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	Green Building Code Correction Sheet for Additions and Alterations to Residential Buildings	4. Public transportation and/or carpool options available in the area.	15. THE FORMALDEHYDE EMISSIONS VERIFICATION CHECKLIST, FORM GRN 3, SHALL BE COMPLETED PRIOR TO	k. The underside of cantilevered and overhanging appendages and floor projections shall maintain the ignition-						
	8. A copy of the construction documents	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	FINAL INSPECTION APPROVAL. THE MANUFACTURER'S SPECIFICATIONS SHOWING FORMALDEHYDE CONTENT FOR	resistant integrity of exterior walls, or the projection shall be enclosed to the grade (707A.8)						
L	or a comparable document indicating the information from Energy Code Sections 110.10(b) through 110.10(c) shall be provided to the occupant.	range. 6. Information about water-conserving landscape and irrgation	ALL APPLICABLE WOOD PRODUCTS SHALL BE READILY AVAILABLE AT THE JOB	I. Buildings shall have all underfloor areas completely enclosed to the grade with construction as required for						
	(Energy Code §110.10(d)) 9. The flow rates for all new plumbing fixtures shall comply with the maximum flow rates	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	SITE AND BE PROVIDED TO THE FIELD INSPECTOR FOR VERIFICATION. (4.504.5.1, 9.504.5.1) 16. ALL NEW CARPET INSTALLED IN THE BUILDING INTERIOR	exterior walls (707A.8, 7207.1) m. All utilities, pipes, furnances, water heaters or other						
	specified in Section 4.303.1 (4.303.1) 10. When a shower is served by more than one showerhead, the combined flow rate of all the	foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around	SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING: 16.a. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS	mechanical devices located in an exposed under-floor area of a residential building shall be enclosed with materials as						
	showerheads and/or other outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or	the building, etc. 9. Information about state solar energy and incentive programs	PROGRAM 16.b. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH STANDARD	required for 1-hour fire-resistive construction.(7207.2) n. The space between the roof covering and roof decking						
	the shower shall be designed to only allow one showerhead to be in operation at a time. (4.303.1.3.2) 21. Show or state on plans that annular spaces around pipes,	available. 10. A copy of all special inspection verifications required by the enforcing agency or this code. (4.410.1)	PRACTICE FOR THE TESTING OF VOCS (SPECIFICATION 01350) 16.c.NSF/ANSI 140 AT THE GOLD LEVEL	shall be constructed to prevent the intrusion of flames and embers and be fire stopped per 705A.2.						
н К Н Н	electric cables, conduits, or other openings in the sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings	COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION	16.d. SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE™ GOLD (4.504.3, 9.504.3) 17. ALL NEW CARPET CUSHION INSTALLED IN THE BUILDING	 No trellis is permitted within 10 feet of the primary structure. p. Trellis more than 10 feet from the primary structure shall be constructed of heavy timber or non combustible materials. 						
PLAN S	with cement mortar, concrete masonry, or metal plates. Piping prone to corrosion shall be protected in accordance	At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and	INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND	Minimum of 4 inches spacing is required between the members. (Information Bulletin No. P/BC 2020-023).						
	with Section 313.0 of the Los Angeles Plumbing Code. (4.406.1) 22. Provide flashing details for all new roof valleys, around	ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal, or other methods acceptable to the enforcing agency	RUG INSTITUTE GREEN LABEL PROGRAM. (9.504.3.1) 18. NEW HARDWOOD PLYWOOD, PARTICLE BOARD, AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS							
LES OF	new windows and doors, and at new chimney to roof intersections on the building plans. (4.407.3) 23. Materials delivered to the construction	to reduce the amount of water, dust and debris which may enter the system. (4.504.1)	USED IN THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE FORMALDEHYDE LIMITS LISTED IN TABLE 4.504.5/ TABLE							
	site shall be protected from rain or other sources of moisture. (4.407.4)	FINISH MATERIAL POLLUTANT CONTROL Finish materials shall comply with section 4.504.2	9.504.5. (4.504.5, 9.504.5) 19. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR							
NON J	24. Construction waste shall be reduced in accordance with IAMC Section 66.32 et seq. Indicate how construction waste will be handled:	CAPILLARY BREAK A capillary break shall be installed in compliance with at least	FRAMING SHALL NOT BE ENCLOSED UNTIL IT IS INSPECTED AND FOUND							
	 a. City of Los Angeles certified hauler b. Source separated on site (Incorporate waste management plan onto plans) (4.408.1) 	one of the following: 1. A 4-inch thick (101.6mm) base of 1/2 ince (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct	TO BE SATISFACTORY BY THE BUILDING INSPECTOR. (4.505.3, 9.505.3) 20. BATHROOM EXHAUST FANS SHALL BE ENERGY STAR							
	25. An Operation and Maintenance Manual including, at a minimum, the items listed in Section 4.410.1, shall be completed and placed in the	contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI	COMPLIANT AND BE DUCTED TO TERMINATE TO THE OUTSIDE OF THE BUILDING. (4.506.1, 9.506.1)							
	building at the time of final inspection. Form GRN 6 (4.410.1)	302.2R-06. 2. Other equivalent methods approved by the enforcing agency.	21. BATHROOM EXHAUST FANS, NOT FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM,							
	28. All duct and other related air distribution component openings shall be covered with tape, plastic, or sheet metal until the final startup of the	3. A slab design specified by a licensed design professional. (4.505.2.1)	MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. (4.506.1, 9.506.1)							
	heating, cooling and ventilating equipment. (4.504.1) 29. Architectural paints and coatings, adhesives, caulks and sealants shall comply with the	MOISTURE CONTENT OF BUILDING MATERIALS Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the	22. WHOLE HOUSE EXHAUST FANS SHALL HAVE COVERS OR LOUVERS WHICH CLOSE WHEN THE FAN IS OFF AND THAT ARE INSULATED WITH A MINIMUM INSULATION VALUE OF R-4.2.							
CCURA	Volatile Organic Compound (VOC) limits listed in Tables 4.504.1- 4.504.3. (4.504.2.1-4.504.2.3)	framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:	(4.507.1, 9.507.1) 23. A 4-INCH THICK BASE OF ½ INCH OR LARGER CLEAN							
THE A	31. a. The VOC Content Verification Checklist, Form GRN 2, shall be completed and verified prior to final	 Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall 	AGGREGATE SHALL BE PROVIDED FOR THE PROPOSED SLAB ON GRADE CONSTRUCTION. (4.505.2.1, 9.505.2.1)							
EFOR	inspection approval. The manufacturer's specifications showing VOC content for all applicable products shall be readily available at the job site and be provided to	satisfy requirements found in Section 101.8 of this code. 2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to	24. A VAPOR BARRIER SHALL BE PROVIDED IN DIRECT CONTACT WITH CONCRETE FOR THE PROPOSED SLAB ON GRADE							
	the field inspector for verification. (4.504.2.4) b. All new carpet installed in the building interior shall	be verified. 3. At least three random moisture readings shall be performed on	CONSTRUCTION. (4.505.2.1, 9.505.2.1) 25. THE SIZE AND LAYOUT OF THE HEATING AND AIR-							
RESPO	meet the testing and product requirements of one of the following: i. Carpet and Rug Institute's Green Label Plus	wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.	CONDITIONING SYSTEMS SHALL BE IN ACCORDANCE WITH ACCA MANUAL J, ACCA 29-D AND ACCA 36-S, ASHRAE HANDBOOKS. (4.507.2,							
IOT BE	Program ii. California Department of Public Health's Specification 01350	Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow	9.507.2) 26. 50 % OF THE TOTAL AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH THE VOC LIMITS OR BE CERTIFIED							
	iii. NSF/ANSI 140 at the Gold level iv. Scientific Certifications Systems Indoor Advantage™ Gold	the manufacturers' drying recommendations prior to enclosure.	UNDER THE RESILIENT FLOOR COVERING INSTITUTE 9RCFI) FLOOR SCORE PROGRAM.							
