

GENERAL NOTES	
1.	ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE LOCAL BUILDING CODES AND REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS APPLICABLE TO SPECIFIC TRADES OR SUBCONTRACTOR'S WORK.
2.	CONTRACTOR WILL HAVE EXAMINED THE PREMISES AND SITE SO AS TO COMPARE THEM WITH THE DRAWINGS AND WILL BE SATISFIED AS TO THE CONDITION OF EXISTING WORK AND ADJACENT PROPERTY PRIOR TO SUBMISSION OF BID. NO ALLOWANCES WILL SUBSEQUENTLY BE MADE IN BEHALF OF THE CONTRACTOR BY REASON OF ANY OMISSION ON HIGHER PART TO INCLUDE THE COSTS OF ALL ITEMS OF WORK, EITHER LABOR OR MATERIALS, WHETHER THEY ARE OR ARE NOT ESPECIALLY OR PARTICULARLY SHOWN OR NOTED BUT WHICH ARE IMPLIED OR REQUIRED TO ATTAIN THE COMPLETED CONDITIONS PROPOSED IN THE DRAWINGS.
3.	ALL SUBCONTRACTORS TO THE GENERAL CONTRACTOR SHALL INSPECT THE SITE AND SHALL CONVEY ANY QUESTIONS REGARDING DESIGN INTENT AND SCOPE OF WORK TO THE ARCHITECT PRIOR TO SUBMITTING BID AND PRIOR TO COMMENCING WORK.
4.	CONTRACTOR SHALL COORDINATE THE WORK OF THE VARIOUS TRADES AND SUBCONTRACTORS AND SHALL BE RESPONSIBLE FOR ANY ACTS, OMISSIONS, OR ERRORS OF THE SUBCONTRACTORS AND OF PERSONS DIRECTLY OR INDIRECTLY EMPLOYED BY THEM.
5.	CONTRACTOR TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS INCLUDING SAFETY OF PERSONS AND PROPERTY FOR THE DURATION OF THE PROJECT.
6.	CONTRACTOR TO NOTIFY ARCHITECT PRIOR TO ORDERING OF ALL LONG LEAD ITEMS AND OF APPROXIMATE DELIVERY DATES.
7.	ALL CONSTRUCTION MATERIALS AND SUPPLIES TO BE STORED, HANDLED, AND INSTALLED, ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
8.	IF ERRORS OR OMISSIONS ARE FOUND IN THE DRAWINGS THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
9.	DRAWINGS SCHEMATICALLY INDICATE NEW CONSTRUCTION. THE CONTRACTOR SHOULD ANTICIPATE, BASED ON EXPERIENCE, A REASONABLE NUMBER OF ADJUSTMENTS TO BE NECESSARY TO MEET THE DESIGN OBJECTIVES AND SHOULD CONSIDER SUCH ADJUSTMENTS AS INCLUDED IN THE SCOPE OF WORK.
10.	WHEN SPECIFIC FEATURES OF CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SIMILAR CONDITIONS.
11.	ALL DIMENSIONS TO BE TAKEN FROM NUMERIC DESIGNATIONS ONLY; DIMENSIONS ARE NOT TO BE SCALED OFF DRAWINGS.
12.	THESE NOTES TO APPLY TO ALL DRAWINGS AND GOVERN UNLESS MORE SPECIFIC REQUIREMENTS ARE INDICATED APPLICABLE TO PARTICULAR DIVISIONS OF THE WORK.SEE SPECIFICATIONS AND GENERAL NOTES IN THE SUBSECTIONS OF THE DRAWINGS.
13.	ALL DIMENSIONS ARE TO FACE OF FRAMING, UNLESS OTHERWISE NOTED.
14.	WEATHERSTRIP ALL DOORS LEADING FROM HEATED TO UNHEATED AREAS.Provide VINYL BEAD TYPE WEATHERSTRIPPING AT THESE DOORS AND WINDOWS. ALL SIDES OF THE DOOR MUST BE WEATHERSTRIPPED, INCLUDING THE THRESHOLD.
15.	CAULK AND SEAL OPENINGS IN BUILDING EXTERIOR 1/8" OR GREATER TO PREVENT AIR INFILTRATION.
16.	WINDOWS TO BE MADE OPERABLE AND CLEANED, U.O.N.
17.	ALL WALL FRAMING TO BE 2x4 @ 16" O.C. MINIMUM, U.O.N.
18.	5/8" GYPSUM WALL BOARD ON WALLS.
19.	ALL GYPSUM AND/OR PLASTER SURFACES SHALL BE SMOOTH, CONTINUOUS, FREE OF IMPERFECTIONS, AND WITH NO VISIBLE JOINTS, U.O.N.
20.	STUCCO OVER WOOD SHEATHING SHALL INCLUDE TWO LAYERS OF GRADE D BUILDING PAPER.
21.	STRUCTURAL WOOD MEMBERS ADJACENT TO CONCRETE OR EARTH TO BE PRESSURE TREATED DOUGLAS FIR.
22.	ALL WALL AND FLOOR INSULATION TO BE R-19. ALL ROOF INSULATION TO BE R-23 MIN.
23.	ALL USERS OF THESE DRAWINGS AGREE BY USING THESE DRAWINGS TO HOLD THE ARCHITECT HARMLESS FOR ANY AND ALL WORK THAT DOES NOT CONFORM TO REQUIREMENTS AND MINIMUM STANDARDS OF THE UNIFORM BUILDING CODE, LOCAL ORDINANCES AND ACCEPTABLE STANDARDS.
24.	THE ARCHITECT HAS NO CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR ANY SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
25.	THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF PRODUCTS OR MATERIALS NOT SPECIFIED IN THESE DRAWINGS.
26.	ITEMS REQUIRED BY TITLE 24, "ENERGY CONSERVATION STANDARDS" SHALL BE CERTIFIED BY CALIFORNIA ENERGY COMMISSION (CEC). EQUIPMENT WHICH REQUIRES PREVENTATIVE MAINTENANCE FOR EFFICIENT OPERATION SHALL BE FURNISHED WITH THE COMPLETE AND NECESSARY MAINTENANCE INFORMATION.

ABBREVIATIONS	
& / @ Ø # (D) (E) (N) (R)	AND ANGLE F.O.C. CENTERLINE DIAMETER OR ROUND POUND OR NUMBER DEMOLISH EXISTING NEW REMOVE
A.B. ADJ. AGGR. ALUM. APPROX. ARCH. A.S.	ANCHOR BOLT ADJUSTABLE AGGREGATE ALUMINUM APPROXIMATE ARCHITECTURAL AIR SPACE
BD. BLDG. BLK. BLKG. BM. BOT.	BOARD BUILDING BLOCK BLOCKING BEAM BOTTOM
CAB. CEL. CER. CLG. CLKG. CL. CLR. CNTR. COL. CONC. CONT. CTR.	CABINET CEMENT CERAMIC CLEAR CAULKING CLOSET COUNTER COLUMN CONCRETE CONTINUOUS CENTER
DBL. DET. DIA. DIM. DISP. DN. D.O. DR. DS. DWG. DWR.	DOUBLE DETAIL DIAMETER DIMENSION DISPENSER DOWN DOOR OPENING DRAWING DRAWER
E E.A. EL. ELEC. ELEV. ENCL. EQ. EQUIP. EXST. EXT. F.D. FDN. FIN. FLR. FLASH.	EAST EACH ELEVATION ELECTRICAL ENCLOSURE EQUIPMENT EXISTING EXTERIOR DRAIN FOUNDATION FINISH FLOOR FLASHING
FLUOR. FLUOR. F.O.C. F.O.F. F.O.S. F.R. F.S. FT. FTG. FURR.	FLUORESCENT FIXTURE AT FACE OF CONCRETE FACE OF FINISH FACE OF STUDS FIRE RATED FULL SIZE FOOT OR FEET FOOTING FURRING
G.S.M. GA. G.F.I. QL. GND. GR. GYP.	GALVANIZED SHEET METAL GAGE GROUND FAULT INTERCEPTOR GLASS GROUND GRADE GYPSUM
H. H.B. H.C. HDWD. HDWR. HGT. HORIZ. HR.	HIGH HOSE BIB HOLLOW CORE HARDWOOD HARDWARE HEIGHT HORIZONTAL HOUR
I.D. INSUL. INT.	INSIDE DIAMETER (DIM.) INSULATION INTERIOR
LAM. LAV. L.O. LT.	LAMINATE LAVATORY LINE OF LIGHT
MAX. M.C. MECH. MEMB. MTL. MTD. MFR. MIN. MIR. MISC.	MAXIMUM MEDICINE CABINET MECHANICAL MEMBRANE METAL MOUNTED MANUFACTURER MINIMUM MIRROR MISCELLANEOUS
N. N.I.C. NO. NOM. N.T.S.	NORTH NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE
O.A. OBS. O.C. O.D. OPNG. OPP.	OVERALL OBSCURE ON CENTER OUTSIDE DIAMETER (DIM.) OPENING OPPOSITE
P.G. PL. P.LAM. PLYWD.	PAINT GRADE PLATE PLASTIC LAMINATE PLYWOOD

CODE RELATED NOTES	
1) FIRE-STOPS SHALL BE PROVIDED IN THE FOLLOWING SPACES: A) CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AT THE CEILING AND FLOOR LEVELS, AND AT TEN-FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL. B) AT ALL INTERSECTIONS BETWEEN VERTICAL AND HORIZONTAL SPACES SUCH AS SOFFITS, DROP AND COVE CEILINGS. C) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN, AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF THE STAIRS IF THE WALLS UNDER THE STAIRS ARE UNFINISHED. DOWN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS WHICH AFFORD A PASSAGE FOR FIRE AT THE FLOOR AND CEILING LEVELS WITH COMBUSTIBLE MATERIALS. EJAT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY-BUILT CHIMNEYS. EJAT OPENINGS SHALL BE PROVIDED WITH ACCESS 22 INCHES BY 30 INCHES MINIMUM HEAD-ROOM CLEARANCE SHALL BE 30 INCHES. 2) PRE-MANUFACTURED ITEMS, INCLUDING BUT NOT LIMITED TO, FIREPLACES, WOOD-BURNING STOVES, FIXTURES, EQUIPMENT AND APPLIANCES SHALL BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS AND REQUIREMENTS. 3) ATTIC SPACE SHALL BE PROVIDED WITH ACCESS 22 INCHES BY 30 INCHES MINIMUM HEAD-ROOM CLEARANCE SHALL BE 30 INCHES. 4) ATTIC SPACES SHALL BE PROVIDED WITH CROSS-VENTILATION. MINIMUM VENTILATION EQUAL TO 1/150 OF THE AREA OF THE ATTIC. 5) ALL HABITABLE ROOMS SHALL BE PROVIDED WITH NATURAL LIGHT BY MEANS OF EXTERIOR WINDOWS OR SKYLIGHTS WITH AN AREA NOT LESS THAN 1/10 OF THE FLOOR AREA OF SUCH A ROOM WITH A MINIMUM OF TEN SQUARE FEET.	6) ALL HABITABLE ROOMS SHALL BE PROVIDED WITH NATURAL VENTILATION BY MEANS OF EXTERIOR OPENINGS WITH AN AREA OF NOT LESS 1/20 OF THE FLOOR AREA OF SUCH ROOMS WITH A MINIMUM OF FIVE SQUARE FEET. 7) BARS, GRILLES, GRATES OR SIMILAR DEVICES MAY BE INSTALLED ON AN EMERGENCY ESCAPE OR RESCUE WINDOWS AND DOORS PROVIDED: A) SUCH DEVICES ARE EQUIPPED WITH APPROVED RELEASE MECHANISMS WHICH CAN BE OPERATED FROM THE INSIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT; AND B) THE BUILDING IS EQUIPPED WITH SMOKE DETECTORS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE. 8) ALL BATHROOMS, WATER CLOSET COMPARTMENTS, LAUNDRY ROOMS AND SIMILAR ROOMS SHALL BE PROVIDED WITH NATURAL VENTILATION BY MEANS OF AN OPERATING EXTERIOR OPENING WITH AN AREA OF NOT LESS THAN 1/20 OF THE FLOOR AREA OF SUCH ROOMS WITH A MINIMUM OPENING OF 1.5 SQUARE FEET. IN LIEU OF NATURAL VENTILATION, A MECHANICAL VENTILATION SYSTEM CONNECTED TO THE OUTSIDE MAY BE PROVIDED. THE MECHANICAL VENTILATION SYSTEM SHALL BE CAPABLE OF FIVE AIR CHANGES PER HOUR & EQUIPPED WITH A BACKDRAFT DAMPER. THE POINT OF DISCHARGE SHALL BE A MINIMUM OF 3' CLEAR FROM ANY OPENING INTO THE BUILDING. 9) ALL PLATFORMS AND OPEN SIDES OF STAIRWAYS, LANDINGS, RAMPS, BALCONIES OR PORCHES WHICH ARE MORE THAN 30 INCHES ABOVE GRADE OR FLOOR BELOW, SHALL BE PROTECTED BY A GUARDRAIL. GUARDRAILS SHALL BE 36 INCHES IN HEIGHT WITH INTERMEDIATE RAILINGS SPACED TO PREVENT A 4 INCH SPHERE FROM PASSING THROUGH. 10) THE MINIMUM WIDTH OF STAIRWAYS SHALL NOT BE LESS THAN 36 INCHES. THE MINIMUM RUN SHALL BE 9 INCHES AND THE MAXIMUM RISER HEIGHT SHALL BE 8 INCHES. THERE SHALL NOT BE A VARIATION OF GREATER THAN 3/8 INCH BETWEEN ANY RISER. THE MINIMUM HEAD-ROOM CLEARANCE SHALL BE 6'-8" INCHES AS MEASURED PLUMB FROM THE STAIR TREAD NOSING.
SAWARD PRIVATE RESIDENCE 43 Solitaire Lane, Aliso Viejo, CA. 92656	
	

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ARCHITECT: PixelArch Ltd. 24001 Calle De La Magdalena, unit 389C 3896, Laguna Hills, CA 92653 Tel: (415) 316 7162 info@pixelarchltd.com www.pixelarchltd.com	PROJECT LOCATION: 43 Solitaire Lane, Aliso Viejo, CA. 92656 PARCEL NUMBER: 623-301-47 OCCUPANCY TYPE: Residential PARCEL SIZE: 0.16 acres ZONING: GENERAL PLAN: OS (Open Space) Zoning District SPRINKLER: NON-SPRINKLED																																																																																																																				
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SCOPE:

●2nd FLOOR ADU

●FIRST FLOOR ADDITION

●FIRST FLOOR BATHROOM

●OPEN ELEVATION OVER LIVING ROOM TO REMAIN

SAWARD PRIVATE RESIDENCE

43 Solitaire Ln, Unit B, Aliso Viejo, CA. 92656

Seal:	
Revision Notes:	
Date	Description
04/19/25	REVISION

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COVER SHEET

Scale: --

Date: 04/12/2024

Page No. :

A.000

SPECIFICATIONS

DIVISION 00 - CONDITIONS OF CONTRACT

0.01 Terminology

- Referenced Organizations
 - ACI American Concrete Institute (www.concrete.org)
 - AISC American Institute of Steel Construction (www.aisc.org)
 - AITC American Institute of Timber Construction (www.aitc-iplam.org)
 - ANSI American National Standard Institute (www.ansi.org)
 - APA American Plywood Association (www.apawood.org)
 - ASHRAE American Society of Heating, Refrigeration, and Air Conditioning Engineering (www.ashrae.org)
 - ASTM American Society for Testing and Materials (www.astm.org)
 - AWI Architectural Woodwork Institute (www.awinet.org)
 - AWS American Welding Society (www.aws.org)
 - AAMA Architectural Aluminum Manufacturers' Association (www.aamanet.org)
 - CRI Carpet and Rug Institute (www.carpet-rug.org)
 - CEC California Energy Commission (www.energy.ca.gov)
 - CRSI Concrete Reinforcing Steel Institute (www.crsi.org)
 - FS Federal Specification (<http://apps.fss.gsa.gov/publicspecs/>)
 - GA Gypsum Association (www.gypsum.org)
 - GANA Glass association of North America (www.glasswebsite.com)
 - ICC International Code Council (www.iccsafe.org)
 - NIST PS National Institute of Standards and Technology, Product Standards (www.nist.org)
 - NEMA National Electrical Manufacturers Association (www.nema.org)
 - NFPA National Fire Protection Association (www.nfpa.org)
 - NFRC National Fenestration Rating Council (www.nfrc.org)
 - NOMA National Oak Flooring Manufacturers Association (www.noma.org)
 - NPCA National Paint and Coatings Association (www.npca.org)
 - NRCA National Roofing Contractors Association (www.nrca.net)
 - WDMA National Wood Window and Door Association (www.wdma.com)
 - PDCA Painting and Decorating Contractors of America (www.pdca.org)
 - SDI Steel Door Institute (www.steeldoor.org)
 - SMACNA Sheet Metal and Air Conditioning Contractors National Association (www.smacna.org)
 - TCNA Tile Council of North America (www.tcna.org)
 - TPJ Truss Plate Institute (www.tpinst.org)
 - TRI Tile Roofing Institute (www.tileroofing.org)
 - UL Underwriters' Laboratories Inc. (www.ul.com)
 - WCLIB West Coast Lumber Inspection Bureau (www.wclib.org)
 - WI Woodwork Institute (www.woodworkinstitute.com)
 - WWPA Western Wood Products Association (www.wwpa.org)
- Definitions
 - 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.
 - Owner: The term "Owner" shall mean the Owner or the Owner's authorized representative(s).
 - Contractor: The term "Contractor" shall mean the general contractor or the general contractor's authorized representative(s).
 - Architect: The term "Architect" shall mean PixelArch ltd. authorized representative(s).
 - Engineer: The term "Engineer" shall mean the structural engineer or the structural engineer's authorized representative(s).
 - 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 editions of: The California Building Code (CBC), California Residential Code (CRC), California Electric Code (CEC), California Plumbing Code (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 rating. 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 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:
 - Site grading, subgrade preparation, cutting slopes, excavation, placement of engineered fill material and compaction is in accordance with the Soils Report.
 - The utility trenches have been properly backfilled and compacted.
 - 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 landscapes, pad grade under building shall have positive slope to a perforated drain set in gravel trench and extend pipe to all portions of underlayment 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 220th of one foot, plus or minus.
- Site grading shall be within 52.0th 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:
 - ACI 301 "Specifications for Structural Concrete for Buildings"
 - ACI 318 "Building Code Requirements for Reinforced Concrete"
 - CRSI "Manual of Standard Practice"
- See Structural Engineer's drawings for additional requirements.

3.02 General Requirements

- Provide underlayment 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 details, location of sleeves, inserts, etc. to be cast in concrete and for extent of depressions, cuts and ramps.
- Finishes:
 - All interior slabs shall receive trowel smooth finish (U.O.N.).
 - All driveways, sidewalks, and stairs shall receive broom-smooth finish (U.O.N.).
 - Garage slabs and other interior slabs that will remain unfinished shall be treated with Lipodith 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 A108.6 and A118.3. 4.02
- General Requirements
 - Concrete Block
 - Mortar joints to be "flush" (U.O.N.).
 - Bond shall be "running" (U.O.N.).
 - Brick:
 - 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 concave where subject to freezing.
 - Bond shall be "running" (U.O.N.).
 - Stone:
 - 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, tooing 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:
 - Mortar for glass block installed on exterior walls and other damp location shall be waterproofed with Latitcrete 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 other 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, polyethylene 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:
 - Lumber:
 - Structural lumber and their wood fasteners shall conform with CBC Chapter 23 and/or relevant chapters of the CRC.
 - 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.
 - All timbers 6 x 8 and larger exposed to view shall be free of heart content (FOHC), with moisture content of 22% maximum.
 - Max. deflection (DL + LL) shall be: Floor with Tile = U/720
- All wood shall be non-tropical, reused, reclaimed, or FSC Certified

6.02 General Framing Requirements:

- Blocking:
 - Block floor joists at all supports, line up double joists under all walls parallel to floor joists and space double joists under plumbing walls.
 - Provide solid full width blocking or post below all structural posts - continuous to foundation.
 - Provide blocking and nailers for all finishes and fixtures as required.
 - Provide blocking in walls at ceiling lines.
 - Corbels, knee braces, etc., shall be construction select materials. At double framed floors "sleepest" shall be perpendicular to framing below.
- 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.
- 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:
 - Insulation shall be installed per the California Energy Code requirements.
 - Thermal Batt/Blanket Insulation: Mineral-Fiber Blanket complying with ASTM C 665, Type I (blankets without membrane facing).
 - Thermal insulation/blow-in blanket insulation glass fiber loose-fill complying with ASTM C 764 Type I (for pneumatic) or Type II (for poured) in attic.
 - 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.
 - All plumbing walls adjacent to interior living spaces shall be sound insulated with fiberglass batts.
 - Concrete Tile Roofing:
 - 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.
 - Concrete Tile Roofing shall be applied according to manufacturers specifications.
 - 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.
 - 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 nails 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-asphalted 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.
 - 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.).
 - 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 completion 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:
 - All work shall comply with the NCRA "Roofing and Waterproofing Manual" and CBC 1507.2 or CRC R905.2.
 - Asphalt shingles shall be applied according to manufacturers specifications.
 - The minimum performance standard for asphalt shingles shall be Elk Premium Roofing - Prestique 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.
 - For asphalt shingle underlayment shall be 15 lb. felt, 2 layers at pitch less than 4:12.
 - 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.).
 - 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 completion 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:
 - All work shall comply with the NCRA "Roofing and Waterproofing Manual" and CBC 1507.10 or CRC R905.11.
 - Built-up roofing shall be applied according to manufacturers specifications.
 - The minimum performance standard for built up roofing for nonable 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 manufacturer. Color as selected by Owner (U.O.N.).
 - 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 completion 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:
 - 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).
 - 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.
 - The minimum slope for standing-seam metal roof panel systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope).

Minimum slopes for metal roof panels shall comply with following:

- 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).
- 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.
- 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 1 G 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	1 G 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
Tempe and tempe-coated stainless	Tempe 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 (0.03%-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 GFGO 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:

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

Underlayment and high wind:

Underlayment applies in areas subject to high winds [V_w 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 manufacturer's installation instructions. Fasteners are to be applied along the overlap not more than 36" (914 mm) on center.

Underlayment installed where V_{asf} 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-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [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.

- 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 completion 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:
 - All work shall comply with the SMACNA "Architectural Sheet Metal Manual".
 - All metal flashing to conform to ASTM A 653, Commercial grade (zinc coated G 90).
 - 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.
 - Sheet metal flashing shall be installed at all locations where different material intersect such as roof to wall, roof to roof, deck/block/landing to wall, penetrations into walls, chimneys and as detailed. Flash and counterflash as required to make watertight.
 - 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. Use manufacturer's printed installation instructions recommendations for roofing tile.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION (CONTINUED)

- Sheathing Paper:
 - Provide sheathing paper under exterior metal lath and plaster, under wood siding, under masonry veneer, under metal flashings and where indicated or detailed.
 - Use Tyvek House Wrap.
 - 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.
 - Lap paper over head flashings and base screeds, roof and waterproof membranes, and under sill pedestals.
 - Wall openings: Individually flash all exterior openings for fixtures such as windows, doors and vents as detailed to make them water tight.
- Flexible Flashings:
 - Forlither system.
 - Moiststop E-Z seal adhesive flashing for dampproofing at all exterior door window heads and jams.
 - Forlithash 40 mil waterproof flashing for waterproofing at all horizontal plaster surfaces, horizontal penetrations, and windowsills.
 - Moiststop sealant for sealing around windows.
- Deck Waterproofing:
 - The minimum performance standard for waterproof sheet membrane at waterproof decks with tile or concrete finish shall be WR Grace "Butluthene 3000". All products and components shall be by same manufacturer. Install in strict accordance with manufacturer's written instructions to assure waterproof integrity.
 - 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.
 - 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 personally during membrane waterproofing work to review installation procedures.
 - 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 (e.g. 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:
 - 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.
- Frostopping
 - 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 frostopping the penetration.
 - Firestopping materials shall conform to CBC Section 713 for fire resistance standards and requirements for penetrations in walls and partitions and floors.
 - Through-Penetration Firestopping Materials: Hilt Construction Chemicals, Inc., International Protective Coatings Corp., Specified Technologies, Inc., The ResolSeal 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 frostopping.
 - Mineral Fiber Firestopping Materials: Semirigid mineral fiber insulation, nominal 4-pcf density, complying with ASTM C 612, Type IA and IB.
 - 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."
 - Provide solid continuous frostopping 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.
 - 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.
 - 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.
 - Identify firestop systems after installation. Identify the firestop system that has been installed and include the appropriate UL Design Number.
- Caulking and Sealants/Grades:
 - 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.
 - 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 1-1/2 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.
- 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.
- 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:
 - Doors shall meet or exceed the standards of the AWI/AWMAC "Architectural Wood Standards", Section 9, Custom Grade (U.O.N.).
 - Wood doors shall be 1-3/4" thick solid core at exterior doors and where noted at selected interior doors. If interior doors shall be 1-3/4" thick, 6"-8" interior doors shall be 1 1/2" thick.
 - Slite & Rail Wood Doors:
 - Masonite International Corporation, molded panel series, or equal. See Window & Door schedule. Final windows and doors style to be selected by owner.



Project Name and Address:

SAWARD PRIVATE
RESIDENCE

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-WPHS-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 frame 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-Tu 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: Machineable 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, flined 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 1/2 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 19-inch by 24-inch opening unobstructed by pipes, ducts, and similar construction per CBC 1209.1.1 or CRC R 408.4.
- 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: 1/4 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 AIA/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.
- i. 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" polystyrene system shall be La-Habra-Wall (ICC-ES ECR-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 1, 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 Mortarsal Mason's Line with Portland Cement and Sand in accordance with ANSI A 42.2, Type L.
- E. Portionments:
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 layers 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, 1 in. 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 criteria 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 Sampler: 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 1/4", 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 cement 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 1-1/4 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 at field cut edges before installing.
- D. Pre-drill nail holes, if necessary, to prevent breakage.
- f. Siding Installation:
- A. Starting: Install a minimum 1/4 inch thick lath starter strip @ the bottom course of the wall.
- Apply planks horizontally with minimum 1-1/4 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 3/4 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 2 coats 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 or by 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-W-408A 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. If washer standpipe shall extend between 18 and 30 inches above its trap. The trap shall be between 5 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 tubs, showers, spas and similar 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 archetdural 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 R13.1.3 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 furmed spaces shall be installed as per CMC Section 904.11 and include the following:
 - 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).
 - Continuous solid flooring not less than 24 inches wide from access to furnace.
 - A level working platform minimum 30 inches in depth along entire firebox side of furnace.
 - A permanent 110V electrical outlet and lighting fixture (controlled by switch) located at required access) at or near furnace.
 - 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.
 - 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 rest 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 future 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 conforming to listed 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:
 - Main electrical service shall be 200 AMP minimum (U.O.N.)
 - Install a main service disconnect as per CEC 230-70
 - Provide grounding at service entrance to comply with CEC Section 250
 - Branch circuit load distribution shall conform to CEC Section 210
 - Panel and sub-panels shall not be located in closets or similar confined spaces. (CEC 110-26)
 - Labels wire smaller than No. 6 A.W.G. shall not be used in electrical wiring.
 - Protection of wiring shall be as per CEC Sections 320-334.
- Receptacle Outlets:
 - 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).
 - Provide GFCI (GFI) protection per CEC Section 210-8(a).
 - Outlet locations shall comply with CEC Sections 210-50 and 210-52
 - Switched outlets shall be one-half hot (U.O.N.).
- Lighting:
 - All light fixtures shall be LED (U.O.N.)
 - All light fixtures shall comply to CEC Section 410 for type, ratings, and installation.
 - Ceiling locations shall comply to CEC Section 210-70 and 410.
 - Fixture mounted junction boxes shall be capable of supporting 60# minimum (U.O.N.) and supported as per CEC Section 410-36
 - Fixtures installed in closets shall comply to CEC Section 410-16
 - Install switches at 4'7" 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

- GENERAL CONTRACTOR 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.
- PATCH AND REPAIR (E) WALLS & CEILINGS AS REQUIRED AND PREPARE TO RECEIVE (N) FINISHES AS SCHEDULED. VERIFY EXTEND OF WORK IN THE FIELD.
- (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. PREPARE ALL GYP. BD. WALL SURFACES TO RECEIVE PARTITIONS, AND WALL FINISHES.
- PROVIDE SIGNAGE AS REQUIRED BY APPLICABLE CODES. SEE G 2.01. FOR PLACES, LOCATIONS, AND TYPICAL MOUNTING HEIGHTS OF SIGNAGE.
- SEE G.00 FOR ABBREVIATIONS AND SYMBOLS USED ON THESE SHEETS.
- 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.
- NEW WALLS TO ALIGN WITH CENTER OF (E) WINDOW MULLIONS U.O.N.
- 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 3,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR. LOCATIONS INDICATED ON THE DRAWINGS SHALL BE VERIFIED WITH THE FIRE MARSHALL AS BEING ACCEPTABLE.
- REFER TO SHEET G 2.01 FOR TYPICAL MOUNTING HEIGHTS OF LIGHT STROBES, LIGHT SWITCHES, THERMOSTATS, OUTLETS, FIRE EXTINGUISHER CABINETS, ETC.
- THERMOSTATS TO BE LOCATED ABOVE LIGHT SWITCHES, TYP. SEE G 2.00.
- 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 EXISTS, 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.
- REFER TO DOOR SCHEDULE ON SHEET A 9.00 FOR MORE INFORMATION ON SCOPE OF WORK

- RELATED TO DOORS.
- PROVIDE BACKING AS REQUIRED PER FURNITURE REQUIREMENTS.
- THE CONSTRUCTION PLANS INDICATE THE TYPE AND LOCATION OF NEW INTERIOR PARTITIONS, DOORS, WINDOWS, CABINETWORK, ETC. THE BUILDING SHELL AN EXISTING CONDITION.
- 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.
- 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.
- 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. REFER TO DETAIL 1, SHEET A11.01.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING 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.
- FOR TYPICAL PARTITIONS, AND PARTITION DETAILS REFER TO SHEET A 9.10.
- 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 SUB-CONTRACTORS PRIOR TO CONSTRUCTION OR FABRICATION PROCEEDING.



Project Name and Address:

SAWARD PRIVATE RESIDENCE

43 Solitaire Ln, Unit B, Also Viejo, CA. 92656

Seal:

Revision Notes:

Date	Description

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GENERAL NOTES (2)

Scale: -

Date: 04/12/2024

Page No. :

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

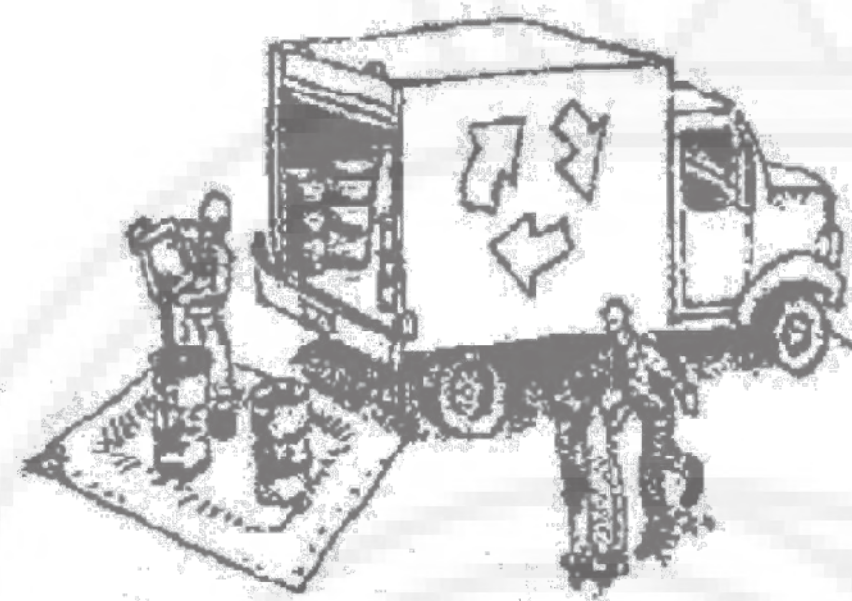
YNARESPON PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	YNARESPON PARTY	4.106.2.4 New multifamily dwellings, hotels and motels and new residential parking facilities.	YNARESPON PARTY	Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code.	YNARESPON PARTY	4.304 OUTDOOR WATER USE
	301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.		4.106.4.2.1 Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.		4.106.4.2.4 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.		4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
	301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.		4.106.4.2.2 Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.		4.106.4.2.5 Electric Vehicle Ready Space Signage. Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).		NOTES: 1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/
	The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.		1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.		4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings. When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.		DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY
	Notes: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.		The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.		Notes: 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.		4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE
	Notes: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 11101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.		Exceptions: 1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces. 2. When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.		4.106.4.3.1 Water Conserving Plumbing Fixtures and Fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.1.4.		4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.
	301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.		2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.		Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 11101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.		4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
	SECTION 302 MIXED OCCUPANCY BUILDINGS		Exception: Areas of parking facilities served by parking lifts.		4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.		4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.1.1, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.
	302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. Exceptions: 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable. 2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.		Notes: a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.		Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.		Exceptions: 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.
	DIVISION 4.1 PLANNING AND DESIGN		4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.		4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.		4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.
	ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development CBC California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety OSHPO Office of Statewide Health Planning and Development LR Low Rise HR High Rise AA Additions and Alterations N New		2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.		4.303.1.3 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.		1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material collected will be taken. 4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.
	CHAPTER 4 RESIDENTIAL MANDATORY MEASURES		Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.		4.303.1.3.1 Multiple Showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.		4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.
	SECTION 4.102 DEFINITIONS 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)		Notes: a. Construction documents shall show locations of future EV spaces. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.		Note: A hand-held shower shall be considered a showerhead.		Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.
	FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.		2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.		4.303.1.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.		4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.
	WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.		Exception: Areas of parking facilities served by parking lifts.		4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 80 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.		4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.
	4.106 SITE DEVELOPMENT 4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.		3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.		4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.		4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4..
	4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site. 1. Retention basins of sufficient size shall be utilized to retain storm water on the site. 2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency. 3. Compliance with a lawfully enacted storm water management ordinance.		When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.		4.303.1.4.5 Pre-rinse spray valves. When installed, shall meet the requirements in the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.		Notes: 1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section. 2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).
	Notes: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)		4.106.4.2.2.1 Electric vehicle charging stations (EVCS). Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1. Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.		FOR REFERENCE ONLY: The following table and code section have been reprinted from the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).		4.410 BUILDING MAINTENANCE AND OPERATION 4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building: 1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 2. Operation and maintenance instructions for the following: a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. b. Roof and yard drainage, including gutters and downspouts. c. Space conditioning systems, including condensers and air filters. d. Landscape irrigation systems. e. Water reuse systems. 3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9. Information about state solar energy and incentive programs available. 10. A copy of all special inspections verifications required by the enforcing agency or this code. 11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures. 12. Information and/or drawings identifying the location of grab bar reinforcements.
	4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading and drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales 2. Water collection and disposal systems 3. French drains 4. Water retention gardens 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. Exception: Additions and alterations not altering the drainage path.		4.106.4.2.2.1.2 Location. EVCS shall comply with at least one of the following options: 1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building. Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3. 4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions. The charging spaces shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2743 mm). 3. One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. 4.106.4.2.2.1.3 Accessible EV spaces. In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A. 4.106.4.2.3 EV space requirements. 1. Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device. Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code. 2. Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.		4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings. Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code. 4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code. NOTE: THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.		4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive. Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.
	4.106.4.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".		2. Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.		TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019 PRODUCT CLASS [spray force in ounce force (ozf)] MAXIMUM FLOW RATE (gpm) Product Class 1 (< 5.0 ozf and < 1.00 gpm) Product Class 2 (> 5.0 ozf and < 1.20 gpm) Product Class 3 (> 8.0 ozf and 1.28 gpm) Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray valves manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf) [113 grams-force (gf)]		DIVISION 4.5 ENVIRONMENTAL QUALITY SECTION 4.501 GENERAL 4.501.1 Scope The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.
					TABLE - MAXIMUM FIXTURE WATER USE FIXTURE TYPE FLOW RATE SHOWER HEADS (RESIDENTIAL) 1.8 GMP @ 80 PSI LAVATORY FAUCETS (RESIDENTIAL) MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS 0.5 GPM @ 60 PSI KITCHEN FAUCETS 1.8 GPM @ 60 PSI METERING FAUCETS 0.2 GAL/CYCLE WATER CLOSET 1.28 GAL/FLUSH URINALS 0.125 GAL/FLUSH		SECTION 4.502 DEFINITIONS 5.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference) AGRFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements. COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, as all specified in California Code of regulations (CCR), title 17, Section 93120.1. DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

[illegible]

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control



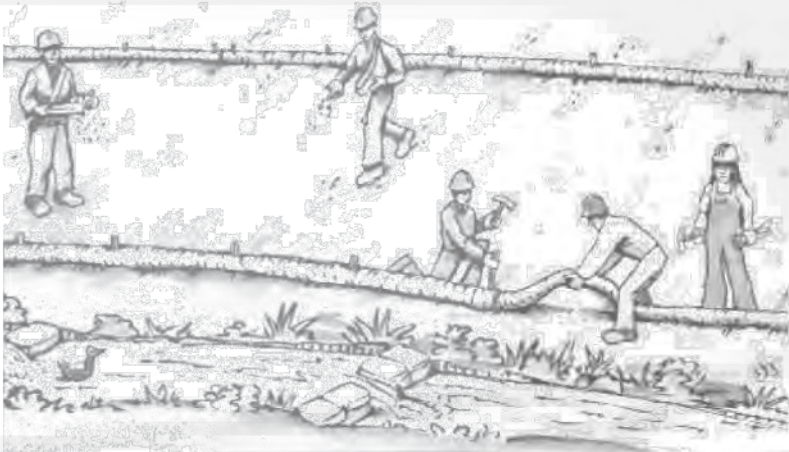
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

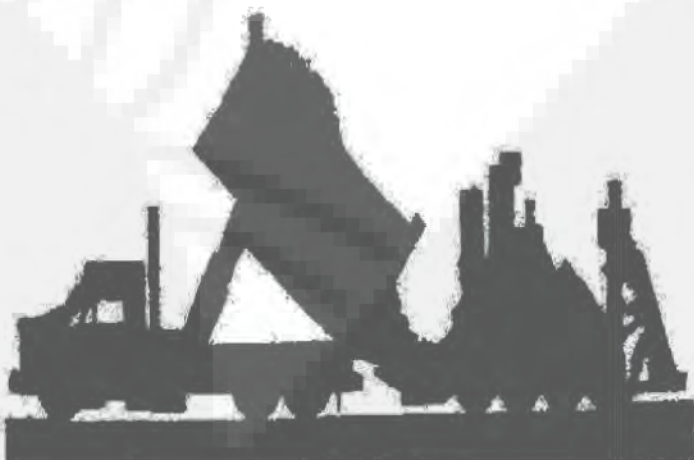


- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
 - Unusual soil conditions, discoloration, or odor.
 - Abandoned underground tanks.
 - Abandoned wells
 - Buried barrels, debris, or trash.

Paving/Asphalt Work



- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application



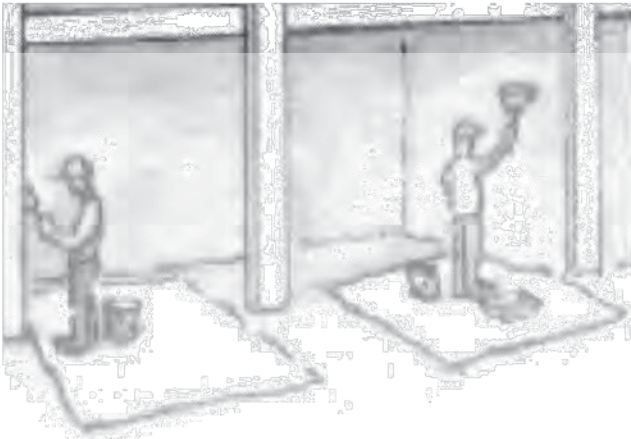
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping



- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

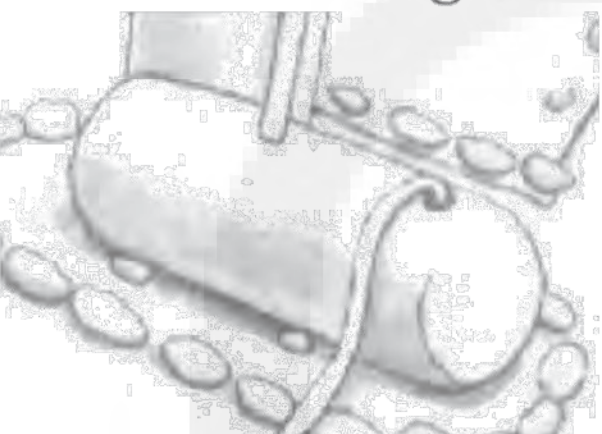
Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to \$10,000 per day!

