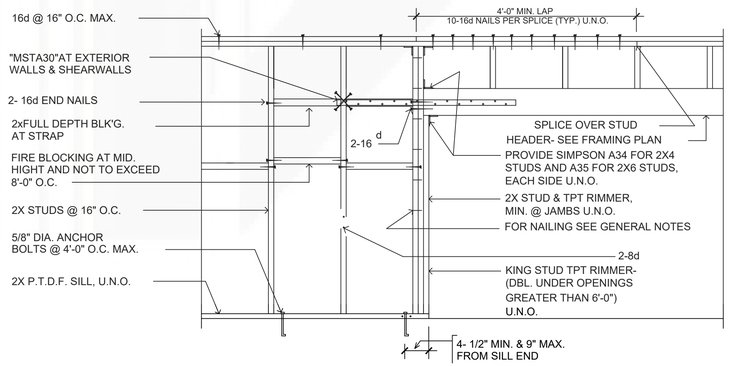
NOTE: "L" = 40 X BAR DIAMETER IN CONC, U.N.O.RETE
"L" = 50 X BAR DIAMETER IN MASONRY, U.N.O.

5 TYPICAL WALL & FTG. REINFORCEMENT

SCALE: NTS

6 TYPICAL STUD WALL INTERSECTION

SCALE: 1"=1'-0"

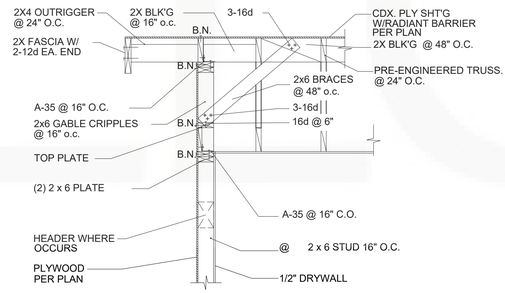


7 TYP. WOOD STUD WALL FRAMING

SCALE: 1"=1'-0"

8 SHEAR TRANSFER SECTION B

SCALE: 1"=1'-0"



9 SHEAR TRANSFER SECTION C

SCALE: 1"=1'-0"

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26860 REGENCY WAY, MORENO VALLEY, CA 92555

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STRUCTURAL PLANS

Sheet :

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	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

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	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555			Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

1. DESIGN CODES AND STANDARDS

APPLICABLE BUILDING CODE 2019 CALIFORNIA BUILDING CODE
APPLICABLE DESIGN LOADS: ASCI/SEI 7-16
BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-08 :
ALL PRESSURES SHOWN ARE BASED ON ASD DESIGN

2. DESIGN DATA

ROOF LIVE LOAD - 20 PSF
ROOF DEAD LOAD - 15 PSF

ROOF DL
ASPHALT SHINGLES - 3.05 PSF
19/32-INCH SHEATING - 2.1 PSF
ROOF TRUSSES OR RAFTERS -6.2 PSF
TOTAL - 11.35 PSF

CEILING DL
1/2-INCH GWB - 1.8 PSF
MISCELLANEOUS - 0.8 PSF
TOTAL - 2.6 PSF

FLOOR DEAD LOAD - 15 PSF
FLOOR LIVE LOAD - 40 PSF
GROUND SNOW LOAD - 5 PSF
WIND PRESSURE– 16 PSF
WALL WIND PRESSURE- 24 PSF

ATC Hazards by Location

Search Information

Address: 26860 Regency Way, Moreno Valley, CA 92555, USA

Coordinates: 33.93266099999999, -117.1940317

Elevation: 1701 ft

Timestamp: 2021-01-12T08:52:52.461Z

Hazard Type: Wind

	Project				Job Ref.	
	WORKSHOP ADDITION					
	Address				Sheet no./rev.	
	26860 REGENCY WAY, MORENO VALLEY, CA 92555				1	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
		01-12-21				

ASCE 7-16

MRI 10-Year	67	mph
MRI 25-Year	72	mph
MRI 50-Year	77	mph
MRI 100-Year	82	mph
Risk Category I	90	mph
Risk Category II	96	mph
Risk Category III	102	mph
Risk Category IV	107	mph

ASCE 7-10

MRI 10-Year — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 25-Year — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 50-Year — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

MRI 100-Year — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category I — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category II — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

Risk Category III — ⚠ Special Region — mph

ASCE 7-05

ASCE 7-05 Wind Speed — ⚠ Special Region — mph

You are in a special wind region. Please contact the Authority Having Jurisdiction.