ENTS S	(4.504.3) c. All new carpet cushion installed in the building	GREEN BUILDING NOTES: 1. EACH APPLIANCE PROVIDED AND INSTALLED MEETS ENERGY STAR IF AN ENERGY STAR DESIGNATION IS								
AGE	interior shall meet the requirements of the Carpet and Rug Institute Green Label program. (4.504.3.1) d. 80% of the total area receiving resilient flooring shall	APPLICABLE FOR THAT APPLIANCE. (4.210, 9.210) 2. WHERE FUTURE SPACE FOR SOLAR IS REQUIRED, AN	Buildings shall have approved address numbers, building numbers, or approved building identification placed in a position that is plainly legible and visible from the street or							
CERS C	comply with one or more of the following: i. Certified as a CHPS Low-Emitting Material in the CHPS High Performance Products Database	ELECTRICAL CONDUIT SHALL BE PROVIDED FROM THE ELECTRICAL	road fronting the property (R319.1)							
S OFFIG	ii. Certified under UL GREENGUARD Gold iii. Certified under the Resilient Floor Covering	LESS THAN ONE INCH. THE CONDUIT SHALL BE LABELED AS								
	Institute (RFCI) FloorScore program iv. Meet the California Department of Public Health's Specification 01350	PER THE LOS ANGELES FIRE DEPARTMENT REQUIREMENTS AND THE ELECTRICAL PANEL SHALL BE SIZED TO ACCOMMODATE	preservative-treated in accordance with AWPA U1 for the species,product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA U1.							
GELES	(4.504.4) e. New hardwood plywood, particle board, and medium density fiberboard composite wood products used in	THE INSTALLATION OF A FUTURE ELECTRICAL SOLAR SYSTEM. (4.211.4, 9.211.4)								
SO AN	the interior or exterior of the building shall meet the formaldehyde limits listed in Table 4.504.5. (4.504.5) f. The Formaldehyde Emissions Verification Checklist,	TABLE	VERY HIGH FIRE HAZARD SEVERITY ZONE LABC 2020							
Y OF L	Form GRN 3, shall be completed prior to final inspection approval. The manufacturer's specifications	9.403.2. (4.303.1, 9.303.1) 4. WHEN SINGLE SHOWER FIXTURES ARE SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL	a. Class A roof covering is required for all buildings. Wood shakes and shingles are not permitted. (7207.4, 1505) b. Valley flashings shall be not less than 0.019-inch (0.48 mm)							
НЕ СП	showing formaldehyde content for all applicable wood products shall be readily available at the job site and be provided to the field inspector for verification.	THE SHOWERHEADS SHALL NOT EXCEED THE MAXIMUM FLOW RATES SPECIFIED IN THE 20 PERCENT REDUCTION COLUMN CONTAINED IN TABLE 4.303.2 OR THE SHOWER SHALL BE								
	(4.504.5) g. Mechanically ventilated buildings shall provide regularly occupied areas of the building with a MERV	DESIGNED TO ONLY ALLOW ONE SHOWERHEAD TO BE IN OPERATION	sheet running the full length of the valley (705A.3)							
	13 filter for outside and return air. Filters shall be installed prior to occupancy and recommendations for	AT A TIME. 5. INSTALLED AUTOMATIC IRRIGATION SYSTEM CONTROLLERS SHALL BE WEATHER- OR SOIL-BASED CONTROLLERS. (4.304.1,	d. (Roof) (Attic)(Exterior wall) vents shall resist the intrusion of							
D	maintenance with filters of the same value shall be included in the operation and maintenance manual. (4.504.6)	9.304.1) 6. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS, OR OTHER OPENINGS IN PLATES AT EXTERIOR	flame and embers into the attic area of the structure, or shall be protected by corrosion-resistant, noncombustible wire mesh with 1/4 Binch (6 mm) openings or its equivalent. Vents							
	h. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed until it is inspected and found to be	WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR.	shall not be installed in eaves and cornices (706A.1, 706A.2, 706A.3, 7207.3)							
	satisfactory by the building inspector. (4.505.3) i. The heating and air-conditioning systems shall be sized and designed using ANSI/ACCA Manual J2011,	CONCRETE MASONRY, OR METAL PLATES. (4.406.1, 9.406.1)	e. Eaves and soffits shall meet the requirements of SFM 12-7A-3 or shall be protected by ignition-resistant materials or							
	ANSI/ACCA 29-D-2014 or ASHRAE handbooks and have their equipment selected in	7. MATERIALS DELIVERED TO THE CONSTRUCTION SITE SHALL BE PROTECTED FROM RAIN OR OTHER SOURCES OF MOISTURE. (4.407.4, 9.407.4)	noncombustible construction on the exposed underside (707A.5) f. Exterior walls shall be approved noncombustible or ignition-							
	accordance with ANSI/ACCA 3 Manual S-2014. (4.507.2) RODENT PROOFING	8. ONLY A CITY OF LOS ANGELES CERTIFIED HAULER WILL BE USED FOR HAULING OF CONSTRUCTION WASTE. (4.408, 9.408) 9. FOR ALL NEW EQUIPMENT, AN OPERATION AND	resistant material, heavy timber, or log wall construction or shall provide protection from the intrusion of flames and embers in							
C	Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected	MAINTENANCE MANUAL INCLUDING, AT A MINIMUM, THE ITEMS LISTED IN SECTION 4.410.1 OR 9.410.1, SHALL BE COMPLETED AND								
	against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency. (4.406.1)	PLACED IN THE BUILDING AT THE TIME OF FINAL INSPECTION. (4.410,	nominal solid wood blocking between rafters at all roof overhangs, or in the							
	MATERIAL PROTECTION Protect building materials delivered to the construction site from	9.410) 10. ALL NEW FIREPLACES MUST BE DIRECT-VENT, SEALED COMBUSTION TYPE. WOOD BURNING FIREPLACES ARE	case of enclosed eaves, terminate at the enclosure (704A.3.2) h. Exterior windows, window walls, glaze doors, and glazed							
	rain and other sources of moisture. (4.407.4)	PROHIBITED PER AQMD RULE 445. (4.503.1, 9.503.1, AQMD RULE 445) 11. AT LEAST 50% OF ALL AREAS RECEIVING RESILIENT	openings within exterior doors shall be insulating- glass units with a minimum of one tempered pane, or glass block units, or							
	CONSTRUCTION WASTE MANAGEMENT Comply with LAMC Section 66.32 et seq. (4.408.1)	FLOORING SHALL COMPLY WITH THE VOLATILE ORGANIC COMPOUND	have a fire- resistance rating of not less than 20 minutes, when							
B	OPERATION AND MAINTENANCE MANUAL At the time of final inspection, a manual, compact disc, web- based reference or other media acceptable to the enforcing	(VOC) LIMITS OR BE CERTIFIED UNDER THE RESILIENT FLOOR COVERING (RCFI) FLOORSCORE PROGRAM. (4.504, 9.504) 12. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION	tested according to NFPA 257, or conform to the performance requirements of SFM 12-7A-2 (708A.2.1) i. Exterior door assemblies shall conform to the performance							
	agency which includes all of the following whall be placed in the building: 1. Directions to the owner or occupant that the manual shall	COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEETMETAL UNTIL THE FINAL STARTUP OF THE HEATING AND	requirements of standard SFM 12-7A-1 or shall be approved noncombustible construction, or solid core wood having stiles and rails not less than 1 3/8 inches thick with interior field							
	remain with the building througout the life cycle of the structure. 2. Operation and maintenance instructions for the following:	COOLING EQUIPMENT. (4.504.1, 9.504.1) 13. ARCHITECTURAL PAINTS AND COATINGS, ADHESIVES, CAULKS AND SEALANTS SHALL COMPLY WITH THE VOLATILE	panel thickness no less than 1-1/4 inches thick, or shall have a fire-resistance rating of not less than 20 minutes when tested							
	 Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating sytsems and other major 	ORGANIC COMPOUND (VOC) LIMITS. (4.504.1-4.504.4, 9.504.1-9.504.4)	according to ASNFPA 252. (Exception: Noncombustible or exterior fire-retardant treated wood vehicle access doors)							
	appliances and equipment. b. Roof and yard drainage, including gutters and downspouts. c. Space conditioning systems, including ocndensers and air	14. THE VOC CONTENT VERIFICATION CHECKLIST, FORM GRN 2, SHALL BE COMPLETED AND VERIFIED PRIOR TO FINAL INSPECTION APPROVAL. THE MANUFACTURER'S	j. Decking, surfaces, stair treads, risers, and landings of decks, porches, and balconies where any portion of such							
	filters. d. Landscape irrigtion systems.	SPECIFICATIONS SHOWING VOC CONTENT FOR ALL APPLICABLE PRODUCTS SHALL BE READILY AVAILABLE AT THE JOB SITE AND BE	surface is within 10 feet (3048 mm) of the primary structure shall be constructed of heavy timber, non combustible or other							
	e. Water reuse systems.3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption,	PROVIDED TO THE FIELD INSPECTOR FOR VERIFICATION. (4.504.5, 9.504.5)	approved materials per Sec.709A.3							
<u>r</u> e 1	including recycle programs and locations.	4 5	6 7 8	9 10	11	12	13	14	15 16	
SHEET VERSION 4.0.1		· - I				. 1	I	1	,	