Project Name and Address:

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RESIDENCE

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Viejo, CA. 92656

Seal:

Revision Notes:

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PRACTICES)

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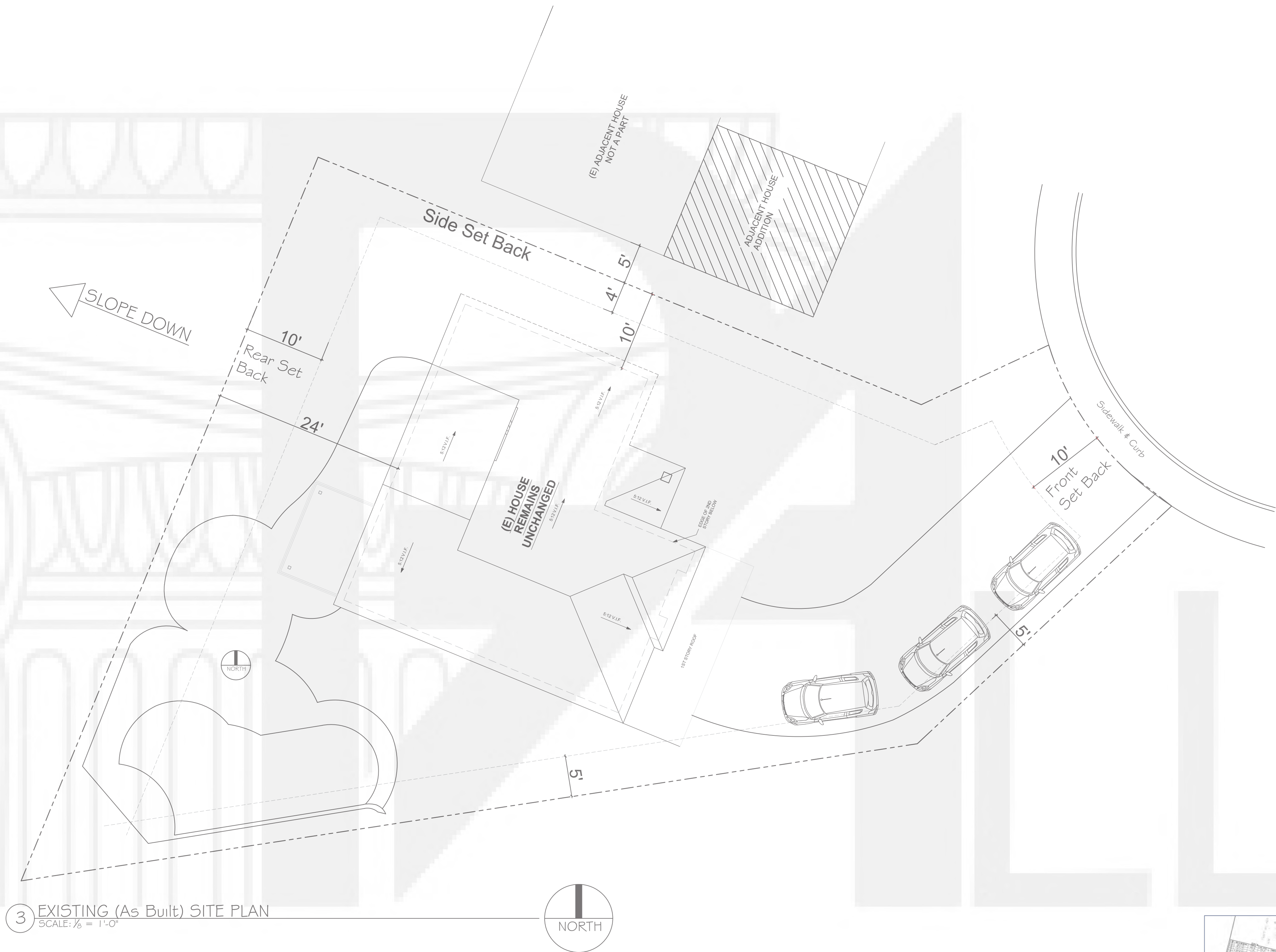
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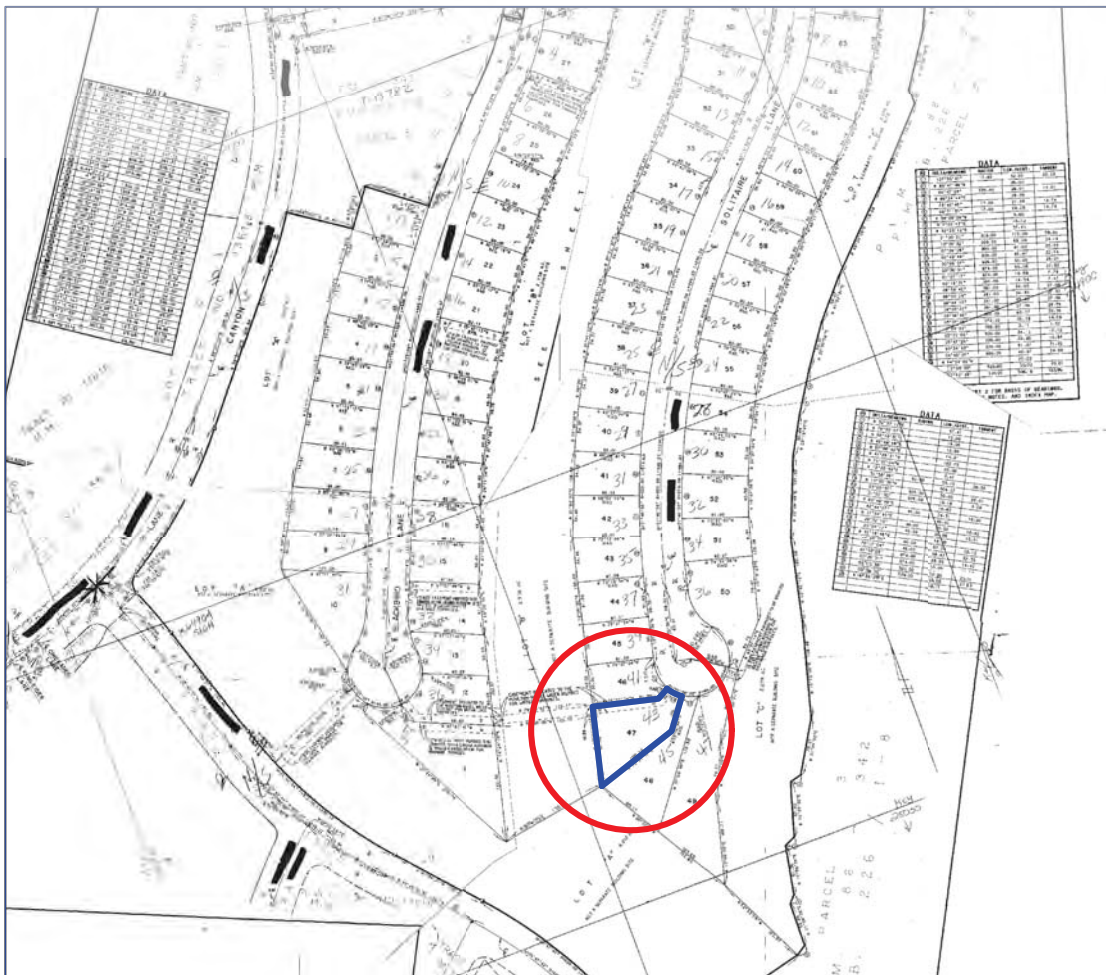
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**EXISTING
(AS BUILT)
SITE PLAN**

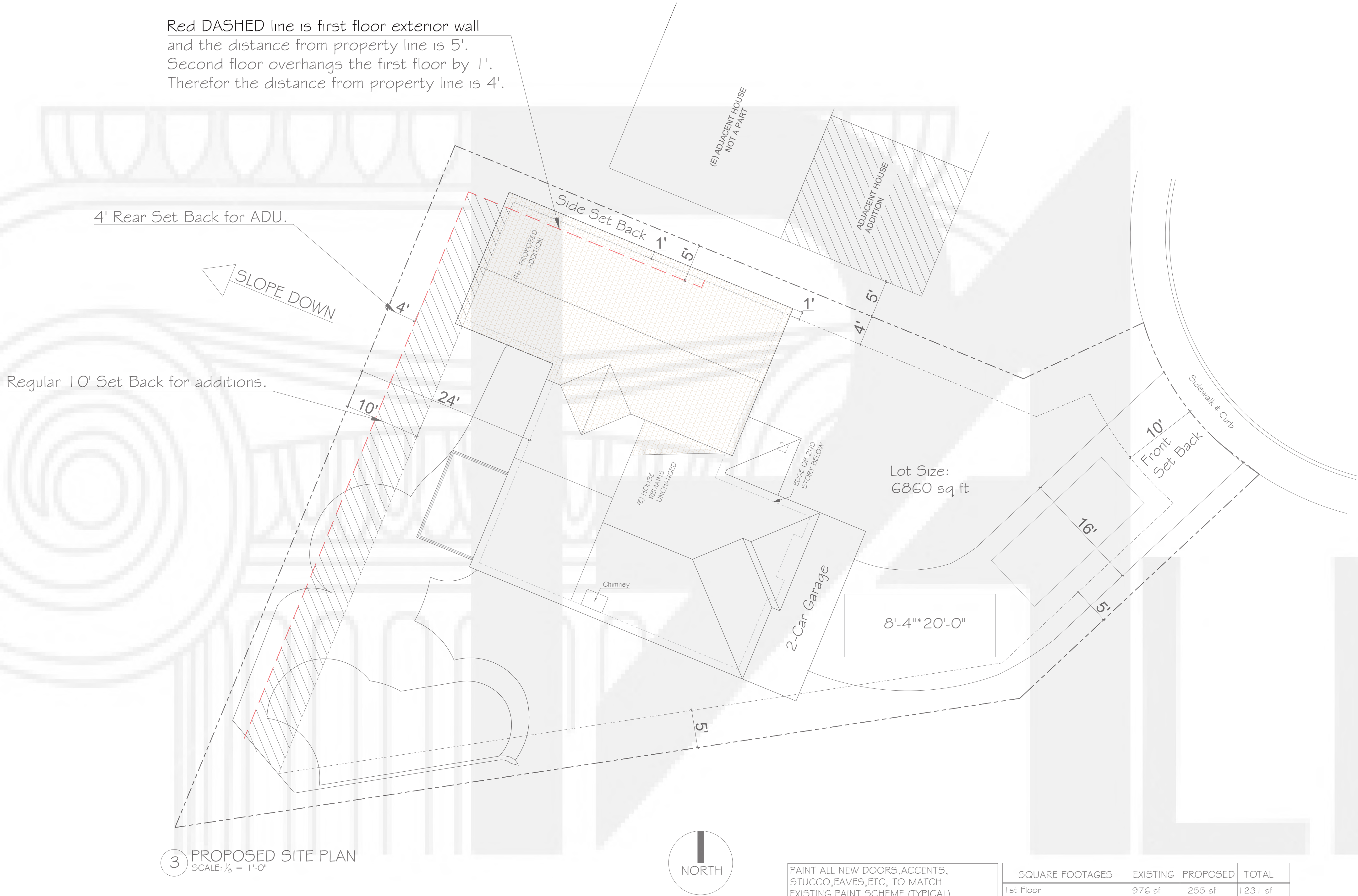
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A.101.1



3 EXISTING (As Built) SITE PLAN
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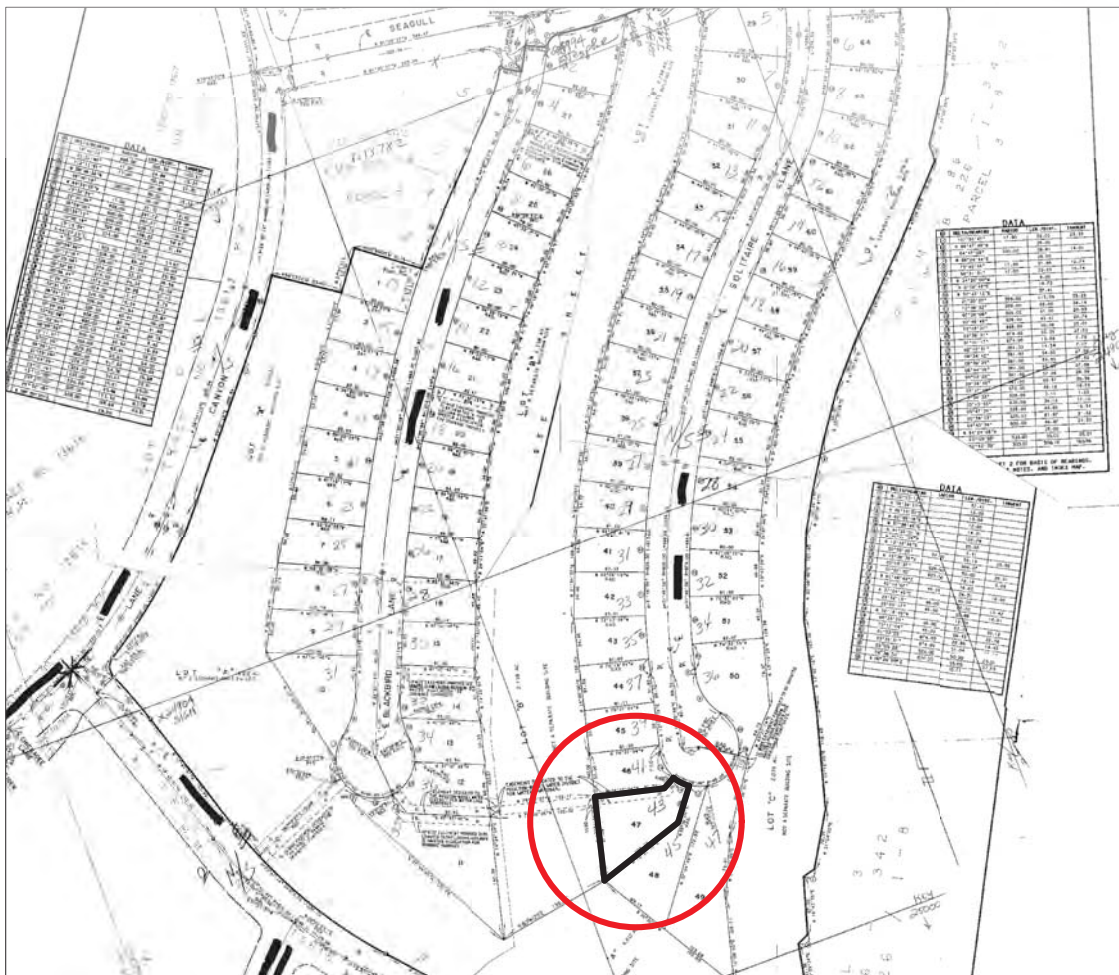


PAINT ALL NEW DOORS,ACCENTS, STUCCO,EAVES,ETC, TO MATCH EXISTING PAINT SCHEME (TYPICAL)

ALL windows sizes as indicated on elevations
ALL new windows and select new doors, windows and door sizes to match existing LIKE FOR LIKE

SQUARE FOOTAGES	EXISTING	PROPOSED	TOTAL
1st Floor	976 sf	255 sf	1231 sf
2nd Floor	827 sf		827 sf
1st Floor ADU Entry/Storage		66 sf	66 sf
2nd Floor ADU		600.36 sf.	600.36 sf.
Total Livable Space	1803 sq.ft.	821.36 sq.ft.	2724 sq.ft.
Garage	450 sf		450 sf
TOTAL DWELLING	2253sq.ft.	878 sq.ft.	3131 sq.ft.

VICINITY MAP



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PROPOSED SITE PLANS

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

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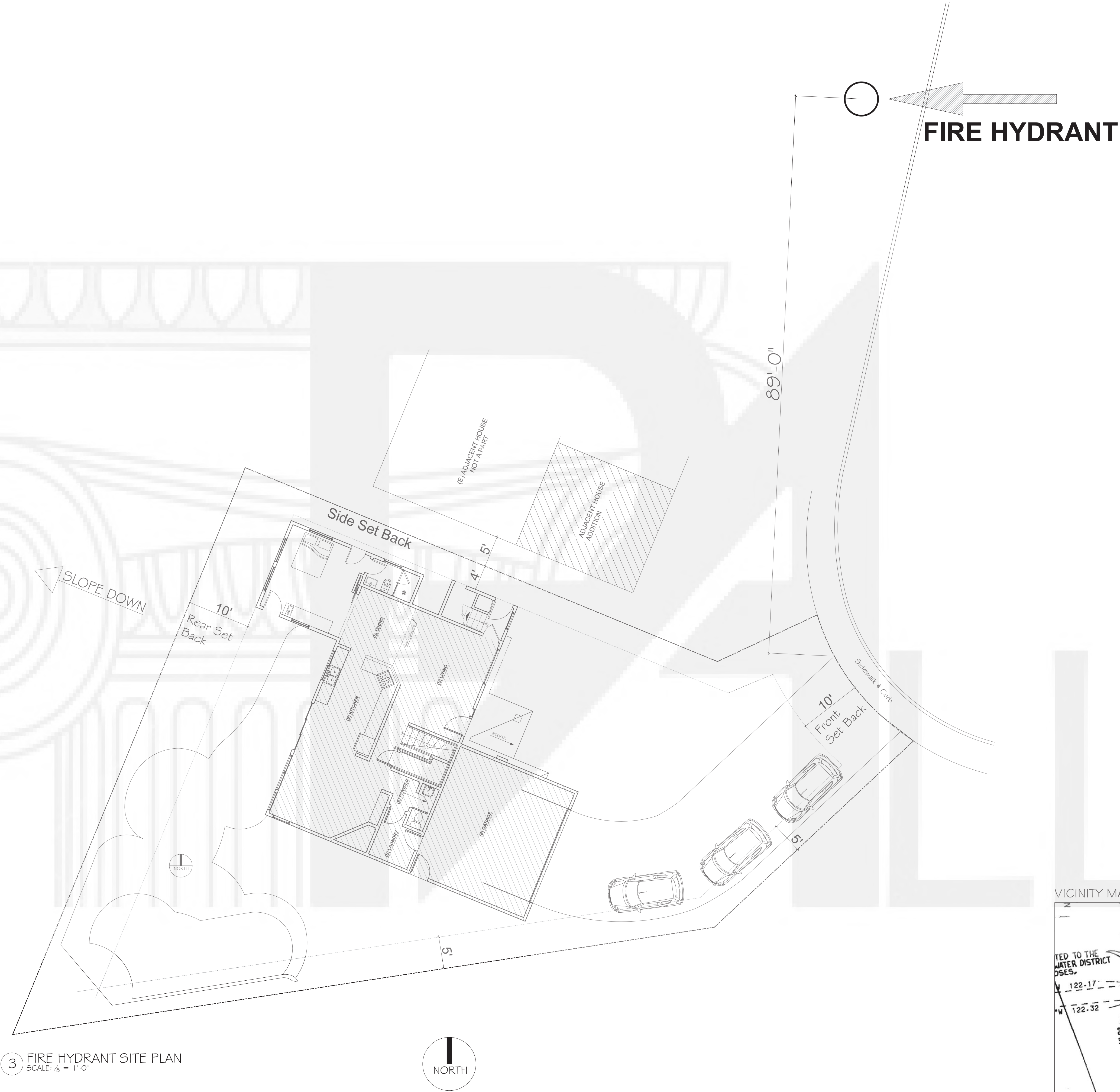
FIRE HYDRANT

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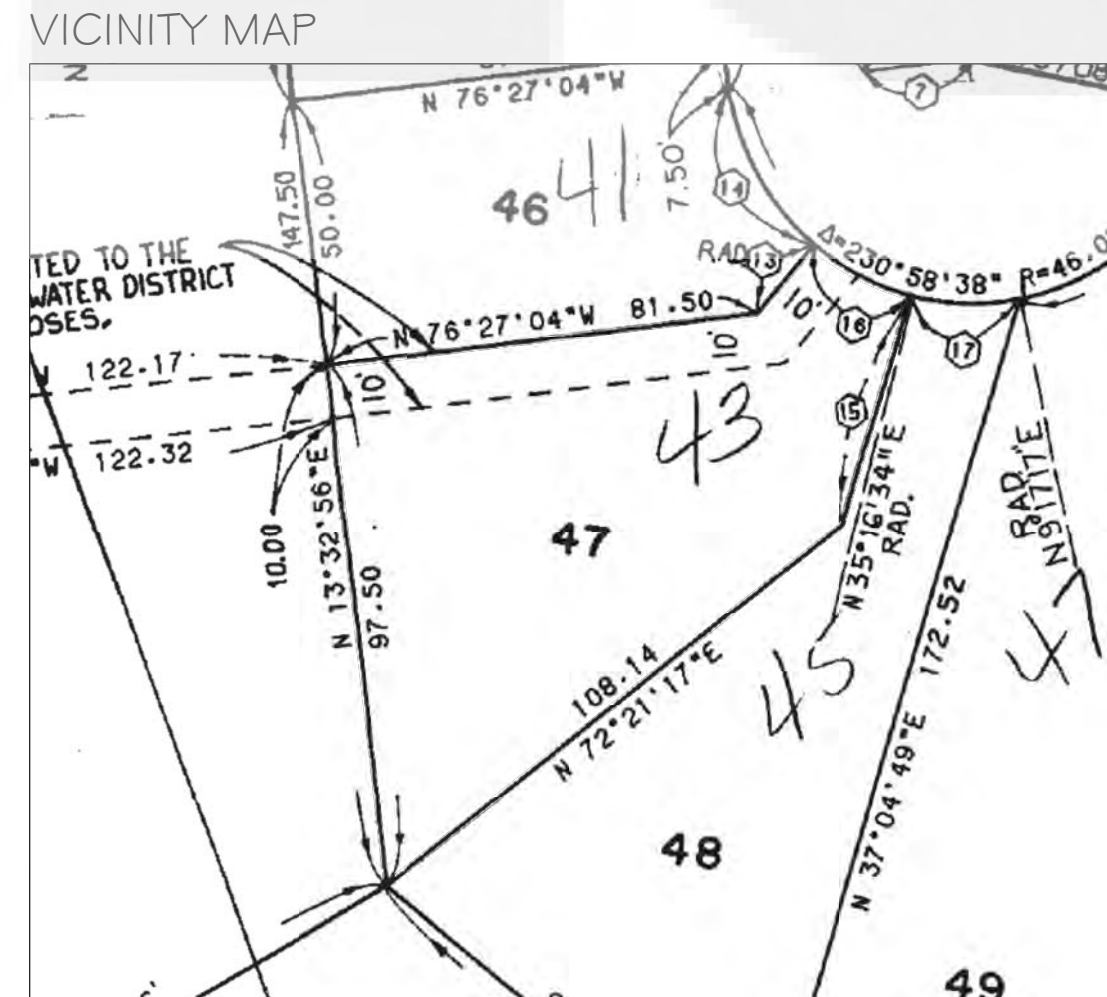
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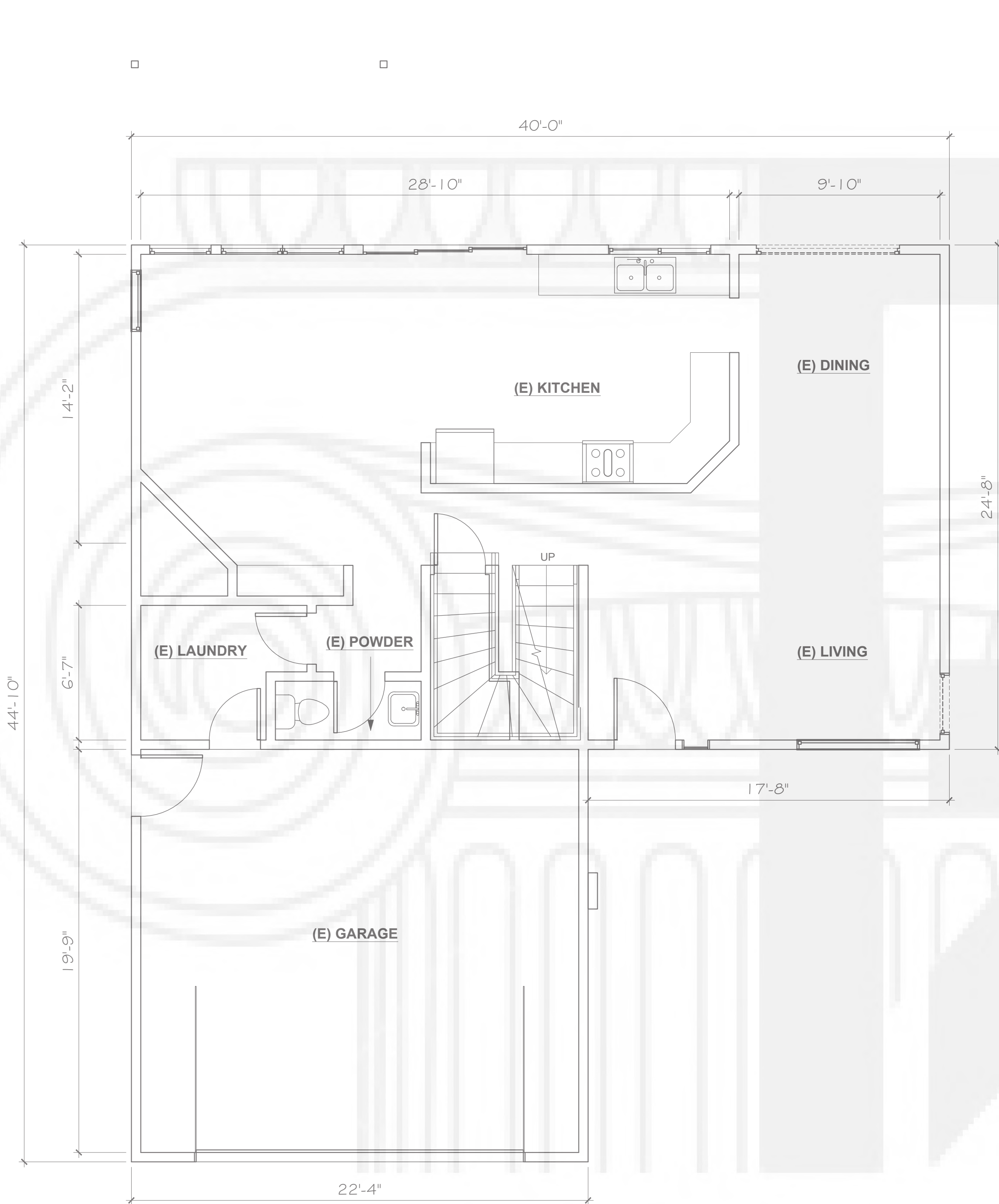
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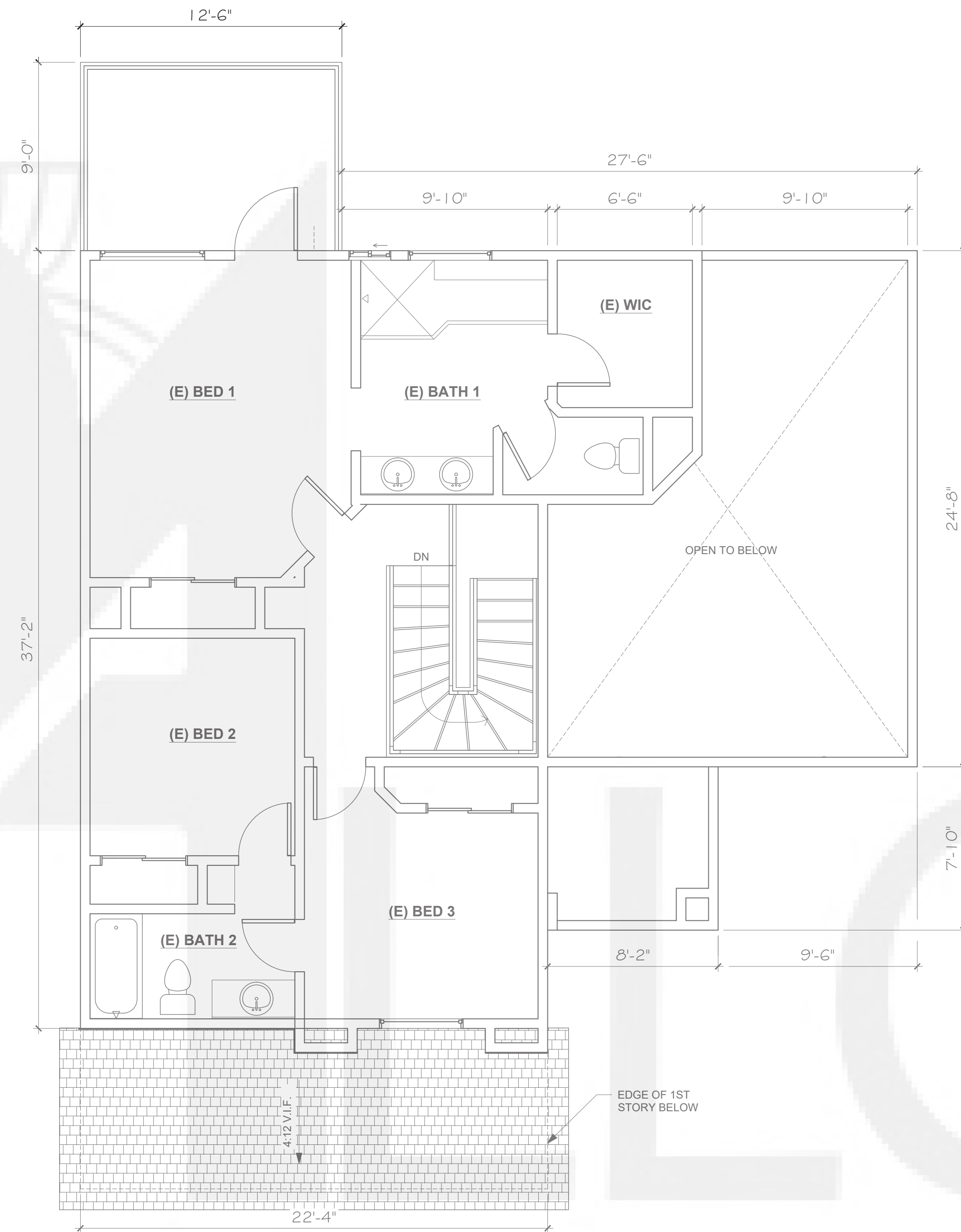


3 FIRE HYDRANT SITE PLAN
SCALE: 1/8" = 1'-0"





1 EXISTING FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



2 EXISTING SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

Scale:

Revision Notes:	
Date	Description
04/19/25	REVISION

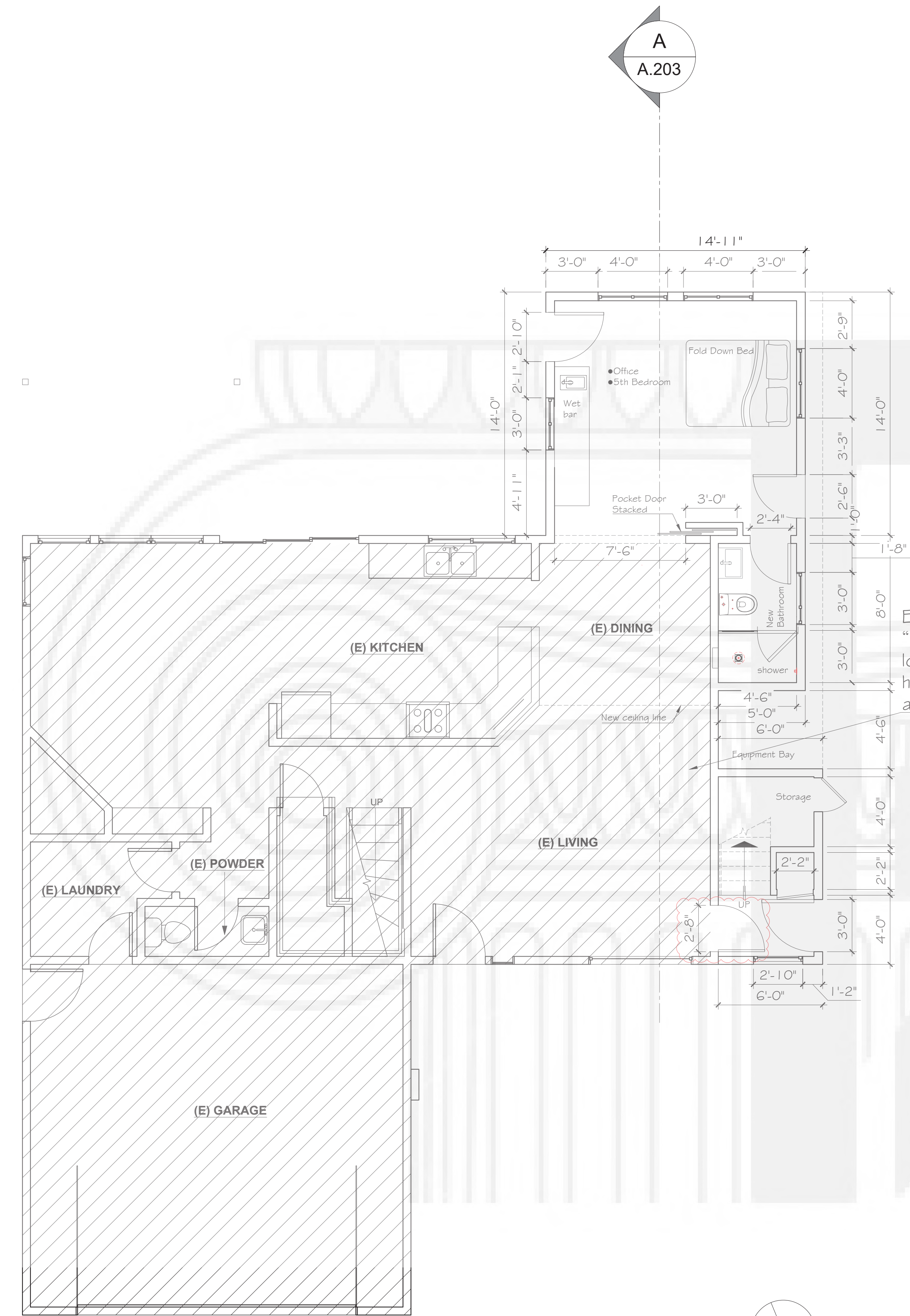
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EXISTING FIRST & SECOND FLOOR PLAN

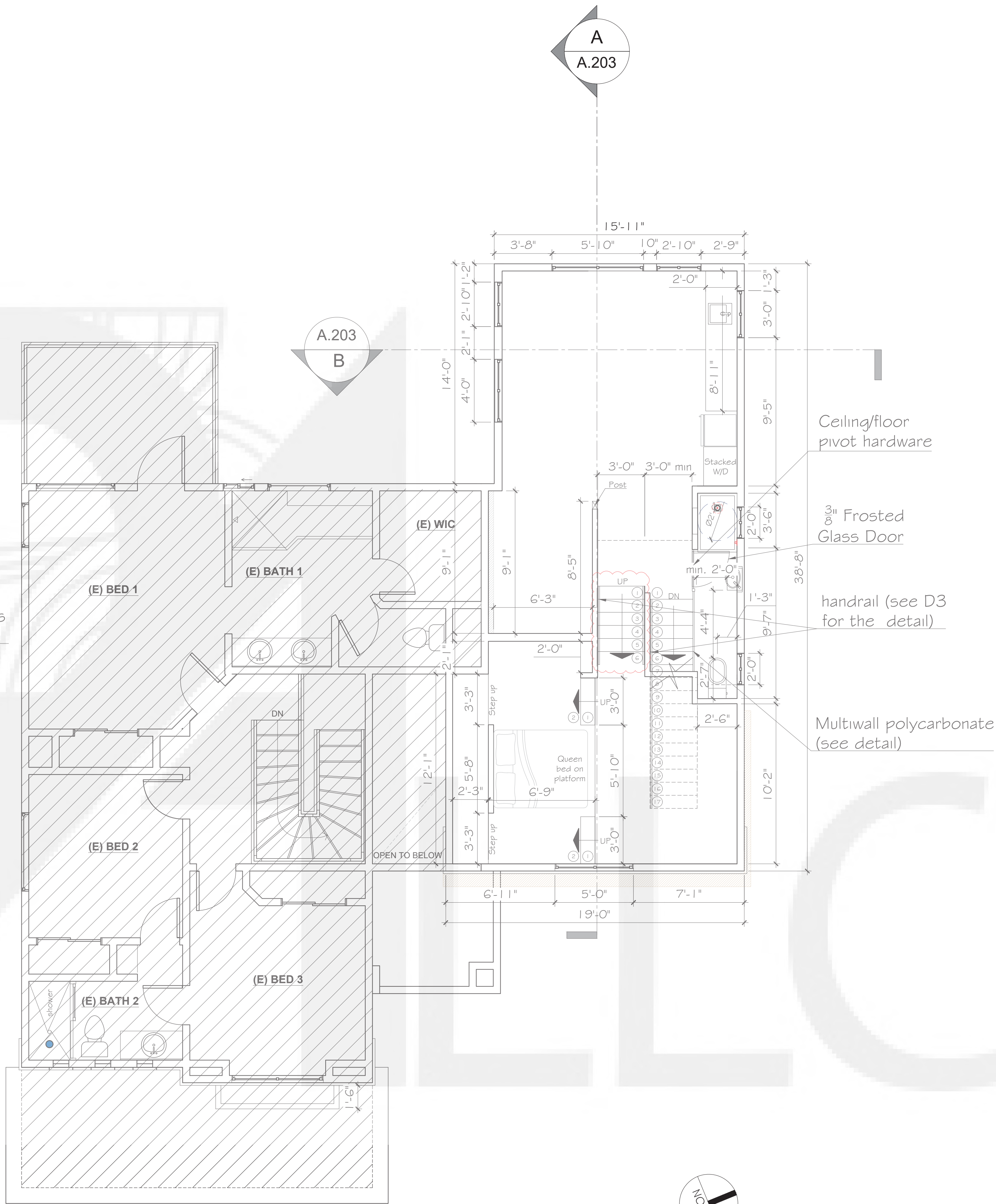
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Date: **04/12/2024**

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1 PROPOSED FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



2 PROPOSED SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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Drawing Title:
**PROPOSED
FIRST &
SECOND
FLOOR PLAN**

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

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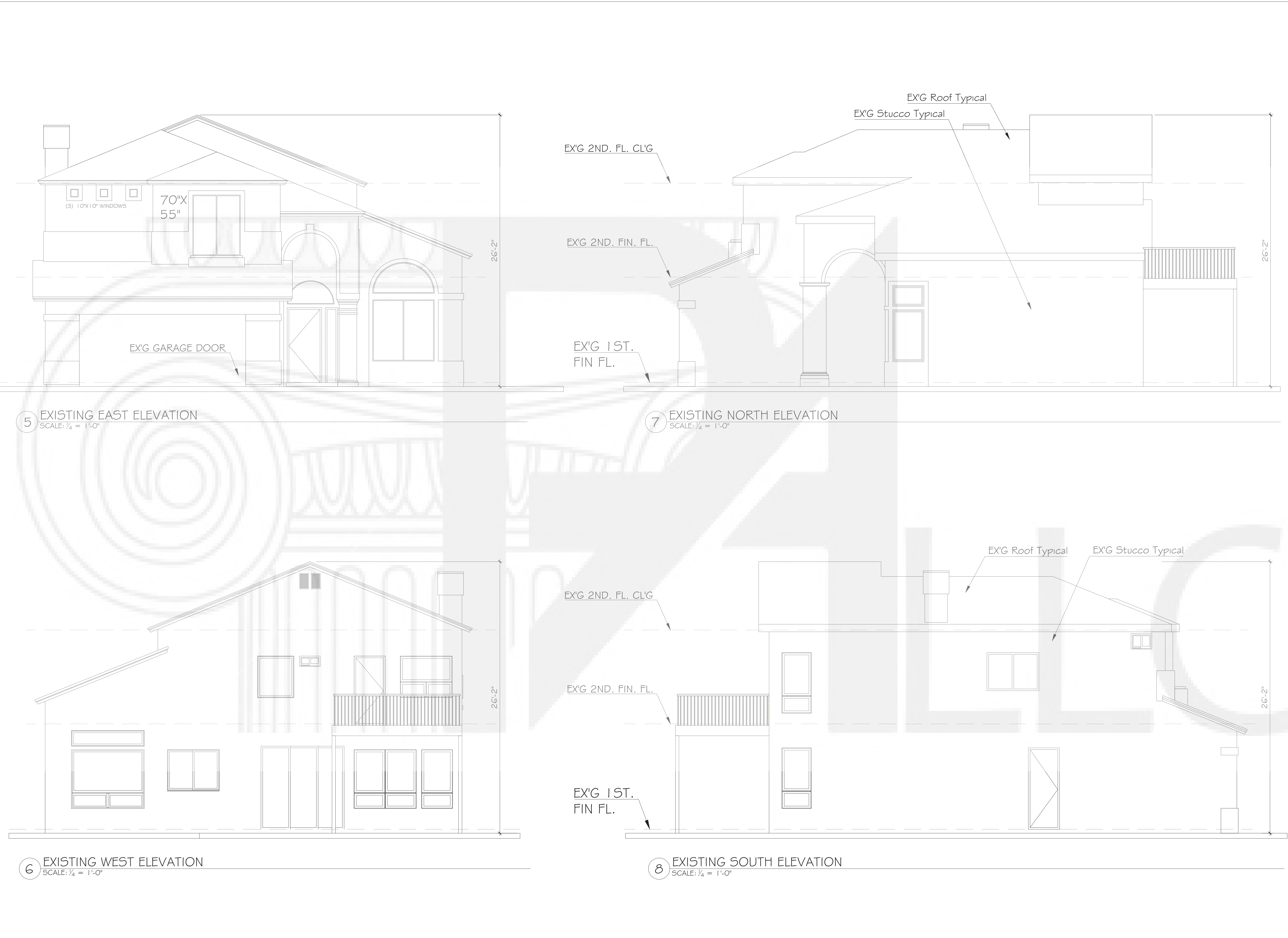
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EXISTING ELEVATIONS

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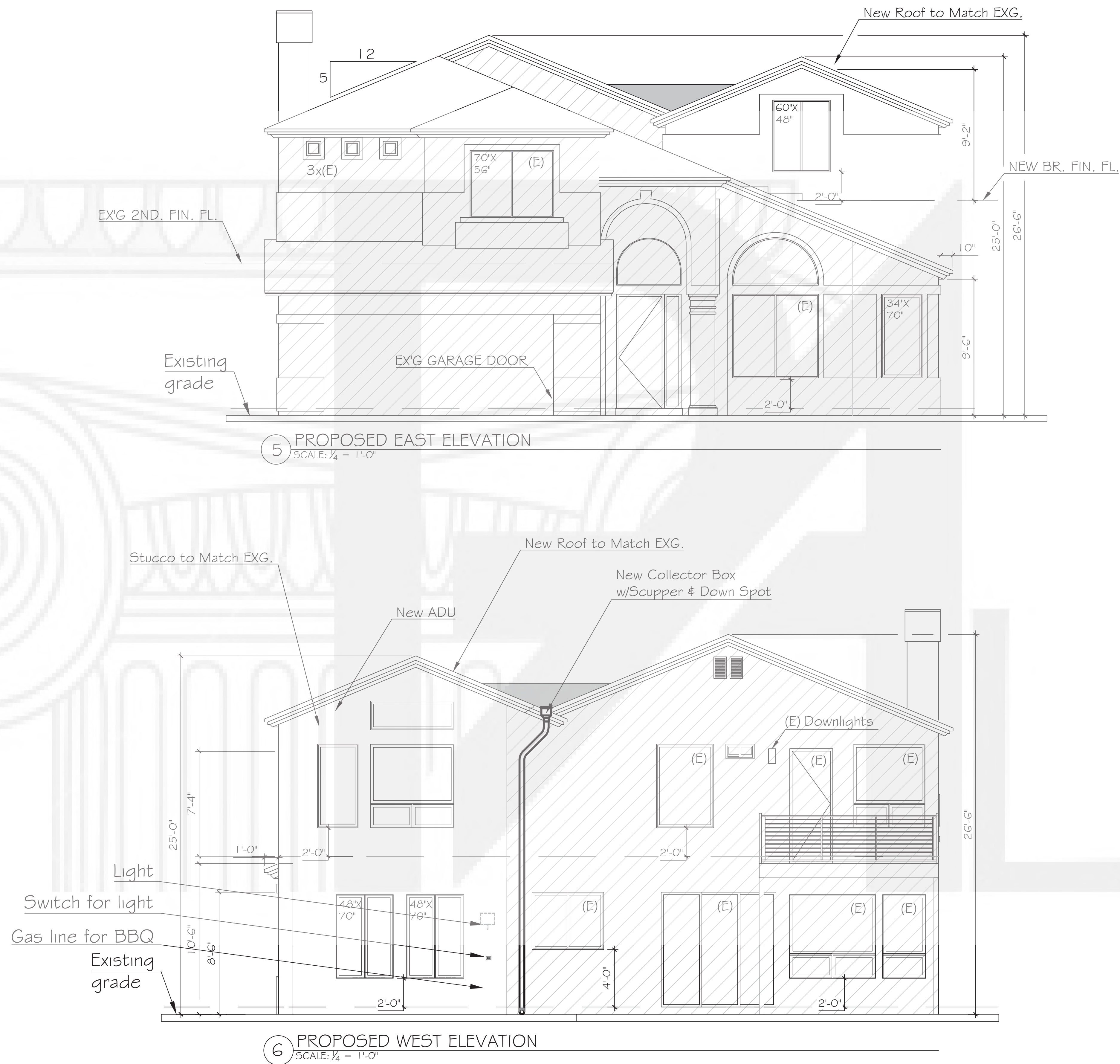
Drawing Title:

**PROPOSED
EAST & WEST
ELEVATIONS**

Scale: $\frac{1}{4}" = 1'-0"$

Date: **04/12/2024**

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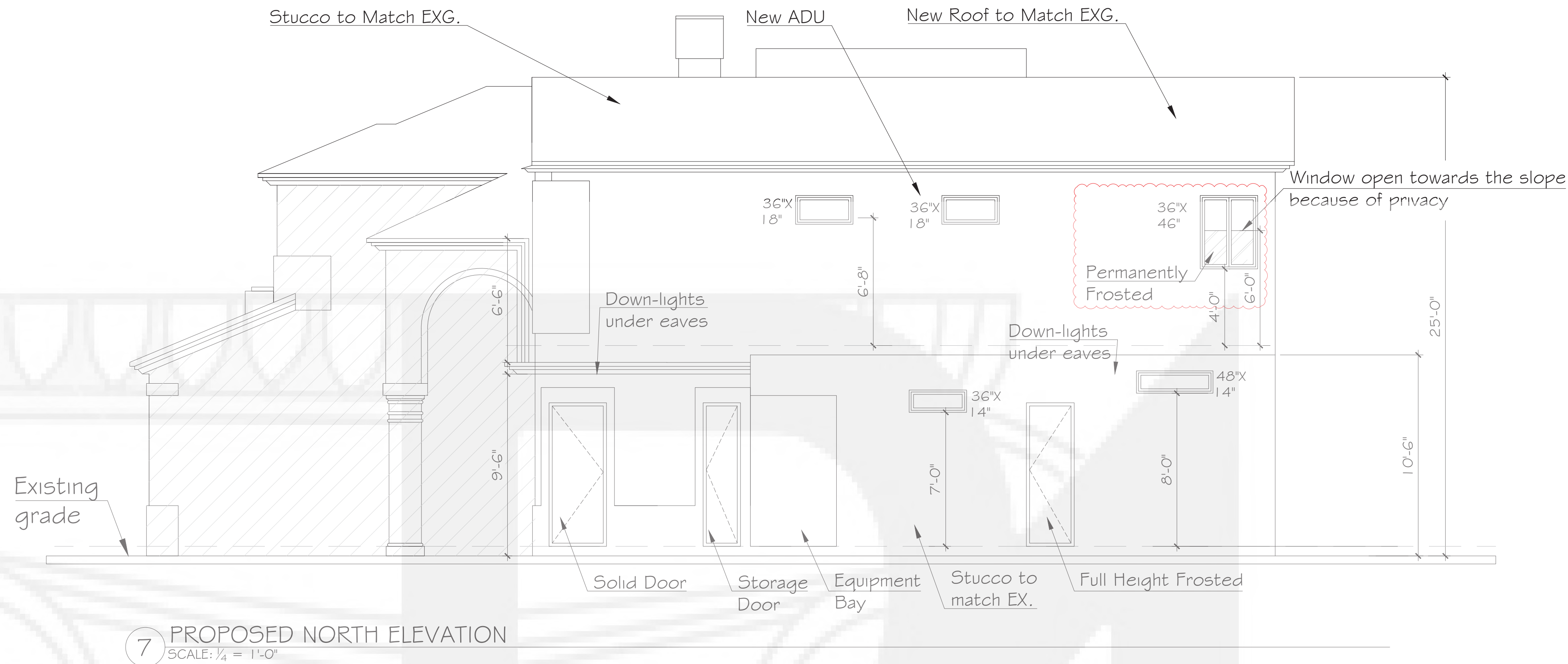
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PROPOSED NORTH & SOUTH ELEVATIONS