	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

IV

You are in a special wind region.
Please contact the Authority Having Jurisdiction.

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

Hazards by Location

Search Information

Address: 26860 Regency Way, Moreno Valley, CA 92555, USA

Coordinates: 33.93266099999999, -117.1940317

Elevation: 1701 ft

Timestamp: 2021-01-12T09:03:23.111Z

Hazard Type: Snow

ASCE 7-16

Ground Snow Load ..... ⚠ 0 lb/sqft

The reported ground snow load applies at the query location of 1701 feet up to a maximum elevation of 1800 feet.

ASCE 7-10

Ground Snow Load ..... ⚠ 0 lb/sqft

The reported ground snow load applies at the query location of 1701 feet up to a maximum elevation of 1800 feet.

ASCE 7-05

Ground Snow Load ..... ⚠ 0 lb/sqft

The reported ground snow load applies at the query location of 1701 feet up to a maximum elevation of 1800 feet.

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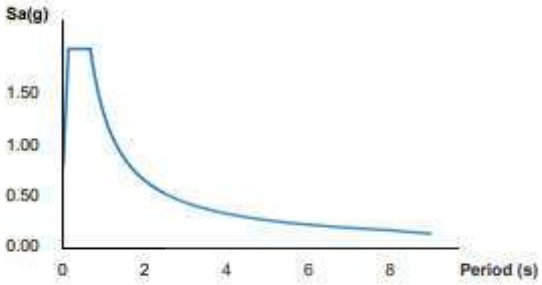
	Project WORKSHOP ADDITION			Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555			Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

ATC Hazards by Location

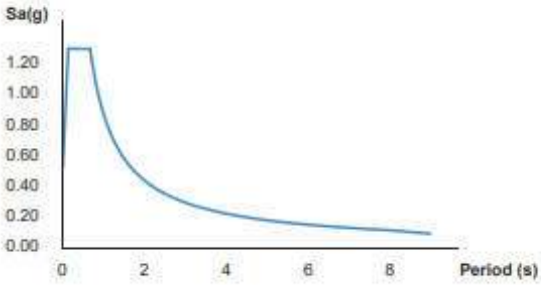
Search Information

Address:	26860 Regency Way, Moreno Valley, CA 92555, USA
Coordinates:	33.93266099999999, -117.1940317
Elevation:	1701 ft
Timestamp:	2021-01-12T09:04:37.284Z
Hazard Type:	Seismic
Reference Document:	ASCE7-10
Risk Category:	II
Site Class:	D

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

Name	Value	Description
S_S	1.953	MCE_R ground motion (period=0.2s)
S_1	0.871	MCE_R ground motion (period=1.0s)
S_{MS}	1.953	Site-modified spectral acceleration value
S_{M1}	1.306	Site-modified spectral acceleration value
S_{DS}	1.302	Numeric seismic design value at 0.2s SA
S_{D1}	0.871	Numeric seismic design value at 1.0s SA

▾Additional Information

Name	Value	Description
SDC	E	Seismic design category
F_a	1	Site amplification factor at 0.2s
F_v	1.5	Site amplification factor at 1.0s
CR_S	1.001	Coefficient of risk (0.2s)
CR_1	0.967	Coefficient of risk (1.0s)
PGA	0.76	MCE_G peak ground acceleration

F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.76	Site modified peak ground acceleration
T_L	8	Long-period transition period (s)
SsRT	2.727	Probabilistic risk-targeted ground motion (0.2s)
SsUH	2.726	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.953	Factored deterministic acceleration value (0.2s)
S1RT	1.13	Probabilistic risk-targeted ground motion (1.0s)
S1UH	1.168	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.871	Factored deterministic acceleration value (1.0s)
PGAd	0.76	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