REVISION DATES (DESIGN STAGE ON

THIS PLAN WAS ELECTRONICALLY ● SIGNED AND STAMPED ●									R		
	VERTICAL CONTROL:				GENERAL + GREEN NULES		PROJECT:	STANDARD ADU		ADDRESS: 1 STANDARD PI AN WAY	LOS ANGELES, CALIFORNIA
WORKS	DATE BY	Date 1									XXXXX
DEPARTMENT OF PUBLIC W	NO. REVISION DESCRIPTION	1 Revision 1								INDEX NO. D-XXXX	
DEPARTM			DATE:	BEGOVIC AIA							
CITY OF LOS ANGELES	GARVIEF MOORE DE ENVISP		DESIGN GROUP	ARCHITECT: MICHAEL LEHRER FAIA; NERIN KADRIBEGOVIC AIA	ENGINEER: OMAR L. GARZA SE		DESIGNED BY: Designer		DRAWN BY: Author	CHECKED BY: Checker	APPROVED BY: DIVISION HEAD
CITY OF	Sł		ET	\mathbf{Y}		0			E		ETS

Tesla Photovoltaic Module

T420S, T425S, and T430S

Maximum Power

The Tesla module is one of the most powerful residential photovoltaic modules available. Our system requires up to 20 percent fewer modules to achieve the same power as a standard system. The module boasts a high conversion efficiency and a half-cell architecture that improves shade tolerance.

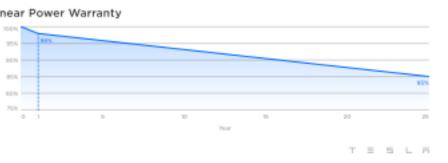
Beautiful Solar

Featuring our proprietary Zep Groove design, the all-black module connects easily with Tesla ZS components to keep panels close to your roof and close to each other for a blended aesthetic with simple drop-in and precision quarter-turn connections.

Reliability

Tesla modules are subject to automotive-grade engineering scrutiny and quality assurance, far exceeding industry standards. Modules are certified to IEC / UL 61730 - 1, IEC / UL 61730 - 2 and IEC / UL 61215.





800 W/m², 20°C, AM15, wind speed 1m/s

35 mm / 1.378 in

Tesla Photovoltaic Module - T4205, T4255, and T4305

Extra Linear Power Output 25 years

The maximum Pmax degradation is 2% in the 1st year and 0.54% annually from the 2nd to

25 years

Module Specifications

Electrical Characteristics

Limited Warranty

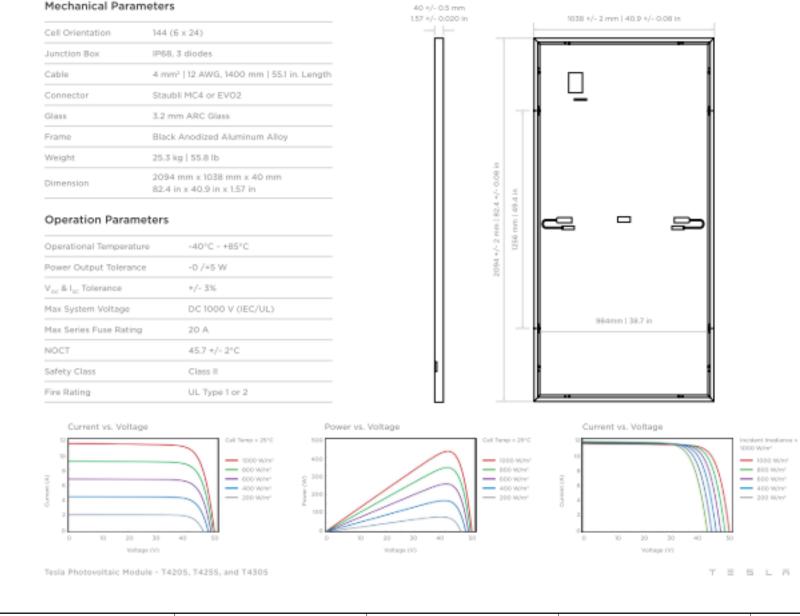
25th year.

NOCT

Materials and Processing

Power Class	Τ4	205	Т4	255	т4	305
Test Method	STC	NOCT	STC	NOCT	STC	NOCT
Max Power, P _{MAR} (W)	420	313.7	425	317.4	430	321.1
Open Circuit Voltage, V _{oc} (V)	40.5	45.47	48.65	45.61	40.0	45.75
Short Circuit Current, I _{sc} (A)	11.16	9.02	11.24	9.09	11.32	9.15
Max Power Voltage, V _{sp} (V)	40.90	38.08	41.05	38.22	41.20	38.36
Hax Power Current, I _{sp} (A)	10.27	8.24	10.36	8.3	10.44	8.37
Module Efficiency (%)	19	9.3	15	0.6	79	1.8
STC			1000 W/m²,	25°C, AH1.5		

Temperature Rating (STC)		Mechanical Loading	
Temperature Coefficient of Isc	+0.040% / °C	Front Side Design Load	3600 Pa 75 lb/ft ³
Temperature Coefficient of V _{oc}	-0.260% / °C	Rear Side Design Load	1600 Pa 33 lb/ft?
Temperature Coefficient of P _{INA} (W)	-0.331% / °C	Hailstone Test	25 mm Hailstone at 23 m/s





The following notes sha represents the minimun projects.

Construction means Construction includes st original line and grade, required to immediately construction material or (Order No. 01-182, NPD

- Eroded sediments sheet flow, swales
- Stockpiles of eart transported from
- Fuels, oils, solver not contaminate t protected from th not be washed int Non-storm water
- on the project site Excess or waste c
- shall be made to r 6. Trash and constru
- contamination of Sediments and oti street/public ways. Accidental depositions must be swept up immediately and may not be washed down
- by rain or by any other means.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will (Rev. 01/01/20)



- 13. All new gas fireplaces must be direct-vent, sealed combustion type. Wood 1. For each new dwelling and townhouse, provide a listed raceway that can accommodate a dedicated 208/240 volt branch circuit. The raceway shall not be burning fireplaces are prohibited per AQMD Rule 445. (4.503.1, AQMD Rule 445) less than trade size 1 (nominal 1-inch inside diameter), shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other 14. All duct and other related air distribution component openings shall be covered enclosure in close proximity to the proposed location of an EV charger. The with tape, plastic, or sheet metal until the final startup of the heating, cooling panel or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch and ventilating equipment. (4.504.1) circuit overcurrent protective device. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for 15. Paints and coatings, adhesives, caulks and sealants shall comply with the future EV charging as "EV CAPABLE". The raceway termination location Volatile Organic Compound (VOC) limits listed in Tables 4.504.1-4.504.3. shall be permanently and visibly marked as "EV CAPABLE". (4.106.4.1) 16. The VOC Content Verification Checklist, Form GRN 2, shall be completed and
- . For common parking area serving R-occupancies, the electrical system shall verified prior to final inspection approval. The manufacturer's specifications have sufficient capacity to simultaneously charge all designated EV spaces at showing VOC content for all applicable products shall be readily available at the job site and be provided to the field inspector for verification. (4.504.2.4) the full rated amperage of the Electric Vehicle Supply Equipment (EVSE). Design shall be based upon a 40-ampere minimum branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter), shall 17. All new carpet and carpet cushions installed in the building interior shall meet the testing and product requirements of one of the following (4.504.3): originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of Carpet and Rug Institute's Green Label Plus Program California Department of Public Health's Specification 01350 an EV charger. Raceways and related components that are planned to be NSE/ANSI 140 at the Gold level installed underground, enclosed, inaccessible or in concealed areas and spaces Scientific Certifications Systems Indoor AdvantageTM Gold shall be installed at the time of original construction. 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 18. 80% of the total area receiving resilient flooring shall comply with one or more accordance with the Los Angeles Electrical Code. (4.106.4.2)of the following (4.504.4): VOC emission limits defined in the CHPS High Performance Products
- 3. Roofs with slopes < 2:12 shall have a 3-year aged SRI value of at least 75 or both a 3-year aged solar reflectance of at least 0.63 and a thermal emittance of at least 0.75. Roofs with slopes ≥ 2:12 shall have an aged SRI value of at least 16 or both a 3-year solar reflectance of at least 0.20 and a thermal emittance of
- d. Meet the California Department of Public Health's Specification 01350 at least 0.75. (4.106.5)4. The required hardscape used to reduce heat island effects shall have a solar 19. New hardwood plywood, particle board, and medium density fiberboard reflectance value of at least 0.30 as determined per ASTM E1918 or ASTM composite wood products used in the building shall meet the formaldehyde C1549. (4.106.7)limits listed in Table 4.504.5. (4.504.5)
- The flow rates for all plumbing fixtures shall comply with the maximum flow
 The Formaldehyde Emissions Verification Checklist, Form GRN 3, shall be rates in Section 4.303.1. (4.303.1)completed prior to final inspection approval. (4.504.5)
- 6. When a shower is served by more than one showerhead, the combined flow 1. Mechanically ventilated buildings shall provide regularly occupied areas of the rate of all the showerheads controlled by a single valve shall not exceed 2.0 building with a MERV 13 filter for outside and return air. Filters shall be gallons per minute at 80psi, or the shower shall be designed to only allow one installed prior to occupancy and recommendations for maintenance with filters showerhead to be in operation at a time. (4.303.1.3.2)of the same value shall be included in the operation and maintenance manual. (4.504.6)
- . Installed automatic irrigation system controllers shall be weather- or soil-based (MWELO, § 492.7) 22. A 4-inch thick base of 1/2 inch or larger clean aggregate shall be provided for controllers. proposed slab on grade construction. A vapor barrier shall be provided in direct 8. For projects that include landscape work, the Landscape Certification, Form contact with concrete for proposed slab on grade construction. (4.505.2.1)
- GRN 12, shall be completed prior to final inspection approval. (State Assembly Bill No. 1881) 23. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed until it is inspected and found to 9. Annular spaces around pipes, electric cables, conduits, or other openings in the be satisfactory.
- (4.505.3)building's envelope at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry, or 24. Newly installed bathroom exhaust fans shall be ENERGY STAR compliant and metal plates. Piping prone to corrosion shall be protected in accordance with be ducted to terminate to the outside of the building. Fans must be controlled Section 313.0 of the Los Angeles Plumbing Code. (4.406.1)by a humidistat which shall be readily accessible. Provide the manufacturer's cut sheet for verification. 10. Materials delivered to the construction site shall be protected from rain or other
- sources of moisture.
- 11. Only a City of Los Angeles permitted hauler will be used for hauling of provided to the occupant." construction waste. (4.408.1)26. The heating and air-conditioning systems shall be sized and designed using 12. For all new equipment, an Operation and Maintenance Manual including, at a ANSI/ACCA Manual J-2004, ANSI/ACCA 29-D-2009 or ASHRAE handbooks and have their equipment selected in accordance with ANSI/ACCA minimum, the items listed in Section 4.410.1, shall be completed and placed in the building at the time of final inspection. (4.410.1)36-S Manual S-2004. (4.507.2)
- (Rev. 01/01/23)