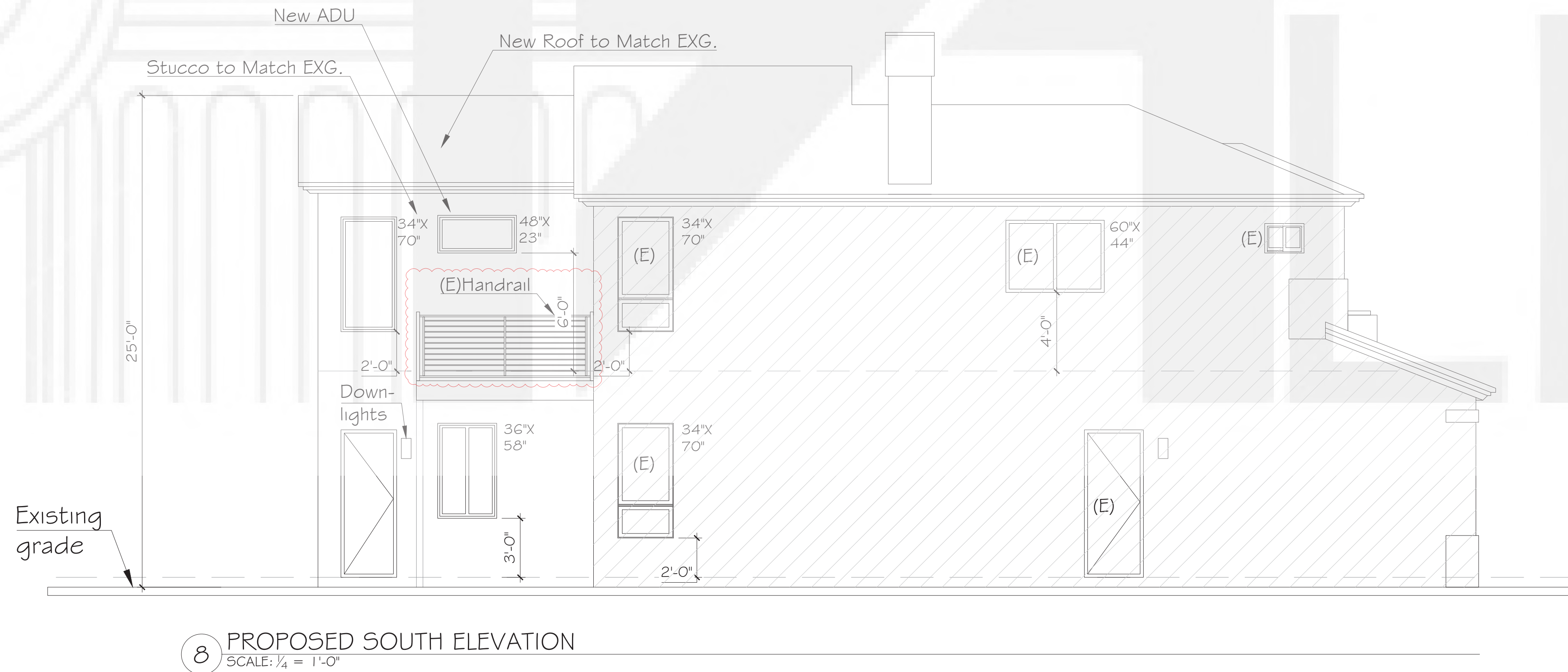
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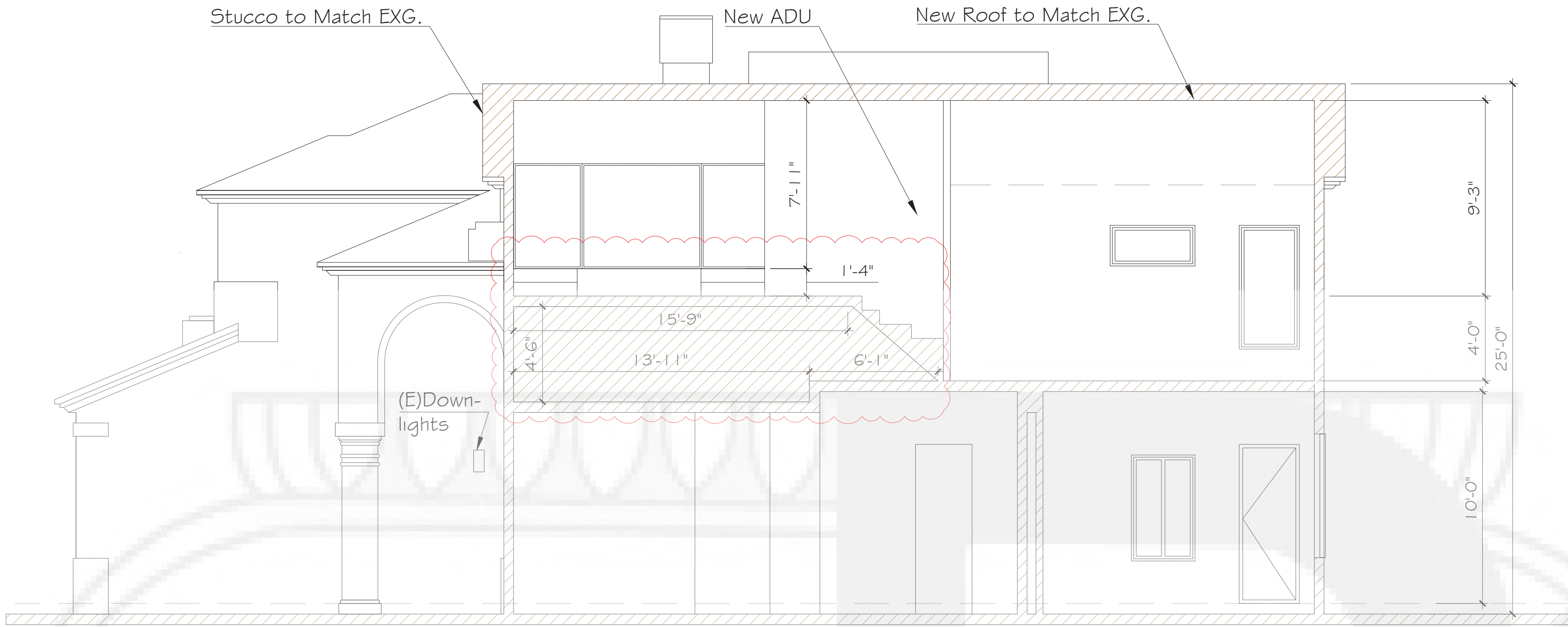
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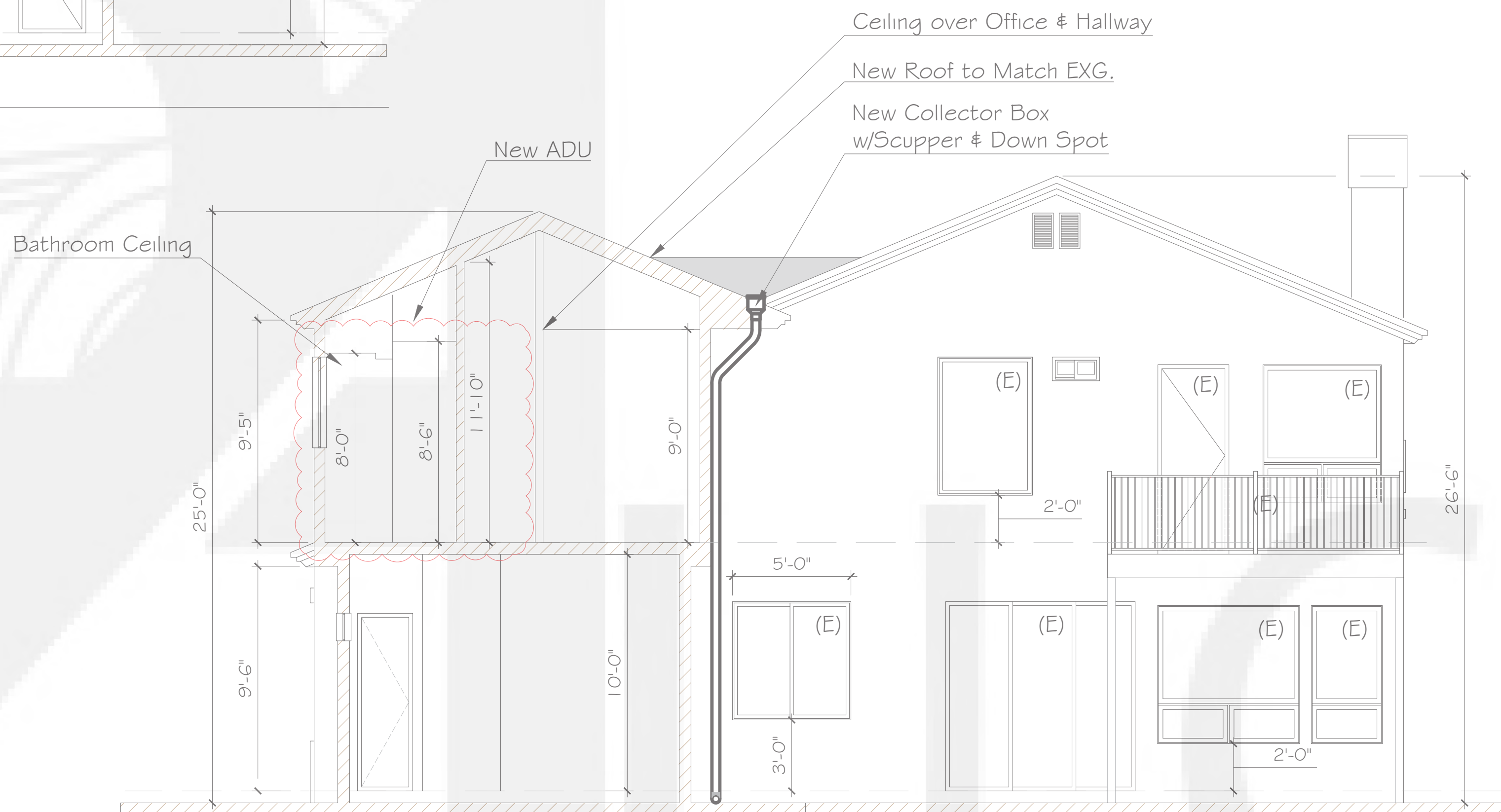


Note:
Window to be frosted up to
6' from finished floor as per:
The code section is
15.14.080(l)(7)(g).
g. All windows and doors
in an ADU less than 30 feet
from a property line that is
not a public right-of-way line
must either be (for windows)
clerestory with the bottom
of the glass at least six feet
above the finished floor, or
(for windows and for doors)
utilize frosted or obscure
glass.





7 PROPOSED SECTION-A
SCALE: 1/4" = 1'-0"



7 PROPOSED SECTION-B
SCALE: 1/4" = 1'-0"

SECTION 1026 OF THE 2022 CALIFORNIA BUILDING CODE /SECTION 310 OF THE 2022 CALIFORNIA RESIDENTIAL CODE

BASEMENTS IN A DWELLING UNIT AND EVERY SLEEPING ROOM BELOW THE FOURTH STORY (INCLUDES ROOMS WHICH COULD BE USED FOR SLEEPING SUCH AS DENS, SEWING ROOMS, STUDY, ETC.) MUST HAVE A LEAST ONE OPERABLE WINDOW OR DOOR APPROVED FOR EMERGENCY ESCAPE OR RESCUE WHICH SHALL OPEN DIRECTLY INTO A PUBLIC STREET, PUBLIC ALLEY, YARD, OR EXIT COURT. THE UNITS MUST BE OPERABLE FROM THE INSIDE TO PROVIDE A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS.

FOR FULL EGRESS, ESCAPE OR RESCUE WINDOWS ARE REQUIRED TO HAVE A MINIMUM NET CLEAR OPEN-ABLE AREA OF 5.7 SQ. FT. (820.8 SQ IN). EXCEPTION: MAY BE REDUCED TO 5.0 SF (720 SQ IN) IF 44" OR LESS FROM EXTERIOR GROUND LEVEL TO SILL. THE MINIMUM NET CLEAR OPEN-ABLE HEIGHT DIMENSION MUST BE 24 INCHES. THE MINIMUM NET CLEAR OPEN-ABLE WIDTH DIMENSION MUST BE 20 INCHES. THEY MUST ALSO HAVE A FINISHED SILL HEIGHT (CLEAR OPENING) OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. IN ORDER TO MEET THE REQUIRED NET-CLEAR OPEN AREA SQUARE-FOOT OPENING, EITHER THE WIDTH OR HEIGHT OR BOTH MUST EXCEED THE MINIMUM DIMENSIONS THEREOF.

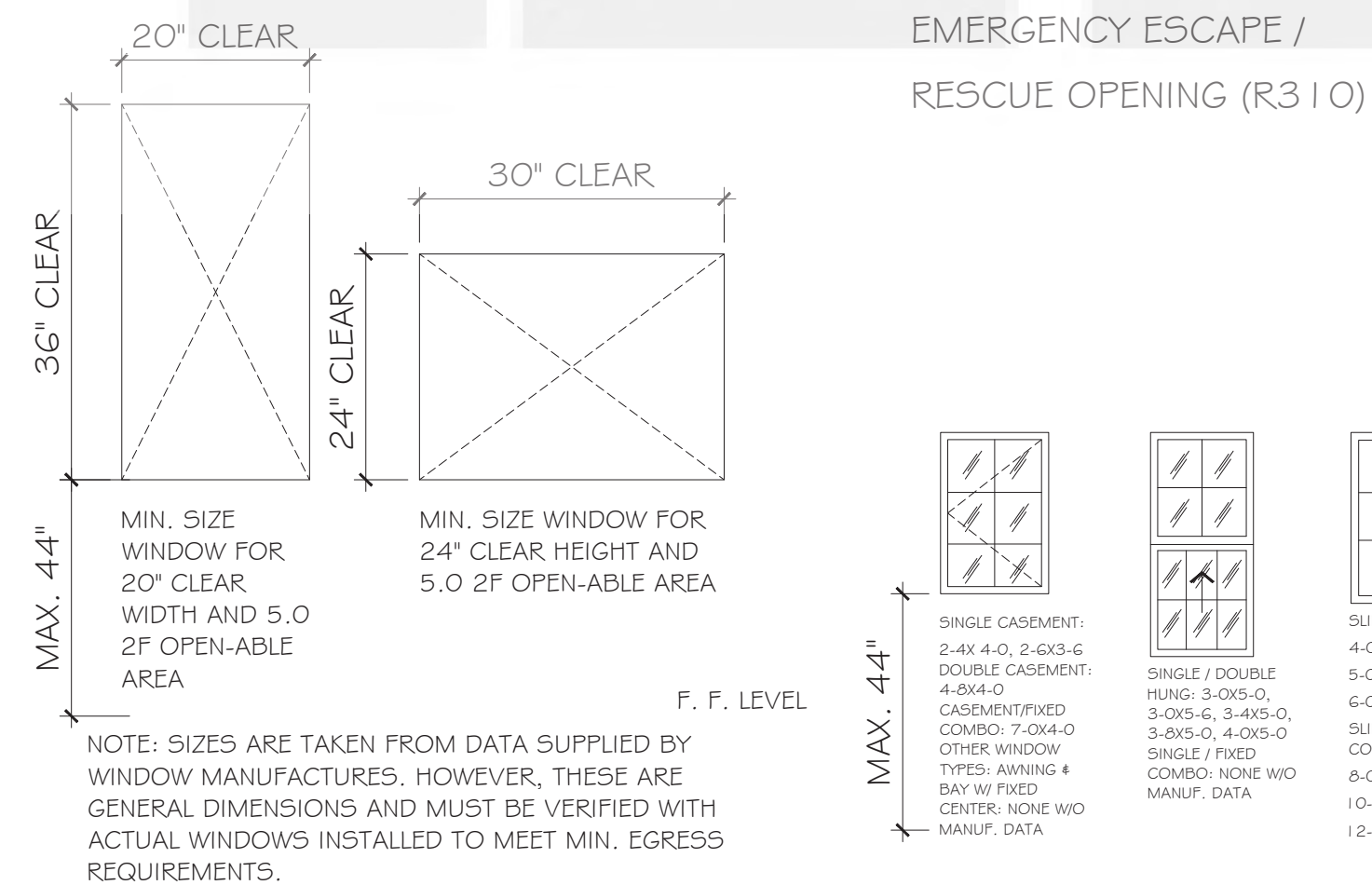
WHEN REPLACING EXISTING NONCONFORMING WINDOWS REQUIRED FOR EMERGENCY ESCAPE AND RESCUE THE REPLACEMENT WINDOWS MUST MEET THE FOLLOWING:

EMERGENCY ESCAPE AND RESCUE REPLACEMENT WINDOW OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 4 SQ. FT.; MINIMUM NET CLEAR OPENING HEIGHT OF 22 INCHES; MINIMUM NET CLEAR OPENING WIDTH OF 20 INCHES. MINIMUM SILL HEIGHT OF NOT MORE THAN 48 INCHES ABOVE THE FLOOR OR THE INSTALLATION OF ONE OR MORE PERMANENTLY AFFIXED STEPS EXTENDING THE FULL WIDTH OF THE WINDOW OPENING, CONSTRUCTED TO THE CURRENT ADOPTED IRC RISE AND RUN DIMENSIONAL REQUIREMENTS, SO THAT THE TOP STEP IS NO GREATER THAN 44 INCHES TO THE TOP OF THE SILL WHERE THE EXISTING ROUGH OPENING DOES NOT ALLOW FOR REPLACEMENT WINDOW DIMENSIONAL REQUIREMENTS THE ROUGH OPENING SHALL BE ENLARGED AND THE REPLACEMENT WINDOW SHALL MEET THE FULL EMERGENCY ESCAPE AND RESCUE OPENINGS PER IRC SECTION R310.1 THROUGH R310.5 OR IBC SECTION 1026 AS APPLICABLE FOR SCOPE OF PROJECT.

ADDITIONAL GLAZING REQUIREMENTS:

FOR MINIMUM LIGHT, ALL SLEEPING ROOMS AND OTHER HABITABLE ROOMS REQUIRE GLAZING EQUAL TO AT LEAST 8% OF THE FLOOR AREA OF THE ROOM; MINIMUM VENTILATION OF 4% OF THE FLOOR AREA. SEE THE INTERNATIONAL BUILDING OR RESIDENTIAL CODES AS APPLICABLE FOR EXCEPTIONS AND A COMPLETE LIST OF LIGHT AND VENTILATION REQUIREMENTS.

SAFETY GLAZING IS REQUIRED IN DOORS, STORM DOORS, RAILINGS, WITHIN 24 INCHES OF A DOOR, OR WHEN PANES ARE OVER 9 SQUARE FEET AND WITHIN 18 INCHES OF THE FLOOR. SEE THE INTERNATIONAL BUILDING OR RESIDENTIAL CODES FOR EXCEPTIONS AND A COMPLETE LIST OF SAFETY GLAZING REQUIREMENTS.



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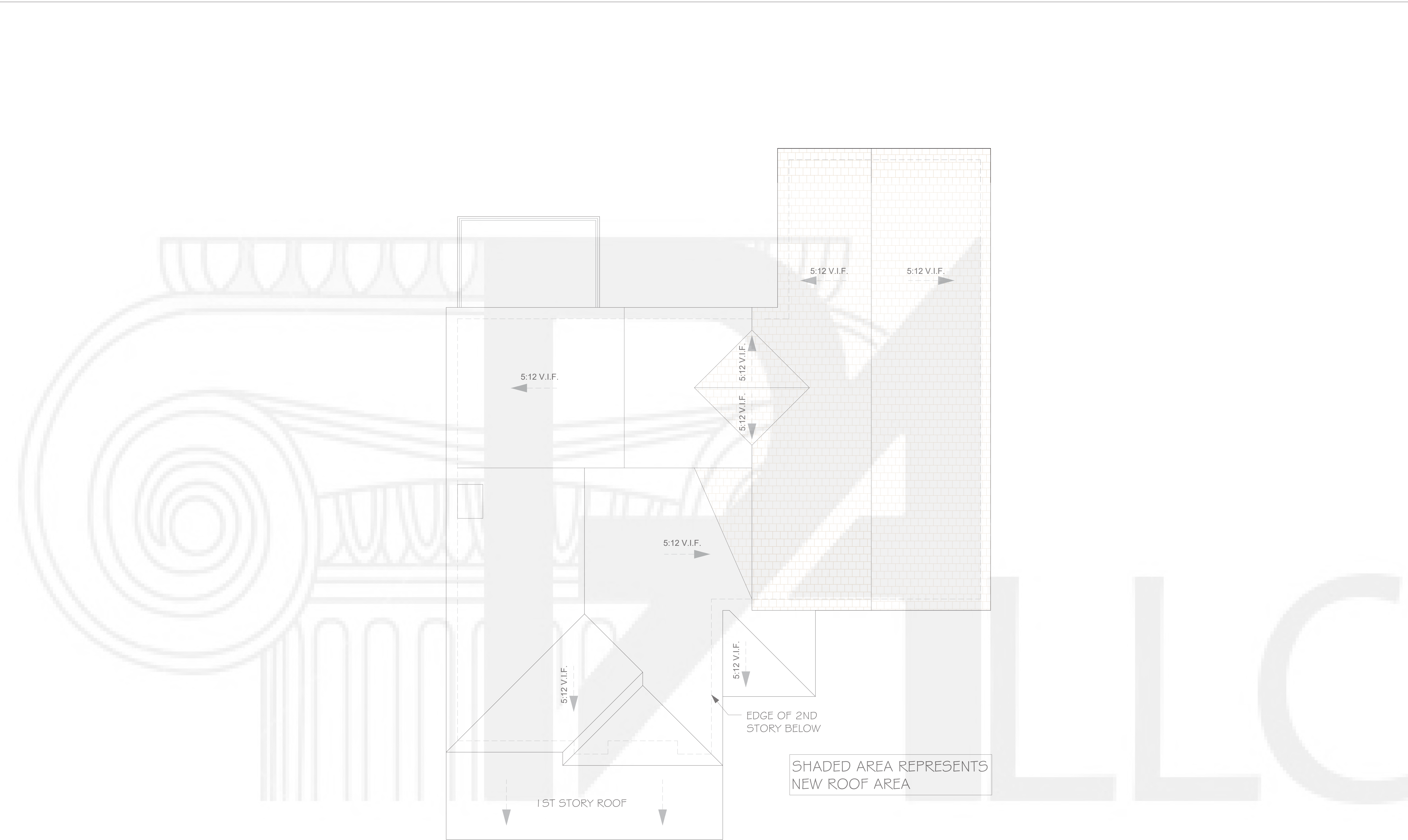
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PROPOSED SECTIONS

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

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4 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"

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**PROPOSED
ROOF PLAN**

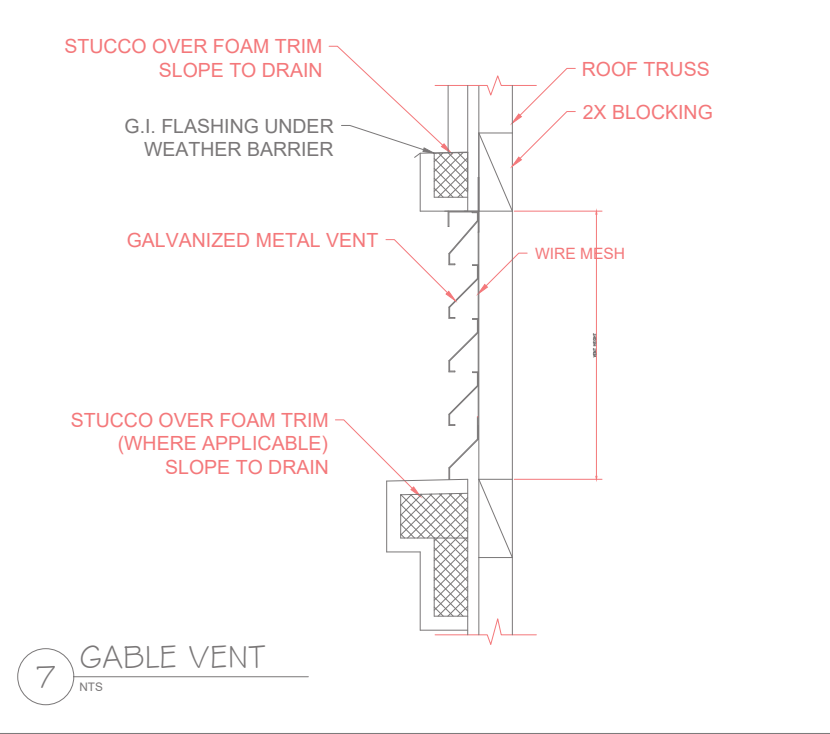
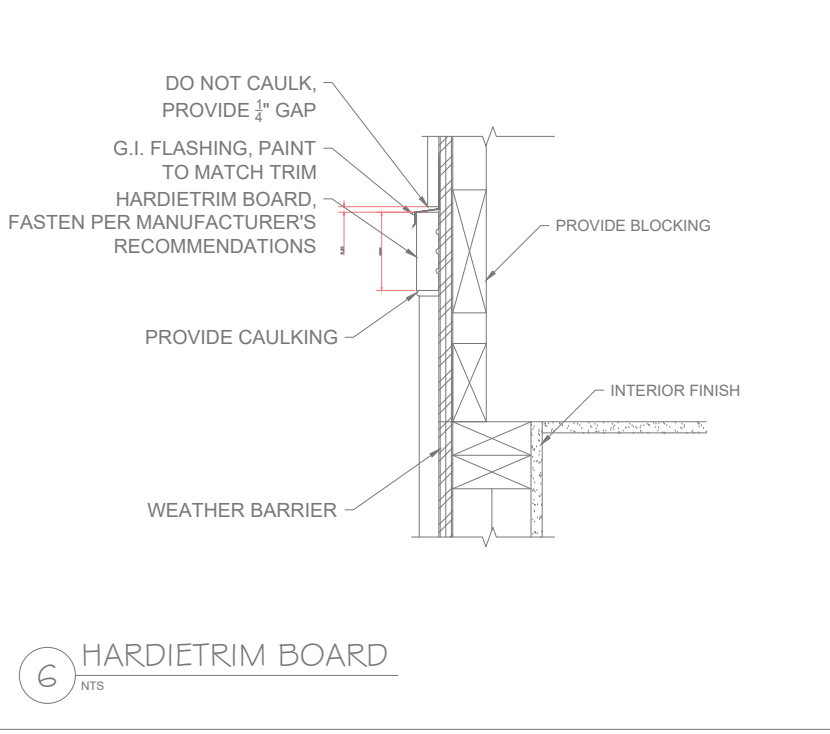
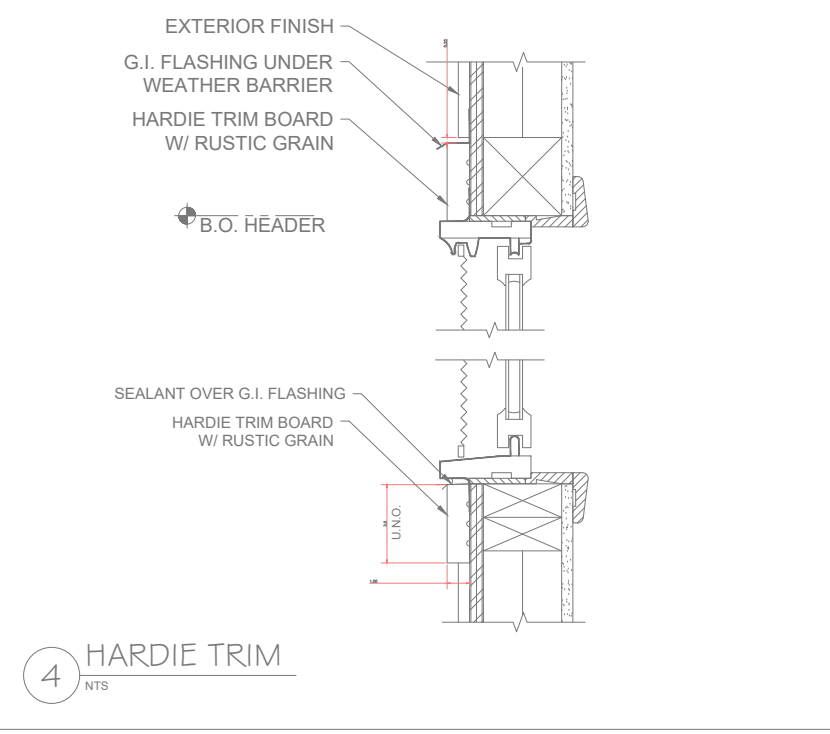
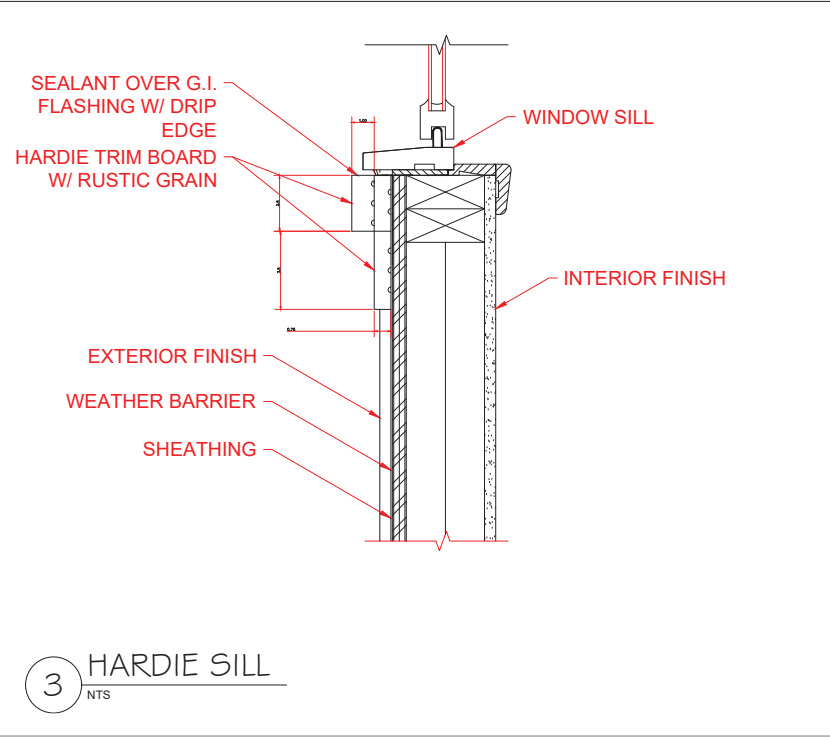
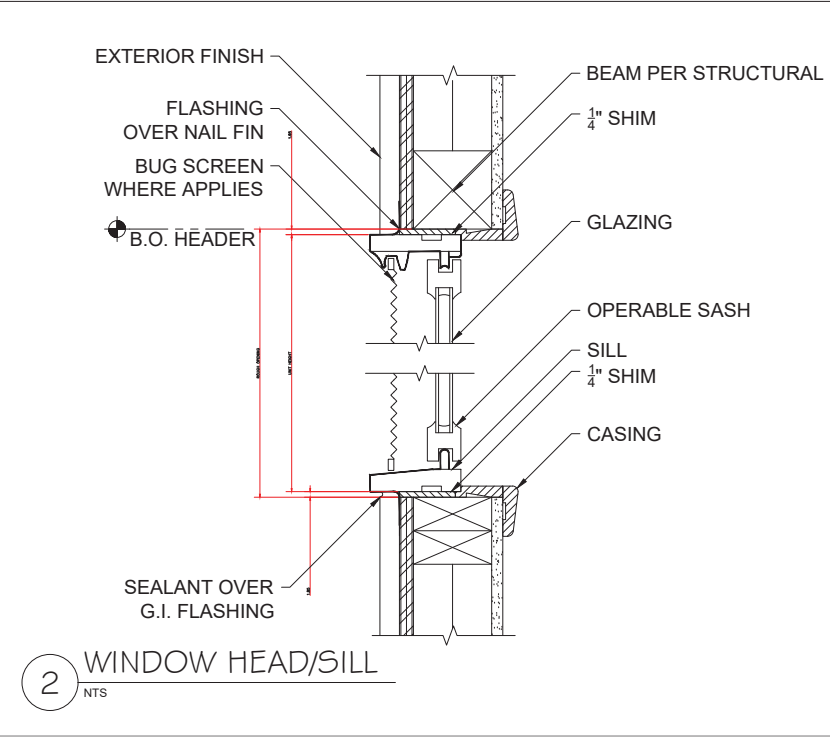
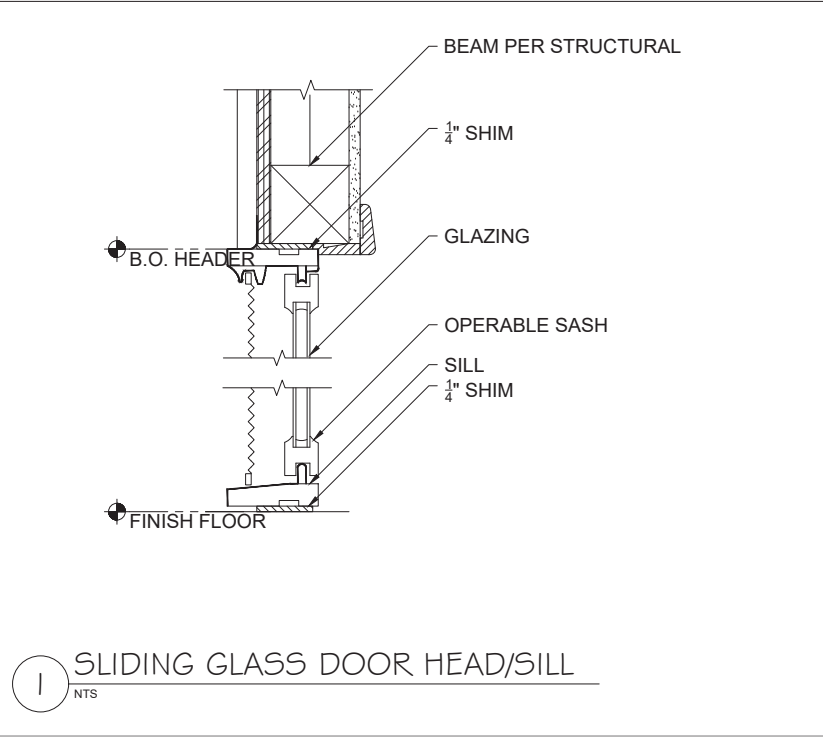
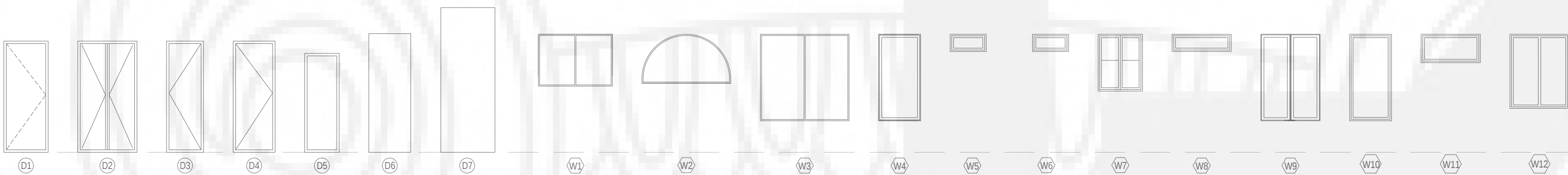
Scale: 1/4" = 1'-0"

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Window Schedule									
Window Mark	New or Replacement	Window / Door Type	Unit Size	Manufacturer / Model #	Grid (Y/N)	Mat'l	Glazing Temp'd	Low E	Remarks
W1	New	Double Casement	60" x 42"	Milgard V300 /	N	Vinyl		X	
W2	Replacement	Fixed	71 x 36" r	Milgard V300 /	N	Vinyl		X	
W3	Replacement	Single Slider	71 x 71	Milgard V300 /	N	Vinyl		X	
W4	New	Casement	34" x 70"	Milgard V300 /	N	Vinyl		X	
W5	New	Awning	36" x 18"	Milgard V300 /	N	Vinyl	X	X	
W5	New	Awning	24" x 18"	Milgard V300 /	N	Vinyl	X	X	
W6	New	Awning	36" x 14"	Milgard V300 /	N	Vinyl	X	X	
W7	New	Double Casement	36" x 46"	Milgard V300 /	N	Vinyl		X	both to open in same direction
W8	New	Awning	48" x 14"	Milgard V300 /	N	Vinyl		X	
W9	New	Double Casement	48" x 70"	Milgard V300 /	N	Vinyl		X	both to open in same direction
W9	New	Double Casement	48" x 70"	Milgard V300 /	N	Vinyl		X	both to open in same direction
W9	New	Double Casement	48" x 70"	Milgard V300 /	N	Vinyl		X	both to open in same direction
W10	New	Casement	34" x 70"	Milgard V300 /	N	Vinyl		X	both to open in same direction
W11	New	Awning	48" x 23"	Milgard V300 /	N	Vinyl		X	
W12	New	Glider	48" x 60"	Milgard V300 /	N	Vinyl		X	retractable screen

Door Schedule									
D1	New	Front Door	36" x 90"	5 horizontal lite		Fiberglass			ADU Front door
D2	New	Double door/smooth	48" x 90"	MS_DRS0080_2	N	Fiberglass		n/a	
D3	New	Full lite with shade	30" x 90"	TBD	N	fiberglass		X	
D4	New	Full Lite	34" x 90"	Nova Full Lite	N	Fiberglass		X	left hand in-swing
D5	New	Hollow Core/6 panel	28" x 80"	raised panel to match (E)	n/a		n/a	n/a	1st fl bathroom
D6	New	Solid Core	34" x 96"	flat panel for pocket application	n/a	MDF		n/a	ADU-LRoom access
D7	New	Solid Core	36" x 96"	flush indented solid core door	n/a	MDF		n/a	ADU-LRoom access



ENERGY NOTES

1. ALL OPENABLE WINDOWS AND SLIDING DOORS SHALL LIMIT AIR LEAKAGE AND BE CERTIFIED AND LABELED TO COMPLY WITH ANSI STANDARD AIS 4.2-1972.
2. FIXED WINDOWS SHALL BE SEALED TO LIMIT AIR INFILTRATION.
3. ALL EXTERIOR DOORS AND WINDOWS ARE TO BE WEATHERSTRIPPED.
4. SITE BUILT DOORS MOUNTED ON THE INSIDE OR THE OUTSIDE OF EXTERIOR WALLS SHALL HAVE A MIN. 1" LAP AT JAMPS.
5. OPEN EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES BETWEEN WALLS, FOUNDATIONS, ROOFS, PANELS, AND AT PENETRATION OF UTILITIES THRU THE ENVELOPE, SHALL BE SEALED, CAULKED, OR WEATHERSTRIPPED TO LIMIT AIR LEAKAGE.
6. 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 NON-RESIDENTIAL ENERGY.
7. INSULATION SHALL BE INSTALLED TO MEET FLAME SPREAD AND SMOKE DENSITY REQUIREMENTS OF 5311 AND TITLE 24.

ROOF AREA VENTILATION NOTE:

CONTRACTOR TO PROVIDE NEW ROOF AREA VENTILATION .NOTE:

1. 50% OF VENTILATION MUST BE IN UPPER 1/3 OF ATTIC SPACE - USE ROOF MOUNTED GSM DORMER VENTS.
2. CONTRACTOR SHALL SUPPLY ALL VENTILATION AMOUNTS ABOVE AS A MINIMUM -EAVE VENTING SHALL BE (3) 2" DIA HOLES PER ROOF BAY (9 SQ IN PER BAY).
3. UPPER ATTIC VENTING SHALL BE ROOF MOUNTED GSM DORMER VENTS (150 SQ IN PER VENT).
4. ALL VENTS SHALL BE COVERED WITH CORROSION RESISTANT WIRE MESH WITH MAXIMUM OPENING OF 1/4" IN DIMENSION.
5. VAULTED CEILINGS SHALL HAVE A MINIMUM 1" AIR SPACE BETWEEN INSULATION AND ROOF SHEATHING.

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 OR WALLS FACING HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60" MEASURED 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 PROGRAMS "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

SAFETY GLASS TO BE USED WITHIN 3' OF DOOR

ENTRY LOCKS, AT ENTRANCE DOORS AND SIDE LIGHTS

NEAR BATHTUBS AND JACUZZIS

ALL SOFFITS LESS THAN 3.94 ft FROM PROPERTY LINES

TO BE NON-VENTED SOLID MATERIAL CONSTRUCTION

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 A500.
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 717.2.7.
7. ORS FOR SIDING, TRIM, WINDOWS, ROOFING, ETC. ARE TO MATCH EXISTING FINISHES AND COLORS.

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 COL

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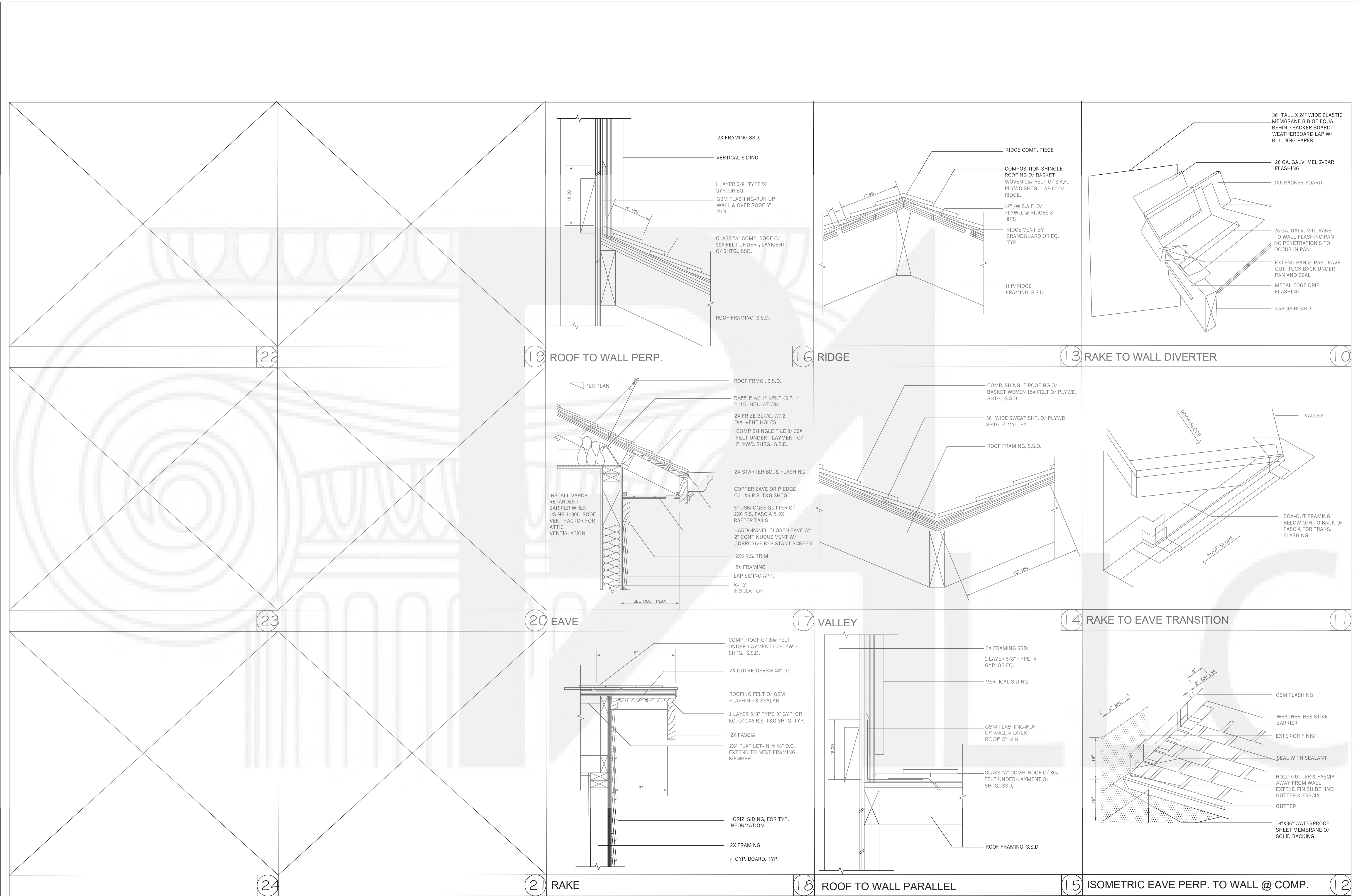
DOORS & WINDOW SCHEDULE

Scale: -

Date: **04/12/2024**

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Drawing Title:
**BUILDING PAPER/
HOUSE WRAP
DETAILS AROUND
WINDOWS**