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3. HEADER CALCULATION

DETERMINATION OF HEADERS

	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

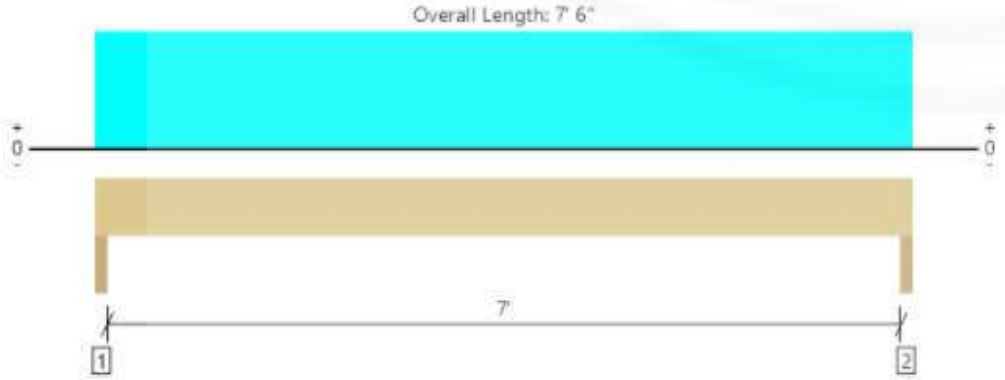
FORTE WEB

MEMBER REPORT

Level, Wall: Header

PASSED

3 piece(s) 2 x 6 Douglas Fir-Larch No. 2



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1224 @ 1 1/2"	8438 (3.00")	Passed (15%)	--	1.0 D + 1.0 Lr (All Spans)
Shear (lbs)	992 @ 8 1/2"	3713	Passed (27%)	1.25	1.0 D + 1.0 Lr (All Spans)
Moment (Ft-lbs)	2144 @ 3' 9"	2765	Passed (78%)	1.25	1.0 D + 1.0 Lr (All Spans)
Live Load Defl. (in)	0.100 @ 3' 9"	0.242	Passed (L/873)	--	1.0 D + 1.0 Lr (All Spans)
Total Load Defl. (in)	0.203 @ 3' 9"	0.313	Passed (L/428)	--	1.0 D + 1.0 Lr (All Spans)

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2015
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/5/16").
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

	Bearing Length			Loads to Supports (lbs)			
Supports	Total	Available	Required	Dead	Roof Live	Total	Accessories
1 - Trimmer - SYP	3.00"	3.00"	1.50"	624	600	1224	None
2 - Trimmer - SYP	3.00"	3.00"	1.50"	624	600	1224	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	7' 6" o/c	
Bottom Edge (Lu)	7' 6" o/c	

- Maximum allowable bracing intervals based on applied load.

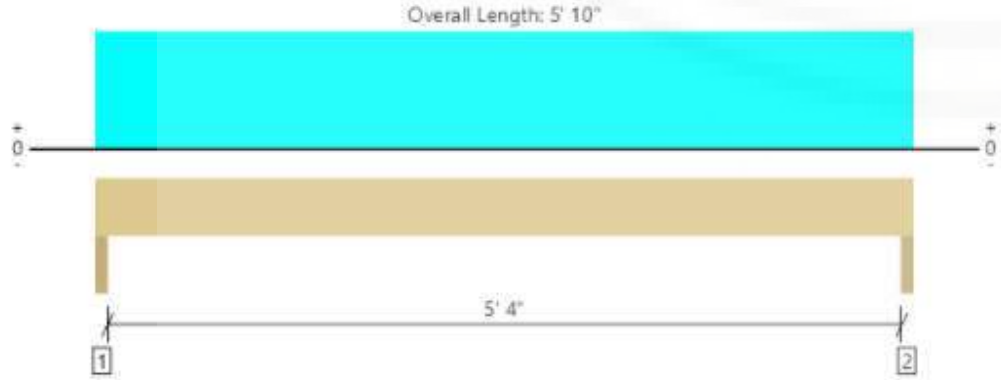
	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