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6 7	8	9	10	11	12	
		FORM GRN 1	DEPARTMENT OF BUILDING AND SAFETY	2023 Los Angele	MALDEHYDE LIMITS s Green Building Code s form into the plans)	;
ENT OF BUILDING AND SAFETY (2023 LOS ANGE	les Green Building Code)		2020 Los Angeles Green Building		1.2, 4.504.3, 4.504.5, 5.504.4.1, 5.504.4.2, 5	5.504
			VOC CONTENT LIMITS FOR ARCHITECTL Grams of VOC per Liter of Cr	JRAL COATINGS 2.3	FORMALDEHYD Maximum Formaldehyde Emis PRODUCT	DE LI
Storm Water Ballution Control Boos	increase for Construction Astiviti		Less Water and Less Exempt Co COATING CATEGORY 2.3	CURRENT LIMIT	Hardwood plywood veneer core Hardwood plywood composite core	+
Storm Water Pollution Control Requ			Flat coatings	50	Particleboard	+
Minimum Water Quality Protection Re	equirements for All Construction Pr	ojects	Nonflat coatings	50	Medium density fiberboard	
		0	Nonflat-high gloss coatings	50	Thin medium density fiberboard ²	
			Specialty Coatings Aluminum roof coatings	100	¹ Values in this table are derived from those specifies	
following notes shall be incorporated in the a	pproved set of construction/grading pl	ans and	Basement specialty coatings	400	Toxics Control Measure for Composite Wood as test additional information, see California Code of Regula	
			Bituminous roof coatings	50	93120.12. ³ Thin medium density fiberboard has a maximum th	icknes
esents the minimum standards of good house	keeping which must be implemented of	n all construction	Bituminous roof primers	350	SEALANT VO	
ects.			Bond breakers	350	Less Water and Less Exempt Cor SEALANTS	mpou
			Concrete curing compounds Concrete curing compounds, Roadways &	350	Architectural	+
Construction means constructing, clearing, g	grading or excavation that result in	soil disturbance.	Bridges	000	Marine deck	
struction includes structure teardown (demolitie			Concrete/masonry sealers	100	Nonmembrane roof	+
	-		Driveway sealers	50 50	Roadway Single-ply roof membrane	+
nal line and grade, hydraulic capacity, or orig	inal purpose of facility; emergency con	struction activities	Dry fog coatings Faux finishing coatings		Other	+
ired to immediately protect public health and	safety; interior remodeling with no or	itside exposure of	Clear Top Coat	100	SEALANT PRIMERS	
truction material or construction waste to stor	m water: mechanical nermit work: or	sion nermit work	Decorative Coatings	350	Architectural	
	• •	sign permit work.	Glazes	350 350	Porous	
er No. 01-182, NPDES Permit No. CAS004001	- Part 5: Definitions)		Trowel Applied Coatings	50	Modified bituminous 500	+
			Fire resistive coatings	150	Marine deck	-
. Eroded sediments and pollutants shall be reta	ined on site and shall not be transported i	from the site via	Floor coatings	50	Other Note: For additional information regarding methods	s to me
sheet flow, swales, area drains, natural draina	ge or wind.		Form-release compounds Graphic arts coatings (sign paints)	100 200	these tables, see South Coast Air Quality Manager	
2. Stockpiles of earth and other construction-rel	•	stastad from baing	High temperature coatings	420	ADHESIVE VOO	сти
-	ated materials shall be covered and/or pro	steeted from being	Industrial maintenance coatings	100	Less Water and Less Exempt Cor	mpou
transported from the site by wind or water.			Low solids coatings'	120	ARCHITECTURAL APPLICATIONS Indoor carpet adhesives	+
3. Fuels, oils, solvents and other toxic materials	must be stored in accordance with their	isting and shall	Magnesite cement coatings Mastic texture coatings	450	Carpet pad adhesives	+
not contaminate the soil nor the surface water		-	Metallic pigmented coatings	150	Outdoor carpet adhesives	
			Multicolor coatings	250	Wood flooring adhesive	+
protected from the weather. Spills must be cl	leaned up immediately and disposed of pi	roperly and shall	Pretreatment wash primers	420	Rubber floor adhesives Subfloor adhesives	+
not be washed into the drainage system.			Primers, sealers, and undercoaters Reactive penetrating sealers	100	Ceramic tile adhesives	+
. Non-storm water runoff from equipment and	vehicle washing and any other activity sl	all be contained	Recycled coatings	250	VCT and asphalt tile adhesives	
	veniere wasning and any other activity si	an oc contained	Roof coatings	50	Drywall and panel adhesives	+
on the project site.			Roof coatings, aluminum	100	Cove base adhesives Multipurpose construction adhesives	+
5. Excess or waste concrete may not be washed	into the public way or any drainage syste	em. Provisions	Rust preventative coatings Shellacs	100	Structural glazing adhesives	+
shall be made to retain concrete waste on-site			Clear	730	Single-ply roof membrane adhesives	
		-	Opaque	550	Other adhesives not specifically listed	
Trash and construction –related solid wastes	must be deposited into a covered receptad	cle to prevent	Speciality primers, sealers and undercoaters	100	SPECIALTY APPLICATIONS PVC welding	+
contamination of storm water and dispersal b	y wind.		Stains Stains, Interior	100 250	CPVC welding	+
7. Sediments and other materials shall not be tra	-	e construction	Stone consolidants	450	ABS welding	
	-		Swimming pool coatings	340	Plastic cement welding	
entrance roadways must be stabilized so as to	÷ .		Traffic marking coatings	100	Adhesive primer for plastic	+
street/public ways. Accidental depositions m	ust be swept up immediately and may no	t be washed down	Tub and tile refinish coatings Waterproofing membranes	420	Contact adhesive Special purpose contact adhesive	+
		1	A MARKET CALL AND		and the second sec	

8. Retention basins of sufficient size shall be provided to retain storm water runoff on-site and shall be properly located to collect all tributary site runoff. 9. Where retention of storm water runoff on-site is not feasible due to site constraints, runoff may be

conveyed to the street and the storm drain system provided that an approved filtering system is installed and maintained on-site during the construction duration.

provide reasonable accommodation to ensure equal access to its programs, services and activities.