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

Date: **04/12/2024**

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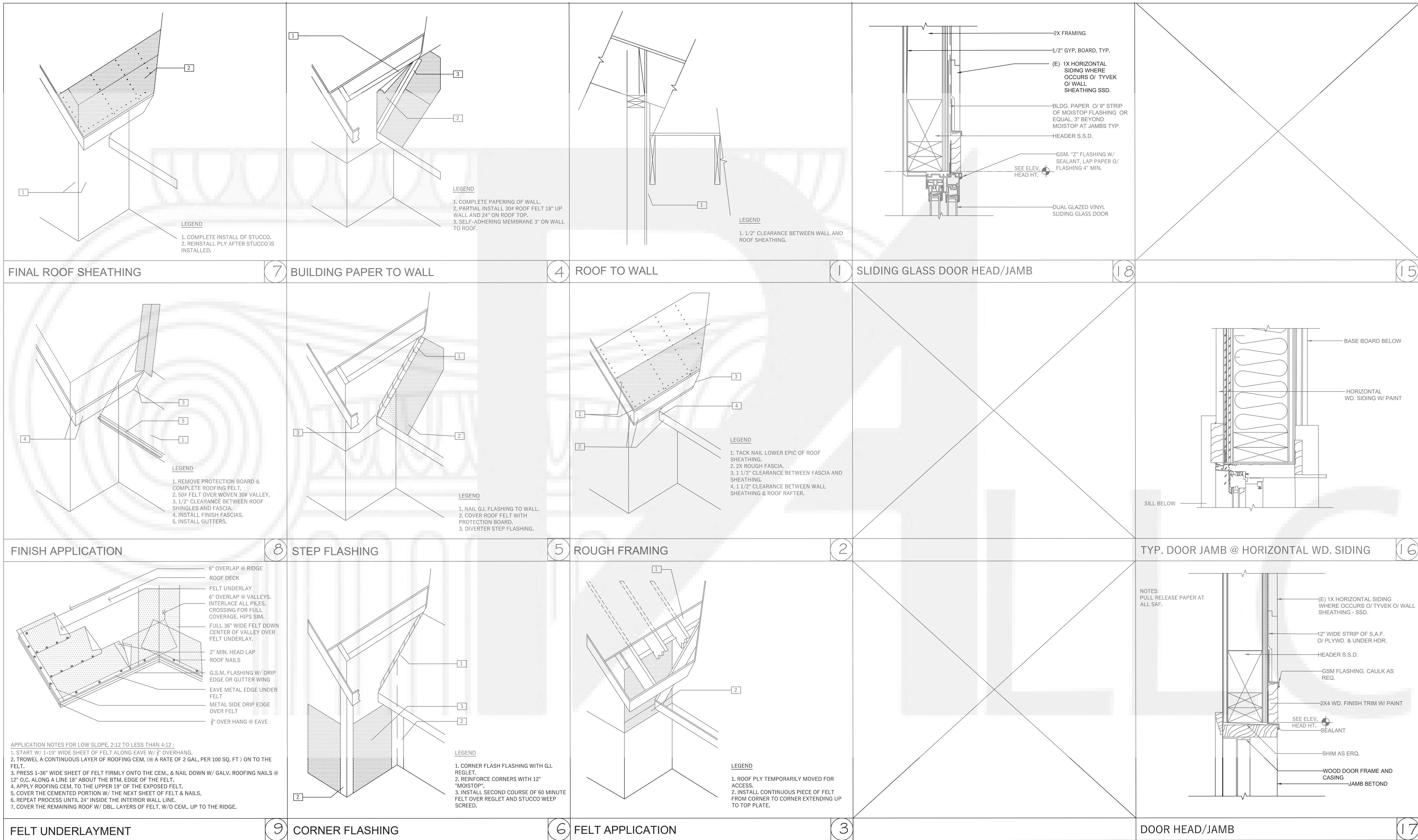
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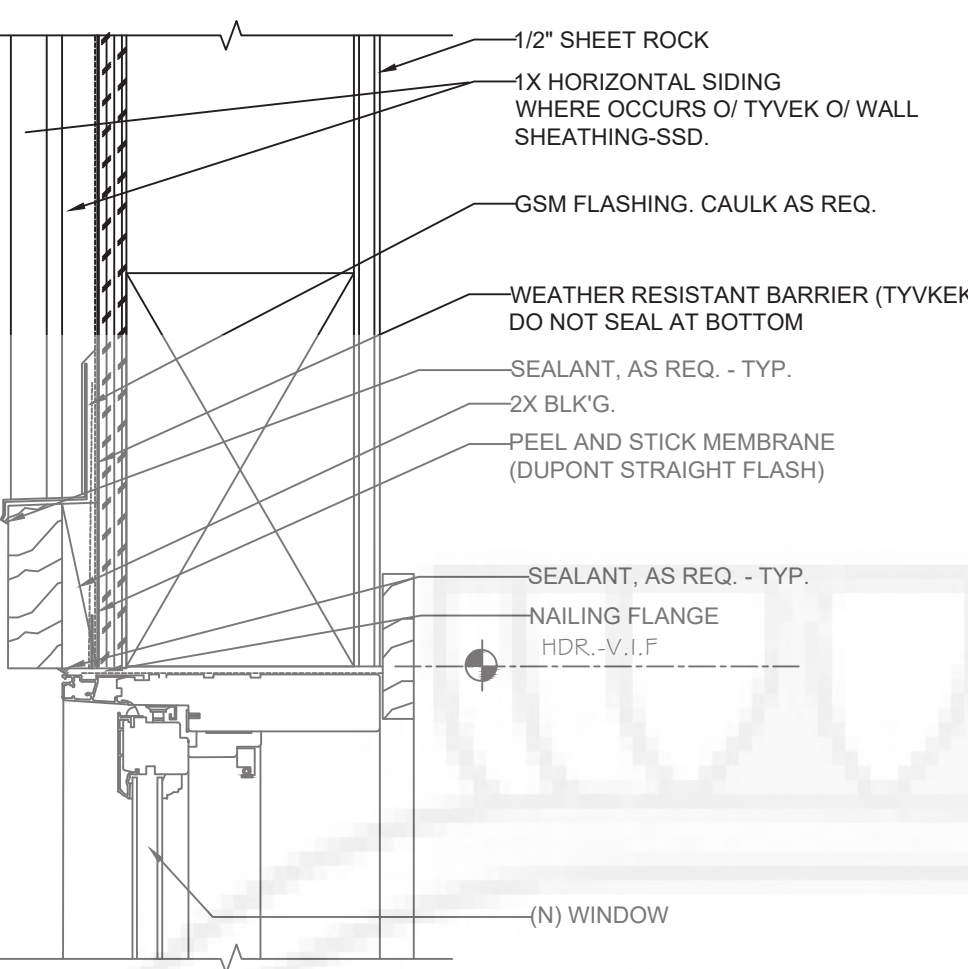
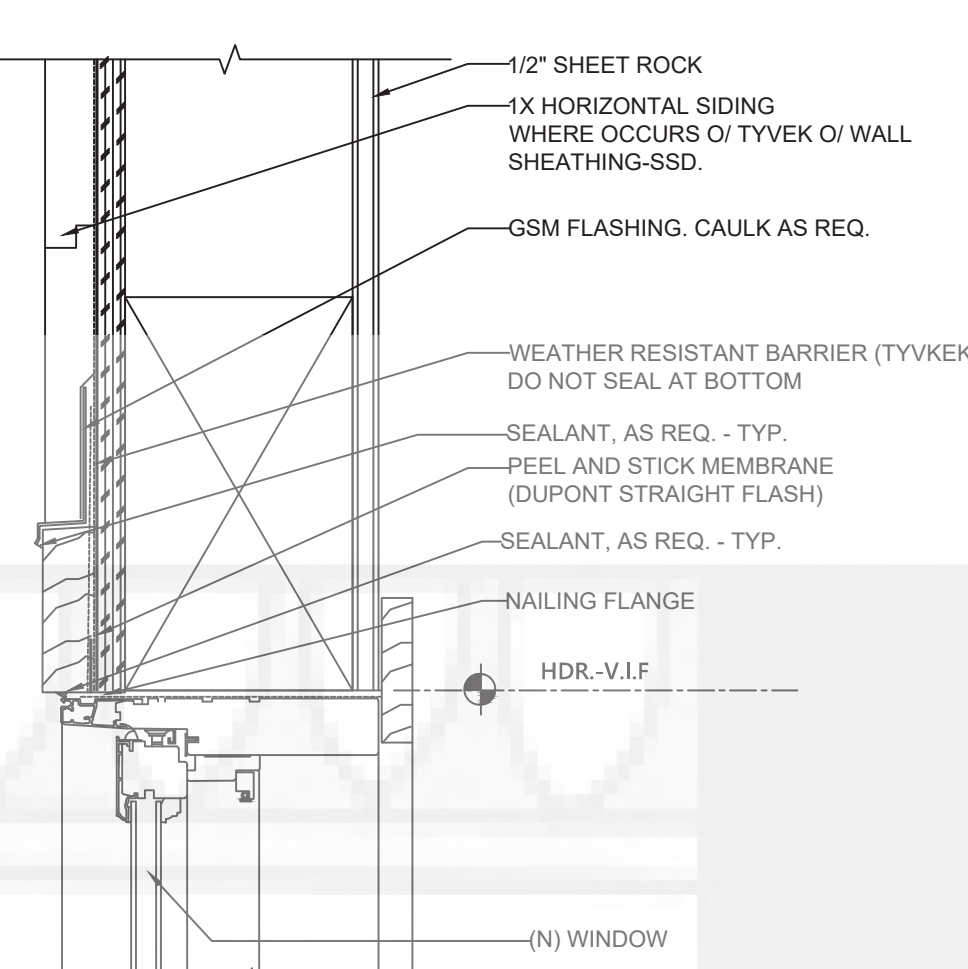
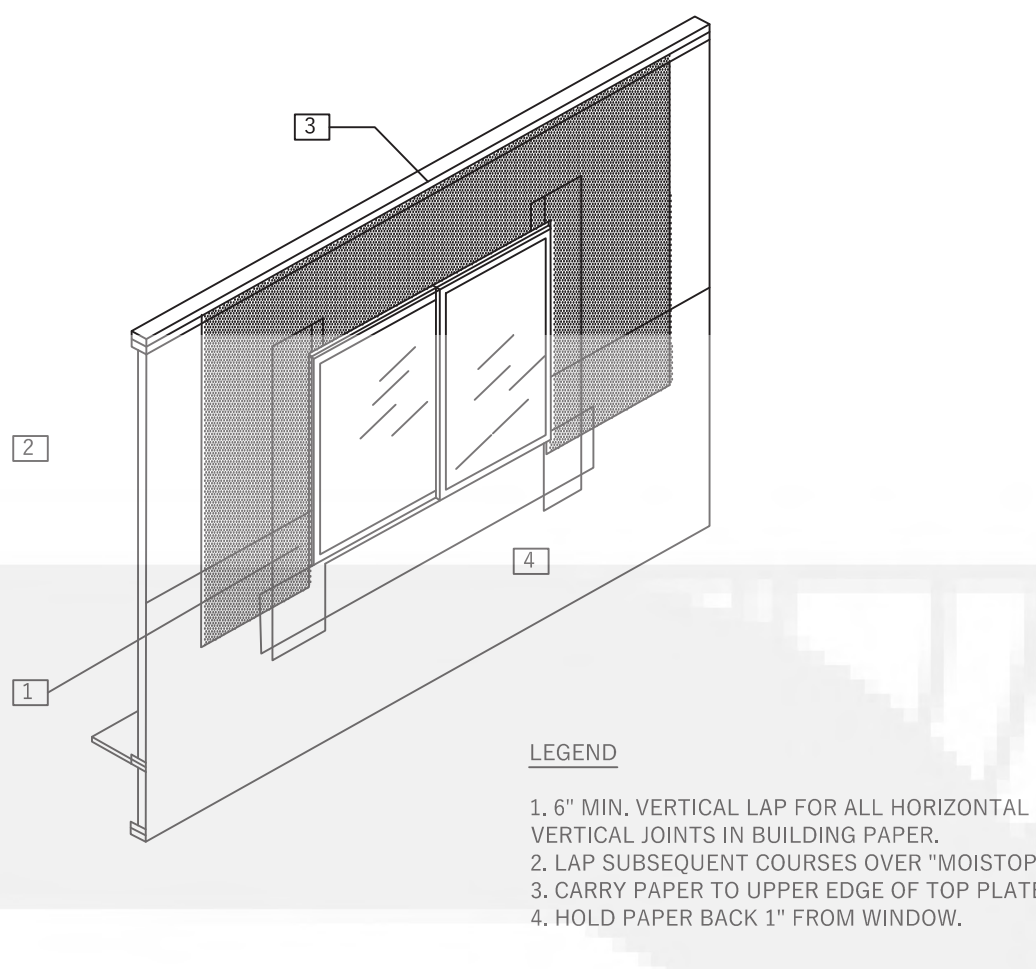
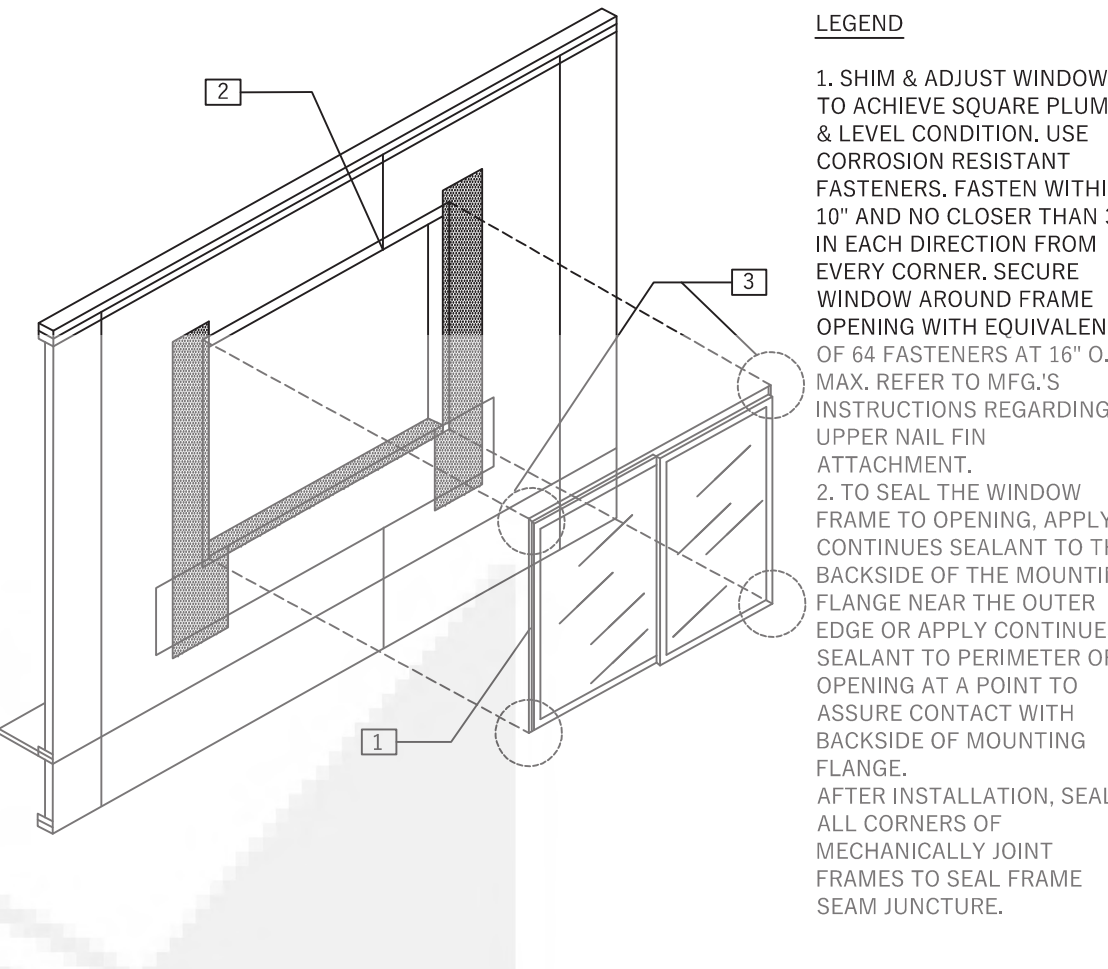
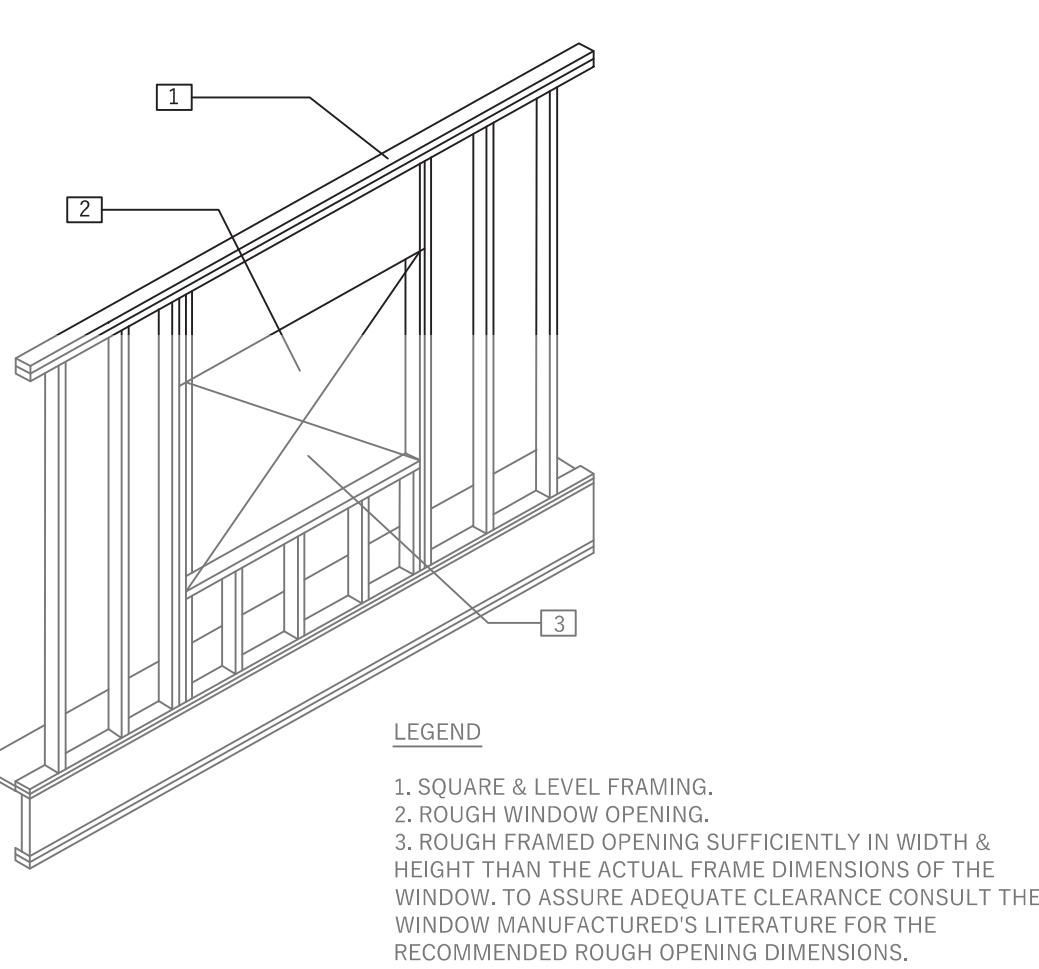
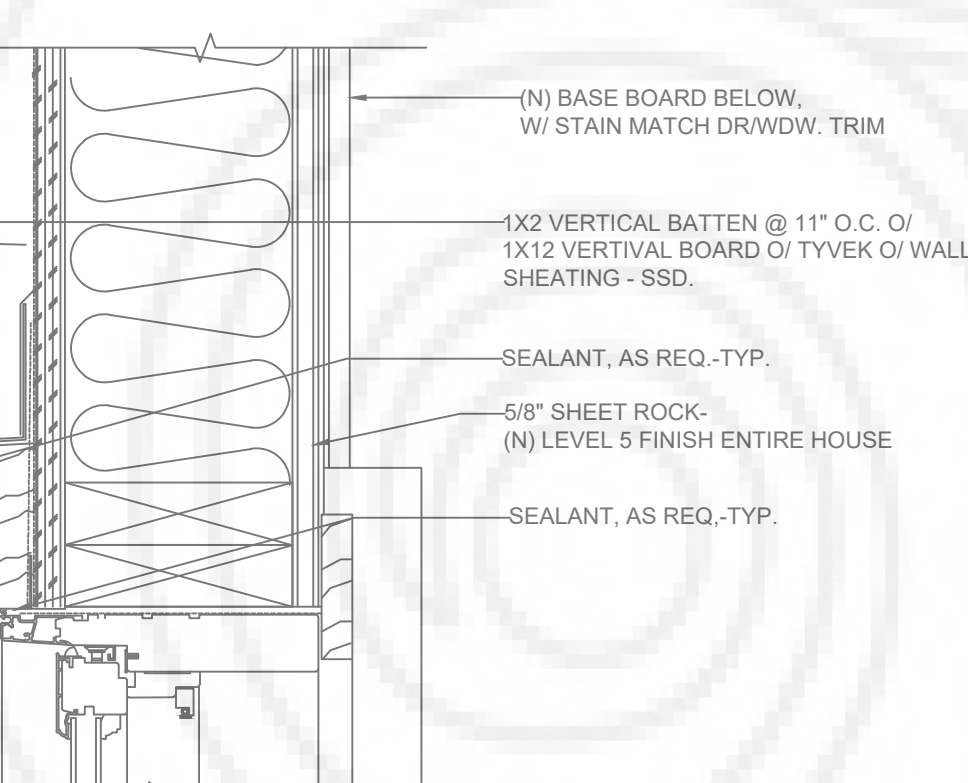
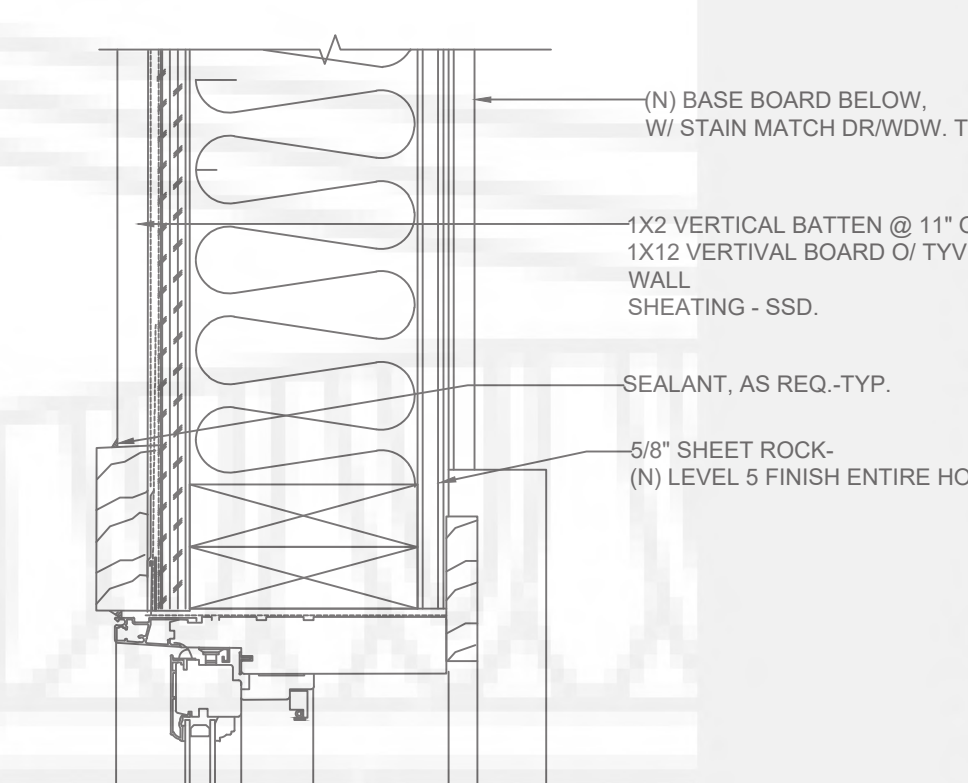
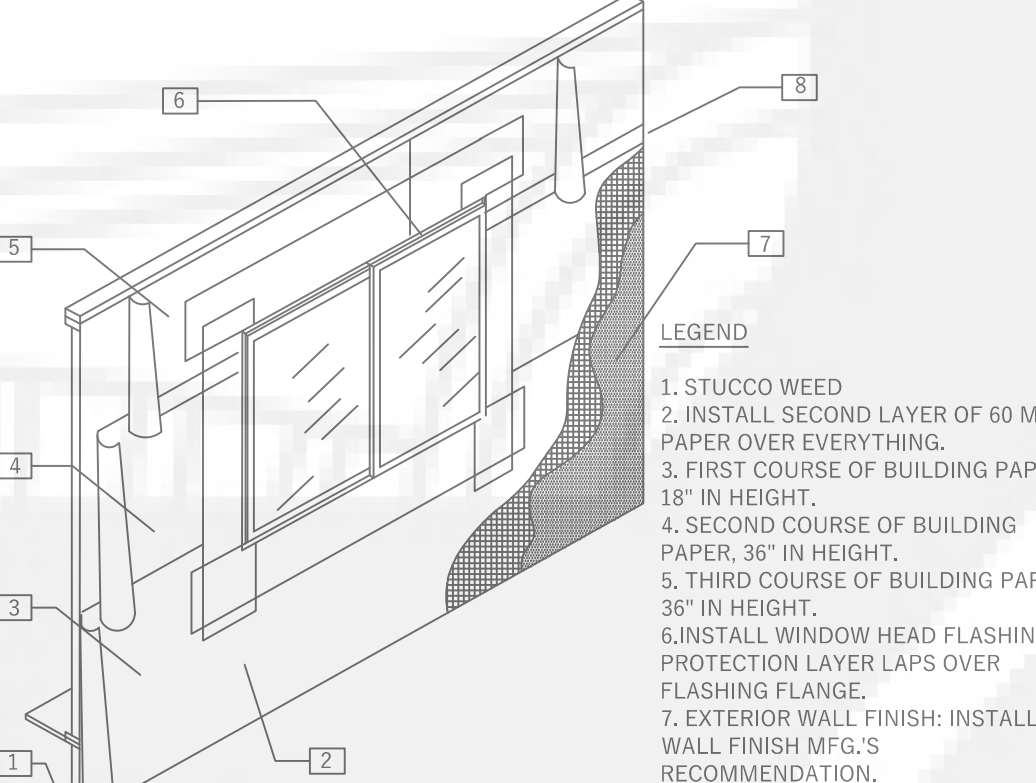
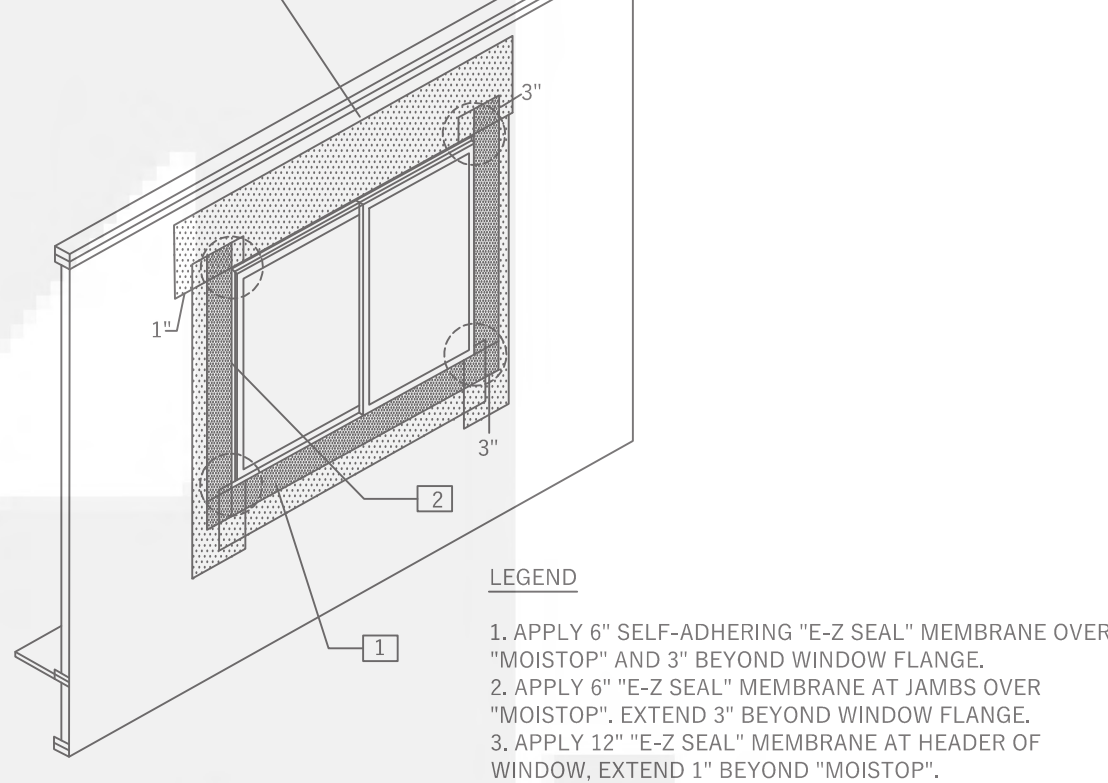
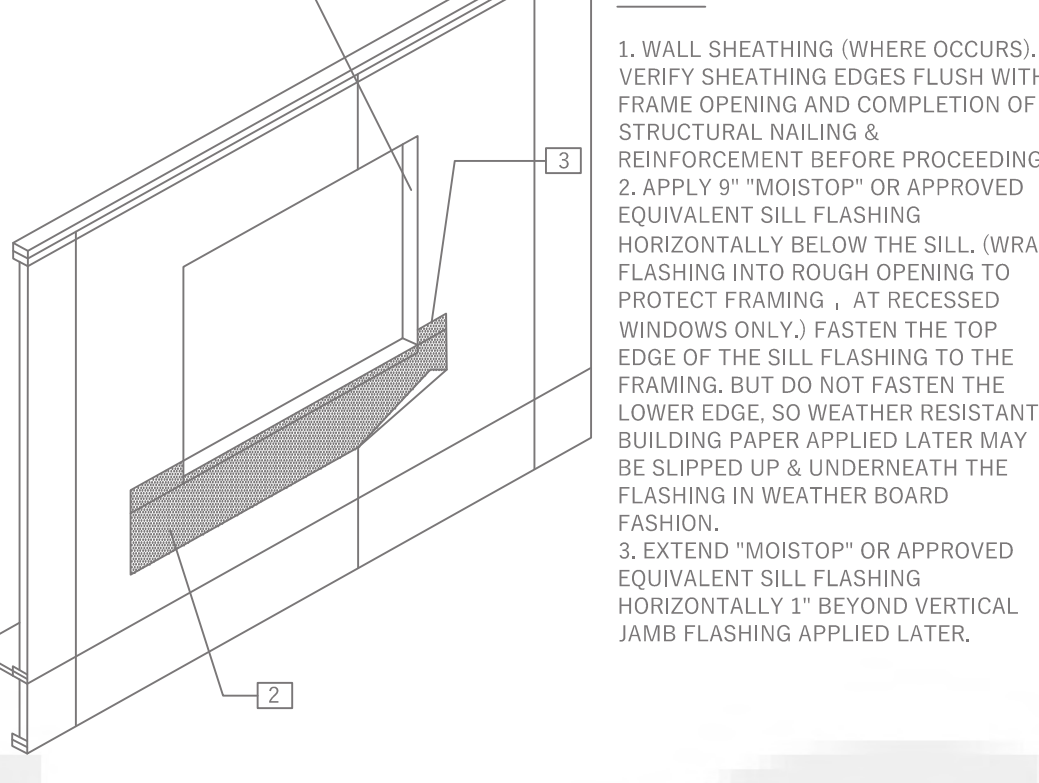
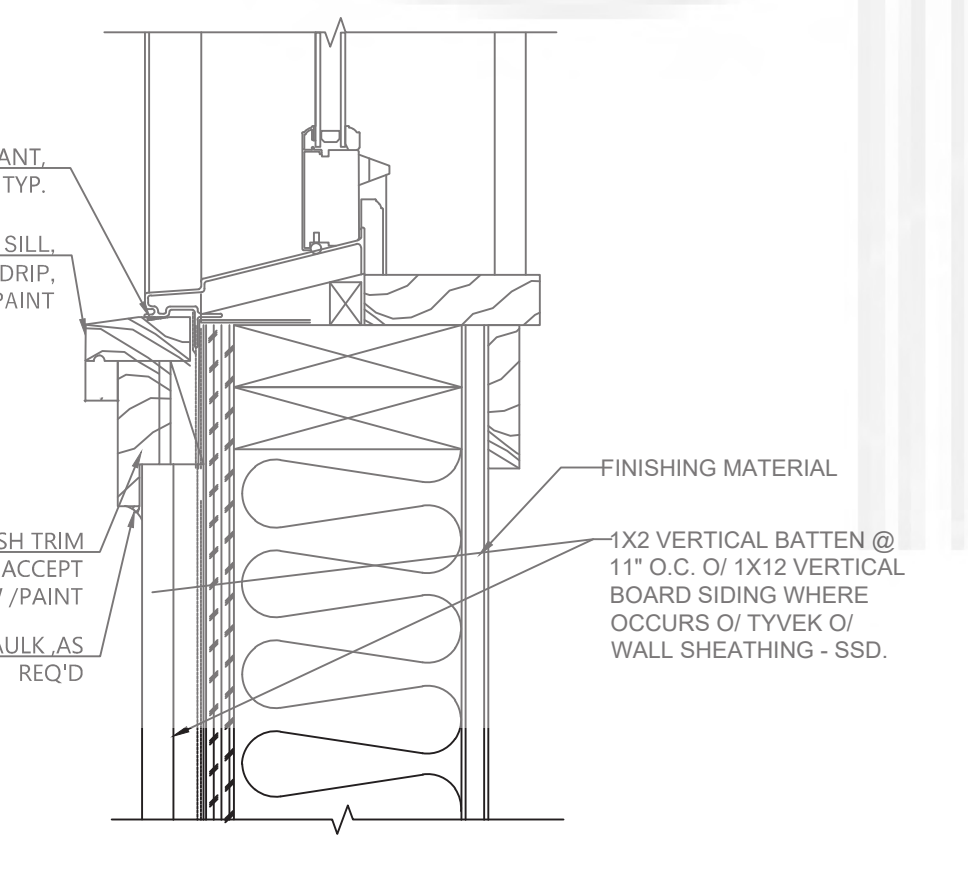
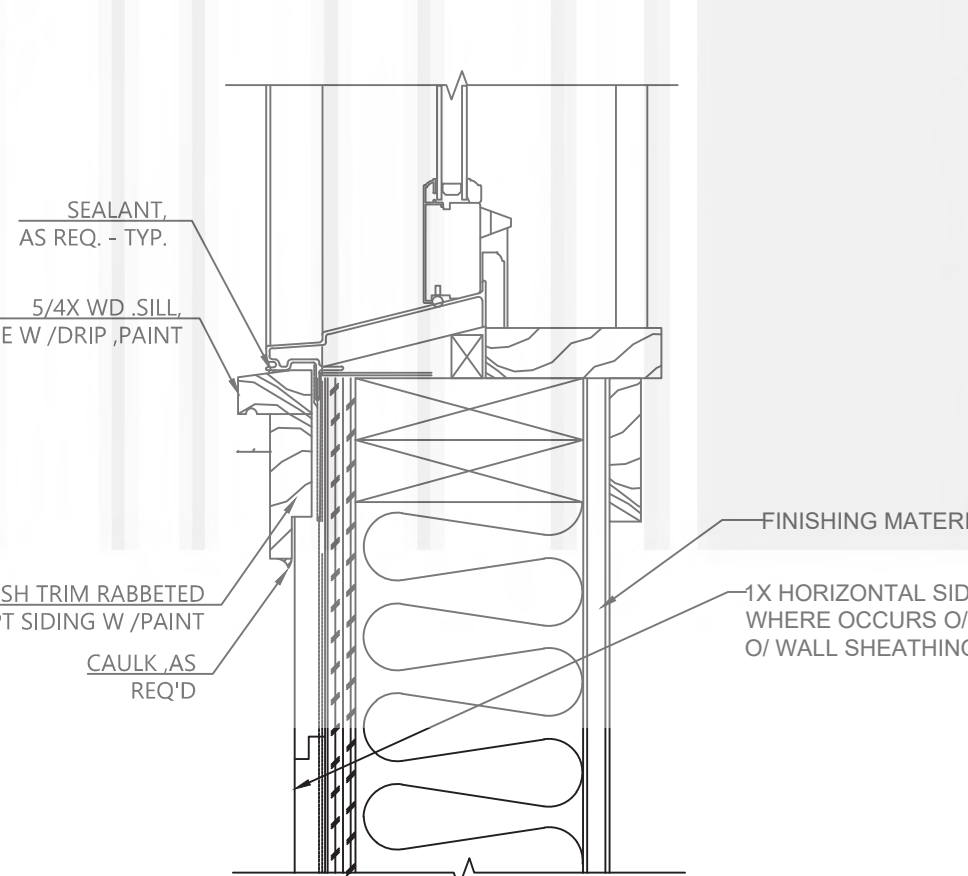
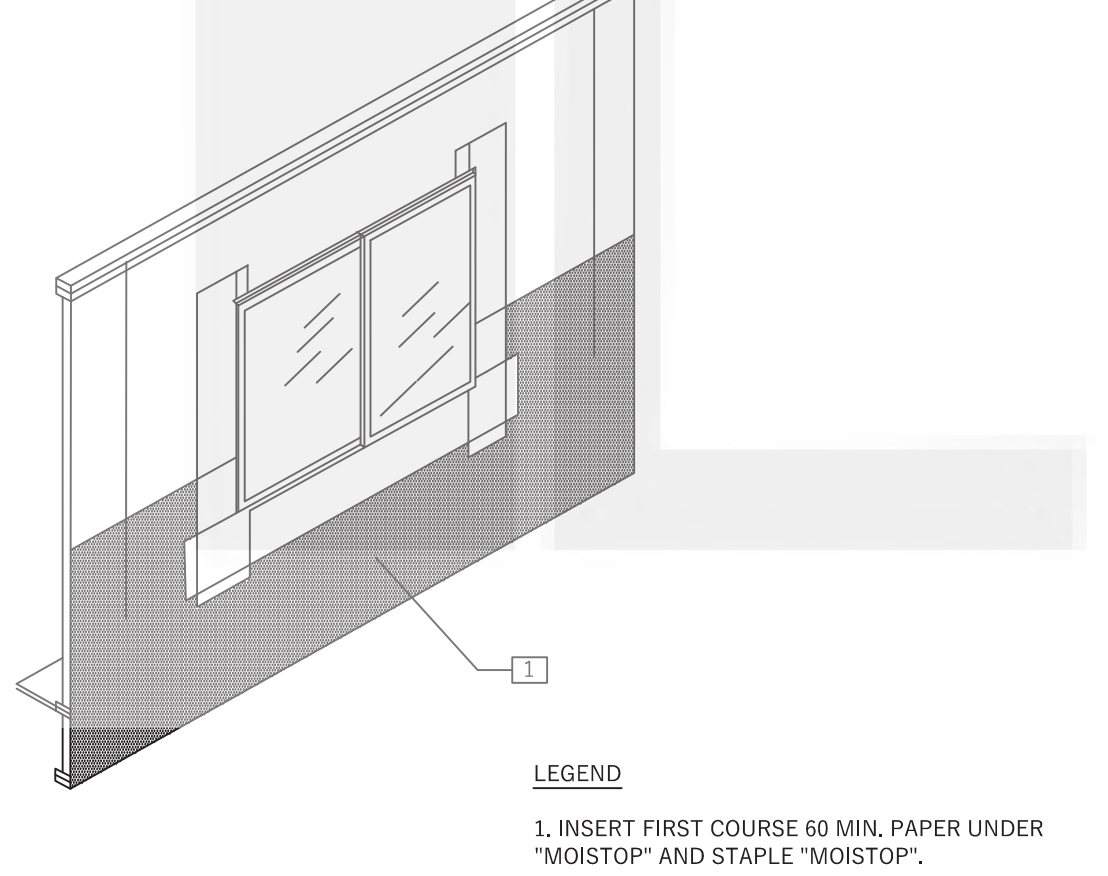
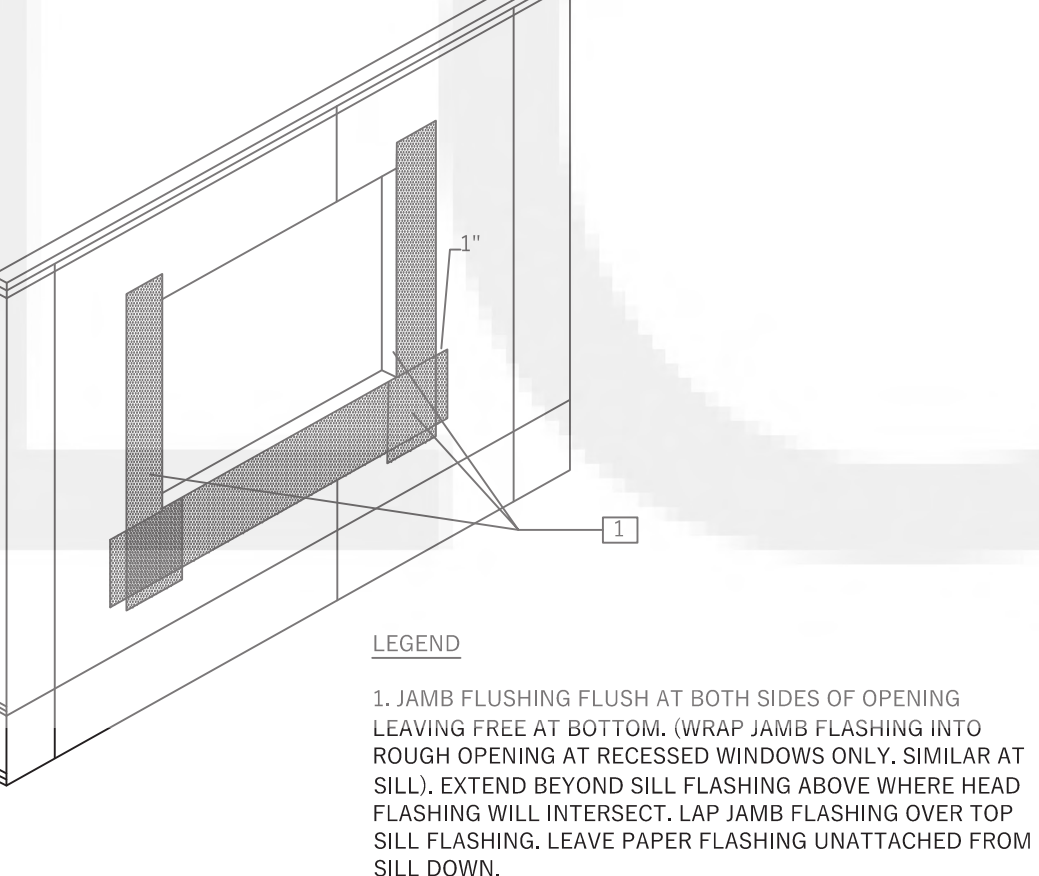
**BUILDING PAPER/
HOUSE WRAP
DETAILS AROUND
WALL TO ROOF
TRANSITION**

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

Date: **04/12/2024**

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WINDOW HEAD @ WD. BOARD & BATTEN SIDING	WINDOW HEAD @ HORIZONTAL SIDING	BUILDING PAPER-SECOND COURSE	WINDOW INSTALLATION	ROUGH WINDOW OPENING
				
WINDOW JAMB @ WD. BOARD & BATTEN SIDING	WINDOW JAMB@HORIZONTAL SIDING	TRIM-FLASHING-PROTECTION COURSE	SELF-ADHESIVE MEMBRANE	SILL FLASHING
				
WINDOW SILL @ WD. BOARD & BATTEN SIDING	WINDOW SILL @ HORIZONTAL SIDING		BUILDING PAPER- FIRST COURSE	JAMB FLASHING

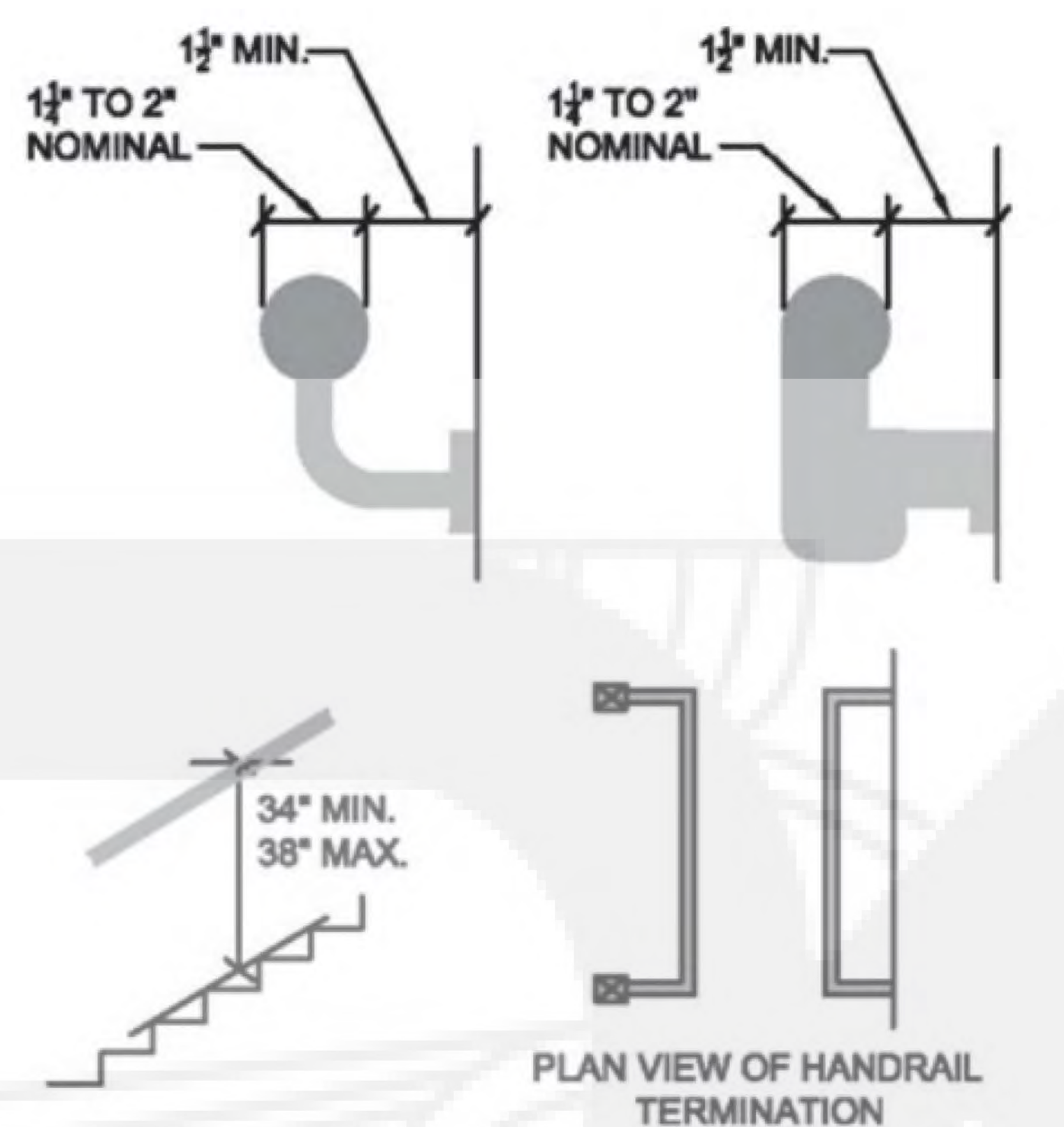
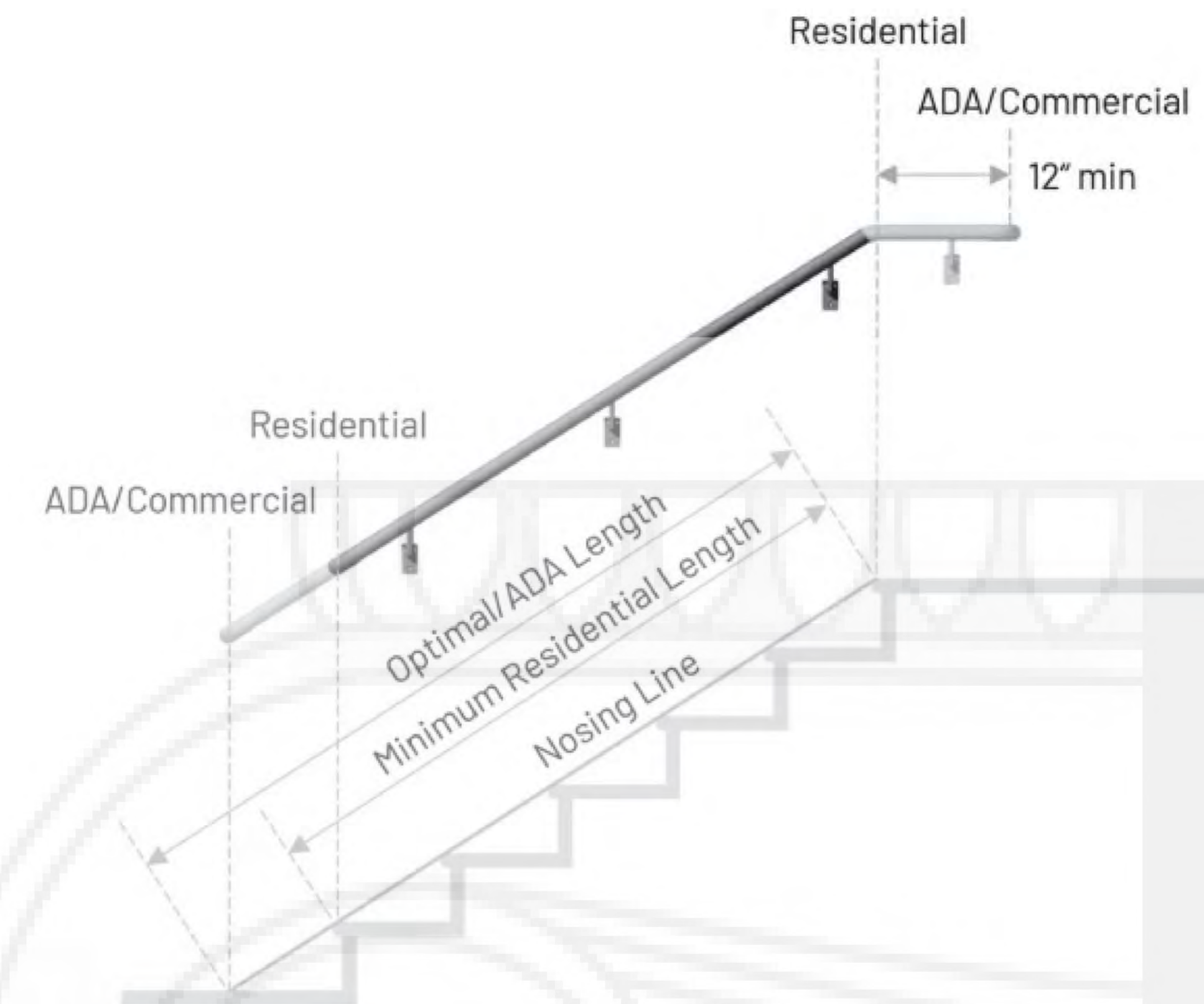
Project Name and Address:
SAWARD PRIVATE RESIDENCE
43 Solitaire Ln, Unit B, Aliso Viejo, CA. 92656