MEMBER REPORT

PASSED

Level, 5-4 Wall: Header

2 piece(s) 2 x 6 Douglas Fir-Larch No. 2



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1004 @ 1 1/2"	5625 (3.00")	Passed (18%)	--	1.0 D + 1.0 Lr (All Spans)
Shear (lbs)	760 @ 8 1/2"	2475	Passed (31%)	1.25	1.0 D + 1.0 Lr (All Spans)
Moment (Ft-lbs)	1341 @ 2' 11"	1843	Passed (73%)	1.25	1.0 D + 1.0 Lr (All Spans)
Live Load Defl. (in)	0.056 @ 2' 11"	0.186	Passed (L/999+)	--	1.0 D + 1.0 Lr (All Spans)
Total Load Defl. (in)	0.113 @ 2' 11"	0.279	Passed (L/592)	--	1.0 D + 1.0 Lr (All Spans)

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2015
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

	Bearing Length			Loads to Supports (lbs)			
Supports	Total	Available	Required	Dead	Roof Live	Total	Accessories
1 - Trimmer - SYP	3.00"	3.00"	1.50"	508	496	1004	None
2 - Trimmer - SYP	3.00"	3.00"	1.50"	508	496	1004	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	5' 10" o/c	
Bottom Edge (Lu)	5' 10" o/c	

- Maximum allowable bracing intervals based on applied load.

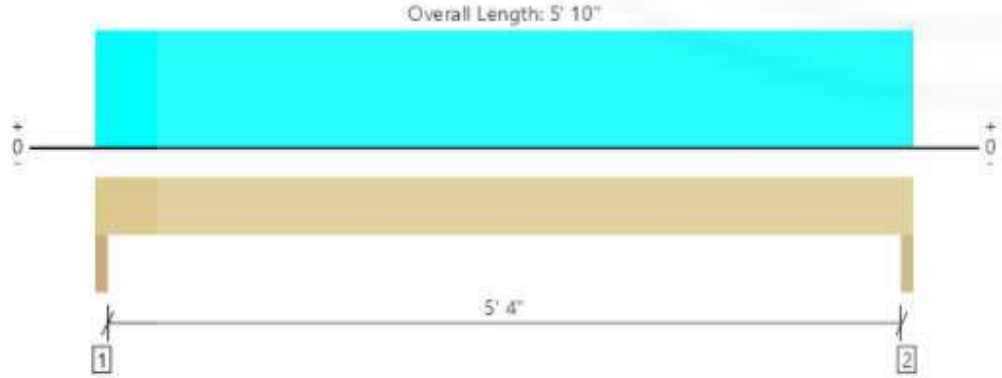
	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

MEMBER REPORT

Level, 4-0 Wall: Header

PASSED

2 piece(s) 2 x 6 Douglas Fir-Larch No. 2



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	479 @ 1 1/2"	5625 (3.00")	Passed (9%)	--	1.0 D + 1.0 Lr (All Spans)
Shear (lbs)	363 @ 8 1/2"	2475	Passed (15%)	1.25	1.0 D + 1.0 Lr (All Spans)
Moment (Ft-lbs)	640 @ 2' 11"	1843	Passed (35%)	1.25	1.0 D + 1.0 Lr (All Spans)
Live Load Defl. (in)	0.026 @ 2' 11"	0.186	Passed (L/999+)	--	1.0 D + 1.0 Lr (All Spans)
Total Load Defl. (in)	0.054 @ 2' 11"	0.279	Passed (L/999+)	--	1.0 D + 1.0 Lr (All Spans)

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2015
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

	Bearing Length			Loads to Supports (lbs)			
Supports	Total	Available	Required	Dead	Roof Live	Total	Accessories
1 - Trimmer - SYP	3.00"	3.00"	1.50"	246	233	479	None
2 - Trimmer - SYP	3.00"	3.00"	1.50"	246	233	479	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	5' 10" o/c	
Bottom Edge (Lu)	5' 10" o/c	

- Maximum allowable bracing intervals based on applied load.