Page 1 of 1

FORM GRN 14

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2023 Los Angeles Green Building Code GREEN BUILDING CODE PLAN CHECK NOTES RESIDENTIAL BUILDINGS

Page 1 of 1

- b. Certified under UL GREENGUARD Gold
- c. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program

(4.407.4) 25. A copy of the construction documents or a comparable document indicating the information from Energy Code Sections 110.10(b) through 110.10(c) shall be (Energy Code §110.10(d))

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

Page 1 of 1

Porous material (except wood)



Waterproofing membranes

Architectural Coatings Suggested Control available from the Air Resources Board.

Zinc-rich primers 100 Grams of VOC per liter of coating, including water and including exempt compounds. The specified limits remain in effect unless revised limits are listed in subsequent columns in the

course. ² Some values in this table are derived from those specified by the California Air Resources Board, Architectural Costings Suggested Control Measure, February 5, 2016. More information is

provide reasonable accommodation to ensure equal access to its programs, services and activities.

Wood coatings

(Rev. 01/01/23)

Nood preservatives

PLUMBING FIXTURE FLOW RATES Residential Occupancies

2023 Los Angeles Green Building Code (Incorporate this form into the plans)

SECTION 4.303.1

FIXTURE TYPE	MAXIMUM ALLOWABLE FLOW RATE
Showerheads	1.8 gpm @ 80 psi
Lavatory faucets, residential	1.2 gpm @ 60 psi ^{1,3}
Lavatory faucets, nonresidential	0.4 gpm @ 60 psi ^{1,3}
Kitchen faucets	1.5 gpm @ 60 psi ^{2,4}
Metering Faucets	0.2 gallons/cycle
Gravity tank type water closets	1.28 gallons/flush ⁵
Flushometer tank water closets	1.28 gallons/flush ⁵
Flushometer valve water closets	1.28 gallons/flush ⁵
Urinals	0.125 gallons/flush
Clothes Washers	ENERGY-STAR certified
Dishwashers	ENERGY-STAR certified

¹Lavatory Faucets shall not have a flow rate less than 0.8 gpm at 20 psi. ² Kitchen faucets may temporarily increase flow above the maximum rate, but not above 2.2gpm @ 60psi

and must default to a maximum flow rate of 1.8 gpm @ 60psi. ³Where complying faucets are unavailable, aerators or other means may be used to achieve reduction. ⁴ Kitchen faucets with a maximum 1.8 gpm flow rate may be installed in buildings that have water closets with a maximum flush rate of 1.06 gallons/flush installed throughout.

⁵ Includes single and dual flush water closets with an effective flush of 1.28 gallons or less. Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2.

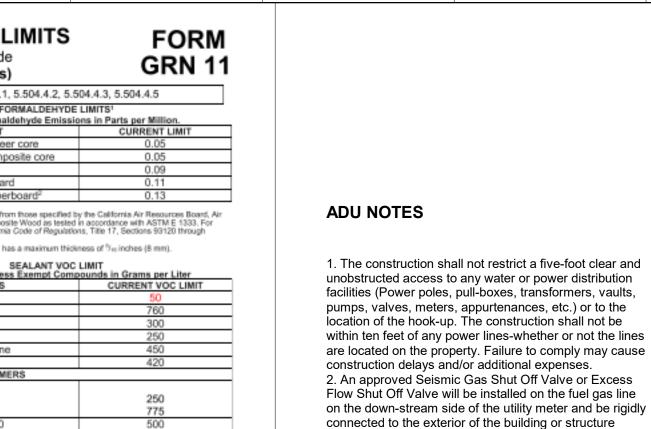
Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities. (Rev. 01/01/23) Page 1 of 1 www.ladbs.org www.ladbs.org 10 13 12

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Quality Management District Rule 116

ADHESIVE VOC LIMIT 1,2 ess Exempt Compounds in Grams per Liter PLICATIONS CURRENT VOC LIMIT

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
door carpet adhesives	50
arpet pad adhesives	50
utdoor carpet adhesives	150
lood flooring adhesive	100
ubber floor adhesives	60
ubfloor adhesives	50
eramic tile adhesives	65
CT and asphalt tile adhesives	50
rywall and panel adhesives	50
ove base adhesives	50
ultipurpose construction adhesives	70
tructural glazing adhesives	100
ngle-ply roof membrane adhesives	250
ther adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
VC welding	510
PVC welding	490
BS welding	325
astic cement welding	100
dhesive primer for plastic	550
ontact adhesive	80
pecial purpose contact adhesive	250
ructural wood member adhesive	140
op and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
etal to metal	30
astic foams	50
prous material (except wood)	50
lood	30
berglass If an adhesive is used to bond dissimilar substrates to C content shall be allowed.	80

For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, http://www.arb.ca.gov/DRD8/SC/CURHTML/R1168.PDF.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will

FORM **GRN 16**

5. Water heater must be strapped to wall. (507.3 & LAPC)6. Sprinkler system must be approved by the Mechanical
Division prior to installation.
7. A fire alarm (visual and audible) system is required. The alarm system must be approved by the Fire Department and Electrical Plan Check prior to installation. (LAMC 57.122)
8. Carbon monoxide alarm is required per (420.6, R315
Glazing in hazardous locations shall be tempered (2406.4, R308.4):
a. Ingress and egress doors
h Papels in sliding or swinging doors

containing the fuel gas piping. (Per Ordinance 170,158

Existing shower heads and toilets must be adapted for

to shower and approved shatter-resistant materials for

shower enclosure. (1210.2.3, 2406.4.5, R307.2, R308.4)

3. Provide ultra-flush water closets for all new construction.

4. Provide (70) (72) inch high non-absorbent wall adjacent

and 180,670) Separate plumbing permit is required.

low water consumption.

b. Panels in sliding or swinging doors c. Doors and enclosure for hot tub, bathtub, showers

(Also glazing in wall enclosing these compartments within 5' of standing surface)

d. If within 2' of vertical edge of closed door and within 5' of standing surface e. In wall enclosing stairway landing

f. Guards and handrails

- Comply with Title 24 energy requirements
- a. Energy Calculations provided herein
- b. HERS field verification is required
- c. Provide a CFIR Form (certificate of compliance) d. Certificate of compliance shall display the required registration number.

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD	HOD
Project Name: Residential Building	Calculation Date/Time: 2023-06-13715:53:29-07:00
Calculation Description: Title 24 Analysis	Inout File Name: BureauofEngineeringADURevB.ribd22x
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
M ario Bertacco	Marrío-Bertacco-
Company:	Signature Date:
NRG Compliance LP	06/15/2023
Address: PO Box 3777	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:
Santa Rosa, CA 95402	707-237-6957
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
 Tecrtify the following under penalty of perjury, under the laws of the State of California: 1 am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance to a current for the second and the requirements of Title 24, Part 1 and 25. Tecrtify that the energy features and performance specifications (dentificate of Compliance configure to compliance compliance to the second and the second accept the second and this Certificate of Compliance acception to the second acception of the 24, Part 1 and 25. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applications, plans and specifications under the the endocement agency for sporod with this building permit application. 	following under penalty of perjury, under the laws of the State of California: 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. I certify that the energy features and Performance specifications identificate of Compliance conform to the requirements of Tale 24, Part 1 and Part 6 of the California Code of Regulations. The building design features indentifications identificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations plans and specifications usefunction to the requirement with the information provided on other applicable compliance documents, worksheets,
Responsible Designer Name:	Responsible Designer Signature:
Ashle Fauvre	A Shille Fauwyre
Company:	Date Signed:
Kadre Architects	06/14/2023
Address: 1240 Brookmere Rd	Likense:
City/State/Zip:	Phone:
Pasadena, CA 91105	206-351-9727

L D	LOS ANGELES					BUREAU OF ENGINEERING	SIGNED AND STAMPED	
	GARVIEF MOORE PE FNV.SP		NO.	REVISION DESCRIPTION	DATE BY			
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_	DESIGN GROUP	DATE:						י י ד
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VC	S ARCHITECT: MICHAEL LEHRER FAIA; NERIN KADRIBEGOVIC AIA	RIBEGOVIC AIA) F
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ENGINEERING