Revision Notes:	
Date	Description

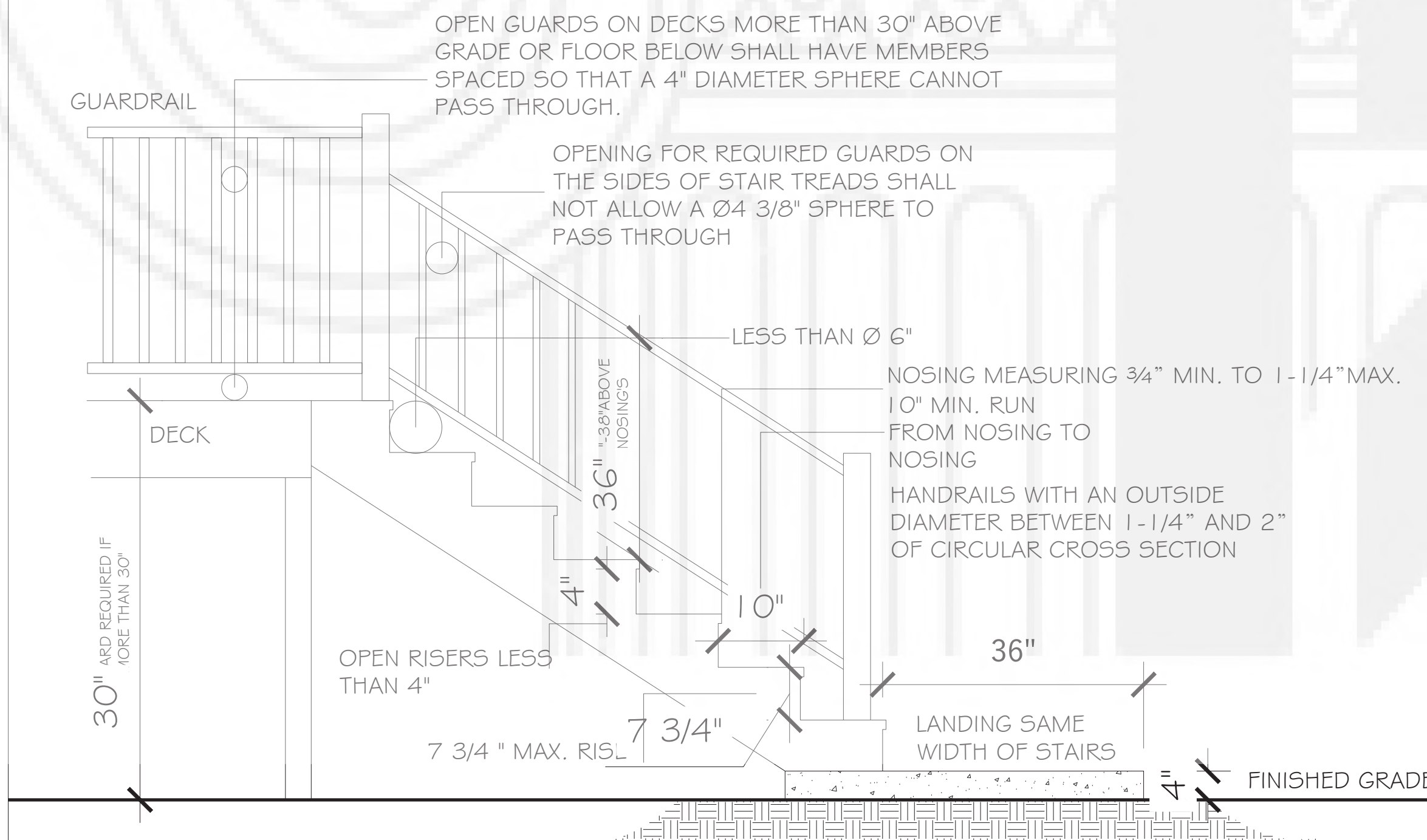
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Drawing Title:
BUILDING PAPER/ HOUSE WRAP DETAILS AT WALL TO ROOF TRANSITION

Scale: -
Date: **04/12/2024**
Page No. :

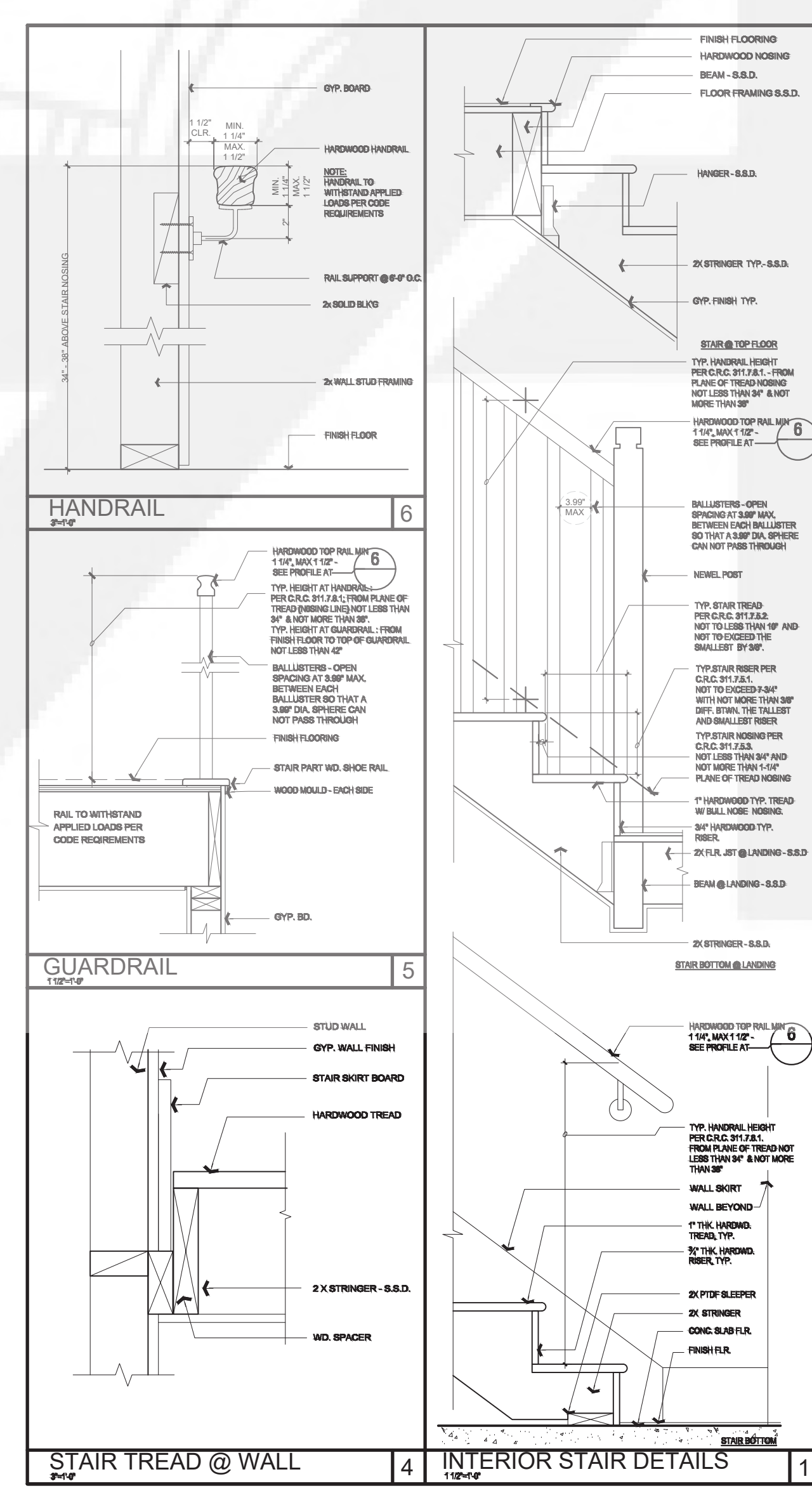


CODE REQUIREMENTS BASED ON THE 2022 CALIFORNIA RESIDENTIAL CODE



STAIRWAY NOTES:
STAIRWAYS SHALL BE NOT LESS THAN 36" IN WIDTH. STAIRWAY RISERS SHALL BE NO GREATER THAN 7 3/4 ".
STAIRWAY TREADS SHALL HAVE A MINIMUM RUN OF 10". THE LENGTH OF RUN AND THE HEIGHT OF RISER SHALL NOT VARY MORE THAN 3/8" IN THE RUN OF THE STAIR. STAIRS ARE REQUIRED TO BE ILLUMINATED.
OPEN RISERS ARE PERMITTED IF THE OPENING IS LESS THAN 4". TREAD NOSING SHALL NOT LESS THAN 3/4" BUT NOT MORE THAN 1 1/4" ON STAIRWAYS WITH SOLID RISERS. EXCEPT WHEN TREADS ARE 1 1" OR MORE.
COMPOSITE MATERIALS MAY REQUIRE ADDITIONAL STRINGERS.

7 TYPICAL STAIRCASE
SCALE: 1/2" = 1'-0"



SCOPE:

- 2nd FLOOR ADU
- FIRST FLOOR ADDITION
- FIRST FLOOR BATHROOM
- OPEN ELEVATION OVER LIVING ROOM TO REMAIN

Project Name and Address:
SAWARD PRIVATE RESIDENCE
43 Solitaire Ln, Unit B, Aliso Viejo, CA. 92656

Revision Notes:

Date	Description
04/10/25	REVISION

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Drawing Title:
Railing details

Scale: -
Date: 04/12/2024
Page No. :

D1.0

SHEAR WALL SCHEDULE										
SYMBOL	MATERIALS	NO. OF SIDES	NAILING		A35/LTP4 FRAMING CLIPS	SILL PLATE	SILL PLATE ATTACHMENT U.N.O.			SHEAR CAPACITY (LBS/FT)
			FIELD (F.N.)	BOUNDARY (B.N.) & EDGE (E.N.)			FRAMED FLOOR		CONCRETE FOUNDATION (F1954 BOLTS)	
							SIMPSON 1/4" SDS	16d NAILS		
	STRUCTURAL-1 PLYWOOD (PL $\frac{3}{8}$ " 5-PLY	1	8d @12" O.C.	8d @ 6' O.C.	32" O.C.	2x	16" O.C.	4" O.C.	$\frac{5}{8}$ " A.B. @ 48" O.C.	280
	STRUCTURAL-1 PLYWOOD (PL $\frac{3}{8}$ " 5-PLY	1	10d @12" O.C.	10d @ 6" O.C.	16" O.C.	2x	12" O.C.	3" O.C.	$\frac{5}{8}$ " A.B. @ 32" O.C.	340
	STRUCTURAL-1 PLYWOOD (PL $\frac{3}{8}$ " 5-PLY	1	10d @12" O.C.	10d @ 4" O.C.	12" O.C.	3x	6" O.C.	2" O.C.	$\frac{5}{8}$ " A.B. @ 24" O.C.	510
	STRUCTURAL-1 PLYWOOD (PL $\frac{3}{8}$ " 5-PLY	1	10d @12" O.C.	10d @ 3" O.C.	8" O.C.	3x	6" O.C.	-	$\frac{5}{8}$ " A.B. @ 12" O.C.	665
	STRUCTURAL-1 PLYWOOD (PL $\frac{3}{8}$ " 5-PLY	2	10d @12" O.C.	10d @ 4" O.C.	6" O.C.	3x	3" O.C.	-	$\frac{5}{8}$ " A.B. @ 10" O.C.	1020
	STRUCTURAL-1 PLYWOOD (PL $\frac{3}{8}$ " 5-PLY	2	10d @12" O.C.	10d @ 2" O.C.	4" O.C.	3x	3" O.C.	-	$\frac{5}{8}$ " A.B. @ 8" O.C.	1740

- NOTES:
- ALL PANEL EDGES SHALL BE BLOCKED.
 - NAILING SHALL BE STAGGERED AT ALL PANEL EDGES, EXCEPT AT SHEAR WALL TYPES 1 & 2.
 - CONNECTION OF DOUBLE 2X STUDS AND BLOCKING IF USED IN LIEU OF 3x STUDS AND BLOCKING AT ADJOINING PANEL EDGES.
 - AT DOUBLE-SIDED SHEAR WALLS, PANEL JOINTS ON EACH SIDE OF WALL SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
 - PROVIDE BOUNDARY NAILING AROUND ALL OPENINGS.
 - ALL ANCHOR BOLTS SHALL HAVE A 3" x 3" x 0.229" PLATE WASHER BETWEEN THE NUT AND SILL PLATE.
 - UPSET THREADS ON SILL BOLTS ARE NOT PERMITTED. ALL SILL BOLTS SHALL HAVE CUT THREADS.
 - REF. WALL ELEVATIONS NOTATION ON PLAN FOR STUD SIZE AND SPACING.
 - SHEAR WALL SHEATHING IS NOT TO BE INTERRUPTED BY INTERSECTING WALLS.

HOLDOWN SCHEDULE				
HOLDOWN	ANCHOR BOLT/ THREADED ROD	EMBED (MIN.)	POST (MIN.)	
HDU2-SDS-2.5	$\frac{5}{8}$ " DIA.	PAB5	6"	4x4
HDU4-SDS-2.5	$\frac{5}{8}$ " DIA.	PAB5	6"	4x4
HDU5-SDS-2.5	$\frac{5}{8}$ " DIA.	PAB5	6"	4x4
HDU8-SDS-2.5	$\frac{7}{8}$ " DIA.	PAB7	9.5"	4x4
HDU11-SDS-2.5	1" DIA.	PAB8	11"	4x6
HDU14-SDS-2.5	1" DIA.	PAB8	11"	6x6

- NOTES:
- PROVIDE SHEARWALL EDGE NAILING TO POST - FULL HEIGHT.
 - HOLDOWNS SHALL BE INSTALLED PER MANUF. INSTRUCTIONS & ICC-ES REPORT.
 - REF. DETAIL SPECIFIED ON PLAN FOR HOLDOWN TO BEAM CONN. DETAIL.
 - 4x POST TO BE USED WHERE HOLDOWN IS REQUIRED IN 2x4 STUDWALL.

- NAILING NOTES:
- NAILS SHALL BE DRIVEN PERPENDICULAR WHERE POSSIBLE INSTEAD OF TOENAILS.
 - PRE-DRILL FOR ALL NAILS 20d OR LARGER.
 - ALL NAILS SHALL BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE.
 - ALL NAILING APPLICATION SHALL CONFORM TO 2022 CALIFORNIA BUILDING CODE.

- DESIGN DATA:
- DESIGN LOADS:

ROOF

CEILING

FLOOR

DL = 15 psf

LL = 20 psf

DL = 5 psf

LL= 10 psf

DL = 15 psf

LL = 40 psf

- SEISMIC PARAMETERS:

RISK CAT. = II

SITE CLASS = D (DEFAULT)

SEISMIC DESIGN CAT. = D

$I_e = 1.0$

$R = 6.5$ (WOOD SHEAR WALLS)

$\rho = 1.0$

$V_{EQ} = 12.69$ KIPS

$S_S = 1.222$

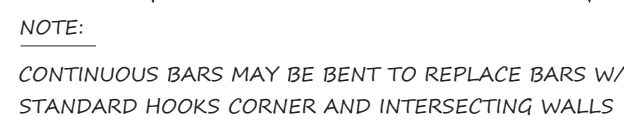
$S_1 = 0.439$

$S_{DS} = 0.978$

$S_{D1} = 0.544$

C_s (STRENGTH) = 0.150 (WOOD SHEAR WALLS)

METHOD = ELF



(1)

2

A diagram showing a horizontal wire. Above the wire, a dimension line with arrows at both ends is labeled "LENGTH". Below the wire, at the left end, there is a small loop or knot. A curved arrow points from the text "WIRE TOGETHER @ EA. END" to this loop. Another similar loop is shown at the right end of the wire.

(3)



4



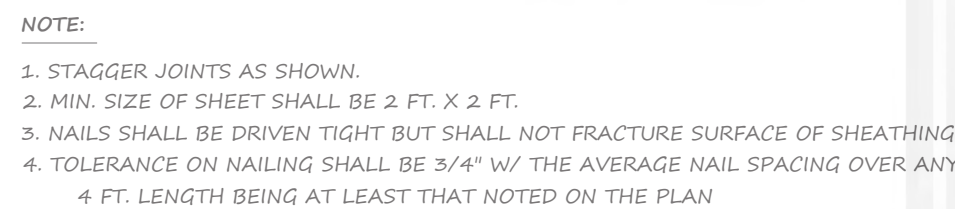
(5)



PHUONG NGUYEN



NO.	SPLICE	SHEAR CAPACITY (LBS)
1	(8) -16d	1,128
2	(10) -16d	1,410
3	(12) -16d	1,692
4	(14) -16d	1,974
5	(16) -16d	2,256



(10)



(1)



(12)

Project Name and Address:

Se

Revision Notes:

Date	Description
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Drawing Title:

TYPICAL CONSTRUCTION DETAILS

Scale: AS SHOWN

Date: 06/27/2024

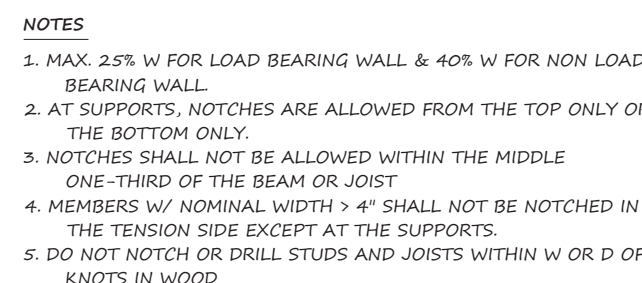
Page No.

S-01



13

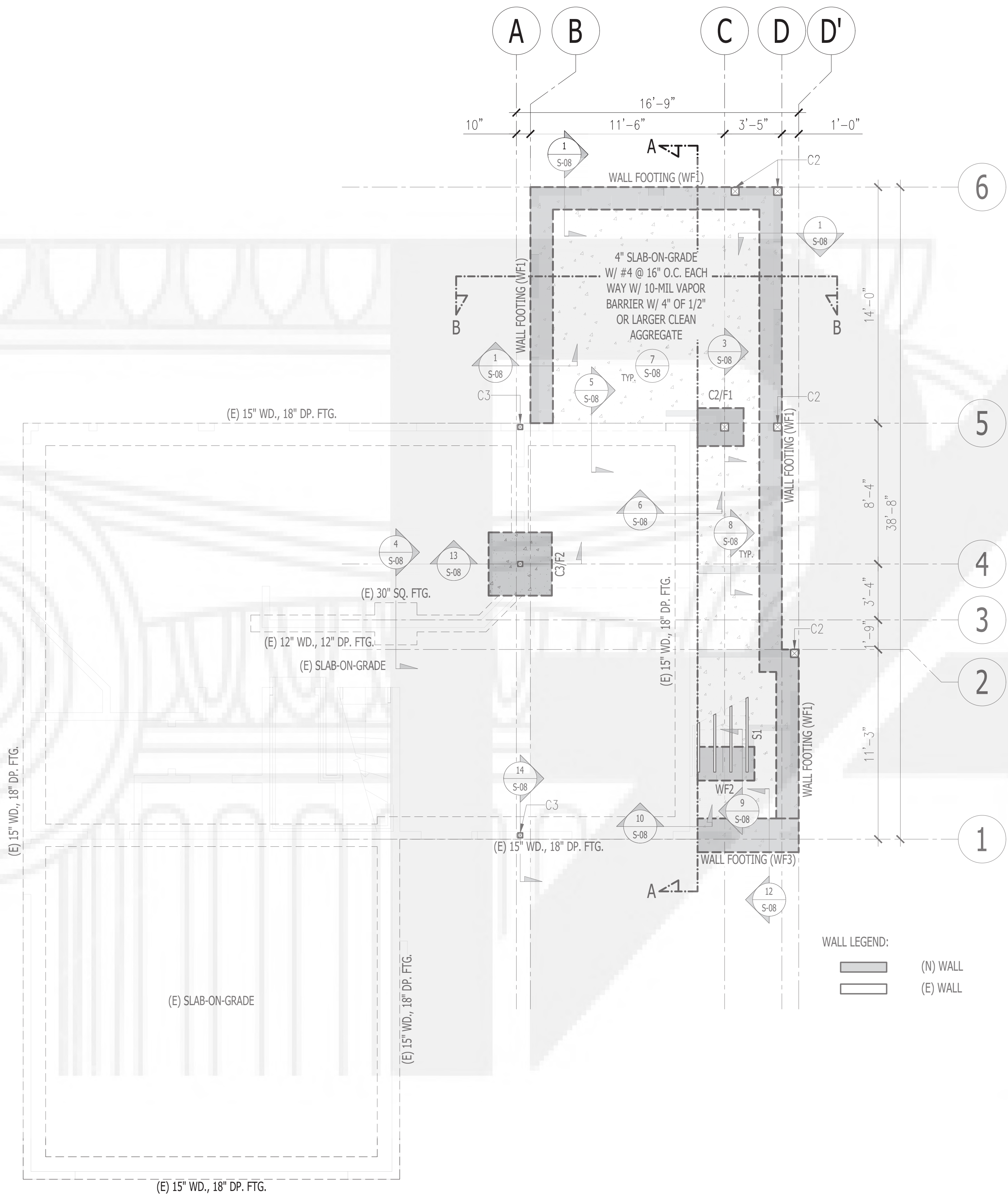
DRAG STRAP SPECIFICATIONS				
STRAP	DRAG MEMBER	L1 (LENGTH OF STRAP TO TOP PLATES)	L2 (LENGTH OF STRAP TO DRAG MEMBER)	DRAG CAPACITY (LBS)
CS16	1 3/8" MIN.	16" W/ (20)-8d	32" W/ (2) ROWS OF 8d's @ 4 1/2" O.C.	1,705
CMST14	3 1/2" MIN.	34" W/ (46)-10d	72" W/ (2) ROWS OF 10d's @ 3 1/2" O.C.	6,475
CMST12	3 1/2" MIN.	44" W/ (86)-10d	96" W/ (2) ROWS OF 10d's @ 3 1/2" O.C.	9,215



(14)

(9)

13



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

STRUCTURAL
CHARLES ABBOTT ASSOCIATES
REVIEWED FOR CODE COMPLIANCE
PHUONG NGUYEN

FOOTING SCHEDULE	
MARK	SIZE & REINF.
WF1	16" WD., 24" DP. W/ (2)-#4 T&B
WF2	24" WD., 12" DP. W/ (2)-#4 T&B
WF3	2'-0" WIDE, 12" DEEP UNDERPINNING W/ #4 @ 9" O.C. BOTT., E.W.
F1	2'-3" WD., 2'-9" LONG, 18" DP. W/ (5)-#4 BOTT. E.W.
F2	3'-9" WD., 3'-9" LONG, 18" DP. W/ (8)-#4 BOTT. E.W.

POST SCHEDULE	
MARK	SIZE
C1	4x4 DF #1
C2	6x6 DF #1
C3	4x4 DF #1

STRINGER SCHEDULE	
MARK	SIZE
S1	2x12 DF #2 @ 12" O.C.

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Tel: (415) 801 6504
info@pixelarchltd.com
www.pixelarchltd.com

Project Name and Address:

PROPOSED
HOUSE ADDITION

43 Solitaire Lane, Aliso Viejo,
CA 92656

Seal:

Revision Notes:

Date	Description

Drawing Title:

PROPOSED
FOUNDATION PLAN

Scale:

AS SHOWN

Date:

06/21/2024

Page No. :

S-02

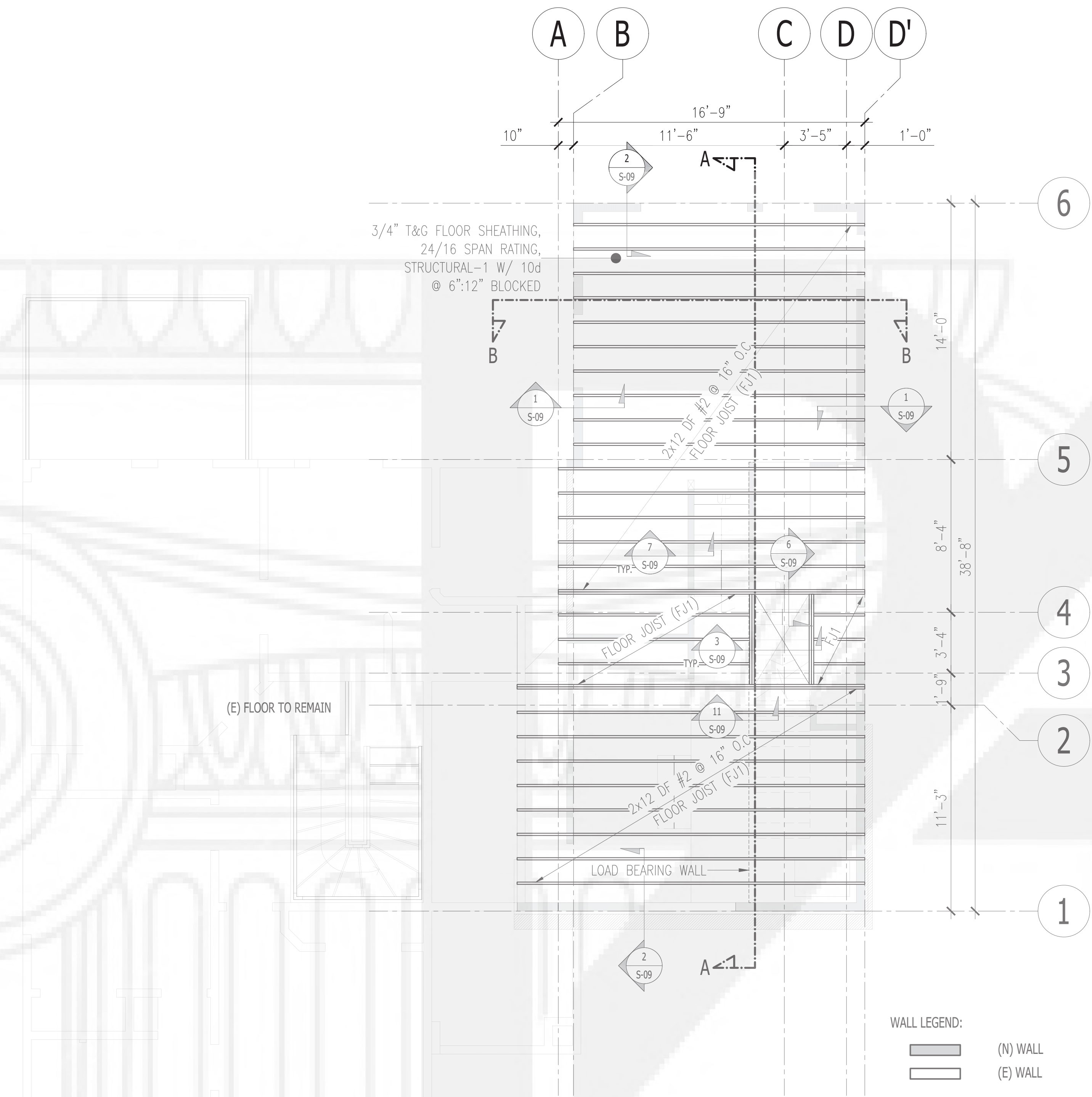
FLOOR JOIST SCHEDULE	
MARK	SIZE
FJ1	2x12 DF #2 @ 16" O.C.



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Drawing Title:

PROPOSED SECOND
FLOOR FRAMING PLAN

Scale: AS SHOWN

Date: 06/21/2024

Page No. :

S-03

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CHARLES ABBOTT ASSOCIATES
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PHUONG NGUYEN

PROPOSED SECOND FLOOR FRAMING PLAN

SCALE 1/4" = 1'-0"





6-04

CEILING JOIST SCHEDULE	
MARK	SIZE
CJ1	2x10 DF #2 @ 24" O.C.



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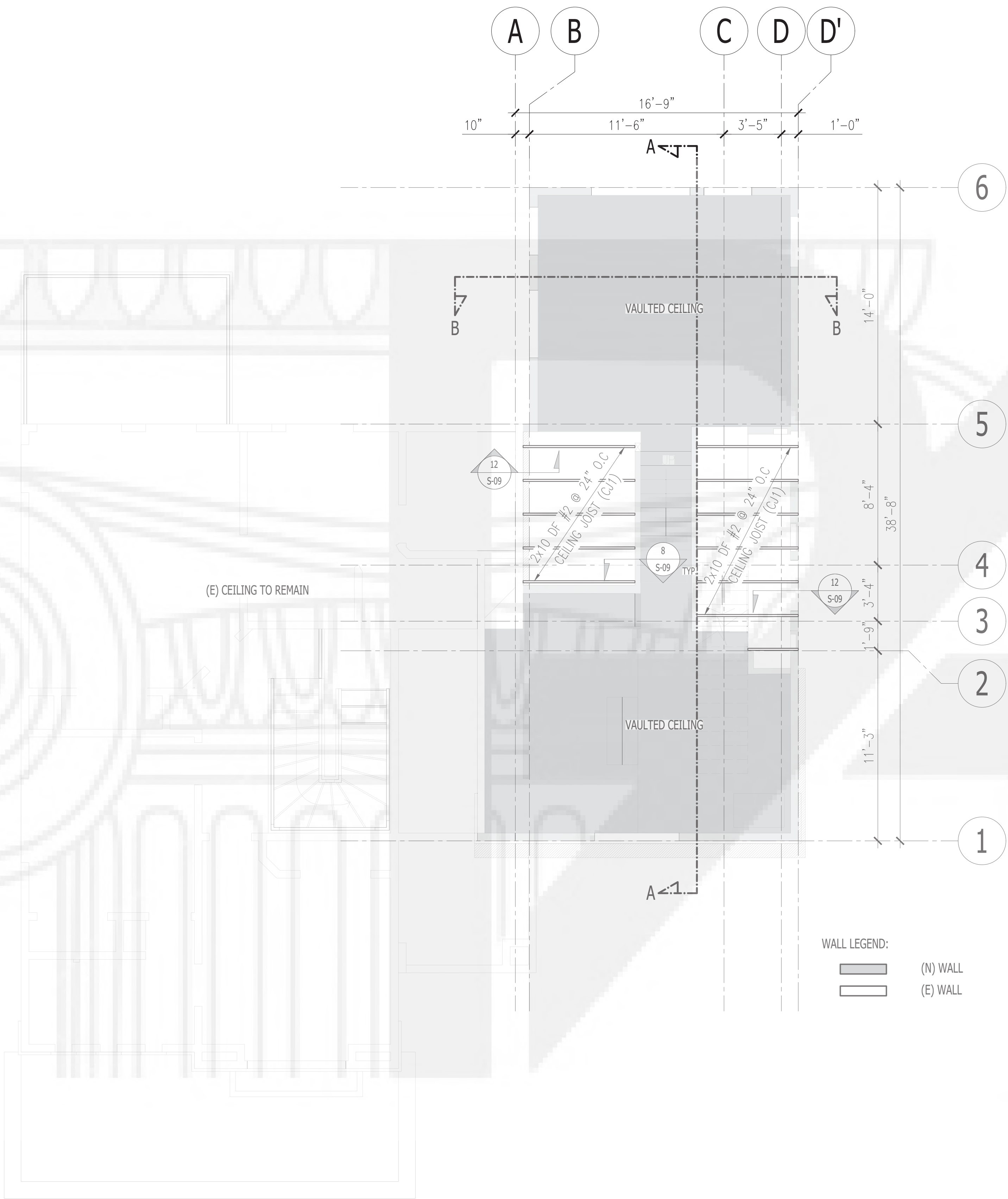
PROPOSED
CEILING FRAMING PLAN

Scale: AS SHOWN

Date: 06/21/2024

Page No. :

S-05



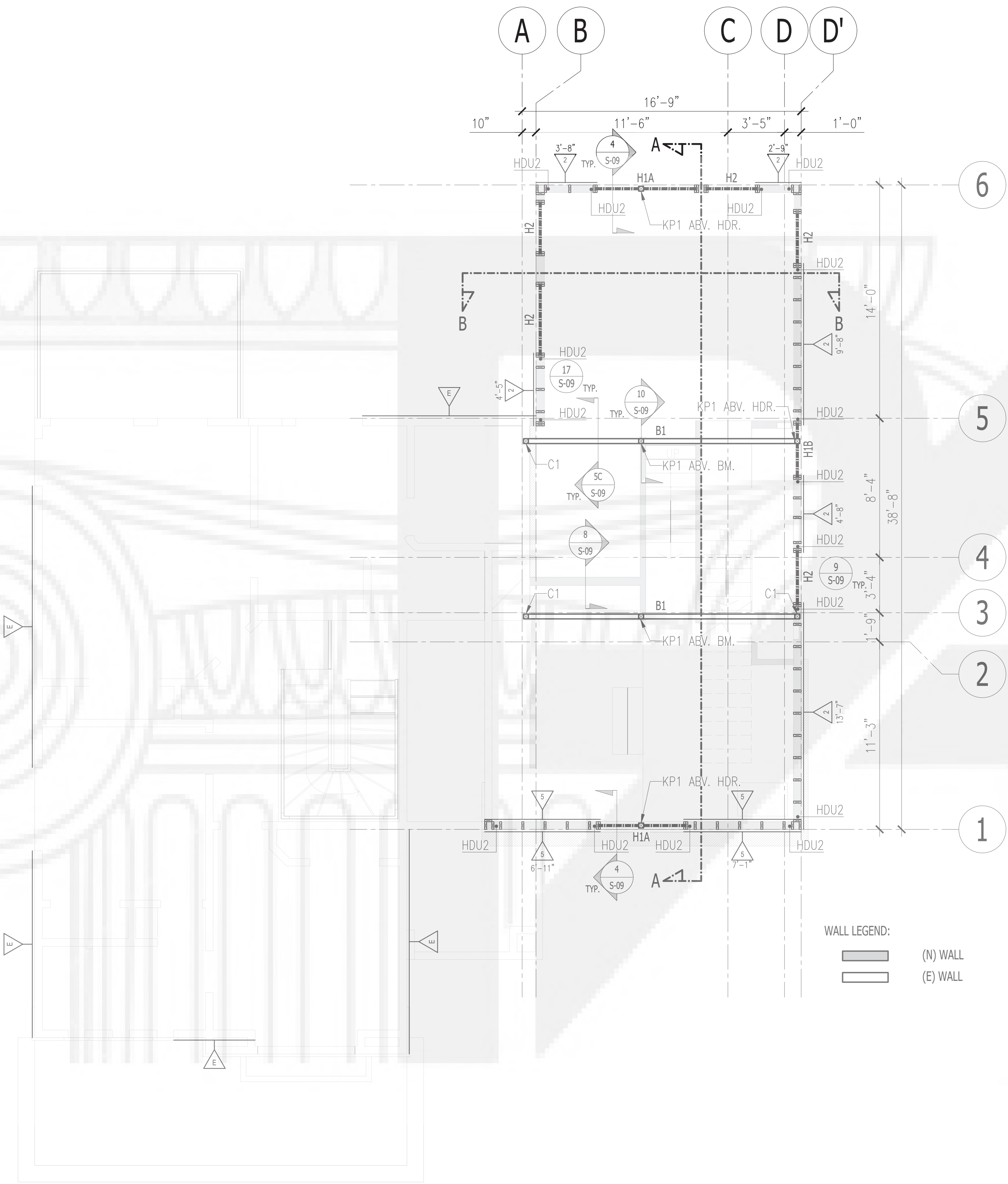
PROPOSED CEILING FRAMING PLAN

SCALE 1/4" = 1'-0"



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[Signature]
PHUONG NGUYEN



PROPOSED SECOND FLOOR SHEAR WALL PLAN
SHOWING BEAMS ABOVE

SCALE 1/4" = 1'-0"



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PHUONG NGUYEN

POST SCHEDULE	
MARK	SIZE
C1	4x4 DF #1
C2	6x6 DF #1
C3	4x4 DF #1

MARK	SIZE
H1A	4x10 DF #2
H1B	4x6 DF #2
H2	4x4 DF #2
H3	4x6 DF #2

BEAM SCHEDULE	
MARK	SIZE
B1	3.5x11.875" PSL 2.2E
B2	5.25x11.25" PSL 2.2E
B3	8-3/4"x12" 24F-V4 DF GLULAM
B4A/B	6x10 DF #1
B5	6x10 DF #1

KING POST SCHEDULE	
MARK	SIZE
KP1	4x4 DF # 1



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Date	Description

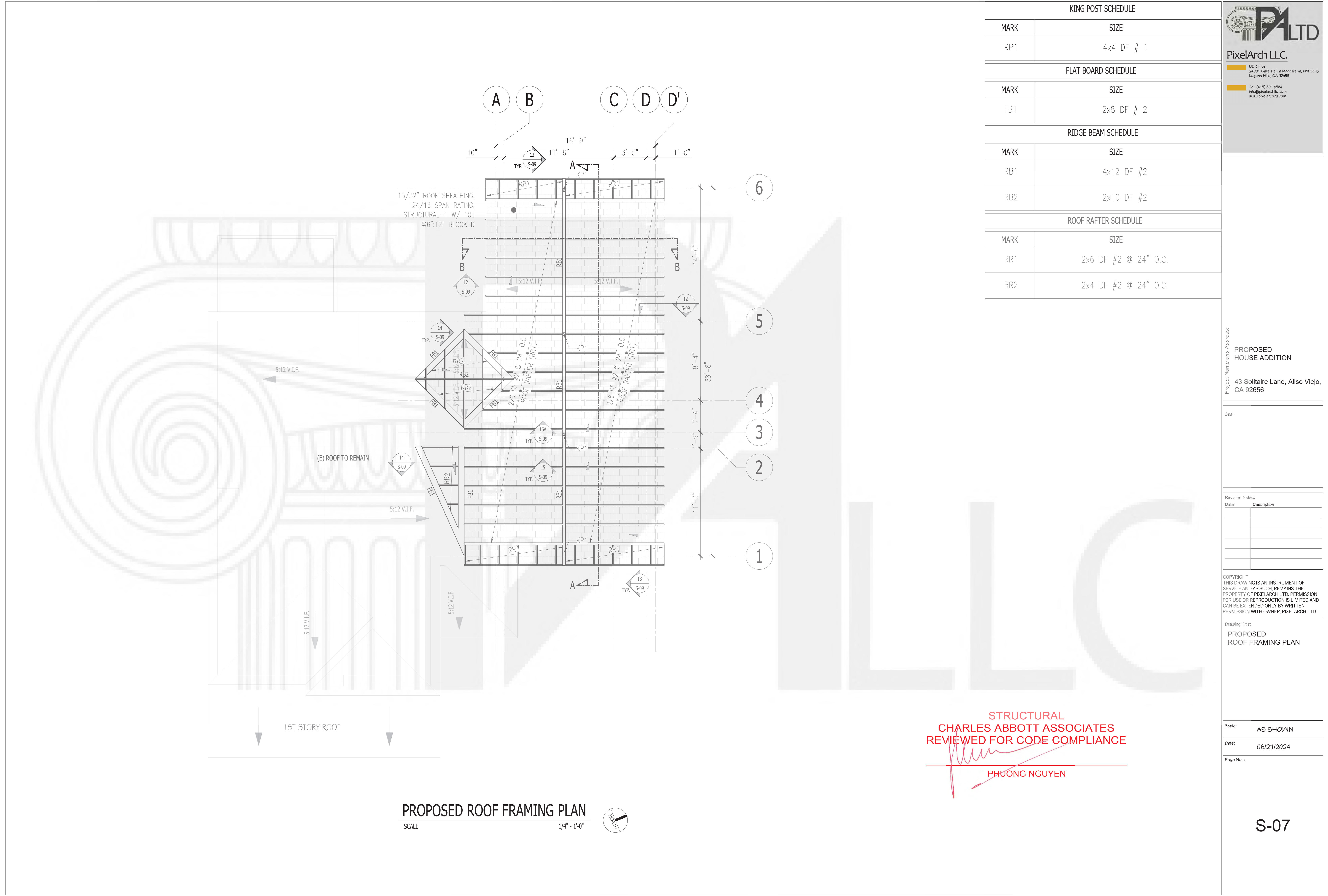
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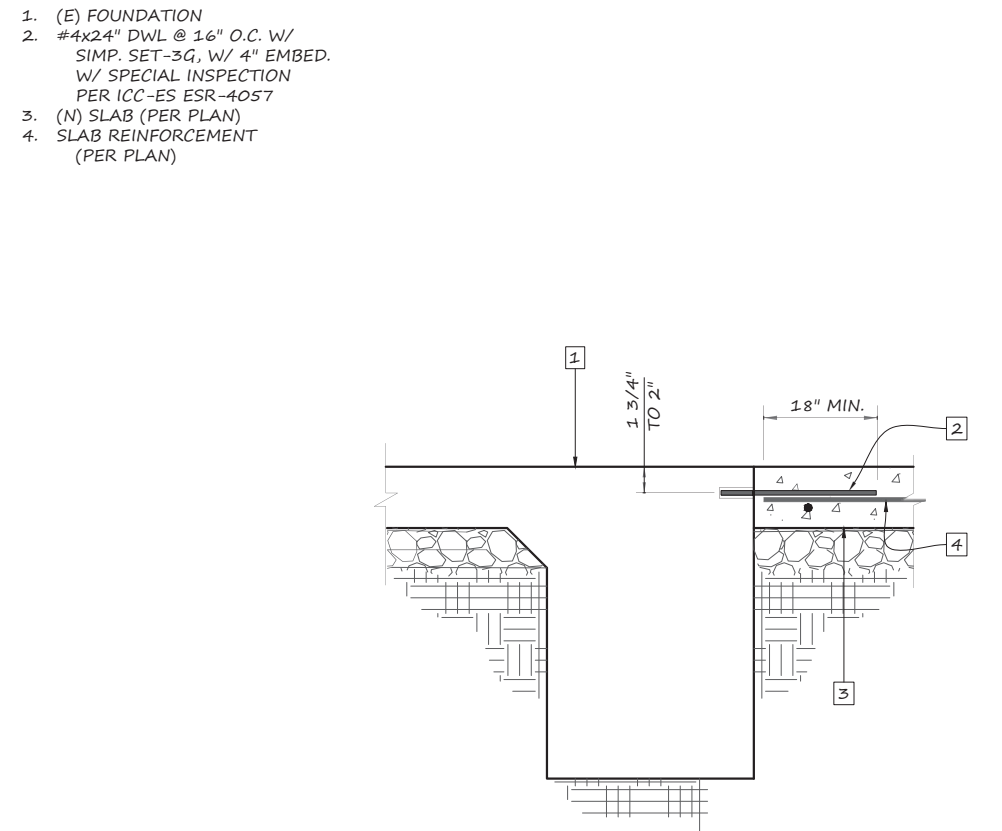
Drawing Title:
**PROPOSED SECOND
FLOOR SHEAR WALL
PLAN SHOWING BEAMS
ABOVE**