4. FOUNDATION CALCULATION

	Project				Job Ref.	
	WORKSHOP ADDITION					
	Address				Sheet no./rev.	
	26860 REGENCY WAY, MORENO VALLEY, CA 92555				1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

DETERMINATION OF LOAD UNDER EXTERIOR WALL

LOADS	15	40	20	20	WALLS		
	Df	L	Dr	L	D		
LEVEL 1	3	3	0	0	108	273.00	plf
LEVEL 2	0	0	0	0		0.00	plf
LEVEL 3	0	0	0	0		0.00	plf
ROOF	0	0	8	8		320.00	plf
FOUNDATION WALL (8"X12")					145.00	145.00	plf
							plf
GARAGE SLAB						0.00	plf
FOOTING					145.00	145.00	plf
TOTAL						**883.00**	**plf**

DEAD	603.00	plf
LIVE	120	plf
SNOW	160	plf
LR	160	plf
D+0.75L+0.75S	**933.00**	**plf**

SOIL BEARING PRESSSURE	1500	psf
FOOTING WIDTH	10	"
FOOTING BEARING PRESSURE	**1500**	psf
BEARING PRESSURE RATIO	**0.62**	%

5. LATERAL ANALYSIS

Wind loads analysis

	Type of plywood Table 4.3A						Anchor capacity					
	6.0		4.0		3.0		HDU2 SDS2.5	HDU4 SDS2.5	HDU5 SDS2.5	HDU8 SDS2.5	HDU11 SDS2.5	HDU14 SDS2.5
15/32 8d 1-3/8	730.0	*	1065.0		1370.0		3075.0	4565.0	5645.0	6765.0	9535.0	10770.0
TYPE 2	365.0		532.5		685.0					6970.0	11175.0	14390.0
15/32 10d 1-1/2	870.0	*	1290.0		1680.0					7870.0		14445.0
TYPE3	435.0		645.0		840.0							
19/32 10d 1-1/2	950.0		1430.0		1860.0							
	475.0		715.0		930.0							

	Project WORKSHOP ADDITION	Job Ref.			
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555	Sheet no./rev. 1			
Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

ATTIC LEVEL

Axe 1,2

Wall wind Load	24.0		PSF														
Roof wind load	16.7		PSF														
	b		h														
Wall area	13.0	x	9.0	/	2.0	=	58.5	SQ.FT.									
Roof area	14.5	x	2.3	/	1.0	=	33.8	SQ.FT.									
Shear wall length	11.0	ft															
Wind pressure per line foot =		(	58.5	x	24.0	+	33.8	x	16.7	)/	11.0	=	**178.9**	<	**TYPE 2**		
Anchor bolt calculation																	
Wall height	9.0																
Roof height/2	1.2																
Uplift F=(	58.5	x	24.0	x	9.0	+	33.8	x	16.7	x(	9.0	+	1.2	))/	11.0	=	**1670**

HDU2 SDS2.5

Axe A

Wall wind Load	24.0		PSF														
Roof wind load	16.7		PSF														
	b		h														
Wall area	16.7	x	9.0	/	2.0	=	75.0	SQ.FT.									
Roof area	18.2	x	2.3	/	1.0	=	42.4	SQ.FT.									
Shear wall length	4.8	ft															
Wind pressure per line foot =		(	75.0	x	24.0	+	42.4	x	16.7	)/	4.8	=	**519.3**	<	**TYPE3**		
Anchor bolt calculation																	
Wall height	9.0																
Roof height/2	1.2																
Uplift F=(	75.0	x	24.0	x	9.0	+	42.4	x	16.7	x(	9.0	+	1.2	))/	4.8	=	**4844**

HDU5 SDS2.5

	Project				Job Ref.	
	WORKSHOP ADDITION					
	Address				Sheet no./rev.	
	26860 REGENCY WAY, MORENO VALLEY, CA 92555				1	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
		01-12-21				

Axe B

Wall wind Load	24.0	PSF												
Roof wind load	16.7	PSF												
	b		h											
Wall area	16.7	x	9.0	/	2.0	=	75.0	SQ.FT.						
Roof area	18.2	x	5.0	/	1.0	=	91.0	SQ.FT.						
Shear wall length	13.0	ft												