RK ORDER 2002 SHEET NAME

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			SURES S							RMS-1
	u of Engine	ering ADL	J			Single Family Multi Family	/ □ Existing	+ Additio		Date 6/13/2023
Project /	Address Indard Plan	Way Los	Angolog			Climate Zone Zone 09	Total Cond. F <i>420</i>		Addition n/a	# of Units 1
		Way LUS	Angeles			rea	420	,	∏/d	1
	struction	Type		Cavi		0	pecial Fea	atures		Status
Wall	Wood Fran			R 23	ty (/	1.002		110103		New
Roof	Wood Fran			R 38		420 Cool R	loof			New
Slab		Slab-on-Grade	,	- no insi	ulation	420 Perim				New
	ESTRATIC	DN Area(<i>ft</i> ²)	Total Area:		Glazing Pe Overha	roomago.		tered Avera	age U-Factor: ades	0.30 Status
Rear (N)		21.0	0.300	0.20	none	none	N/A			New
Right (E,)	12.2	0.300	0.20	none	none	N/A			New
Front (S	E)	62.7	0.300	0.20	none	none	N/A			New
Left (SW	/)	6.2	0.300	0.20	none	none	N/A			New
Left (W)		36.0	0.300	0.20	none	none	N/A			New
Qty.	C SYSTEM Heating		Min. Eff		bling		h. Eff		rmostat	Status
			Min. Eff		oling Heat Pump		N. Eff SEER	Ther		Status New
Qty. 1 HVAC Loca	Heating Electric Heat	t Pump BUTION		Split	Heat Pump		SEER	Setback		
Qty.	Heating Electric Heat	BUTION	8.50 HSPF	Split	Heat Pump	14.0	SEER	Setback	Duct	New
Qty. 1 HVAC Loca HVAC S	Heating Electric Heat	t Pump BUTION He Ductle	8.50 HSPF ating ss / with Fan	Split	Heat Pump	14.0 Duct Loca n/a f Distri	SEER	Setback	Duct R-Value	New Status
Qty. 1 HVAC Loca HVAC S WAT Qty.	Heating Electric Heat C DISTRIE tion System ER HEAT Type	t Pump BUTION He Ductle	8.50 HSPF ating ss / with Fan Gal	Split Coc Ductle	Heat Pump bling ess Min. Ef	14.0 Duct Loca n/a f Distri	seer ation bution	Setback	Duct R-Value	New Status New Status



2022 Single-Family Residential Mandatory Requirements Summary

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

§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole- dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand- controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C mu be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than t minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G
ool and Spa Sys	tems and Equipment:
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting o the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *
ighting:	
	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable
§ 110.9:	requirements of § 110.9. *
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and li closets with an efficacy of at least 45 lumens per watt.
3 150.0(k)1B:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtig and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

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used. Review the respective section for more information.

(04/2022)	espective section for more information.
Building Envelope	
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. *
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafter Roof Insulation . Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have
§ 150.0(q):	a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.
ireplaces, Decora	tive Gas Appliances, and Gas Log:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *
pace Conditionin	g, Water Heating, and Plumbing System:
§ 110.0-§ 110.3:	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.*
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. [*]
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)3:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with

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§ 110.10(e)2:	circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."
§ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps. Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double p
§ 110.10(d):	provided to the occupant. Main Electrical Service Panel. The main electrical service panel must have a minimum husbar ration of 200 amos
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-fami residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system Documentation . A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must
§ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice th horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roc mounted equipment.
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§110.10(b)1A:	feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5
§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
olar Readiness:	applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)4: § 150.0(k)5:	watts of power. Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with
§ 150.0(k)3A:	other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and mee applicable requirements may be used to meet these requirements. Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting. Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall- mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED lig sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2B:	on and off. * Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is install to comply with § 150.0(k).
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	linen closet is closed. Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)1l:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not require to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *

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2022 Single-Family Residential Mandatory Requirements Summary

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach

§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and
	spa heaters. *
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment` maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
Ducts and Fans:	
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in
	these spaces must not be compressed. *
§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m) 12. Filters must be accessible for regular service. Filter

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filter *

2022 Single-Family Residential Mandatory Requirements Summary

l lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or , and switched outlets must be controlled separately from ceiling-installed lighting. r single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to ust have a manual on/off switch and either a photocell and motion sensor or automatic time switch ock. An energy management control system that provides the specified control functionality and meets all sed to meet these requirements.

gns. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 **r More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the sidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

	2022 Single-Family Residential Mandatory Requirements Summary
§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, <u>or</u> a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

Clean-filter pressure drop and labeling must meet the requirements in §150.0(m) 12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the

*Exceptions may apply.

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	Project Name		AND COOLING LOAD				Date		
ol and	Bureau of Engineering AD	JU						3/2023	
	System Name						Floor Area		
	HVAC System							420	
	ENGINEERING CHECKS		SYSTEM LOAD						
/	Number of Systems	1	-	COIL	COOLING P	EAK	COIL HT	G. PEA	
′ I	Heating System		-	CFM	Sensible	Latent	CFM	Sensib	
ne	Output per System	9,000	Total Room Loads	246	5,260	193	164	6,	
	Total Output (Btuh)	9,000	Return Vented Lighting		0				
ter	Output (Btuh/sqft)	21.4	Return Air Ducts		0				
	Cooling System		Return Fan		0				
(no	Output per System	9,000	Ventilation	0	0	0	0		
. (110	Total Output (Btuh)	9,000	Supply Fan		0				
and	Total Output (Tons)	0.8	Supply Air Ducts		0				
	Total Output (Btuh/sqft)	21.4							
	Total Output (sqft/Ton)	560.0	TOTAL SYSTEM LOAD		5,260	193	ŀ	6	
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n no	-	0	HVAC EQUIPMENT SELECTION						
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	Airflow (cfm)	0	Ductiess with Split Heat Fullip		0,307		\vdash	/	
Í	Airflow (cfm/sqft)	0.00							
	Airflow (cfm/Ton)	0.0							
). If a	Outside Air (%)	0.0%	Total Adjusted System Output	l	8,387	0		7	
). II a	Outside Air (cfm/sqft)	0.00	(Adjusted for Peak Design conditions)	,					
AC	Note: values above given at ARI		TIME OF SYSTEM PEAK			Aug 3 PM		Jan	
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d or n, ive	0 cfm					RC	ом	2	
d or n, ive	0 cfm		Coil (Airstream Temperatures at Time of	of Cooling	Peak)	RC	ом	2	
d or n, ive	0 cfm			of Cooling	Peak)	RC	ом	2	
d or n, ive les,	0 cfm 68 °F COOLING SYSTEM PSYCHR		(Airstream Temperatures at Time o	of Cooling	Peak)	RC	ом	2	
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d or n, ive les,	0 cfm 68 °F COOLING SYSTEM PSYCHR 92 / 68 °F Outside Air		(Airstream Temperatures at Time of 5/62 °F 55/54 °F →	of Cooling	Peak)		MOO	8°F _]	
d or n, ve les, le, stic	0 cfm 68 °F COOLING SYSTEM PSYCHR 92 / 68 °F		(Airstream Temperatures at Time o	of Cooling	Peak)	RC	MOO	2	
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>	GENERAL NOTES	
\geq	1. ENERGY CALCULATIONS PROVIDED PER	Ì
2	G-0.3, G-0.4. 2. HERS FIELD VERIFICATION IS REQUIRED 3. PROVIDE A CFIR FORM (CERTIFICATE OF	
	COMPLIANCE) 4. CERTIFICATE OF COMPLIANCE SHALL DISPLAY THE REQUIRED REGISTRATION	
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CF1R-PRF-01E CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Residential Building Calculation Date/Time: 2023-06-13T15:53:29-07:00 (Page 1 of 10) Calculation Description: Title 24 Analysis Input File Name: BureauofEngineeringADURevB.ribd22x

CERTIFICATE OF COMPLIANC

		Calculation Date/Time			(Page 2 of					
	Calculation Description: Title 24 Analysis Input File Name: BureauofEng									
Energy Design Ratings Compliance Margins										
Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)					
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puilding envelope ar										
			et load hour limits are r	not exceeded						
34) to achieve 'Stan	dard Design PV' PV scaling									
34) to achieve 'Stan	dard Design PV' PV scaling									
	29.4 28.6 building envelope ar measures such as p nd total compliance	Source Energy (EDR1) Efficiency ¹ EDR (EDR2efficiency) 29.4 28 28.6 25.1 RESULT ³ building envelope and more efficient equipme measures such as photovoltaic (PV) system ar and total compliance margins are greater than consistent that consis that consistent that consistent that consis	Source Energy (EDR1) Efficiency ¹ EDR (EDR2efficiency) Total ² EDR (EDR2total) 29.4 28 27.6 28.6 25.1 25.8 RESULT ³ : PASS building envelope and more efficient equipment measures such as photovoltaic (PV) system and batteries and total compliance margins are greater than or equal to zero and unm 634) to achieve 'Standard Design PV' PV scaling	Source Energy (EDR1) Efficiency ¹ EDR (EDR2efficiency) Total ² EDR (EDR2total) Source Energy (EDR1) 29.4 28 27.6 28.6 25.1 25.8 0.8 RESULT ³ : PASS building envelope and more efficient equipment measures such as photovoltaic (PV) system and batteries and total compliance margins are greater than or equal to zero and unmet load hour limits are and i334) to achieve 'Standard Design PV' PV scaling	Source Energy (EDR1) Efficiency ¹ EDR (EDR2efficiency) Total ² EDR (EDR2total) Source Energy (EDR1) Efficiency ¹ EDR (EDR2efficiency) 29.4 28 27.6 28.6 25.1 25.8 0.8 2.9 RESULT ³ : PASS building envelope and more efficient equipment measures such as photovoltaic (PV) system and batteries and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded isi34) to achieve 'Standard Design PV' PV scaling					