Scale: **AS SHOWN**

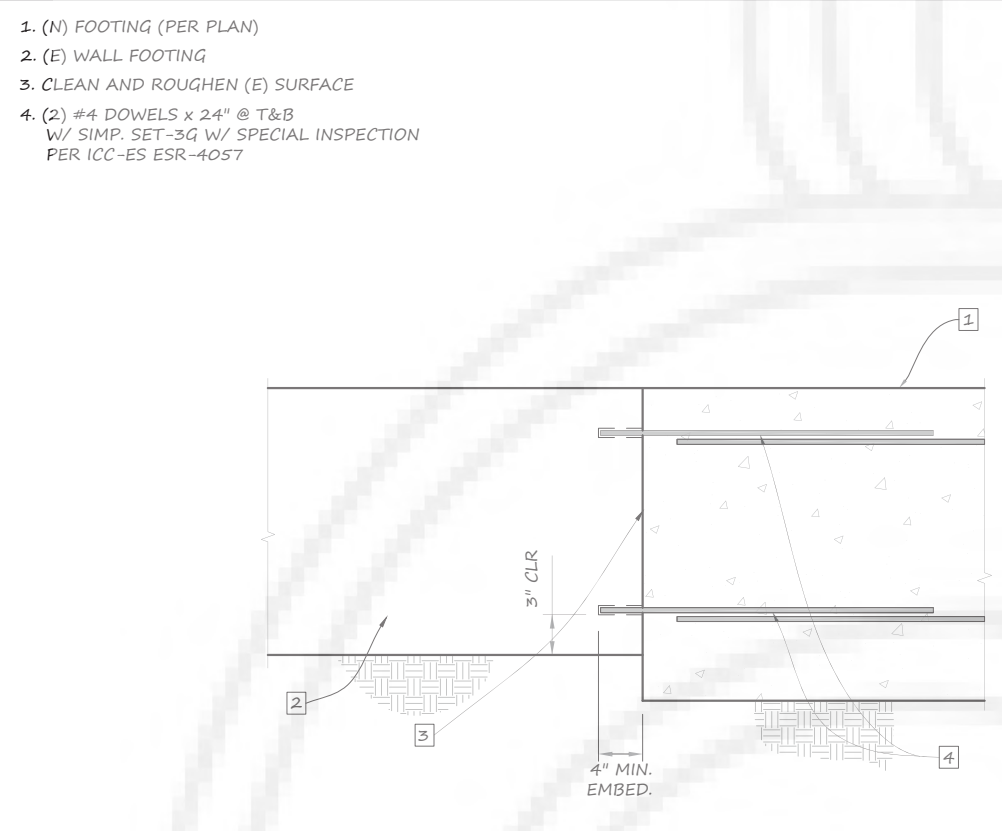
Date: **06/21/2024**

Page No. :
S-06





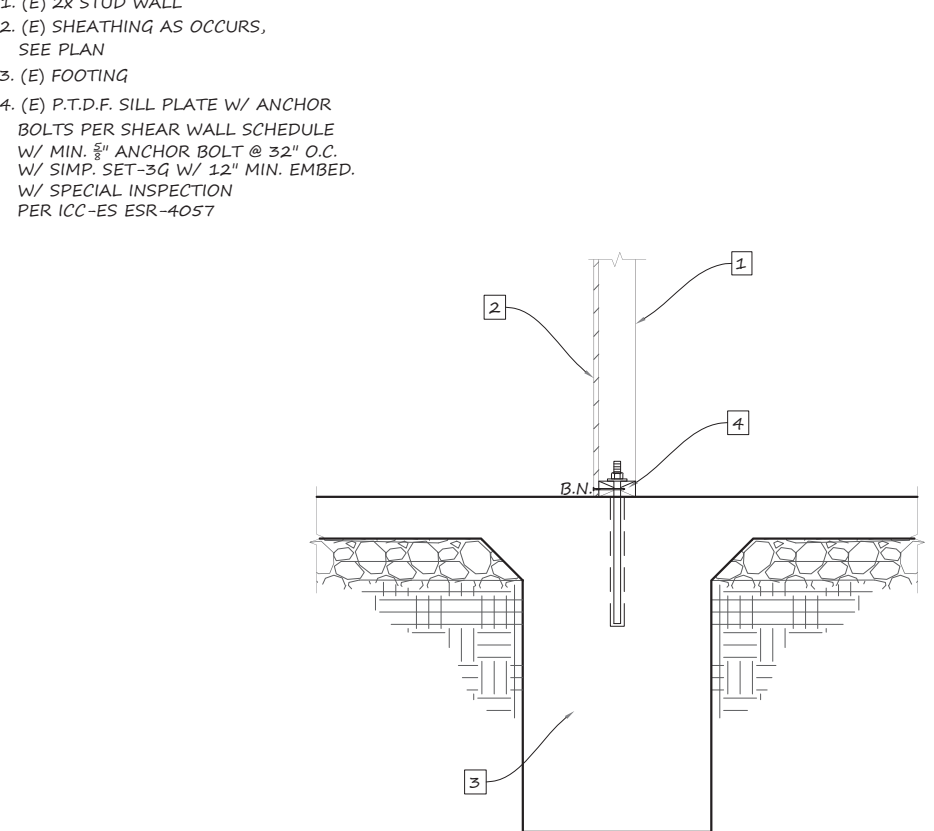
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SCALE : 3/4\"/>



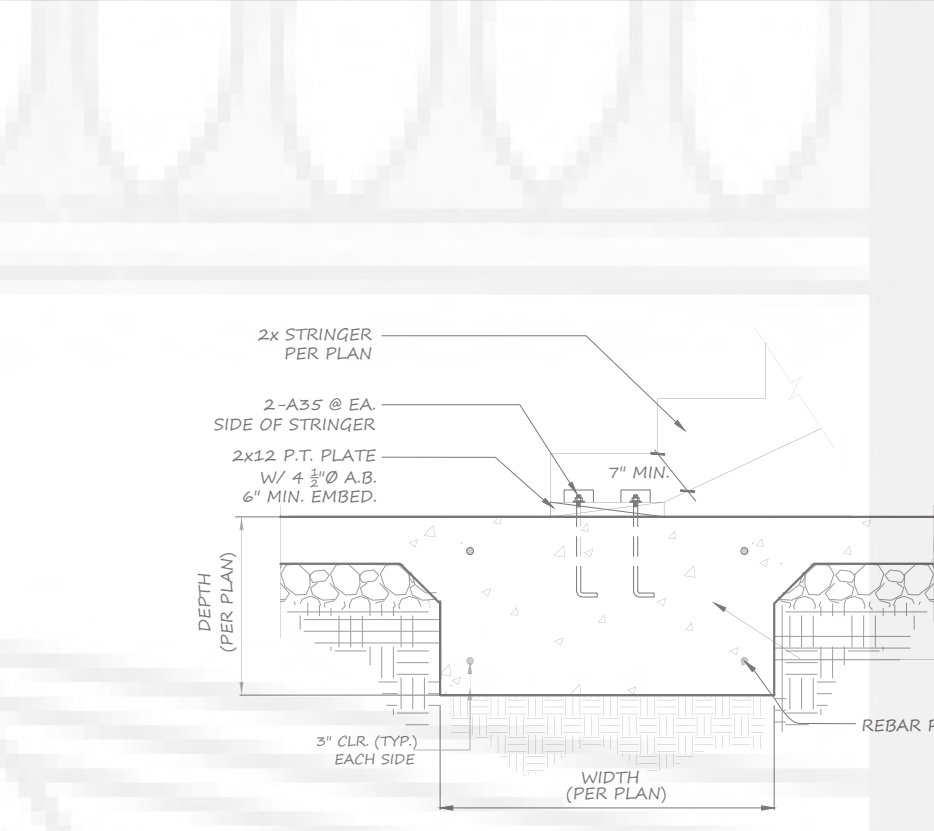
10 (N) FOOTING TO (E) FOOTING
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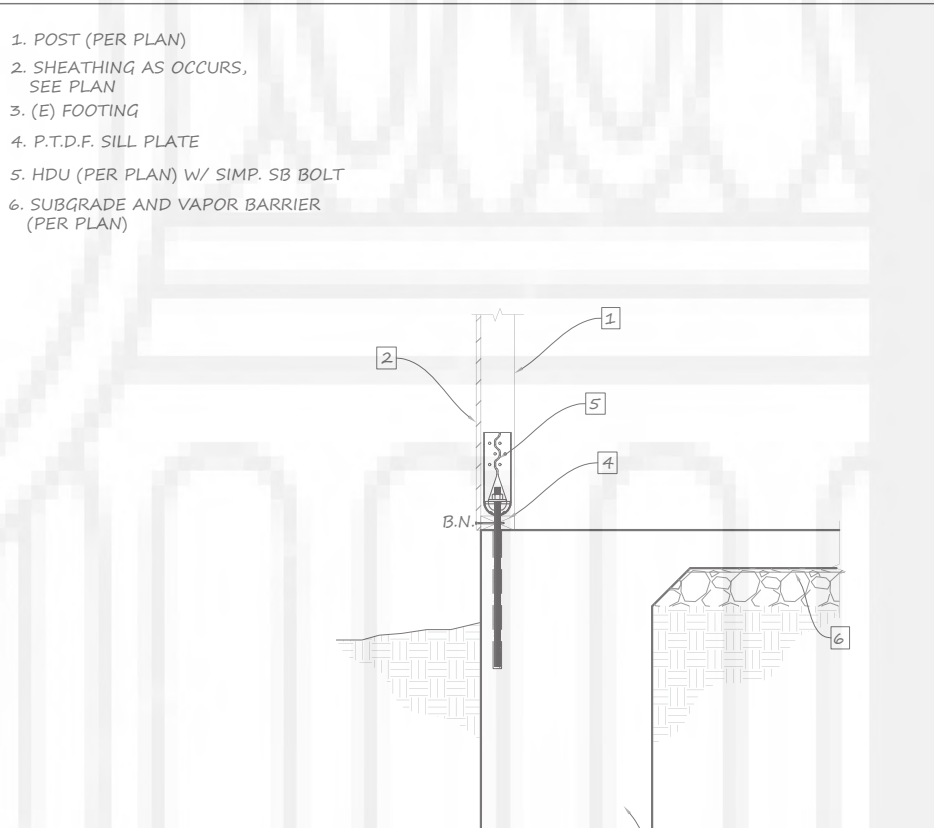
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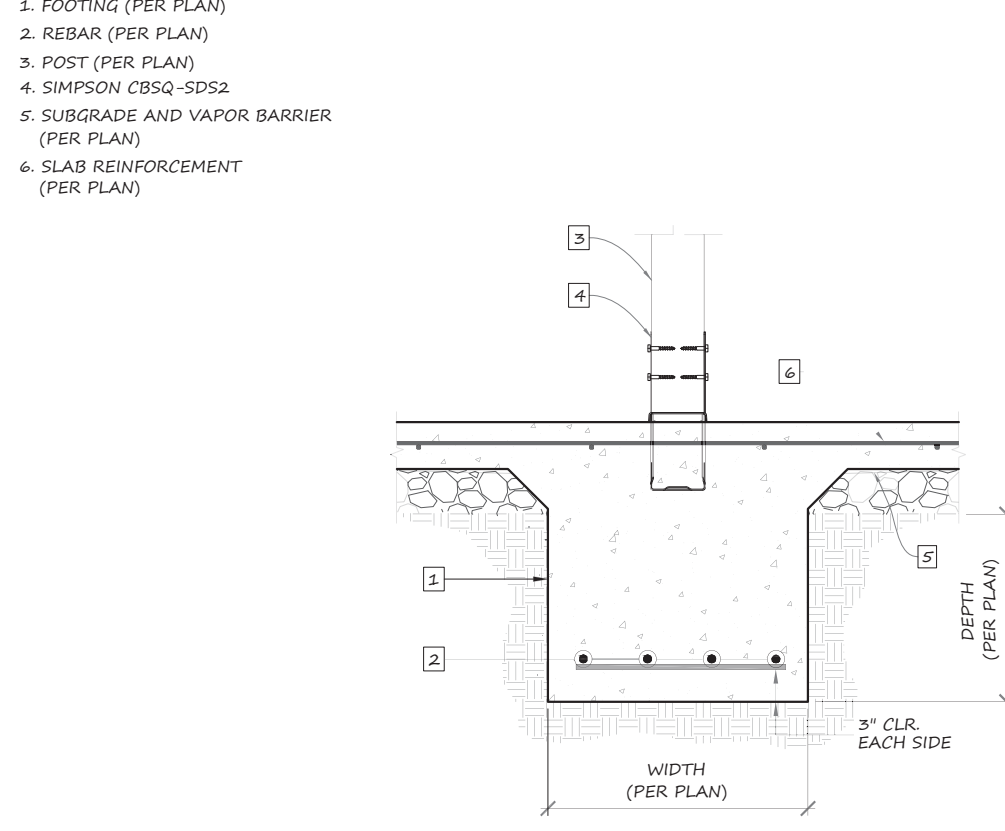
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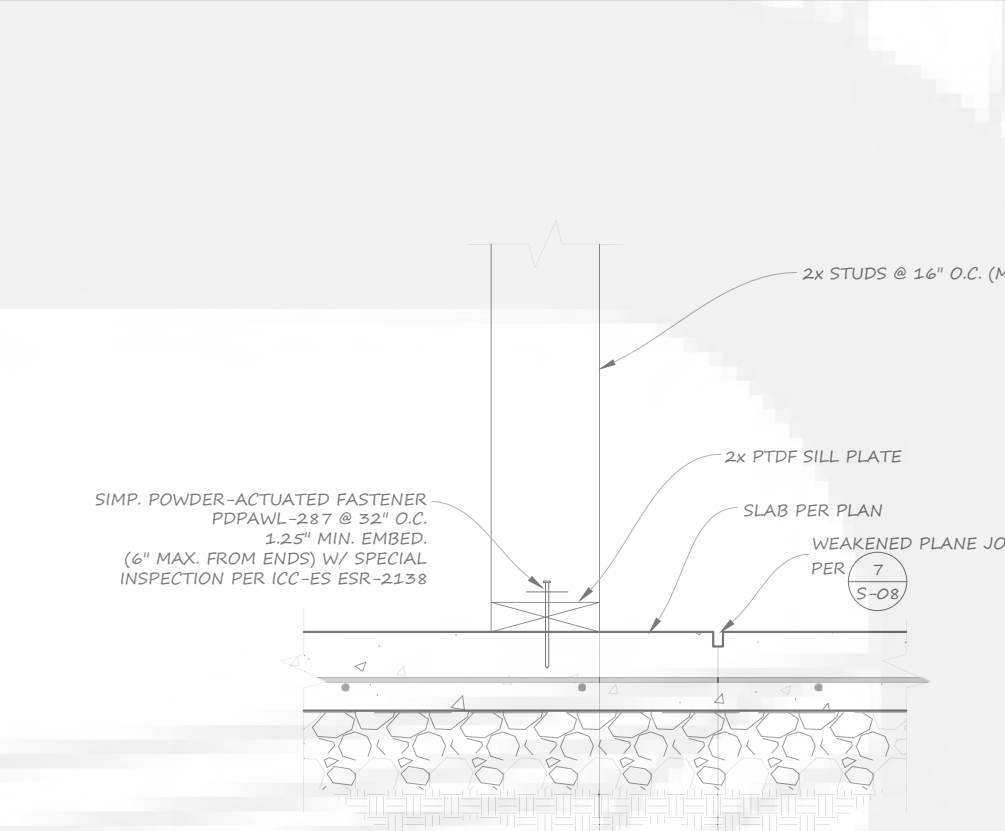
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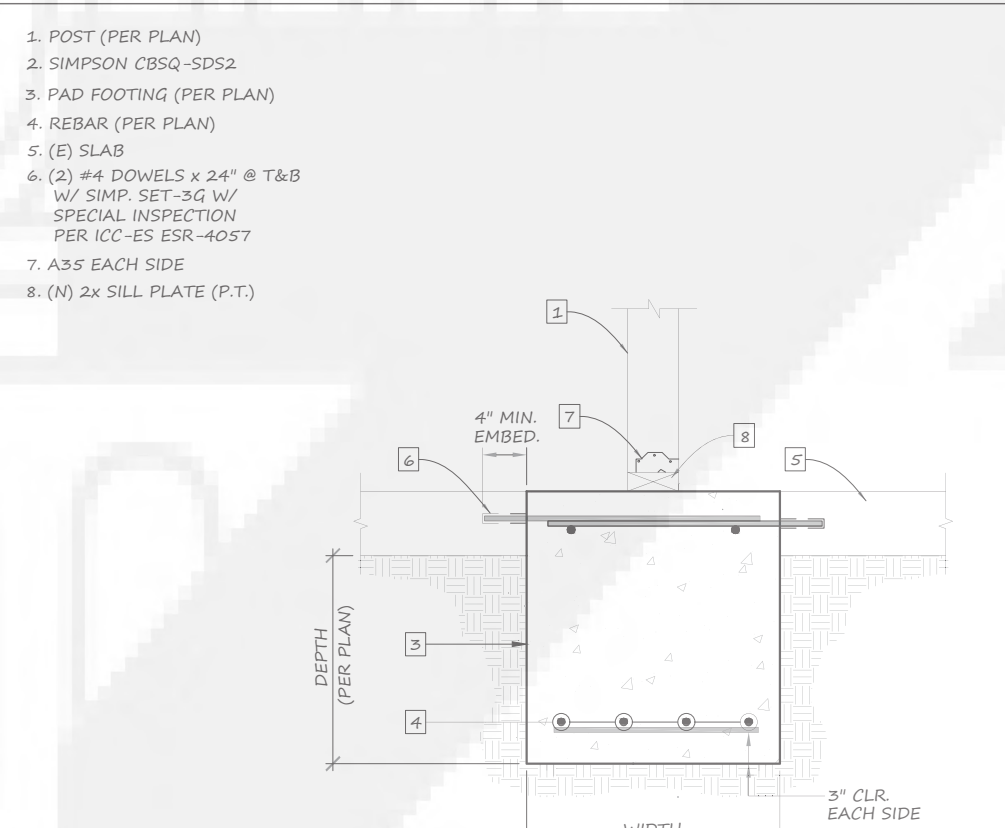
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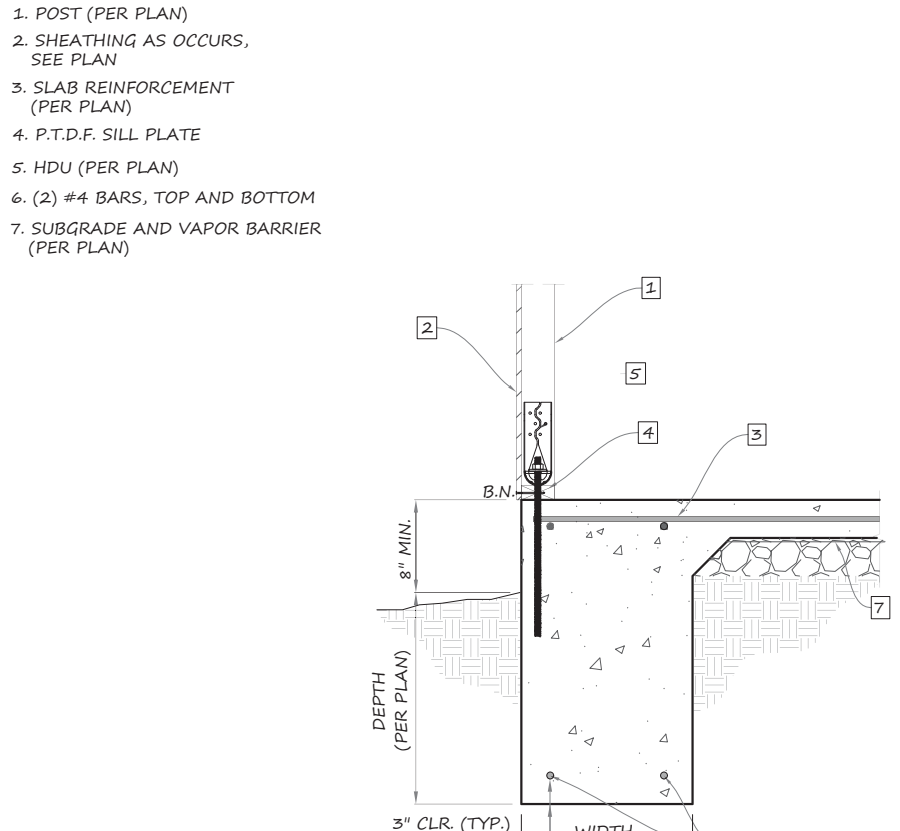
3 INTERIOR PAD FOOTING DETAIL
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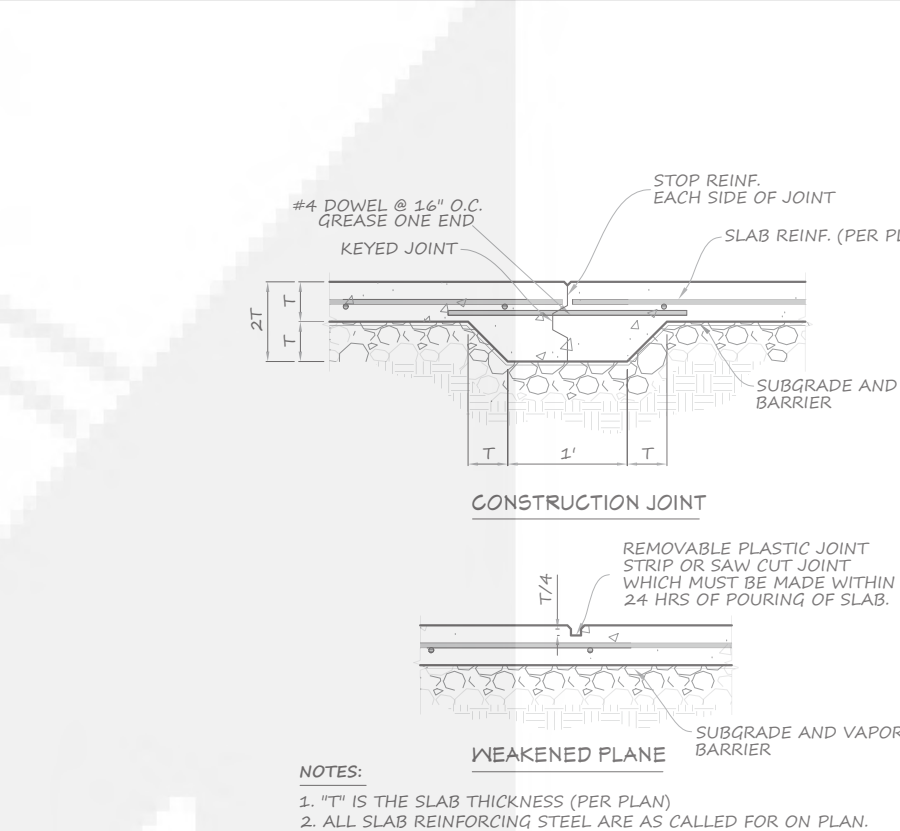
8 TYP. INT. PARTITION TO SLAB CONNECTION
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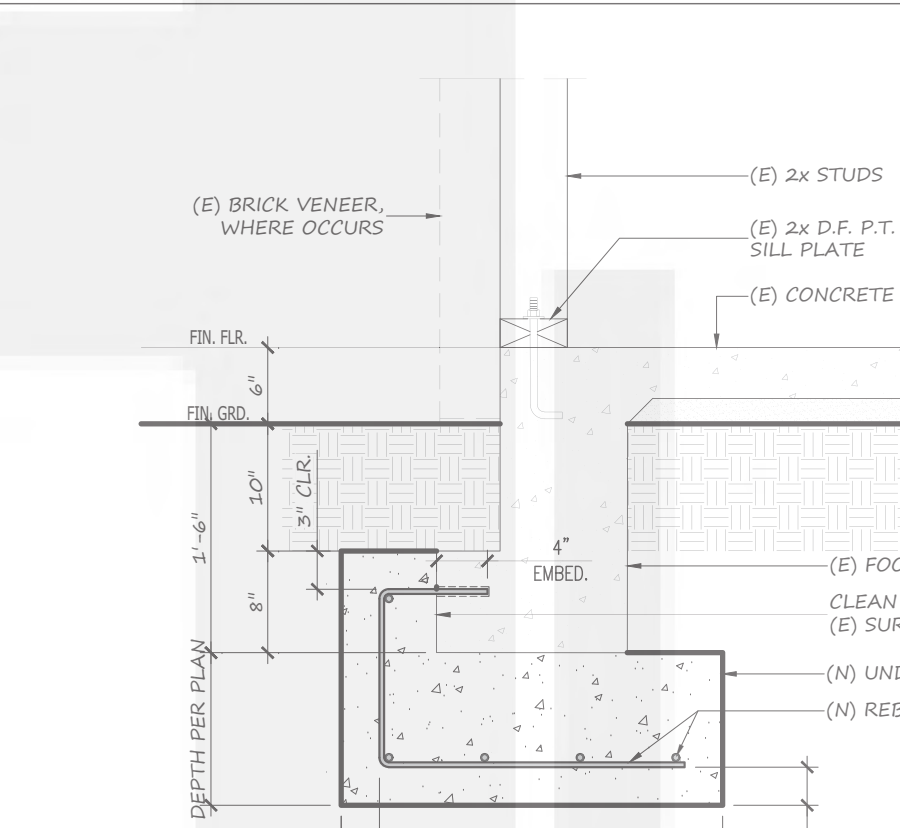
13 (N) PAD FOOTING DETAIL
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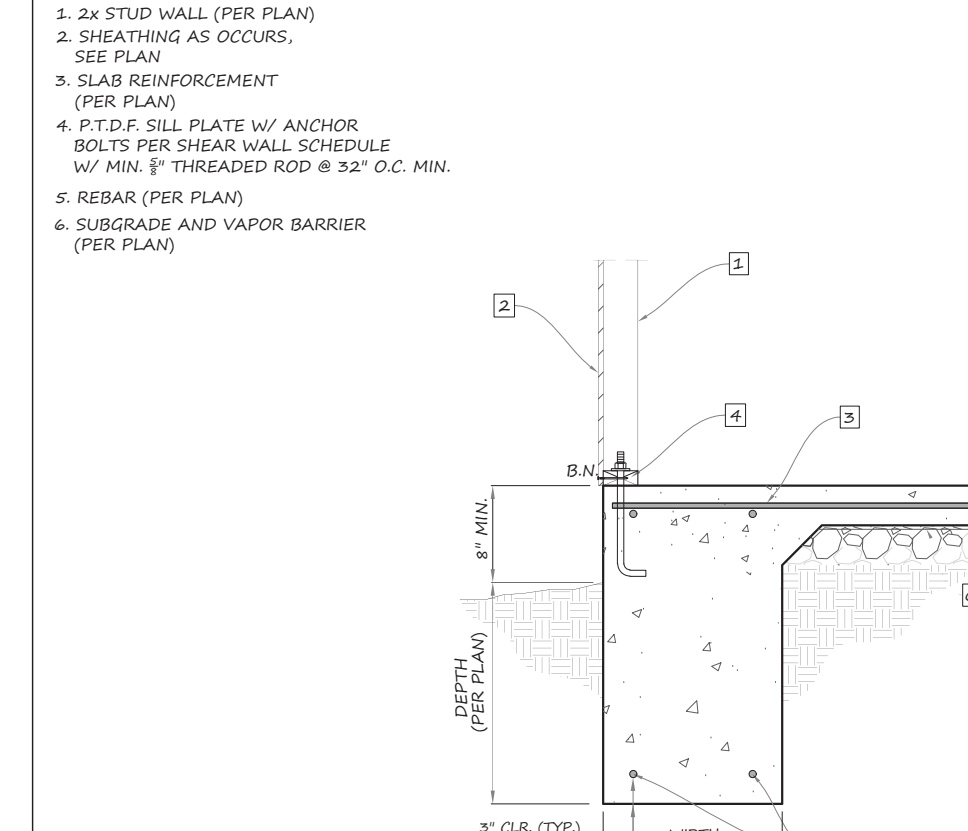
2 TYP. HDU @ FOOTING
SCALE : 3/4\"/>



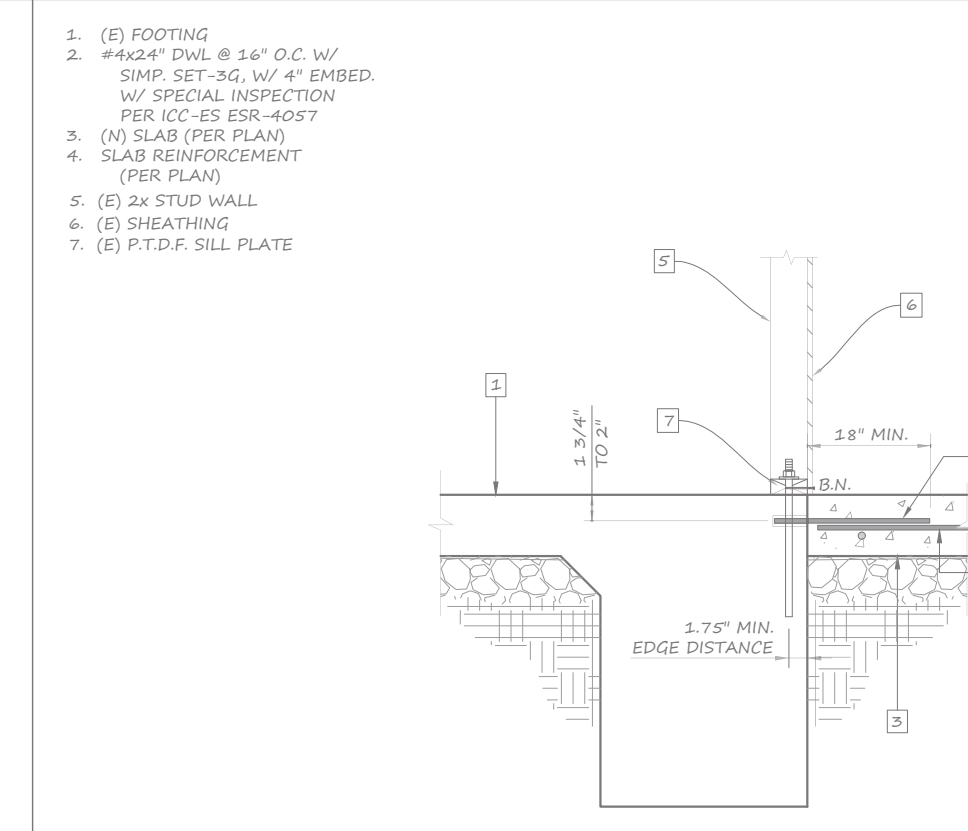
7 TYP. SLAB-ON-GRADE DETAIL
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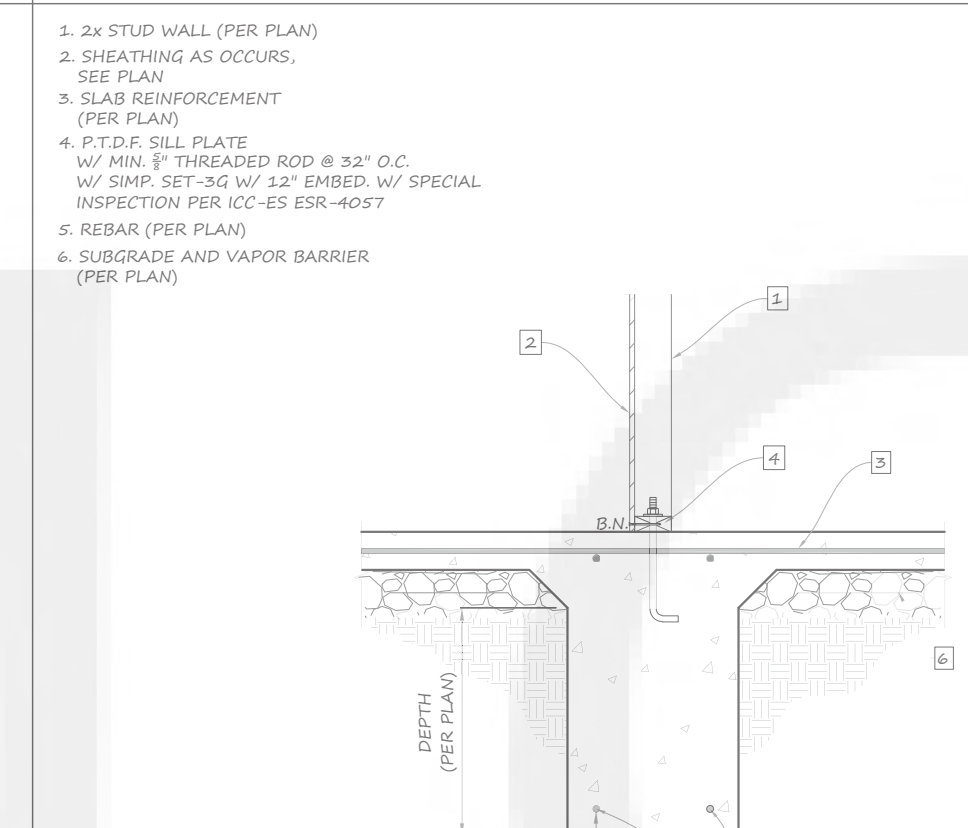
12 UNDERPINNING DETAIL
SCALE : NTS.



1 TYP. FOOTING DETAIL
SCALE : 3/4\"/>



6 (N) SHEAR WALL @ (E) FOOTING
SCALE : 3/4\"/>



11 TYP. INTERIOR FOOTING DETAIL
SCALE : 3/4\"/>

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PROPOSED
HOUSE ADDITION

43 Solitaire Lane, Aliso Viejo,
CA 92656

Revision Notes:	
Date	Description

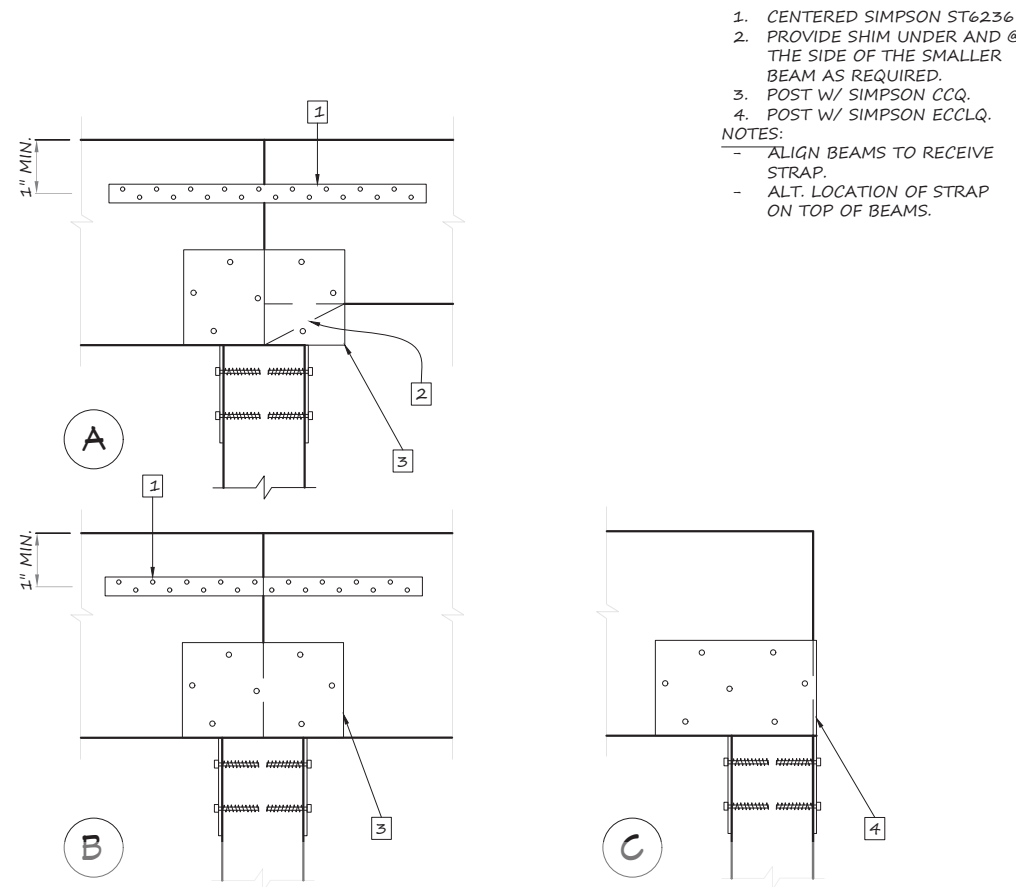
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FOUNDATION DETAILS

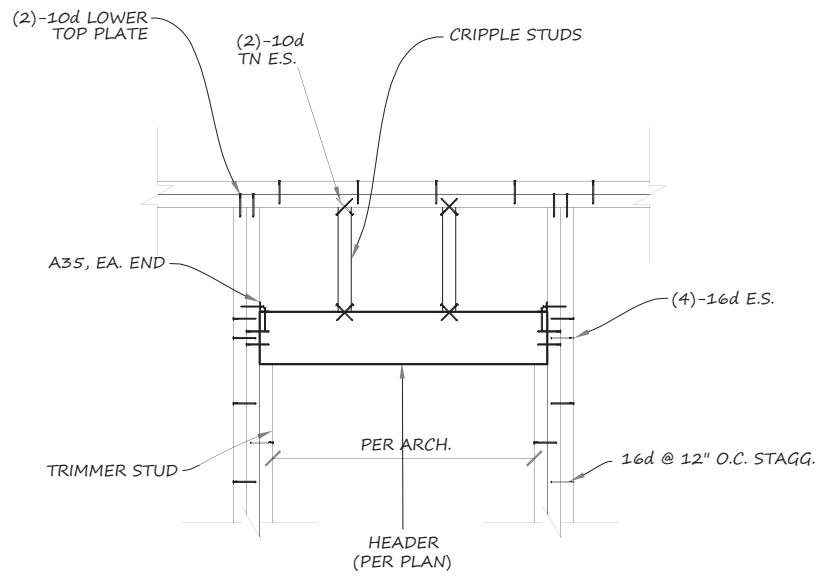
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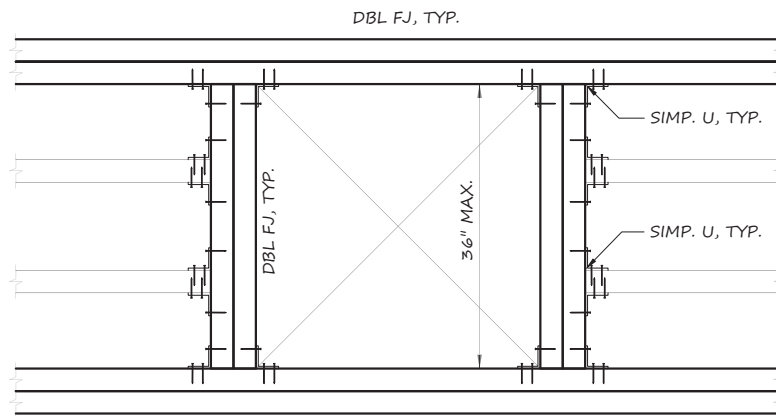
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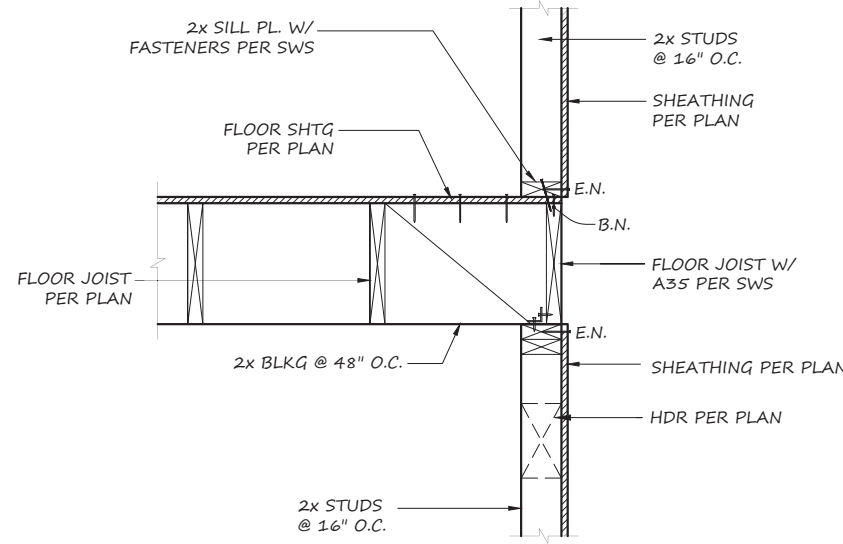
5 BEAM TO POST CONNECTIONS
SCALE : 3/4" : 1'-0"



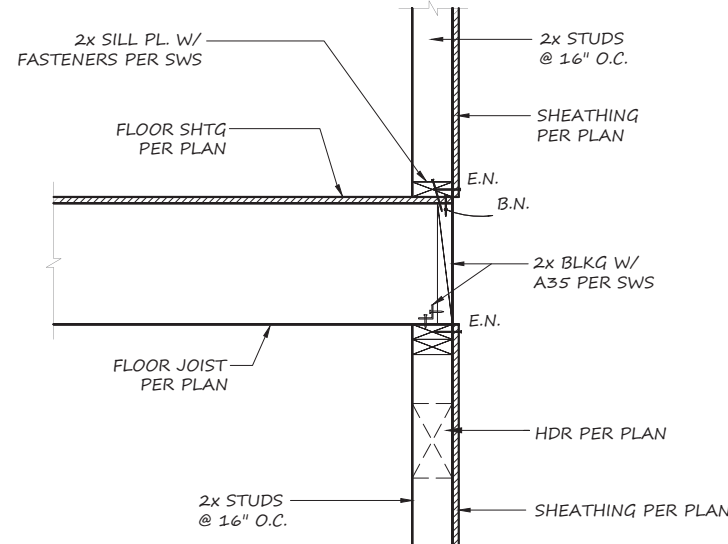
4 TYP. HEADER DETAIL
SCALE : 3/4" : 1'-0"



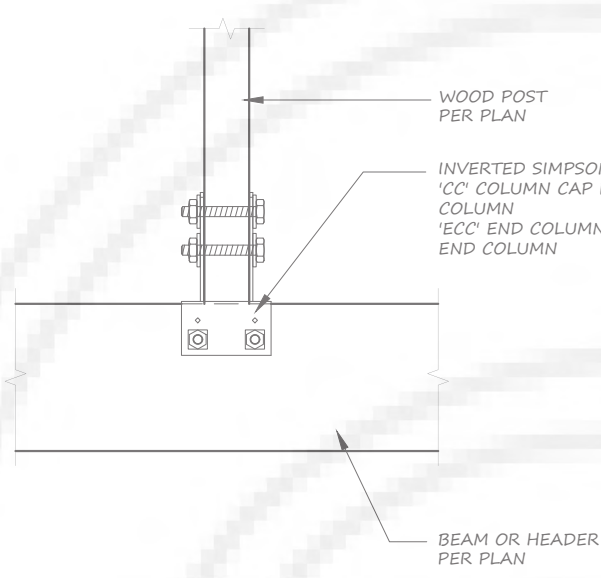
3 TYP. OPENING DETAIL
SCALE : 3/4" : 1'-0"



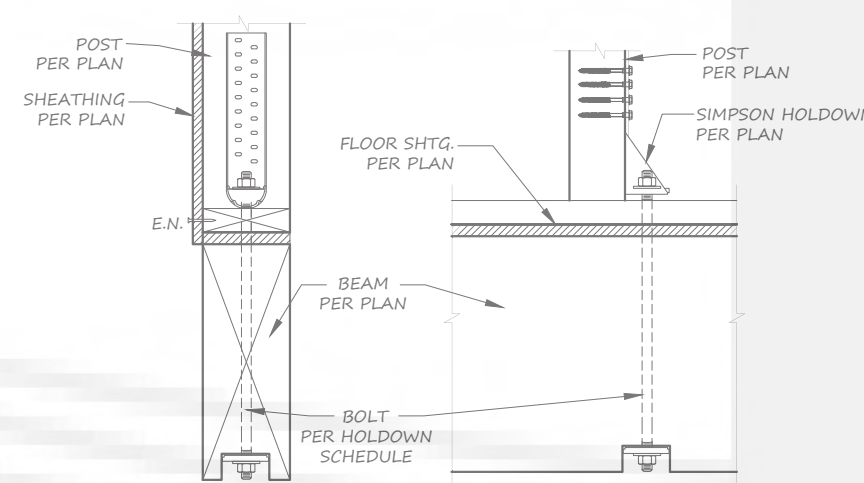
2 SHEAR TRANSFER, @ EXTERIOR WALL
SCALE : 3/4" : 1'-0"



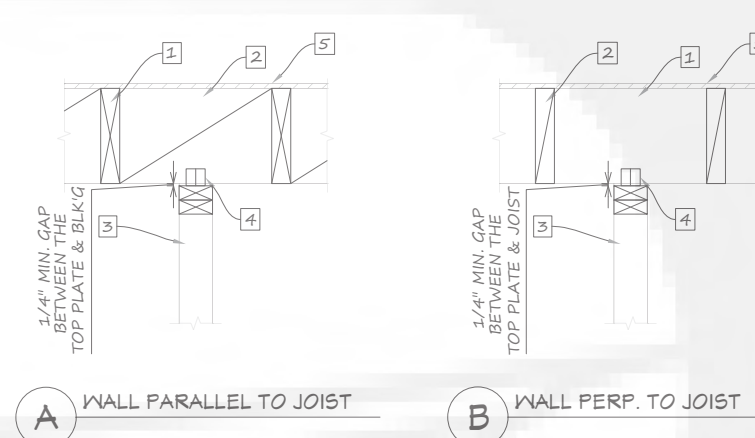
1 SHEAR TRANSFER, @ EXTERIOR WALL
SCALE : 3/4" : 1'-0"



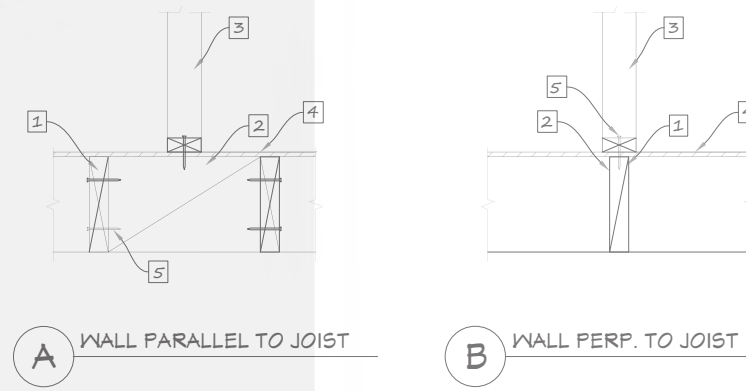
10 TYP. POST ABOVE BEAM/HEADER CONNECTION
SCALE : 3/4" : 1'-0"