Wind pressure per line foot =	(	75.0	x	24.0	+	91.0	x	16.7	)/	13.0	=	**255.3**	<	**2**	**TYPE**

Anchor bolt calculation																	
Wall height	9.0																
Roof height/2	2.5																
Uplift F=(	75.0	x	24.0	x	9.0	+	91.0	x	16.7	x(	9.0	+	2.5	))/	13.0	=	**2590**

HDU2 SDS2.5

SEISMIC ANALYSIS

FORCE DISTRIBUTION

ROOF			
	ROOF WEIGHT	21	PSF
	PARTITION WEIGHT	5	PSF
	W TOTAL	26	PSF
2ND	FLOOR WEIGHT		PSF
	PARTITION WEIGHT		PSF
	W TOTAL		PSF
	HEIGHT:		FT

2019 CBC / 2015 IBC, SEC. 1613; ASCE 7-16, SEC. 12.8

V = 0.7 x (C s x W) x ρ		R:	6.5	I:	1	SDC:	D
Cs = Sds/(R/I)		S1:	0.871	Sds:	1.30	Sd1:	0.871
				Occ.		Site	
Cs=	**0.2504**			Cat:	II	Class:	D

Check Constraints

	Project				Job Ref.	
	WORKSHOP ADDITION					
	Address				Sheet no./rev.	
	26860 REGENCY WAY, MORENO VALLEY, CA 92555				1	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
		01-12-21				

Cs min = 0.044 * I * S_{DS}

Cs max = S_{D1} / T (R / I)

Cs min = **0.072**

For S_{D1}: S_{D1} = 2/3 * S_{M1}

ASCE 7-02 Eq. 9.4.1.2.5-2

S_{M1} = Fv * S_1 S_1 [a] = **0.871** S_{M1} = **1.31**

ASCE 7-02 Eq. 9.4.1.2.4-2 Fv [a] = **1.5**

S_{D1} = **0.871**

For T: T = Cu * Ta

Ta = C_T * $hn^{3/4}$

Cu = **1.4** [a]

C_T = **0.02** [a]

hn = **9**

Ta = 0.104

T = **0.145**

Cs max = **1.1508**

Cs FINAL = **0.2504**

V = 0.7 x (Cs x W) x ρ = **0.2279** **V=** **5.9241**

wt ht wt*ht % F		W TOTAL	H TOTAL	WT*HT	%	F	V TOTAL
GF FLOOR		25	9	225	1.00	5.92	5.92
						0.00	5.92
				225			

HOLD DOWN CAPACITIES SHEAR WALL CAPACITIES

HDU2	HDU4	HDU5	HDU8	HDU11	HDU14	
2307	3425	4254	5904	7152	10835	lbs

SHEAR WALL DESIGN

TYPE 2	TYPE 3	TYPE 4	TYPE 5	
335	490	630	820	lbs/ft
560	860	1100	1460	

SHEAR WALL DESIGN

Shear Line Level

	LENGTH	TRIBUTARY AREA	F FLR	F ADD	F TOTAL	V/FT	WALL	T/C	DL/FLR	T NET WALL DL	HDU
Line 1,2											

	Project WORKSHOP ADDITION				Job Ref.	
	Address 26860 REGENCY WAY, MORENO VALLEY, CA 92555				Sheet no./rev. 1	
	Calc. by	Date 01-12-21	Chk'd by	Date	App'd by	Date

GR	11.0	581.0	3441.9		3441.9	312.9	2.0	0.0	80.0	-440.0	**HDU2**
							TYPE 2		WIND		HDU2 SDS2.5
Line A											
GR	4.8	581.0	3441.9		3441.9	712.6	5.0	0.0	80.0	-193.2	**HDU2**
							TYPE3		WIND		HDU5 SDS2.5
Line B											
GR	13.0	581.0	3441.9		3441.9	264.8	2.0	0.0	80.0	-520.0	**HDU2**
									WIND		HDU2 SDS2.5