01	Project Name	Residential Building										
02	Run Title	Title 24 Analysis										
03	Project Location	Standard Plan Way										
04	City	Los Angeles	05	Standards Version	2022							
06	Zip code	91801	07	Software Version	CBECC-Res 2022.2.1							
08	Climate Zone	9	09	Front Orientation (deg/ Cardinal)	135							
10	Building Type	Single family	11	Number of Dwelling Units	1							
12	Project Scope	Newly Constructed	13	Number of Bedrooms	1							
14	Addition Cond. Floor Area (ft ²)	0	15	Number of Stories	1							
16	Existing Cond. Floor Area (ft ²)	n/a	17	Fenestration Average U-factor	0.3							
18	Total Cond. Floor Area (ft ²)	420	19	Glazing Percentage (%)	32.90%							
20	ADU Bedroom Count	n/a			•							
OMPLIA	NCE RESULTS											
01	Building Complies with Computer	Performance										
02	This building incorporates feature	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	nore Special Features shown below										

Registration Number: 423-P010101735A-000-00000000-0000 Registration Date/Time: 06/14/2023 15:55 HERS Provider: CHEERS NOTICE: This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document. CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2023-06-13 15:53:53 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Residential Building

Project Name: R	esidential Building			Calcula	tion Date	e/Time: 2023	8-06-13T	15:53:29-07:0	00	(F	Page 4 of 10			
Calculation Desc	ription: Title 24 An	alysis		Input File Name: BureauofEngineeringADURevB.ribd22x										
ENERGY USE INTE	NSITY													
		Standard Design (kBtu,	/ft ² - yr) P	Proposed Design (kBtu/f	t ² - yr)	Compliant	ce Margin	n (kBtu/ft ² - yr) 1	Margin Percentage				
Gros	Gross EUI ¹ 36.04			34.3			1.74	Ļ		4.83				
Net	Net EUI ² 13.4			11.66			1.74	ļ		12.99				
		including PV) / Total Buildi ding PV) / Total Building Are	-											
REQUIRED PV SYS	TEMS													
01	02	03	04	05	06	07	08	09	10	11	12			
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)			
1.63	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98			
REQUIRED SPECIA	L FEATURES							•						
The following are	features that must be	installed as condition for r	meeting the mode	eled energy performanc	e for this o	computer anal	ysis.							
 IAQ Ventilat Cool roof Variable cap 		s 0.555556 W/CFM npliance option (verificatio nnce (NEEA) rated heat pun					stalled							

Registration Number: 423-P010101735A-000-0000000-0000 Registration Date/Time: 06/14/2023 15:55 HERS Provider: CHEERS NOTICE: This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document. Report Generated: 2023-06-13 15:53:53 Report Version: 2022.0.000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Calculation Date/Time: 2023-06-13T15:53:29-07:00 (Page 7 of 10) Project Name: Residential Building Calculation Description: Title 24 Analysis Input File Name: BureauofEngineeringADURevB.ribd22x OPAQUE SURFACE CONSTRUCTIONS

01 02 03 04 05 06 07 08 Interior / Exterior Total Cavity R-value Construction Name Surface Type Construction Type Continuous U-facto Assembly Layers Framing R-value Inside Finish: Gypsum Board R-23 R-23 Exterior Walls 2x6@16in.O.C. None / None 0.066 Cavity / Frame: R-23 / 2x6 Wood Framed Wall Exterior Finish: 3 Coat Stucco Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Wood Framed R-38 Roof No Attic R-38 Cathedral Ceilings 2x10 @ 24 in. O. C. None / None 0.029 Siding/sheathing/decking Ceiling Cavity / Frame: R-38 / 2x10 Inside Finish: Gypsum Board BUILDING ENVELOPE - HERS VERIFICATION 05 01 02 03 04
 Quality Insulation Installation (QII)
 High R-value Spray Foam Insulation
 Building Envelope Air Leakage
 CFM50 CFM50 Required Not Required N/A n/a n/a WATER HEATING SYSTEMS 06 07 01 02 03 04 05 08 09 Solar Heating System Compact Water Heater Name System Type Distribution Type Water Heater Name Number of Units **HERS** Verification Distribution Name (#) HERS Verified Pipe DHW Sys Domestic Hot DHW Sys 1 DHW Heater 1 n/a None DHW Heater 1 (1) Water (DHW) 1-hers-dhw Insulation credit

CF1R-PRF-01E

Project Name: Resident						ime: 2023-06-13T1			(Page 5 of		
Calculation Description	,				In	iput File Na	me: B	ureauofEngineerin	gADURevB.r	IDd22X	
HERS FEATURE SUMMARY	(
The following is a summar detail is provided in the bu									y performan	ce for this compu	iter analysis. Addition
 Verified heat pump Wall-mounted ther Ductless indoor uni Pipe Insulation, All 	entilation Charge Prooms (SC3.1.4.1.7) Trated heating capacity mostat in zones greater t tits located entirely in con- Lines				1						
BUILDING - FEATURES INF						04 0				06	07
Project Name	Conditioned Floo	or Area (ft ²)	Number of Dwel Units	ling	Number o	of Bedrooms	N	lumber of Zones		of Ventilation og Systems	Number of Wate Heating Systems
Residential Building	420		1		17	1		1		0	1
01	02		03		04	04		05	06		07
Zone Name	Zone Type	HV	AC System Name	Zo	one Floor A	rea (ft ²)	Avg	g. Ceiling Height	Water Heat	ting System 1	Status
First Floor	Conditioned	ł	IVAC System1		420			11.6	DHV	/ Sys 1	New
OPAQUE SURFACES		-		_		_					
01	02		03	(04	05		06		07	08
Name	Zone	Cons	truction	Azi	muth	Orienta	ion	Gross Area (ft ²) Win	dow and Door Area (ft2)	Tilt (deg)
North Wall	First Floor		२-23		0	n/a		365.4		21	90
East Wall	First Floor		२-23	9	90	n/a		232		12.2	90
Southeast Wall	First Floor	1	२-23	1	.35	Fron	t	132.4		62.7	90
Southwest Wall	First Floor		२-23	2	225	Left		177.9		6.2	90

CERTIFICATE OF CO Project Name: Res Calculation Descri	idential Building		-ORMAN	ICE CO	MPLIAN	CEMETH	Calc	D CF1R-PRF-01 Calculation Date/Time: 2023-06-13T15:53:29-07:00 (Page 8 of 10 Input File Name: BureauofEngineeringADURevB.ribd22x									
WATER HEATERS - N	EEA HEAT PUMP																
01	02		03			04		0	5		06		07		08		
Name	# of Units	; Ta	ınk Vol. (gal)	NEEA	A Heat Pun Brand	np N		at Pum del	ip 1	īank Loca	tion Du	ct Inlet Air Sour	rce D	Ouct Outlet Air Sourc		
DHW Heater 1	1		40			Rheem			OPH401 7515	r2R	Outside	9	First Floor		First Floor		
WATER HEATING - H	ERS VERIFICATION		-														
01)2		03			04	1		05	_		06	Γ	07		
Name	Pipe In	sulation	Pa	ırallel Pi	ping	ing Compact Distrib			Distribution Compact Distribution Type			Recirculation Control		Shower Drain Water Hea Recovery			
DHW Sys 1 - 1/	1 Req	uired	N	ot Requ	ired	1	Vot <mark>Req</mark> uire	Required			Not		Required		Not Required		
SPACE CONDITIONIN	IG SYSTEMS		_														
01	02	03	_		04		05	\mathbf{X}		06		07	08	09			
Name	System Type	Heating Un	it Name	Heatir	ng Equipm Count	nent Coo	ling Unit N	lame		g Equipmen Count	ent Fan Name		Distribution Nam		Required Thermostat Type		
HVAC System1	Heat pump heating cooling	Heat Pump 1	System		1	Hea	at Pump Sys 1	stem		1		n/a	n/a		Setback		
HVAC - HEAT PUMPS	5						_	_					-				
01	02	03	04		05	06	07	0	8	09	10	11	12		13		
					Heati	ng				Cooling							
Name	System Type	Number of Units	Efficie Typ		HSPF / HSPF2 / COP	Cap 47	Cap 17		iency /pe	SEER / SEER2	EER / EER / CEER	Zonally Controlled	Zonally Compressor Controlled Type		HERS Verification		
Heat Pump System 1	VCHP-ductless	1	HSI	PF	8.5	9000	7400	EER	SEER	14	11	Not Zonal	Single Speed	F	Heat Pump System 1-hers-htpump		