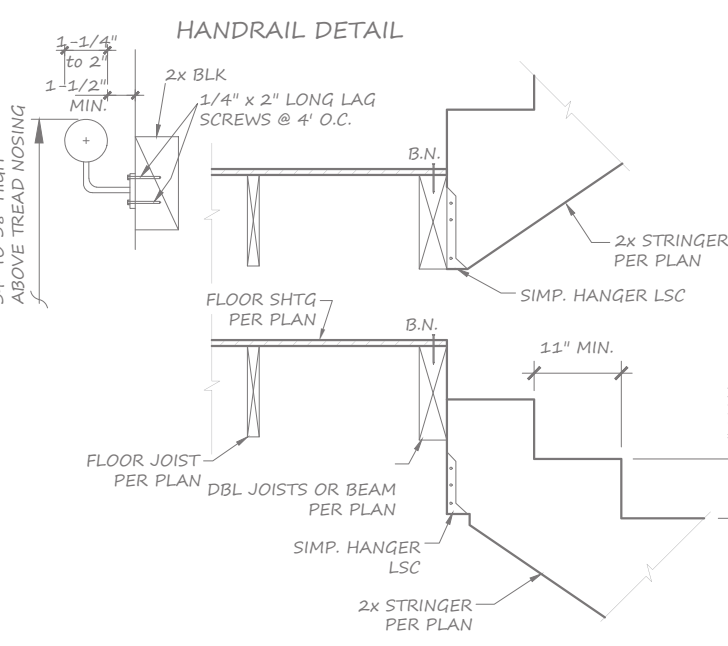
9 TYP. HDU @ WOOD BEAM
SCALE : 3/4" : 1'-0"



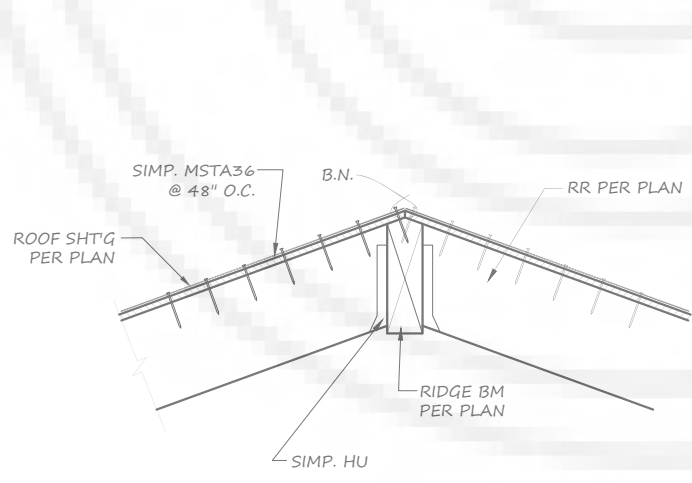
8 INT. PARTITION TO TOP CONNECTION
SCALE : 3/4" : 1'-0"



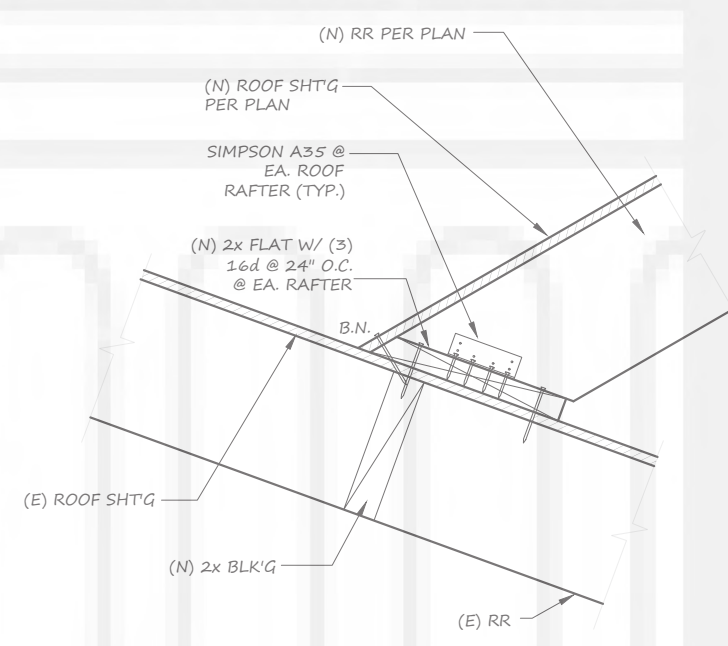
7 INT. PARTITION TO BOTTOM CONNECTION
SCALE : 3/4" : 1'-0"



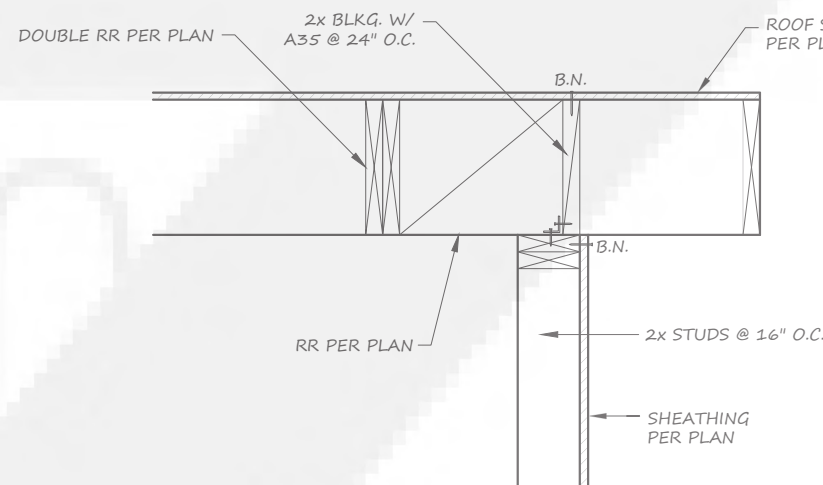
6 TYP. STAIR DETAIL
SCALE : 3/4" : 1'-0"



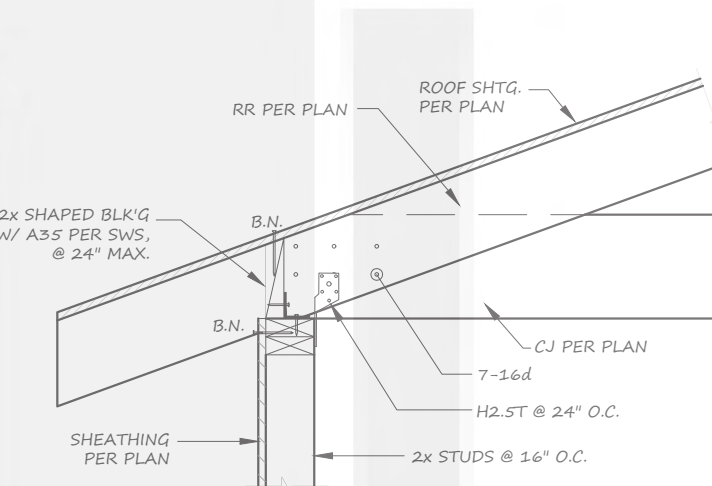
15 RIDGE BEAM DETAIL
SCALE : 3/4" : 1'-0"



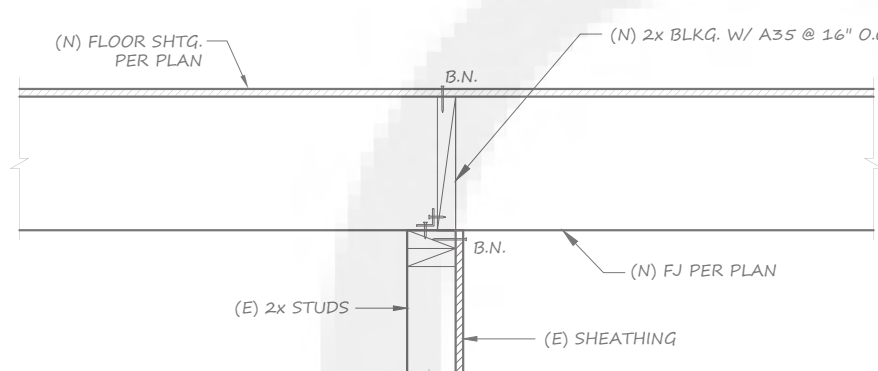
14 TYP. CALIFORNIA FRAMING
SCALE : 3/4" : 1'-0"



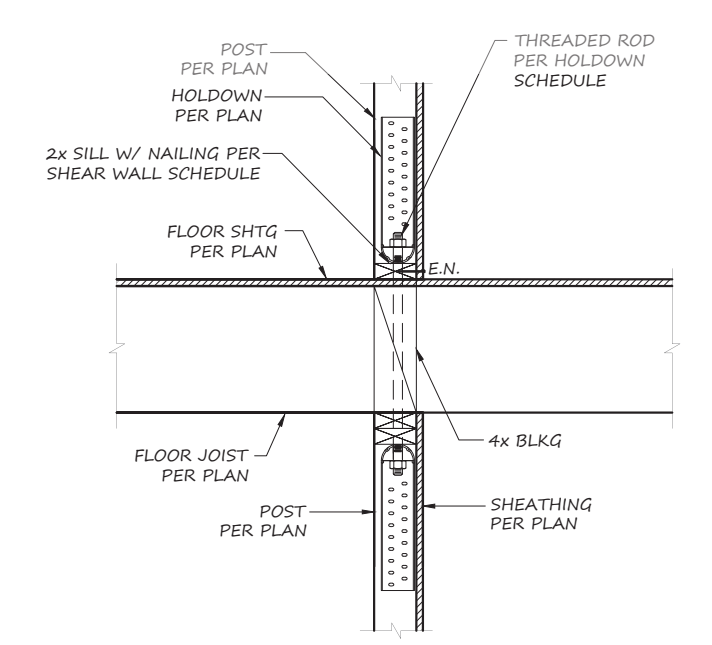
13 SHEAR TRANSFER, @ EXTERIOR WALL
SCALE : 3/4" : 1'-0"



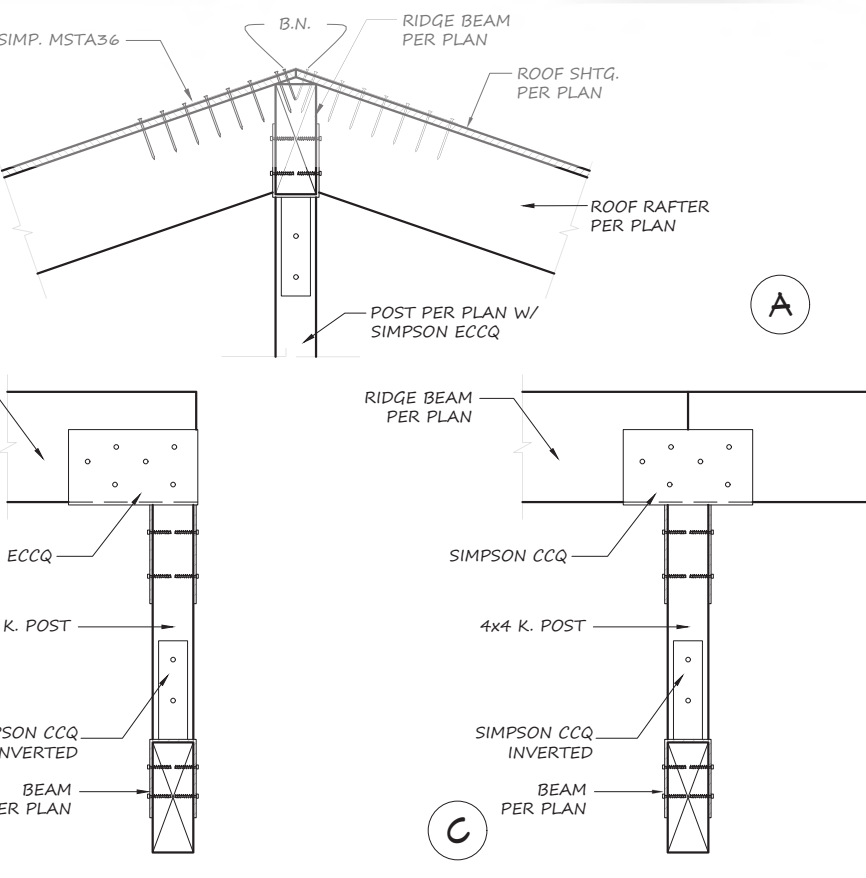
12 SHEAR TRANSFER, @ EXTERIOR WALL
SCALE : 3/4" : 1'-0"



11 SHEAR TRANSFER, @ (E) WALL
SCALE : 3/4" : 1'-0"



17 TYP. HOLDOWN DETAIL
SCALE : 3/4" : 1'-0"



16 RIDGE BEAM TO KING POST
SCALE : 3/4" : 1'-0"

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CHARLES ABBOTT ASSOCIATES
REVIEWED FOR CODE COMPLIANCE

PHUONG NGUYEN

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Date	Description

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FRAMING DETAILS

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TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS (Table reflects 2022 options see code for more options)

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a, b, c}	SPACING OF FASTENERS
Roof			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 ½" × 0.113")	-
2	Ceiling joists to plate, toe nail	3-8d (2 ½" × 0.113")	-
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	-
4	Collar tie rafter, face nail or 1 ¼" × 20 gage ridge strap	3-10d (3" × 0.128")	-
5	Rafter to plate, toe nail	3-16d (3 ½" × 0.135")	-
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 ½" × 0.135")	-
		3-16d (3 ½" × 0.135")	-
Wall			
7	Built-up studs-face nail	10d (3" × 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 ½" × 0.135")	12" o.c.
9	Built-up header, two pieces with ½" spacer	16d (3 ½" × 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3 ½" × 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2 ½" × 0.113")	-
12	Double studs, face nail	10d (3" × 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" × 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3 ½" × 0.135")	-
15	Sole plate to joist or blocking, face nail	16d (3 ½" × 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3 ½" × 0.135")	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2 ½" × 0.113")	-
		or 2-16d (3 ½" × 0.135")	-
18	Top or sole plate to stud, end nail	2-16d (3 ½" × 0.135")	-
19	Top plates, laps at corners and intersections, face nail	2-10d (3" × 0.128") -	
20	1" brace to each stud and plate, face nail	2-8d (2 ½" × 0.113")	-
		2 staples 1 ¾"	-
21	1" × 6" sheathing to each bearing, face nail	2-8d (2 ½" × 0.113")	-
		2 staples 1 ¾"	-
22	1" × 8" sheathing to each bearing, face nail	2-8d (2 ½" × 0.113")	-
		3 staples 1 ¾"	-
23	Wider than 1" × 8" sheathing to each bearing, face nail	3-8d (2 ½" × 0.113")	-
		4 staples 1 ¾"	-
Floor			
24	Joist to sill or girder, toe nail	3-8d (2 ½" × 0.113")	-
25	Rim Joist to top plate, toe nail (roof applications also)	8d (2 ½" × 0.113")	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 ½" × 0.113")	6" o.c.
27	1" × 6" subfloor or less to each joist, face nail	2-8d (2 ½" × 0.113")	-
		2 staples 1 ¾"	-
28	2" subfloor to joist or girder, blind and face nail	2-16d (3 ½" × 0.135")	-
29	2" planks (plank & beam - floor & roof)	2-16d (3 ½" × 0.135")	at each bearing
30	Built-up girders and beams, 2-inch lumber layers	10d (3" × 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
31	Ledger strip supporting joists or rafters	3-16d (3 ½"× 0.135")	At each joist or rafter

TABLE R602.3(1) – continued – FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER ^{b, c, e}	SPACING OF FASTENERS	
			Edges (inches) ⁱ	Intermediate supports ^{c, e} (inches)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing				
32	$\frac{3}{8}$ " - $\frac{1}{2}$ "	6d common (2" × 0.113") nail (subfloor wall) ^j 8d common ($2\frac{1}{2}$ " × 0.131") nail (roof)	6	12 ^g
33	$\frac{19}{32}$ " - 1"	8d common nail ($2\frac{1}{2}$ " × 0.131")	6	12 ^g
34	1 $\frac{1}{8}$ " - 1 $\frac{1}{4}$ "	10d common (3" × 0.148") nail or 8d ($2\frac{1}{2}$ " × 0.131") deformed nail	6	12
Other wall sheathing ^h				
35	$\frac{1}{2}$ " structural cellulosic fiberboard sheathing	$\frac{1}{2}$ " galvanized roofing nail, $\frac{7}{16}$ " crown or 1" crown staple 16 ga., 1 $\frac{1}{4}$ " long	3	6
36	$\frac{25}{32}$ " structural cellulosic fiberboard sheathing	$\frac{13}{4}$ " galvanized roofing nail, $\frac{7}{16}$ " crown or 1" crown staple 16 ga., 1 $\frac{1}{2}$ " long	3	6
37	$\frac{1}{2}$ " gypsum sheathing ^d	1 $\frac{1}{2}$ " galvanized roofing nail; staple galvanized, 1 $\frac{1}{2}$ " long; 1 $\frac{1}{4}$ " screws, Type W or S	7	7
38	$\frac{5}{8}$ " gypsum sheathing ^d	1 $\frac{3}{4}$ " galvanized roofing nail; staple galvanized, 1 $\frac{5}{8}$ " long; 1 $\frac{5}{8}$ " screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing				
39	$\frac{3}{4}$ " and less	6d deformed (2" × 0.120") nail or 8d common ($2\frac{1}{2}$ " × 0.131") nail	6	12
40	$\frac{7}{8}$ " - 1"	8d common ($2\frac{1}{2}$ " × 0.131") nail or 8d deformed ($2\frac{1}{2}$ " × 0.120") nail	6	12
41	1 $\frac{1}{8}$ " - 1 $\frac{1}{4}$ "	10d common (3" × 0.148") nail or 8d deformed ($2\frac{1}{2}$ " × 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. For regions having basic wind speed of 110 mph or greater, 8d deformed (21/2" × 0.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.

g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.

h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.

i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

Project Name and Address:

PROPOSED
HOUSE ADDITION

43 Solitaire Lane, Aliso Viejo,
CA 92656

Seal:

Revision Notes:	
Date	Description

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FASTENING SCHEDULE	

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ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
\$	SINGLE POLE SWITCH AND BOX, WALL MOUNTED +44" AFF. LOWER CASE LETTER INDICATES CIRCUIT CONTROLLED BY SWITCH.
	WALL MOUNTED DIMMER SWITCH, 0–10V DIMMING WITH ON–OFF SWITCH.
\$LV	WALL MOUNTED 2 WAY ON, CENTER OFF LOW VOLTAGE SWITCH FOR LCP CONTROLLER LIGHTS.
	RECEPTACLE, DUPLEX 20A, 120V GRD, NEMA 5–20R +18" AFF U.O.N.(WP=WEATHERPROOF, GFCI=GROUND FAULT CIRCUIT INTERRUPTER)
	DEDICATE RECEPTACLE, DUPLEX 20A, 120V GRD, NEMA 5–20R +18" AFF U.O.N. (WP=WEATHERPROOF, GFI=GROUND FAULT CIRCUIT INTERRUPTER)
	USB RECEPTACLE, DUPLEX 20A, 120V GRD, NEMA 5–20R +42" AFF U.O.N.
	RECEPTACLE, SINGLE, 20A, 120V GRD, NEMA 5–20R +18" AFF UON.
	RECEPTACLE, DOUBLE DUPLEX (2) 20A, 120V, GRD – NEMA (2) 5–20R +18" AFF U.O.N.
	RECEPTACLE DUPLEX 20A, 120V GRD NEMA 5–20R CEILING MOUNTED.FOR GARAGE DOOR OPENER
	RECEPTACLE DOUBLE DUPLEX (2) 20A, 120V GRD, NEMA 5–20R UON. FLOOR MOUNTED.
	2 PORT VOICE/ DATA OUTLET, WALL MOUNT +18" AFF PROVIDE RING & STRING TO PULL CABLES THRU HOLLOW WALL. VOICE/ DATA WIRING BY TELECOM SYSTEM INSTALLER.
	TV OUTLET, WALL MOUNT +60" AFF PROVIDE RING & STRING TO PULL CABLES THRU HOLLOW WALL.
	COMBINATION 4–PLEX RECEPTACLE, NEMA 5–20R DOUBLE DUPLEX (1 DUPLEX AUTO CONTROLLED BY OCCUPANCY SENSOR PER T24, (1) DUPLEX UNCONTROLLED), & TYPE 6 VOICE/DATA OUTLET, FLOOR MOUNTED. PROVIDE MIN. 3/4" TEL/DATA CONDUIT WITH PULL WIRES.
	4–PLEX RECEPTACLE, NEMA 5–20R DOUBLE DUPLEX (1 DUPLEX AUTO CONTROLLED BY OCCUPANCY SENSOR PER T24, (1) DUPLEX UNCONTROLLED), +18" AFF, U.O.N. SEE NOTE 2.
	DUPLEX RECEPTACLE, NEMA 5–20R OCCUPANCY SENSOR CONTROLLED, +18" AFF. SEE NOTE 2.
	GFCI DUPLEX RECEPTACLE ABOVE COUNTER LEVEL, NEMA 5–20R.
	GFCI DUPLEX RECEPTACLE ABOVE COUNTER LEVEL, VACANCY SENSOR CONTROLLED, NEMA 5–20R.
	SPECIAL PURPOSE CONNECTION FOR ELECTRICAL EQUIPMENT. VERIFY CONNECTION TYPE AND WIRING REQUIREMENTS PRIOR TO ROUGH–IN.
	CLASS 1, DIVISION 1 RATED EXPLOSION–PROOF OUTLET. SEE ADDITIONAL NOTES ON SHEET E3.1.
	RECEPTACLE, 120V/240V, 3PH, 4W, GRD, RATING AS INDICATED IN PLANS.
	RECEPTACLE 20A, 480V, 3PH, 4W, GRD, NEMA L22–20R, +18" AFF UON.
	DUPLEX RECEPTACLE 20A, 120V, GND (5–20R U.O.N), SUSPENDED BY TYPE S.O. CORD WITH GRIPS AT EACH END.
	DOUBLE DUPLEX RECEPTACLE 20A, 120V, GND (5–20R U.O.N), SUSPENDED BY TYPE S.O. CORD WITH GRIPS AT EACH END.
	TWIST–LOCK RECEPTACLE 20, 250V, SINGLE PHASE (L6–20R U.O.N), SUSPENDED BY TYPE S.O. CORD WITH GRIPS AT EACH END.
	OCCUPANCY SENSOR LOW VOLTAGE CEILING MOUNTED FOR ROOM CONTROLLER.
	OCCUPANCY SENSOR LOW VOLTAGE WALL MOUNTED FOR ROOM CONTROLLER.
	CEILING MOUNTED DAYLIGHT SENSOR.
	JUNCTION BOX CEILING MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES.
	JUNCTION BOX WALL MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES.
	ELECTRICAL PANELBOARD, SURFACE OR FLUSH MOUNTED (277/480V).
	ELECTRICAL PANELBOARD, SURFACE OR FLUSH MOUNTED (120/208V).
	SPECIAL PURPOSE ELECTRICAL PANELBOARD, SURFACE OR FLUSH MOUNTED.
	TRANSFORMER – DRY TYPE.
	FUSED DISCONNECT SWITCH WITH DUAL ELEMENT FUSES. SWITCH AND FUSES RATING PER NAMEPLATE OF SERVED UNIT.
	NON–FUSED DISCONNECT SWITCH, RATING PER NAMEPLATE OF SERVED UNIT.
	MAGNETIC MOTOR STARTER, NEMA RATING AS REQUIRED PER SERVED UNIT.
	MOTOR OUTLET AND FLEX CONNECTION TO MOTOR.
	WALL MOUNTED JUNCTION BOX FOR PRE–WIRED FURNITURE POWER SYSTEM CONNECTION. PROVIDE POWER WHIP WITH TERMINATION PLUG TO MATCH FURNITURE SYSTEM CONNECTOR. LOCATE BOX AS LOW AS POSSIBLE. FIELD COORDINATE FINAL LOCATION.
	COMBINATION TELEPHONE AND DATA OUTLET, WALL MOUNTED AS LOW AS POSSIBLE FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM.
	FLOOR MOUNTED FURNITURE FEEDS W/POWER & TELE/DATA PORT CAPACITY FOR ELECTRIFIED DESKS PER CLIENT'S REQUIREMENTS.
	POWER POLES W/POWER & TELE/DATA PORT CAPACITY FOR ELECTRIFIED DESKS PER CLIENT'S REQUIREMENTS. LEGEND NOTES: 1. MOUNTING HEIGHT INDICATED ARE AFF TO CENTER OF PLATE. IN CASE OF CONFLICT, GENERAL NOTES 41 & 42 SHALL PREVAIL. 2. NOT ALL SYMBOLS AND ABBREVIATIONS ARE NECESSARILY USED IN THIS PROJECT.

GENERAL NOTES

- WORKMANSHIP SHALL BE OF THE HIGHEST ORDER. PER NEC ARTICLE 110-12, ANY DEFECTIVE OR DAMAGED EQUIPMENT SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING WITH THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH NECA STANDARDS OF INSTALLATION. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS.
- ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. ALL CONDUIT SHALL BE ROUTED CONCEALED UNLESS NOTED ON PLAN OR APPROVED BY THE ARCHITECT AND/OR ENGINEER. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE ELECTRICAL CONTRACTOR. UON, AND SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL PLANS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, OR MECHANICAL EQUIPMENT, ITEMS OR FEATURES.
- THE ELECTRICAL PLANS SHOW CONCEPTUAL UNDERGROUND CONDUIT ROUTING FOR CLARITY ONLY. THE CONTRACTOR HAS THE OPTION TO INSTALL UNDERGROUND CONDUIT IN A MANNER ALLOWING THE SHORTEST POSSIBLE CONDUIT LENGTH.
- ALL EXISTING ELECTRICAL INFORMATION, POWER AND SIGNALS, SHOWN HEREIN HAS BEEN COMPILED FROM PREVIOUS AS-BUILT CONSTRUCTION DOCUMENTS AND/OR INFORMATION PROVIDED BY THE OWNER'S FACILITIES PERSONNEL. IT HAS NOT NECESSARILY BEEN PHYSICALLY FIELD VERIFIED BY THIS ENGINEER. USE AND APPLICATION OF THIS INFORMATION SHALL BE CONFINED TO THE PROJECT FOR WHICH IT IS INTENDED.
- ALL EQUIPMENT SHALL HAVE AN INDEPENDENT TESTING LABORATORY LABEL (U.L., C.S.A., ETC.) AS REQUIRED BY NEC ARTICLE 110.2 AND 110-3. PROVIDE EVIDENCE OF COMPLIANCE WITH THIS REQUIREMENT WITH EQUIPMENT SUBMITTALS. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO ISSUING PURCHASE ORDERS IF EQUIPMENT PROPOSED IS NOT COMPLIANT WITH THIS REQUIREMENT. WHERE FIELD CERTIFIED PRODUCTS MAY BE REQUIRED FOR FIELD ASSEMBLED COMPONENTS, PROVIDE CERTIFIED REPORT BY AN APPROVED TESTING AGENCY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION. ALL TESTING FEES SHALL BE INCLUDED IN ELECTRICAL CONTRACTORS BID.
- WORKING CLEARANCES ABOUT ELECTRICAL EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF NEC ARTICLE 110 AND ARTICLE 408.18. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORKING CLEARANCES FOR EQUIPMENT INSTALLED AS PART OF THIS CONTRACT.
- THE ELECTRICAL CONTRACTOR SHALL PERFORM ANY AND ALL TRENCHING, EXCAVATION AND BACKFILLING AND FURNISH ALL NECESSARY SCAFFOLDING, STAGING, RIGGING AND HOISTING REQUIRED FOR THE INSTALLATION OF HIS WORK. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ALL EQUIPMENT/MATERIALS REMOVED SHALL BECOME PROPERTY OF THE OWNER.
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED LIGHTING FIXTURES. THE ELECTRICAL CONTRACTOR SHALL VERIFY THAT ALL LIGHTING FIXTURES, CEILING TRIMS AND FRAMES ARE COMPATIBLE WITH THE CEILING AND SPACE WHICH THEY ARE INTENDED TO BE INSTALLED TO. LIGHTING FIXTURE MOUNTING SUPPORT AND LOCATIONS SHALL BE PER NEC ARTICLE 410 REQUIREMENTS.
- COORDINATE ELECTRICAL PANEL AND TERMINAL CABINET LOCATIONS AND ROUTING OF UNDERGROUND CONDUITS WITH FRAMING CONTRACTOR PRIOR TO BEGINNING ANY ROUGH-IN WORK FOR THIS EQUIPMENT.
- ALL NEW PANELBOARDS/LOADCENTERS SHALL BE FURNISHED BASED ON THE TYPE, RATING, ENCLOSURES AND FEATURES INDICATED ON THE PLANS. CABINET SHALL BE CODE GAUGE, GALVANIZED STEEL. FRONTS SHALL BE SHEET STEEL WITH GRAY LACQUER FINISH WITH HINGED LOCKING DOOR. GROUND AND NEUTRAL BUS SHALL BE AS INDICATED ON THE PLANS. BUS SHALL BE COPPER OR ALUMINUM. MAIN AND NEUTRAL LUGS SHALL BE BOLT-ON TYPE. EQUIPMENT GROUND BUS SHALL BE ADEQUATE FOR FEEDER AND BRANCH-CIRCUIT EQUIPMENT GROUND CONDUCTORS AND BONDED TO BOX. TANDEM CIRCUIT BREAKERS SHALL NOT BE USED. MULTIPOLAR BREAKERS SHALL HAVE A COMMON TRIP. THE MINIMUM INTERRUPTING RATING FOR CIRCUIT BREAKERS SHALL BE AS INDICATED ON THE PLANS. FOR FLUSH MOUNTED PANELS PROVIDE A MINIMUM OF (4) - 1" CONDUITS STUBBED AN ACCESSIBLE LOCATION IN ATTIC FOR FUTURE USE, UON.
- PROVIDE PERMANENT PLASTIC ENGRAVED, MECHANICALLY FASTENED NAME PLATE ON EACH PANEL AND DISCONNECTING DEVICE. PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL INSTALLED OR MODIFIED.
- ADDITIONALLY, PROVIDE PERMANENT PLASTIC ENGRAVED, MECHANICALLY FASTENED NAME PLATE ON EACH SUB-PANEL OR TRANSFORMER WITH THE WORDING "FED FROM PANEL ____", NOTING THE PANEL NAME OF THE UPSTREAM PANEL.
- ENCLOSED NON-FUSIBLE DISCONNECT SWITCHES AND ENCLOSED FUSIBLE DISCONNECT SWITCHES (WITH CLIPS TO ACCOMMODATE SPECIFIED FUSES) SHALL HAVE ENCLOSURE CONSISTENT WITH ENVIRONMENT WHERE LOCATED. HANDLE LOCKABLE WITH 2 PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION. ALL SWITCHES SHALL BE "HEAVY DUTY" RATED FOR THE VOLTAGE REQUIRED.
- ALL WIRING FOR EQUIPMENT SHALL BE ONE OF THE FOLLOWING TYPES THW, THWN, THWN/THHN WITH A RATING OF AT LEAST 75 DEG. CELSIUS.
- TEMPORARY POWER USED TO SUPPLY EQUIPMENT USED BY PERSONNEL DURING CONSTRUCTION MUST HAVE G.F.C.I. PROTECTION PER NEC 305.6(a)(b).
- FINAL EQUIPMENT CONNECTIONS - THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR & MATERIALS REQUIRED TO MAKE FINAL CONNECTIONS TO ALL EQUIPMENT DESIGNATED TO BE CONNECTED BY THIS CONTRACTOR. VERIFY ALL REQUIREMENTS, CONDUCTOR SIZES, OVER-CURRENT PROTECTION, PHASES, VOLTAGES, MOTOR ROTATION, ETC., WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE FUSED DISCONNECT IF REQUIRED BY MANUFACTURER.
- ALL TELECOMMUNICATIONS RACEWAY AND CABLING TO BE INSTALLED PER NEC ARTICLE 800.
- ALL LIGHT SWITCHES MUST BE EFFECTIVELY GROUNDED PER NEC 380.9(b).
- ALL BRANCH CIRCUITS SHALL BE IN METAL RACEWAYS, FLEXIBLE METAL RACEWAYS AND/OR TYPE MC CABLE CONDUIT. INSULATED EQUIPMENT GROUNDING CONDUCTOR, ALL INSTALLED ELECTRICAL WIRING SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE SAFETY CODES.

RESIDENTIAL NOTES

- PRIOR TO BEGINNING THE PROJECT, THE CONTRACTOR SHALL WALK THE SITE AND COMPARE (E) CONDITIONS WITH THE EXISTING CONDITIONS SHOWN ON THESE DRAWINGS. ANY OBVIOUS OR LIKELY DISCREPANCY BETWEEN THE SITE CONDITIONS AND THESE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THIS ENGINEER. THE CONTRACTOR SHALL WAIT FOR DIRECTION FROM THIS ENGINEER, BEFORE PROCEEDING WITH ITEMS THAT CONCERN THE DISPUTED MATTER. NO EQUIPMENT SHALL BE ORDERED THAT CONCERNS THE DISPUTED MATTER.
- THE CONTRACTOR SHALL NOT ORDER ANY EQUIPMENT WITHOUT SUBMITTING THE PRODUCT DATA SHEETS TO THIS ENGINEER FOR APPROVAL.
- VERIFY UTILITY COMPANY REQUIREMENTS AND PROVIDE ALL TELEPHONE EQUIPMENT REQUIRED INCLUDING RACEWAY, CONDUCTORS, TERMINAL BLOCKS, CABINETS, BACKBOARDS, OUTLET BOXES, TELEPHONE JACKS AND COVER PLATES.
- SERVICE ENTRANCE EQUIPMENT SHALL BE PER CEC 230 REQUIREMENTS. SERVICE EQUIPMENT INTERRUPT CURRENT RATINGS SHALL MEET OR EXCEED THE FAULT CURRENT LEVELS AVAILABLE FROM THE UTILITY COMPANY. CONTRACTOR SHALL VERIFY UTILITY METERING SHALL BE ACCESSIBLE TO THE UTILITY COMPANY AT ALL TIMES.
- LIGHT FIXTURE MTS SUPPORT AND LOCATIONS SHALL BE PER CEC 410 REQUIREMENTS. LIGHTINGS OUTLET BOXES LOCATED IN LIVING ROOM AND BEDROOMS SHALL BE INSTALLED WITH CEILING FAN SUPPORT PER CEC 314.27(2)(C & D).
- AS PERMITTED BY THE AHJ (AUTHORITY HAVING JURISDICTION), THE USE OF NONMETALLIC-SHEATHED CABLING (OR "ROMEX") MAY BE USED FOR BRANCH CIRCUIT WIRING. PER CEC 334, IN LIEU OF THE CONDUIT AND WIRING CALLED FOR IN THESE PLANS.
- PROVIDE AN AFCI COMBINATION-TYPE CIRCUIT BREAKER AT ELECTRICAL PANEL, PER NEC 210.12, FOR ALL 120V, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS (INCLUDING LTG, RECEPTACLE AND SMOKE ALARMS) THROUGHOUT DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN'S, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, AND SIMILAR AREAS (EXCLUDING KITCHEN, LAUNDRY ROOM, BATHROOMS, AND GARAGES). PROVIDE A DEDICATED NEUTRAL FOR EACH AFCI PROTECTED CIRCUIT. CONNECT CIRCUIT HOT AND NEUTRAL TO AFCI CIRCUIT BREAKER. CONNECT CIRCUIT BREAKER PIGTAIL TO NEUTRAL BAR. VERIFY CONNECTION WITH MFR DOCS.
- FOR ADA, HEARING IMPAIRED UNITS: PROVIDE AUDIO/VISUAL DEVICES FOR DOORBELL, SMOKE ALARM & CARBON MONOXIDE SENSOR AND SMOKE ALARM VISUAL DEVICE IN THE BATHROOM. INSTALL & CONNECT PER MFR DOCS.
- PROVIDE LISTED TAMPER-RESISTANT RECEPTACES THROUGHOUT DWELLING UNITS IN ACCORDANCE WITH CEC 408.12, FOR ALL NON-LOCKING, 125-VOLT, 15- AND 20-AMPERE RECEPTACES, UNLESS EXCEPTION APPLIES.
- PROVIDE DEDICATED NEUTRAL (GROUNDED) CONDUCTOR FOR ALL BRANCH CIRCUITS. NO MULTI-WIRE BRANCH CIRCUITS ARE ALLOWED.
- PROVIDE RECEPTACLE AT GAS WATER HEATER, PER CEC (ENERGY) 150.0(N)(1)(A).
- PROVIDE GFCI PROTECTED RECEPTACES AT ALL BATHROOM AND KITCHEN COUNTERS, PER CEC 210.8(A), FOR DWELLING UNITS, TYPICAL.

CERTIFIED ELECTRICIAN NOTE

THE CALIFORNIA STATE LICENSE BOARD (CSLB) "ZERO TOLERANCE POLICY" IS IN EFFECT FOR NON-COMPLIANT ELECTRICIANS. IN CALIFORNIA, ELECTRICAL WORK SHALL ONLY BE DONE BY "STATE CERTIFIED ELECTRICIANS". PER LABOR CODE SECTIONS 3099 AND 3099.2, SECTIONS 209.0 AND THE AB 931, AS OF JANUARY 2006, ENFORCEMENT OF LEGAL ACTION WILL BE ISSUED TO ANY C-10 CONTRACTOR WHO WILLFULLY EMPLOYS AN "UNCERTIFIED ELECTRICIAN" TO PERFORM ELECTRICAL WORK IN THE STATE OF CALIFORNIA.

FIRE WALL PENETRATIONS

PENETRATIONS IN A FIRE RATED WALL SHALL BE PROTECTED BY AN APPROVED FIRE STOP MATERIAL IN ACCORDANCE WITH CBC SECTION 714.3.2 EXP. 2. "MEMBRANE PENETRATIONS OF MAXIMUM 2 HR. FIRE RESISTANCE RATED WALL AND PARTITIONS BY STEEL ELECTRICAL OUTLET BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA, OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.

RESIDENTIAL CALGREEN CODE NOTES

CALGREEN, DIV 4.5, SEC. 4.506.1: BATHROOM EXHAUST FANS - REQUIRED IN EACH BATHROOM. SHALL BE ENERGY STAR COMPLIANT & DUCTED OUTSIDE. IF SEPARATE FROM WHOLE HOUSE VENTILATION, MUST HAVE HUMIDITY CONTROLS:

- CAPABLE OF AUTOMATIC OR MANUAL ADJUSTMENT OF < 50% TO MAX OF 80%.
- MAY BE A SEPARATE COMPONENT, NOT REQUIRED TO BE INTEGRAL TO FAN.

APPLICABLE CODES & STANDARDS

APPLICABLE CODES AS OF JANUARY 1, 2020

LISTING		
CAC 2022	CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE	CCR TITLE 24 PART 1
CBC 2022	CALIFORNIA BUILDING CODE	CCR TITLE 24 PART 2, VOL 1&2
CEC 2022	CALIFORNIA ELECTRICAL CODE	CCR TITLE 24 PART 3
CEC 2022	CALIFORNIA ENERGY CODE	CCR TITLE 24 PART 6
	2008 CALIFORNIA ELEVATOR SAFETY ORDERS	CCR TITLE 8, DIV 1 CH. 4, SUB CH. 6
CFC 2022	CALIFORNIA FIRE CODE	CCR TITLE 24 PART 9
CALGREEN 2022	CALIFORNIA GREEN BUILDING STANDARDS CODE	CCR TITLE 24 PART 11
CRSC 2022	CALIFORNIA REFERENCED STANDARDS CODE	CCR TITLE 24 PART 12
ADDITIONAL CODES AND STANDARDS		
ADA	AMERICANS WITH DISABILITIES ACT - PUBLIC ACCOMMODATIONS	
NFPA 101	2022 LIFE SAFETY CODE W/ CA AMENDMENTS	
NESC	NATIONAL ELECTRICAL SAFETY CODE	
IESNA	ILLUMINATING ENGINEERS SOCIETY OF NORTH AMERICA	

ELECTRICAL ABBREVIATIONS

NOTE: SOME ABBREVIATIONS MAY NOT APPLY TO THIS PROJECT

1Ø	-	SINGLE PHASE
3Ø	-	THREE PHASE
3W	-	THREE WIRE
4W	-	FOUR WIRE
A	-	AMPERE
AC	-	ALTERNATING CURRENT
AFG	-	ABOVE FINISHED GROUND
AFF	-	ABOVE FINISHED FLOOR
AIC	-	AMPS INTERRUPTING CAPACITY
AWG	-	AMERICAN WIRE GAUGE
BKR	-	BREAKER
BLDG	-	BUILDING
C	-	CONDUIT (<600V)
CB	-	CIRCUIT BREAKER
CKT	-	CIRCUIT
CU	-	COPPER
DISC	-	DISCONNECT
(E)	-	EXISTING
EF	-	EXHAUST FAN
FLA	-	FULL LOAD AMPS
GFI	-	GROUND FAULT CIRCUIT INTERRUPTER
GND	-	GROUND
HP	-	HORSEPOWER
J-BOX	-	JUNCTION BOX
KCMIL	-	THOUSAND CIRCULAR MILS
KVA	-	KILOVOLT/ AMPERE
LTS	-	LIGHTING
MCA	-	MIN CIRCUIT AMPS
MFR	-	MANUFACTURER
MFR DOCS	-	MANUFACTURER'S DOCUMENTATION
MLO	-	MAIN LUGS ONLY
MOCPP	-	MAX OVERCURRENT PROTECTION
(N)	-	NEW
NEC	-	NATIONAL ELECTRICAL CODE
NECA	-	NATIONAL ELEC CONTRACTORS ASSOCIATION
NEMA	-	NATIONAL ELEC MFR'S ASSOC.
NTS	-	NOT TO SCALE
PB	-	PULL BOX
PVC	-	POLYVINYL CHLORIDE CONDUIT
REC	-	RECEPTACLE
RM	-	ROOM
SPEC	-	SPECIFICATION
SWBD	-	SWITCHBOARD
TELE	-	TELEPHONE
TFMR	-	TRANSFORMER
TYP	-	TYPICAL WHERE OCCURS
UON	-	UNLESS OTHERWISE NOTED
V	-	VOLT
VFD	-	VARIABLE FREQUENCY DRIVE
W	-	WATT
WP	-	WEATHERPROOF (NEMA 3R)

- SMOKE DETECTOR HARD WIRED W/ BATTERY BACK-UP, INTERCONNECTED
- CARBON MONOXIDE DETECTOR HARD WIRED W/ BATTERY BACK-UP, INTERCONNECTED

Note:
Outdoor Lighting shall be equipped with manual control switch, photocell and motion sensor with no override to on, and by either photocontrol and automatic time switch, astronomical time clock with no override to on, or energy management control system per CENC 150.0(k)3.

Scale:

ELECTRICAL SPECS

Scale:

NTC

Date:

8-11-2024

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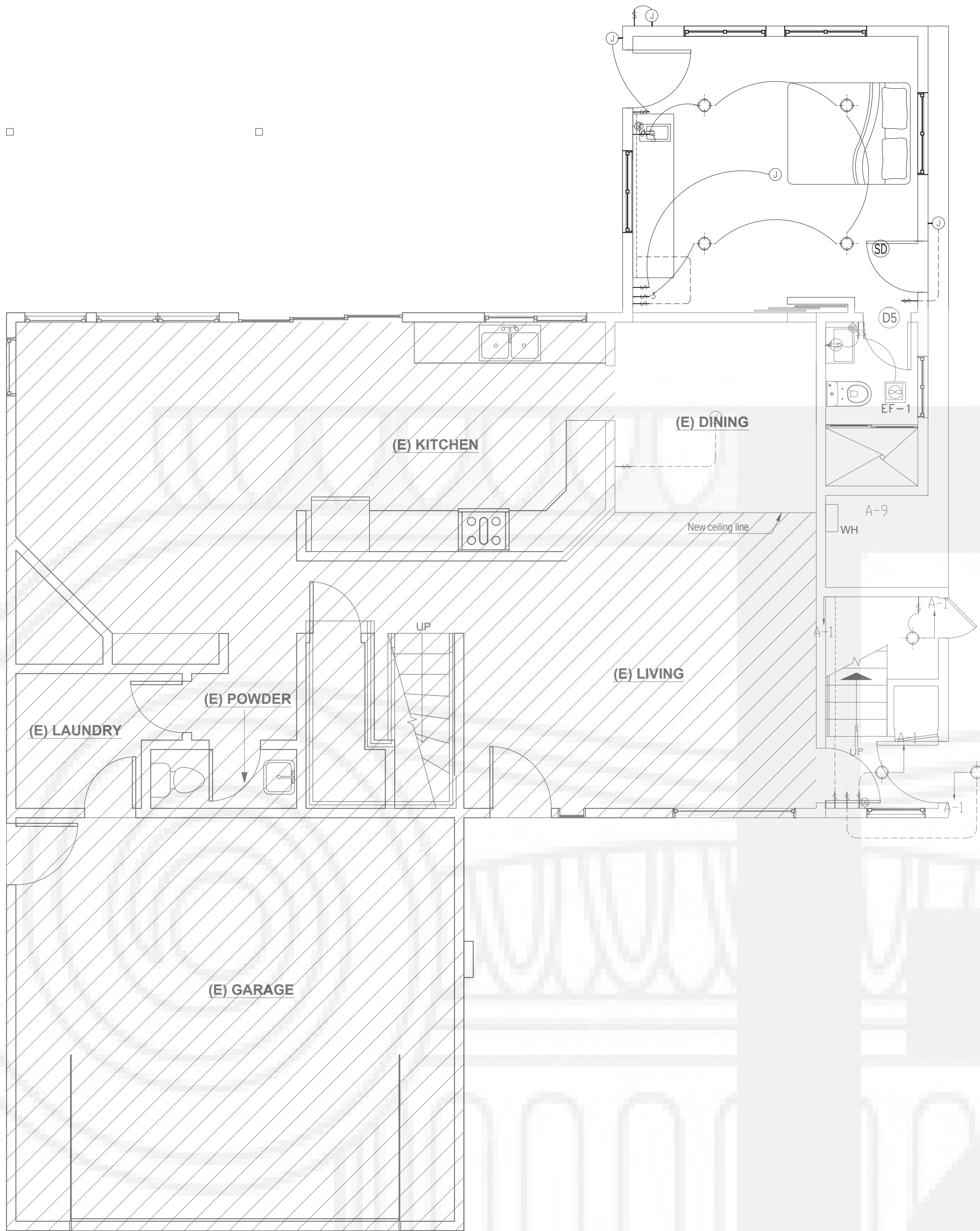
FIRST &
SECOND FLOOR
LIGHTING PLAN

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

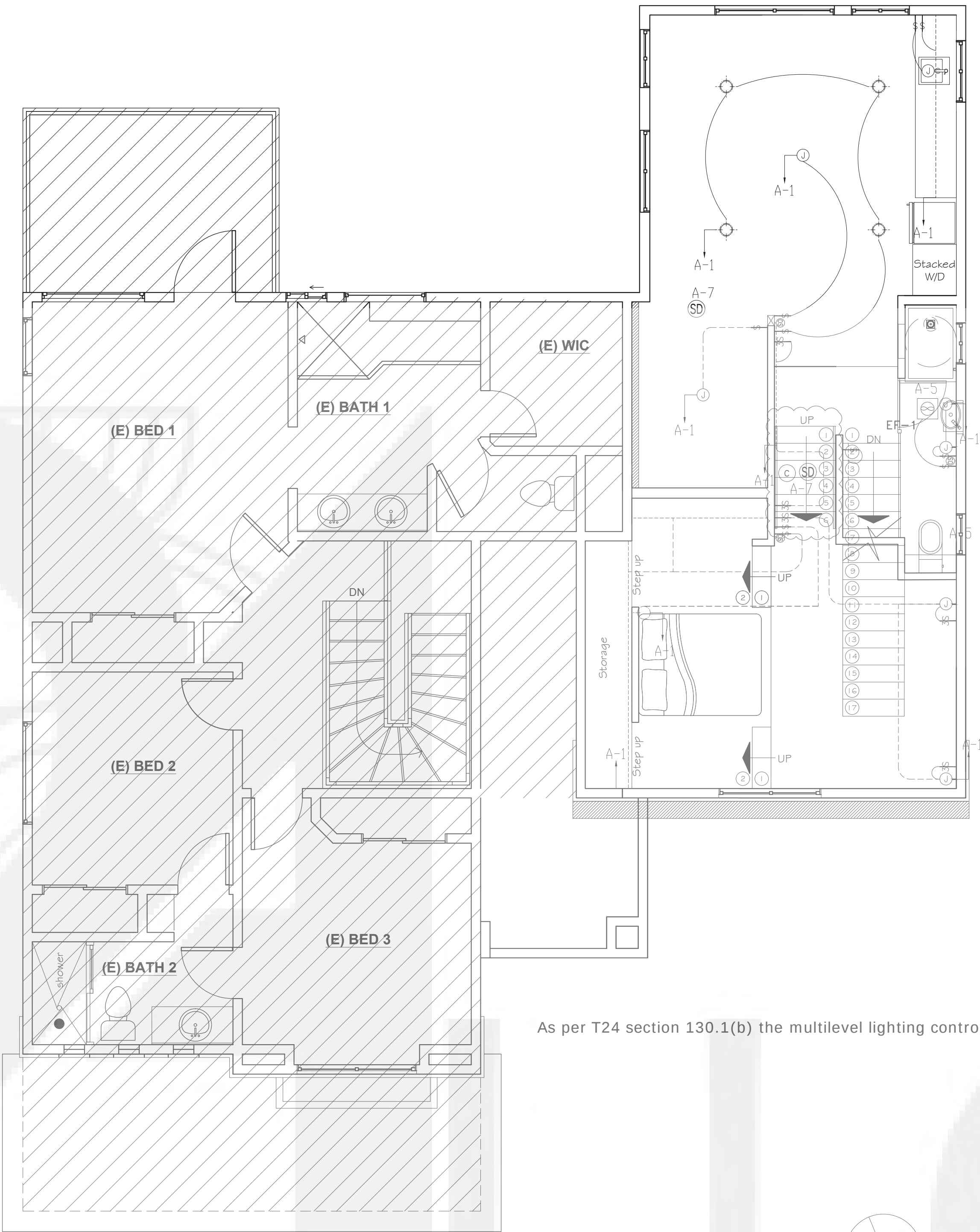
Date: 8-11-2024

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E2.0



1 FIRST FLOOR LIGHTING PLAN
SCALE: 1/4" = 1'-0"



1 SECOND FLOOR LIGHTING PLAN
SCALE: 1/4" = 1'-0"

PLAN DESIGN NOTES
All installed luminaires shall be high-efficacy in accordance with ES TABLE 150.0-A.
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. ES 150.0(k)
Light sources that are not marked "JA8-2022-E" shall not be installed in enclosed luminaires. ES 150.0(k)
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. See ES 150.0(k) 3 for additional control options.
Electric Vehicle Charging: Note on the plans that electrical vehicle supply equipment (EVSE) rough-in only is required in one- and two-family dwellings and townhomes with attached garages. The EVSE rough-in consists of a minimum 1" conduit extending from the main panel to a junction box where the EVSE receptacle box will be provided. The main service panel must be sized to accommodate a future 208/240 Volt 40 ampere dedicated branch circuit. California Green Code 4.106.4. Currently there is no PNL schedule and or load calculation provide to confirm compliance.

MANDATORY (CBEES 150.0(k)):
- Provide on utility plans a complete lighting fixture schedule.
- All luminaires shall be high-efficacy in accordance with CBEES Table 150.0-A
- All LED luminaires and lamps shall be marked JA8-2022 and listed in the California Energy Commission database at <https://cacertappliances.energy.ca.gov/Pages/ApplianceSearch.aspx>
- All recessed downlight and enclosed luminaires shall be marked JA8-2016-E and listed in the California Energy Commission database at <https://cacertappliances.energy.ca.gov/Pages/ApplianceSearch.aspx>
- Recessed downlight luminaires in ceilings shall not be screw-based.
- Bathrooms, garages, laundry rooms, and utility rooms: At least one luminaire in each space shall be controlled by a vacancy sensor.
- All luminaires requiring JA8-2022 or JA8-2022-E marking shall be controlled by a dimmer or vacancy sensor.
Exception: Closets less than 70 s.f.
Exception: Hallways
- Outdoor lighting permanently mounted to building shall be controlled by one of the following:
- Photocontrol **and** motion sensor
- Photocontrol **and** automatic time-switch control
- Astronomical time clock

FIRE ALARM PLAN NOTES
1. CO alarms shall be "hard wired" and shall be equipped with battery backup. (CRC R315.6)
2. CO alarms shall be listed in accordance with UL 2034 (CRC R315.1.1). CO detector shall be listed in accordance with UL 2705 (CRC R315.7.1).
3. CO alarms shall be interconnected such that the activation of one alarm will activate all alarms in the individual dwelling unit. (CRC R315.5)
4. In existing dwelling unit a CO alarm is permitted to be battery operated where repair or alteration do not result in the removal of wall or ceiling finishes. (CRC R315.5 exceptions 1)



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FIRST &
SECOND FLOOR
POWER PLAN

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

Date: 8-11-2024

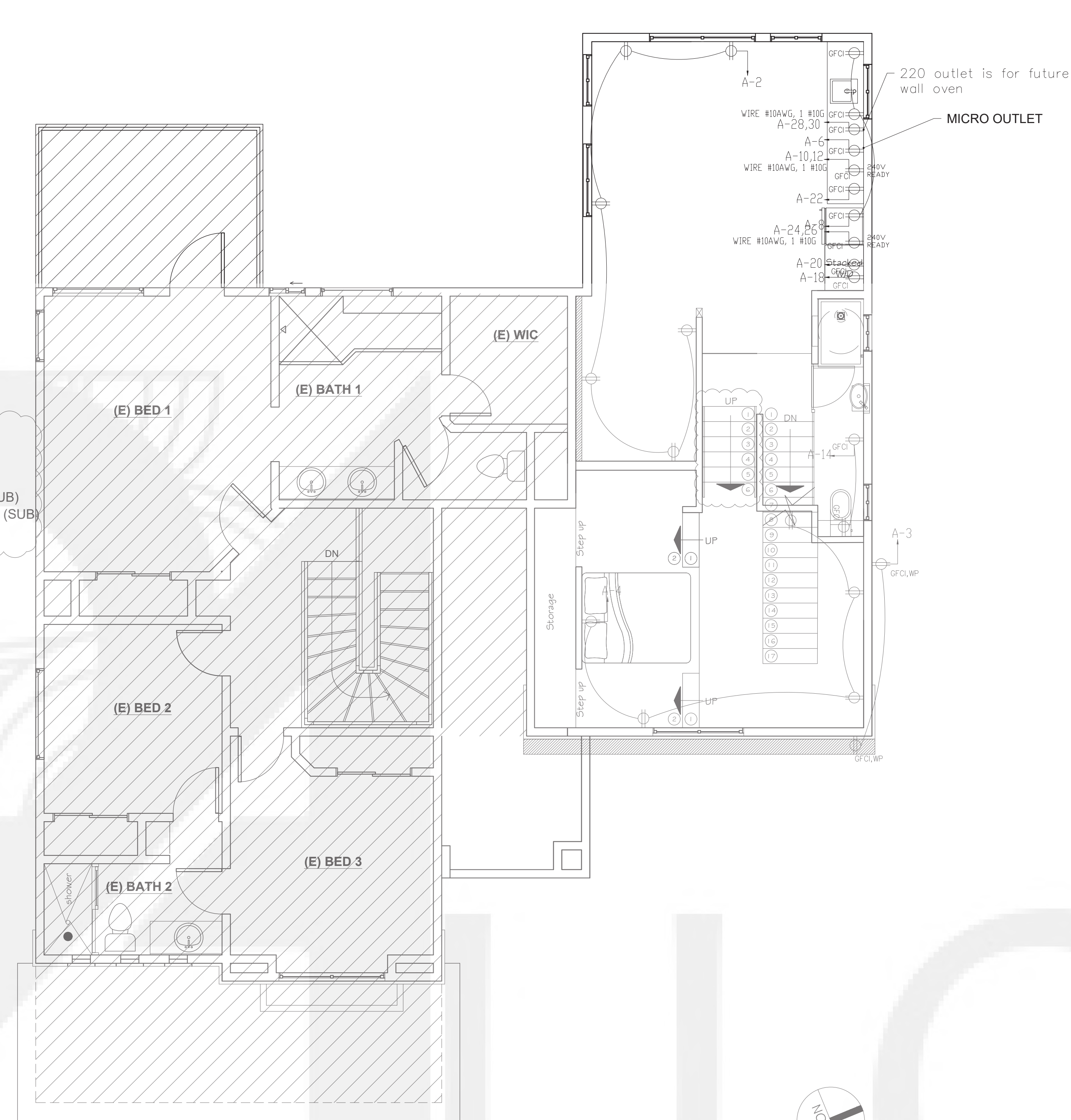
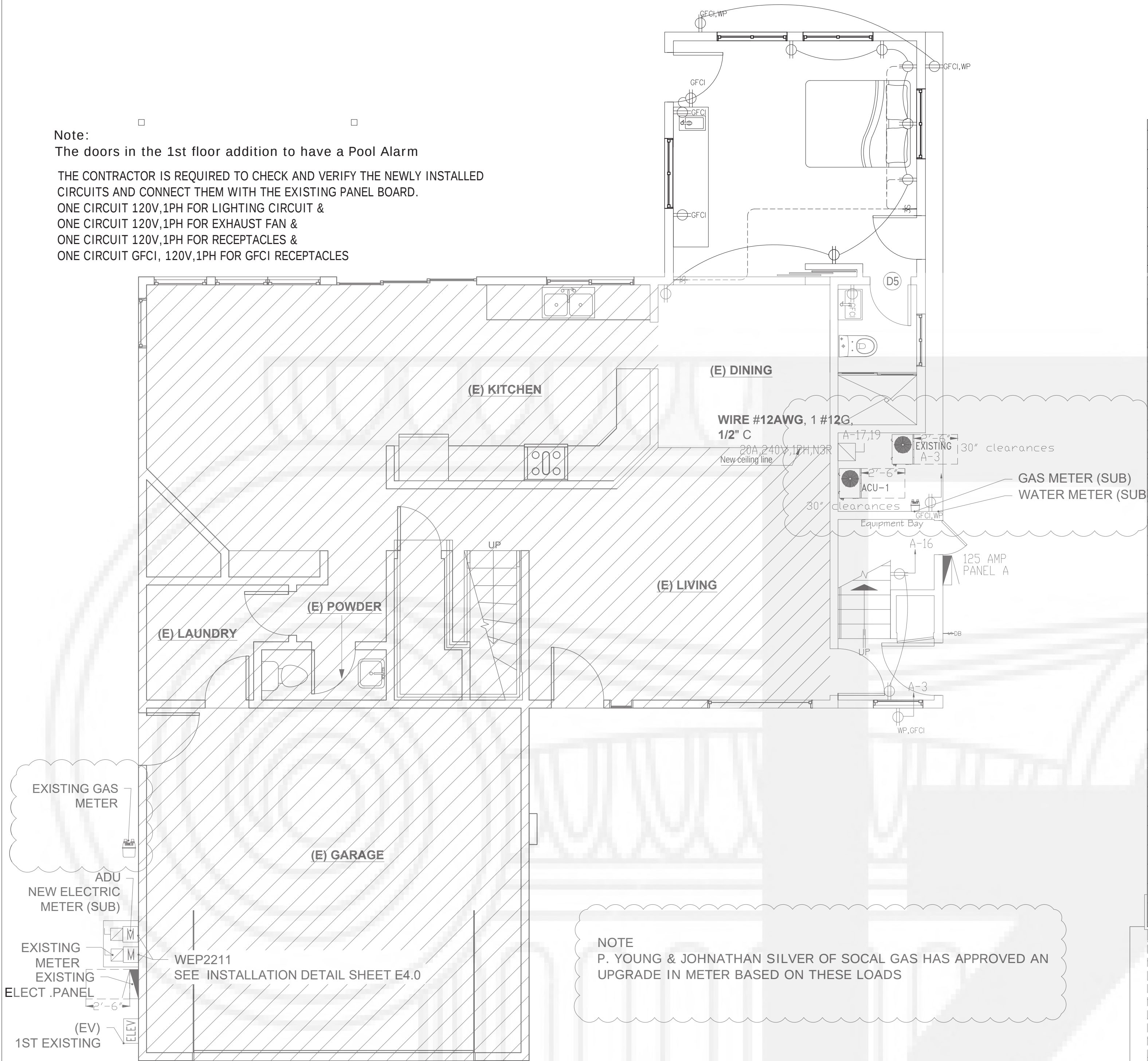
Page No.:

E3.0

Note:

The doors in the 1st floor addition to have a Pool Alarm

THE CONTRACTOR IS REQUIRED TO CHECK AND VERIFY THE NEWLY INSTALLED
CIRCUITS AND CONNECT THEM WITH THE EXISTING PANEL BOARD.
ONE CIRCUIT 120V,1PH FOR LIGHTING CIRCUIT &
ONE CIRCUIT 120V,1PH FOR EXHAUST FAN &
ONE CIRCUIT 120V,1PH FOR RECEPTACLES &
ONE CIRCUIT GFCI, 120V,1PH FOR GFCI RECEPTACLES



Notes:

- (A)(1) Spacing: receptacle outlets to be installed, so that no point along the wall is further than 6' from an outlet.
- (C)(2) & (3) Kitchen: Provide receptacles within 2ft of kitchen sink and at 4ft on center at counters and islands (12" or more in width)
- (C)(2) & (3) Provide at least one outlet for islands or peninsular counter spaces.
- (H) Hallways longer than 10ft are required to have at least one receptacle outlet.

Notes:

- For all 125-volt, single phase, 15- and 20-amp receptacles, GFCI outlets are required for all kitchen receptacles that are designed to serve countertop surfaces, bathrooms, underfloor spaces or below grade level, in exterior outlets, laundry areas, within 6' of utility/wet bar sinks, dishwashers and in all garages, including outlets dedicated to a single device or garage door opener [CEC 210.8 (A)].
- All 125-volt, single-phase, 15- and 20-ampere receptacles installed outdoors, garages, etc. shall have ground-fault circuit-interrupter protection for personnel [CEC 210.8(A)(1)-(10)].
- Receptacles located outdoors shall be weather resistant, tamper resistant, enclosed in an approved bubble cover [CEC 406.9, 406.12, 210.52(E)].

Provide Tamper Resistant Receptacles for all locations in dwelling as described in CEC 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.

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DETAILS

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E3.1

FIGURE 16 - Typical Protection Post Installations

ALL POSTS ARE
CONCRETE FILLED

Mix concrete using the following
ratio: 1 part Portland cement, 2-1/2
parts sand, 3-1/2 parts gravel, or
5 sacks commercial ready-mix.
Maximum water content is 4.66
gallons per 60 lbs. sack or 7 gallons
per 90 lbs. sack of commercial
ready-mix. Use 3/8" to 3/4" gravel.

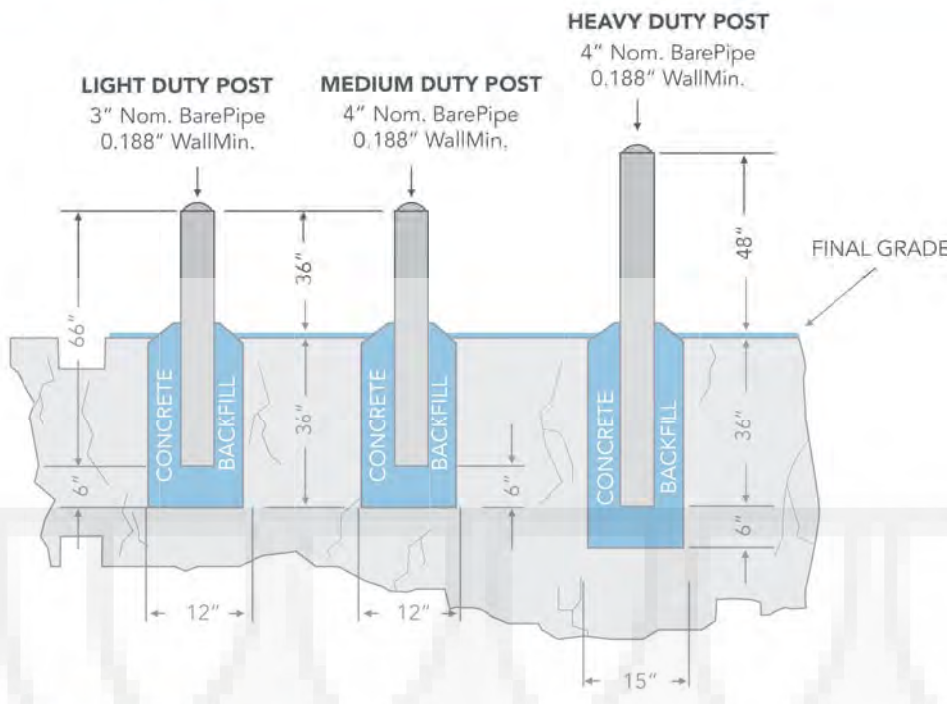
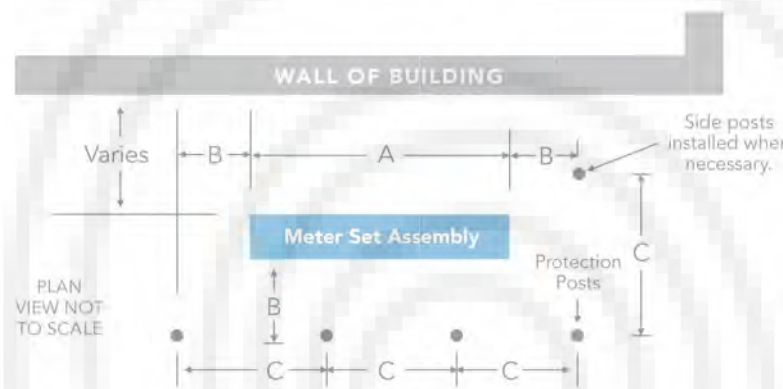


FIGURE 17 - Offset and Spacing of Protection Posts

OFFSET AND SPACING OF PROTECTION POSTS			
Width of MSA ("A")	No. of Posts Required	Offset From Face and Corner of MSA ("B") Max. 26"	Spacing of Posts ("C")
24" to 52"	3	"A"/2 (14" Min. Light & Medium duty) (18" Min. Heavy duty)	2 x "B"
52" to 104"	4	"A"/4 (14" Min. Light & Medium duty) (18" Min. Heavy duty)	2 x "B"
104" to 156"	5	"A"/6 (14" Min. Light & Medium duty) (18" Min. Heavy duty)	2 x "B"
156" to 208"	6	"A"/8 (14" Min. Light & Medium duty) (18" Min. Heavy duty)	2 x "B"



EXAMPLE:

MSA is 84" wide. "A" = 84"

To find "B", use second row of Table (52" to 104")
Four posts are required.

84" divided by 4 posts = 21". "B" = 21"

"C" = 2 x "B" = 42"

Result: Set four posts, 21" offset, on 42" centers.

4.5 SINGLE-FAMILY RESIDENTIAL METER CONFIGURATIONS

For single-family residential meters, please refer to the SoCalGas single-family residential natural gas meter set separation and clearance guidance diagrams for a graphical representation of meter separation requirements (see Figures 17 and 18). Your SoCalGas planner will advise of additional spacing requirements as it varies based upon load.

FIGURE 18 - New Single Residential Natural Gas Meter Set Separation and Clearance Guidance Diagram

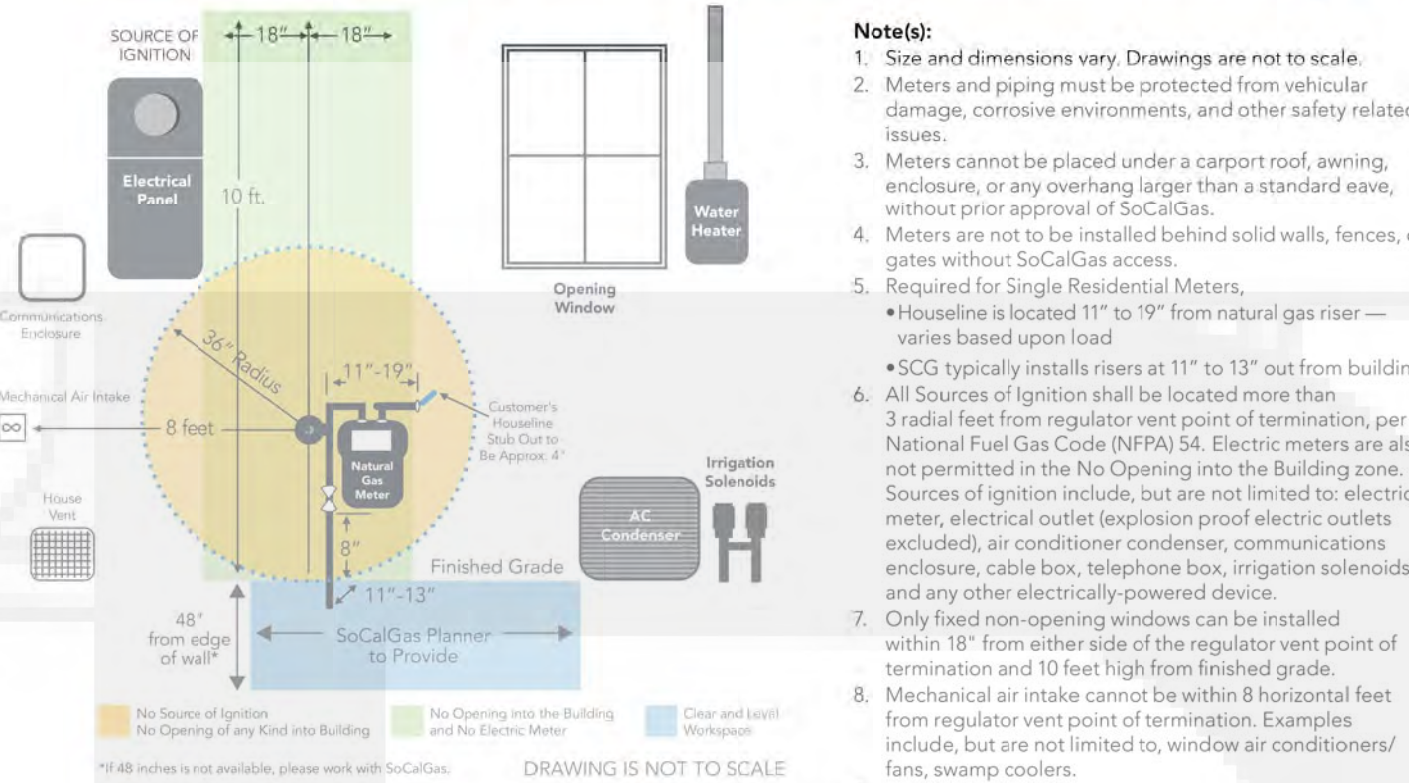
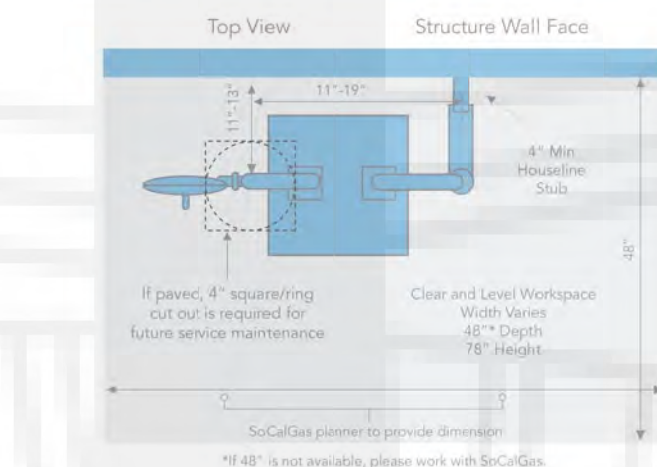


FIGURE 19 - Single Family Residential Standard Delivery Natural Gas Meter Set - Top View





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[illegible]

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD												CF1R-PRF-01-E											
Project Name: 43 Solitaire addition						Calculation Date/Time: 2024-10-15T13:36:51-05:00						(Page 7 of 9)											
Calculation Description: Title 24 Analysis						Input File Name: 43_Solitaire_addition_v30.rbd22																	
HVAC - HEATING UNIT TYPES																							
01		02		03		04		05															
Name		System Type		Number of Units		Heating Efficiency		Heating Unit Brand															
Ex Furnace		Central gas furnace		1		AJUE - 75		n/a															
HVAC - COOLING UNIT TYPES																							
01		02		03		04		05		06		07		08		09							
Name		System Type		Number of Units		Efficiency Metric		Efficiency EER/SEER/CSEER		Efficiency SEER/SEER2		Zonally Controlled		Multi-speed Compressor		HERS Verification							
Ex Cooling		Central split AC		1		EER/SEER		7.06		8		Not Zonal		Single Speed		Ex Cooling-hers-cool							
HVAC - DISTRIBUTION SYSTEMS																							
01		02		03		04		05		06		07		08		09		10		11		12	
Name	Type	Design Type		Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct		Duct Leakage		HERS Verification									
				Supply	Return	Supply	Return	Supply	Return														
Ducts ex	Conditioned space-entirely	Non-Verified		R-4.2		Conditi oned Zone		n/a		n/a		No Bypass Duct		Existing (not specified)		Ducts ex-hers-dist							
HVAC - FAN SYSTEMS																							
01		02				03				04													
Name		Type		Fan Power (Watts/CFM)		Name		Type		Fan Power (Watts/CFM)		Name											
Fan ex		HVAC Fan		0.58									Fan ex-hers-fan										

Registration Number: 2024-P01025319A-000-000-0000000-0000

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Project Name: 43 Solitaire addition						Calculation Date/Time: 2024-10-15T15:36:51-05:00			
Calculation Description: Title 24 Analysis						Input File Name: 43_Solitaire_addition_v30.ribd22			
HVAC FAN SYSTEMS - HERS VERIFICATION									
01		02				03			
Name		Verified Fan Watt Draw				Required Fan Efficacy (Watts/CFM)			
Fan ex-hers-fan		Not Required				0			
INDOOR AIR QUALITY (IAQ) FANS									
01	02	03	04	05	06	07	08	09	
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRIE/ASRIE	Includes Fault Indicator Display?	HERS Verification	Status	
Sfam IAQVentrlpt 1-1	90	0.3	Balanced	Yes	70 / 75	No	No		

Registration Number: 424-P010253136A-000-000-0000000-0000

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD		CF1R-PRF-01-E	
Project Name: 43_Solitaire_addition Calculation Description: Title 24 Analysis		(Page 9 of 9)	
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		Calculation Date/Time: 2024-10-15T15:36:51-05:00 Input File Name: 43_Solitaire_addition_v30.rbd22	
I, certify that this Certificate of Compliance documentation is accurate and complete.			
Documentation Author Name: Igor Pichko		Documentation Author Signature: 	
Company: Energy Consult LLC		Signature Date: 10/18/2024	
Address: 1252 W 22nd St Unit #2		CEA/HERS Certification Identification (if applicable): R19-14-30005	
City/State/Zip: San Pedro, CA 90731		Phone: 4242477658	
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: 	
Company: PixelArch Ltd		Date Signed: 10/18/2024	
Address: 24001 Calle de la Magdalena unit 3896		License: 	
City/State/Zip: Laguna Hills, CA 92653		Phone: 415 801 6584	

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: 43 Solitaire ADU
Calculation Description: Title 24 Analysis

CF18-PRF-01-E
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Calculation Date/Time: 2024-10-15T15:39:37-05:00
Input File Name: 43_Solitaire_ADU_v30.rbd22

GENERAL INFORMATION									
01	Project Name 43 Solitaire ADU								
02	Run Title Title 24 Analysis								
03	Project Location 43 Solitaire Ln								
04	City Aliso Viejo				Standards Version 2022				
05	Zone 2056				Software Version CEC22 Rev 2022.3.0				
06	Climate Zone 3				Front Orientation (deg / Cardinal) 15				
10	Building Type Single family				Number of Dwelling Units 1				
12	Project Scope Newly Constructed Addition				Number of Bedrooms 4				
14	Addition Cond. Floor Area (ft²) 641				Number of Stories 2				
16	Existing Cond. Floor Area (ft²) 1860				fenestration Average U-factor 0.3				
18	Total Cond. Floor Area (ft²) 2501				Glazing Percentage (%) 25.66%				
20	ADU Bedroom Count 1				ADU Conditioned Floor Area 641				
22	Fuel Type Natural gas				No Dwelling Unit: No				

ADDITION ALONE - Project Analysis Parameters					
01	02	03	04	05	06
Existing Area (excl. new addition) (ft²)	Addition Area (excl. existing) (ft²)	Total Area (ft²)	Existing Bedrooms	Addition Bedrooms	Total Bedrooms
1860	641	2501	3	1	4

ADDITION ALONE - ACCESSORY DWELLING UNIT (ADU) PROJECT ANALYSIS PARAMETERS							
01	02	03	04	05	06	07	08
Zone Name	Existing Area (excl. new addition) (ft²)	ADU Area (excl. existing) (ft²)	Total Area (ft²)	Existing Bedrooms	Addition Bedrooms	Total Bedrooms	Attached vs. Detached
Addition	1860	641	2501	3	1	4	Attached

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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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								

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²·yr)	Standard Design TDV Energy (EDR2) (kTDV/ft²·yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²·yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft²·yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	3.45	0	6.88	0	-3.43
Space Cooling	0	39.01	0	39.18	0	-0.17
IAQ/Ventilation	0	4.36	0	4.36	0	0
Water Heating	0	42.67	0	38.95	0	3.72
Self Utilization/Photovoltaic Credit						
Efficiency Compliance Total	0	89.49	0	89.37	0	0.12
Photovoltaics	0		0			
Battery			0			
Flexibility						
Indoor Lighting	0	6.31	0	6.31		
Appl. & Cooking	0	47.4	0	47.17		
Plug Loads	0	57.36	0	57.36		
Outdoor Lighting	0	6.28	0	6.28		
TOTAL COMPLIANCE	0	206.84	0	206.49		

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ENERGY USE INTENSITY				
	Standard Design (kBtu/ft²·yr)	Proposed Design (kBtu/ft²·yr)	Compliance Margin (kBtu/ft²·yr)	Margin Percentage
Gross EUI¹	33.12	32.13	0.99	2.99
Net EUI²	33.12	32.13	0.99	2.99

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED SPECIAL FEATURES				
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.				
• Exposed slab floor in conditioned zone				
• Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)				

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 CF2Bs and CF3Rs are required to be completed in the HERS Registry.				
• Indoor air quality ventilation				
• Kitchen range hood				
• Verified Refrigerant Charge				
• Airflow in habitable rooms (SC3.1.4.1.7)				
• Verified heat pump rated heating capacity				
• Wall-mounted thermostat in zones greater than 150 ft² (SC3.4.5)				
• Ductless indoor units located entirely in conditioned space (SC3.1.4.3.8)				

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
Addition	Conditioned	HVAC new	641	11	DHW n	New

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OPAQUE SURFACES												
01	02	03	04	05	06	07	08	09	10			
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Excavations	Status			
Add Wall F	Addition	Wall new	15	Front	432	42.9	90	none	New			
Add Wall L	Addition	Wall new	105	Left	269	31.24	90	Extension	New			
Add Wall B	Addition	Wall new	195	Back	268	21.84	90	none	New			
Add Wall R	Addition	Wall new	285	Right	244	61.48	90	none	New			
Interior Wall to Other	Addition	Wall Int RD	n/a	n/a	190	0	n/a		New			
Exterior Floor n	Addition	Floor Raised new	n/a	n/a	11	n/a	n/a		New			
Interior Floor to other	Addition	Floor Int RD	n/a	n/a	523	n/a	n/a		New			

OPAQUE SURFACES - CATHEDRAL CEILINGS												
01	02	03	04	05	06	07	08	09	10	11		
Name	Zone	Construction	Azimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof		
Cathedral n-F	Addition	Ceiling cath new	15	Front	366	0	5	0.1	0.85	No		
Cathedral n-B	Addition	Ceiling cath new	195	Back	242	0	5	0.1	0.85	No		

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	U-factor	SHGC	SHGC Source	Exterior Shading			
D1 Glaze n	Window	Add Wall F	Front	15	8	7.5	1	22.5	NFRC	0.23	NFRC	Bug Screen	
W7-Wind n	Window	Add Wall F	Front	15	3	3.8	1	11.4	NFRC	0.23	NFRC	Bug Screen	
W5-Wind n	Window	Add Wall F	Front	15	3	3.5	1	4.5	NFRC	0.23	NFRC	Bug Screen	

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FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
W5-Wind n-2	Window	Add Wall F	Front	15	3	3.5	1	4.5	0.3	NFRC	0.23	NFRC	Bug Screen
W4-Wind n	Window	Add Wall L	Left	105	2.8	5.8	1	16.24	0.3	NFRC	0.23	NFRC	Bug Screen
W12-Wind n	Window	Add Wall L	Left	105	4	5	1	20	0.3	NFRC	0.23	NFRC	Bug Screen
W11-Wind n	Window	Add Wall B	Back	195	4	3.9	1	7.6	0.2	NFRC	0.23	NFRC	Bug Screen
W10-Wind n	Window	Add Wall B	Back	195	2.8	5.8	1	16.24	0.3	NFRC	0.23	NFRC	Bug Screen
W9-Wind n	Window	Add Wall R	Right	285	5.8	5.8	1	33.64	0.3	NFRC	0.23	NFRC	Bug Screen
W9-Wind n-2	Window	Add Wall R	Right	285	2.8	5.8	1	16.24	0.3	NFRC	0.23	NFRC	Bug Screen
W9-Wind n-3	Window	Add Wall R	Right	285	5.8	2	1	31.6	0.3	NFRC	0.23	NFRC	Bug Screen

SLAB FLOORS							
01	02	03	04	05	06	07	08
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Subs On Grade n	Addition	41		none	0	0%	No

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OPAQUE SURFACE CONSTRUCTIONS						
01	02	03	04	05	06	07
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor
Wall new	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.087
						Inside Finish: Gypsum Board Cavity / Frame: R-5.7 / 2x4 Sheathing / Insulation: Wood Siding/Sheathing/Decking Exterior Finish: 3 Coat Stucco
Ceiling cath new	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 16 in. O. C.	R-30	None / None	0.037
						Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-30 / 2x10 Inside Finish: Gypsum Board
Wall Int RD	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277
						Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Floor Raised new	Exterior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-19	None / None	0.046
						Floor Surface: Carpeted Floor Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-0.9 / 2x12
Floor Int RD	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.136
						Floor Surface: Carpeted Floor Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION				
01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

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WATER HEATING SYSTEMS									
01	02	03	04	05	06	07	08	09	
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (H)	
DHW n - 1/1	Domestic Hot Water (DHW)	Standard	Tank-less	1	n/a	None	n/a	Tank-less (1)	

WATER HEATERS												
01	02	03	04	05	06	07	08	09	10	11	12	13
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (in/ft)	Standby Loss or Recovery Eff	1st Hc. Rating or Flow Rate	Tank Location
Tank-less	Gas	Consumer Instantaneo us	1	0	UEF	0.92	Btu/Hr	300000	0	n/a	n/a	

WATER HEATING - HERS VERIFICATION						
01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW n - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS								
01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
HVAC new	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	n/a	n/a	Setback

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HVAC - HEAT PUMPS												
01	02	03	04	05	06	07	08	09	10	11	12	13
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/SEER2/PF2/COP	Cap 47	Cooling Efficiency Type	SEER/SEER2/ER2	SEER/SEER2/ER2	Zonally Controlled	Compressor Type	HERS Verification	
Heat Pump System 1	VCHP-ductless	1	HSPF2	7.5	12000	9000	EER/SEER2	14.3	11.7	Not Zonal	Single-Speed	Heat Pump System 1-Heat Pump

HVAC HEAT PUMPS - HERS VERIFICATION								
01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-Heat Pump	Not Required	0	Not Required	Not Required	Yes	No	Yes	Yes

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION									
01	02	03	04	05	06	07	08	09	10
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Rating: MERV 8 and Higher	Low Leakage Ducts in Conditioned Space	Minimum Airflow per R4.3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump System 1	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

INDOOR AIR QUALITY (IAQ) FANS								
01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficiency (WCFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SHC/ASR	Includes Fault Indicator Display?	HERS Verification	Status
Slam ADU IAQventilat	34	0.35	Exhaust	No	n/a / n/a	No	Yes	

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Date	Description

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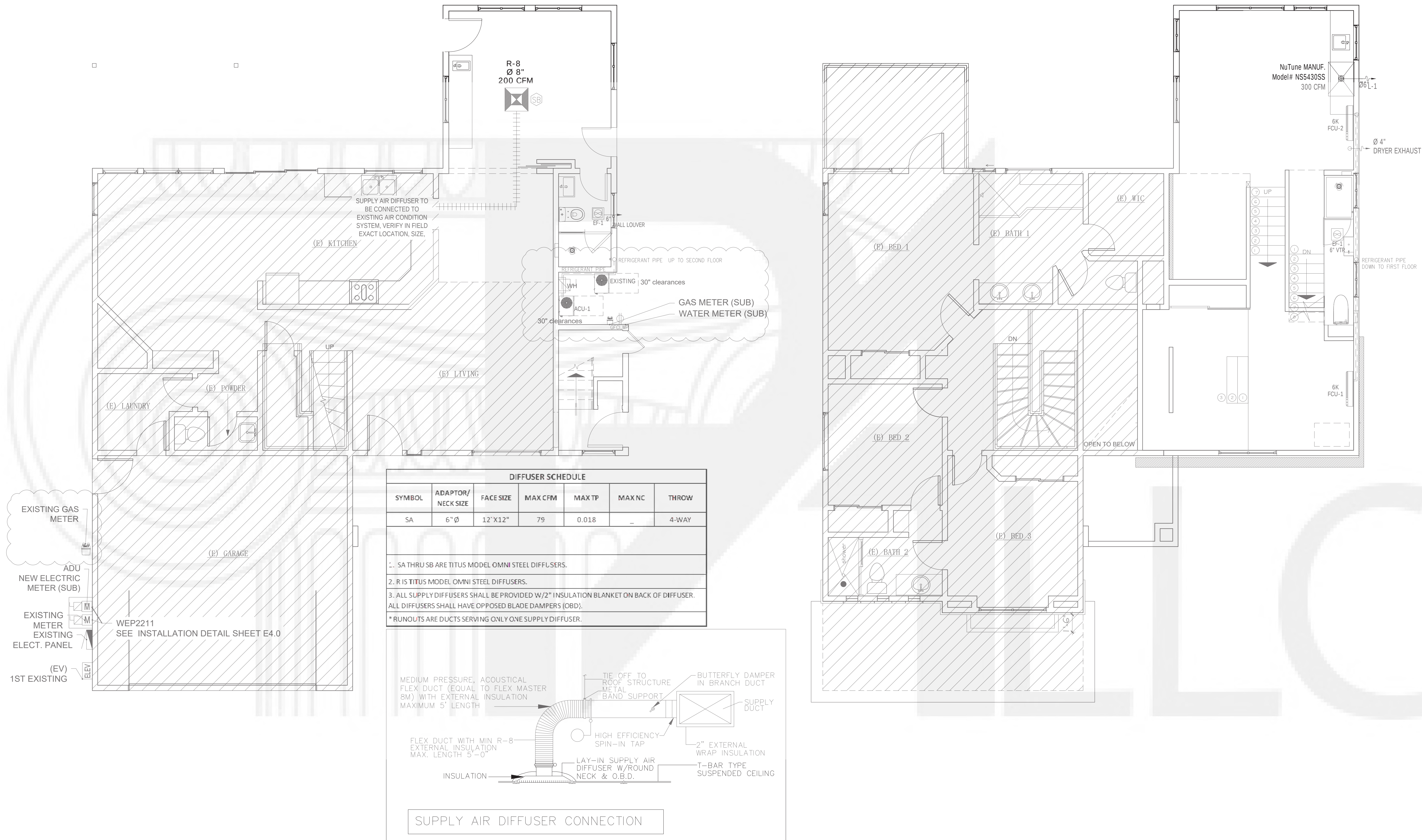
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**MECHANICAL
PLAN**

Scale: $\frac{1}{4}" = 1'-0"$

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M2.0



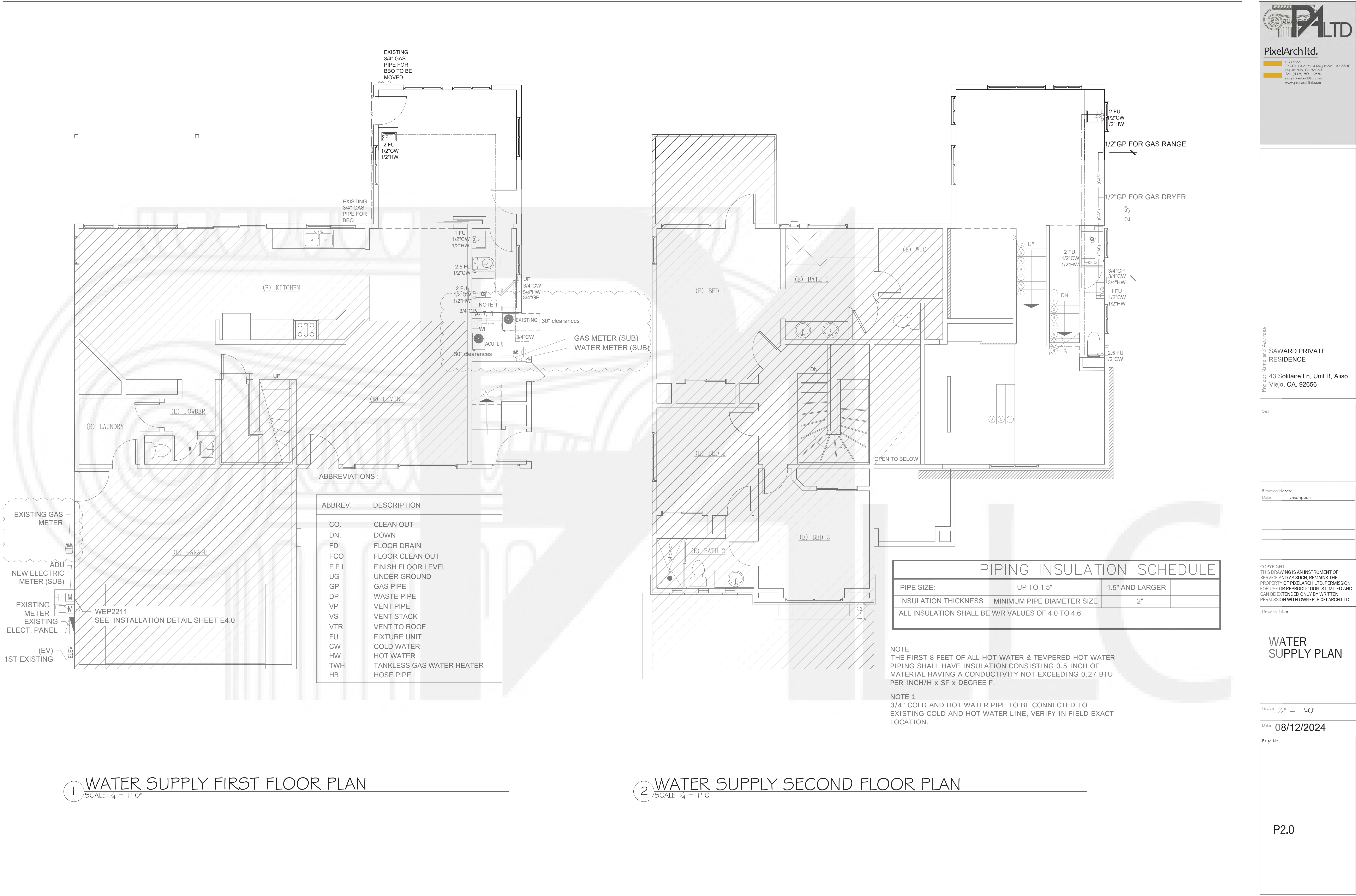
1 MECHANICAL FIRST FLOOR PLAN
SCALE: $\frac{1}{4}" = 1'-0"$

2 MECHANICAL SECOND FLOOR PLAN
SCALE: $\frac{1}{4}" = 1'-0"$



43 Solitaire Ln, Unit 1, Aliso
Viejo, CA. 92656

FIXTURE TYPE	MAXIMUM FLOW RATE
Water closets	1.28 gallons flush
Showerheads	2 gpm@ 80psi
Lavatory faucets	1.2gpm@ 60psi ¹
Kitchen faucets	1.8gpm@ 60psi



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