Registration Number: 423-P010 NOTICE: This document has been gener and cannot guarantee, the accuracy or CA Building Energy Efficiency St

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 423-P010101735A-000-000-0000000-0000
 Registration Date/Time:
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 HERS Provider:
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 Schema Version: rev 20220901

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REVISION DATES (DESIGN STAGE O

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Project Name: Residential Building

Calculation Description: Title 24 Analysis

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft ² -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.98	6.68	2.21	15.99	-1.23	-9.31
Space Cooling	1.8	44.49	1.09	33.39	0.71	11.1
IAQ Ventilation	0.87	9.15	0.87	9.15	0	0
Water Heating	3.9	40.53	2.85	31.72	1.05	8.81
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	7.55	100.85	7.02	90.25	0.53	10.6
Photovoltaics	-4.4	-130.75	-4.4	-130.06		
Battery			0	0		
Flexibility						
Indoor Lighting	1.29	12.13	1.29	12.13		
Appl. & Cooking	8.27	98.47	8.18	97.6		
Plug Loads	8.6	87.44	8.6	87.44		
Outdoor Lighting	0.24	2.07	0.24	2.07		
TOTAL COMPLIANCE	21.55	170.21	20.93	159.43		

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Registration Number: 423-P010101735A-000-000-000000-0000	Registration
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	Schema Vers

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2023-06-13 15:53:53 Schema Version: rev 20220901 CF1R-PRF-01E CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Calculation Date/Time: 2023-06-13T15:53:29-07:00 (Page 5 of 10)

Registration Number: 423-P010101735A-000-0000000-00000 Registration Date/Time: 06/14/2023 15:55 HERS Provider: CHEERS NOTICE: This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document.

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P010101735A-000-000-000000-0000 penerated by California Home Energy Efficiency Rating Services (CHEERS) / or completeness of the information contained in this document.		HERS Provider: CHEERS d to CHEERS. Therefore, CHEERS is not responsible for,
y Standards - 2022 Residential Compliance	Report Version: 2022.0.000 Schema Version: rev 20220901	Report Generated: 2023-06-13 15:53:53

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Project Name: A	Residential Bu	ıilding							Calcula	tio
Calculation Des	cription: Title	24 Analysis							Input F	ile
OPAQUE SURFAC	ES									
01		02		03						
Name		Zone	Const	1	Az	imuth	0	rie		
West Wall		First Floor	F	R-23	3			270		
OPAQUE SURFAC	ES - CATHEDRA	AL CEILINGS								
01	02	03	03 04				05	C	6	Γ
Name	Zone	Construction	Azimu	Azimuth Orie		ntation	Area	(ft ²)		
Roof	First Floor	R-38 Roof No Attic	0				n/a	4:	20	
FENESTRATION /	GLAZING									-
01	02	03	04	Т		05	06	07	08	Γ
Name	Туре	Surface	Orientation	ľ	Azi	muth	Width (ft)	Height (ft)	Mult.	Ī
Window	Window	North Wall				0			1	T
Window 2	Window	East Wall				90			1	T

													_
Window 3	Window	Southeast Wall	Front	135			1	62.7	0.3	NFRC	0.2	NFRC	Bug Screen
Window 4	Window	Southwest Wall	Left	225			1	6.2	0.3	NFRC	0.2	NFRC	Bug Screen
Window 5	Window	West Wall		270			1	36	0.3	NFRC	0.2	NFRC	Bug Screen
SLAB FLOORS											-		
01		02	03		04		05			06		07	08
Name		Zone	Area (ft ²	[:])	Perimeter (ft)		Edge Insul. R-value and Depth			Edge Insul. R-value and Depth		d Fraction	Heated
Slab	1	First Floor	420		99	99		none		0		0%	No

Registration Number: 423-P010101735A-000-000-0000000-0000 Registration Date/Time: 06/14/2023 15:55 HERS Provider: CHEERS NOTICE: This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document. Report Generated: 2023-06-13 15:53:53 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIA
Project Name: Residential Building
Calculation Description: Title 24 Analysis

CERTIFICATE OF CO	MPLIANCE -	RESIDE	NI IAL PE	RFORMAN	CE C	OMPLIANCE ME	THOD								CF1R-PRF-01
Project Name: Resi	dential Build	ing					Calcula	itio	n Date/Time:	2023	-06-13T15	53:29-07	:00		(Page 9 of 10
Calculation Descrip	tion: Title 24	1 Analys	sis				Input F	ile	Name: Bureau	ofEn	gineeringA	DURevB.	ribd22>	C	
HVAC HEAT PUMPS -	HERS VERIFIC	ATION													
01	02		(03		04	05		06		07	,		08	09
Name	Verified Ai	rflow	Airflov	w Target	Ver	ified EER/EER2	Verified SEER/SEER2		Verified Refrige Charge	rant	Verif HSPF/H			ied Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Not Requ	ired		0	N	lot Required	Not Required		Yes		No)	Yes		Yes
VARIABLE CAPACITY	HEAT PUMP C	OMPLIA	NCE OPTI	ON - HERS V	ERIFI	CATION				-					
01			02	03		04	05		06		07	08	3	09	10
Name		Low	tified -Static System	Airflow Habitab Rooms	le	Ductless Units in Conditioned Space	Wall Mount Thermostat	8.	ir Filter Sizing amp; Pressure Drop Rating	Cor	v Leakage Ducts in nditioned Space	Airflov RA3.3	Minimum Airflow per RA3.3 and SC3.3.3.4.1		Indoor Fan not s Running Continuously
Heat Pump Sys	tem 1	Not r	equired	Require	d	Required	Re <mark>qu</mark> ired	I	Not requir <mark>e</mark> d	Not	t required	Not req	uired	Not required	Not required
NDOOR AIR QUALIT	(IAQ) FANS			_			í LA								
01	02		(03		04	05		06		07	,		08	09
Dwelling Unit	Airflow (C	FM)		fficacy CFM)		AQ Fan Type	Includes Heat/Energy Recovery?		IAQ Recover Effectiveness -		Include: Indicator		HERS	Verification	Status
SFam IAQVentRpt 1-1	27		0.55	55556	-	Balanced	No		n/a / n/a		No)		Yes	

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Calculation Date/Time: 2023-06-13T15:53:29-07:00 Input File Name: BureauofEngineeringADURevB.ribd22x CF1R-PRF-01E (Page 3 of 10)

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ion Date/Time: 06/14/2023 15:55 HERS Provider: CHEERS mation uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, ersion: 2022.0.000 Report Generated: 2023-06-13 15:53:53 Schema Version: rev 20220901

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	Calculat	tion Date	e/Time:	2023	-06-13T15:5	3:29-07:00			(Page 6 of 10)
	Input Fi	le Name	: Burea	uofEn	gineeringA	OURevB.ribd22	2x		
		05			06	07	7		08
	Or	ientation		Gross	s Area (ft ²)	Window a Area			Tilt (deg)
		n/a			232	36	5		90
1									
_				_					
0	6	07			08	09	10		11
ea	(ft ²)	Skyligh (ft		Roo	f Rise (x in 12)	Roof Reflectance	Roof Emi	ttance	Cool Roof
42	0	0			7	0.27	0.75		Yes
	08	09	10		11	12	13		14
ıt	Mult.	Area (ft ²)	U-fac	tor	U-factor Source	SHGC	SHGC Sou	irce	Exterior Shading
	1	21	0.3	3	NFRC	0.2	NFRC		Bug Screen
	1	12.2	0.3	3	NFRC	0.2	NFRC		Bug Screen
1	1	62.7	0.3	0.3 NFRC		0.2	NFRC		Bug Screen
	1	6.2	0.3	0.3 NFRC		0.2	NFRC		Bug Screen
	1	36	0.3	3	NFRC	0.2	NFRC		Bug Screen

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Report Version: 2022.0.000 Schema Version: rev 20220901	Report Generated: 2023-06-13 15:53:53

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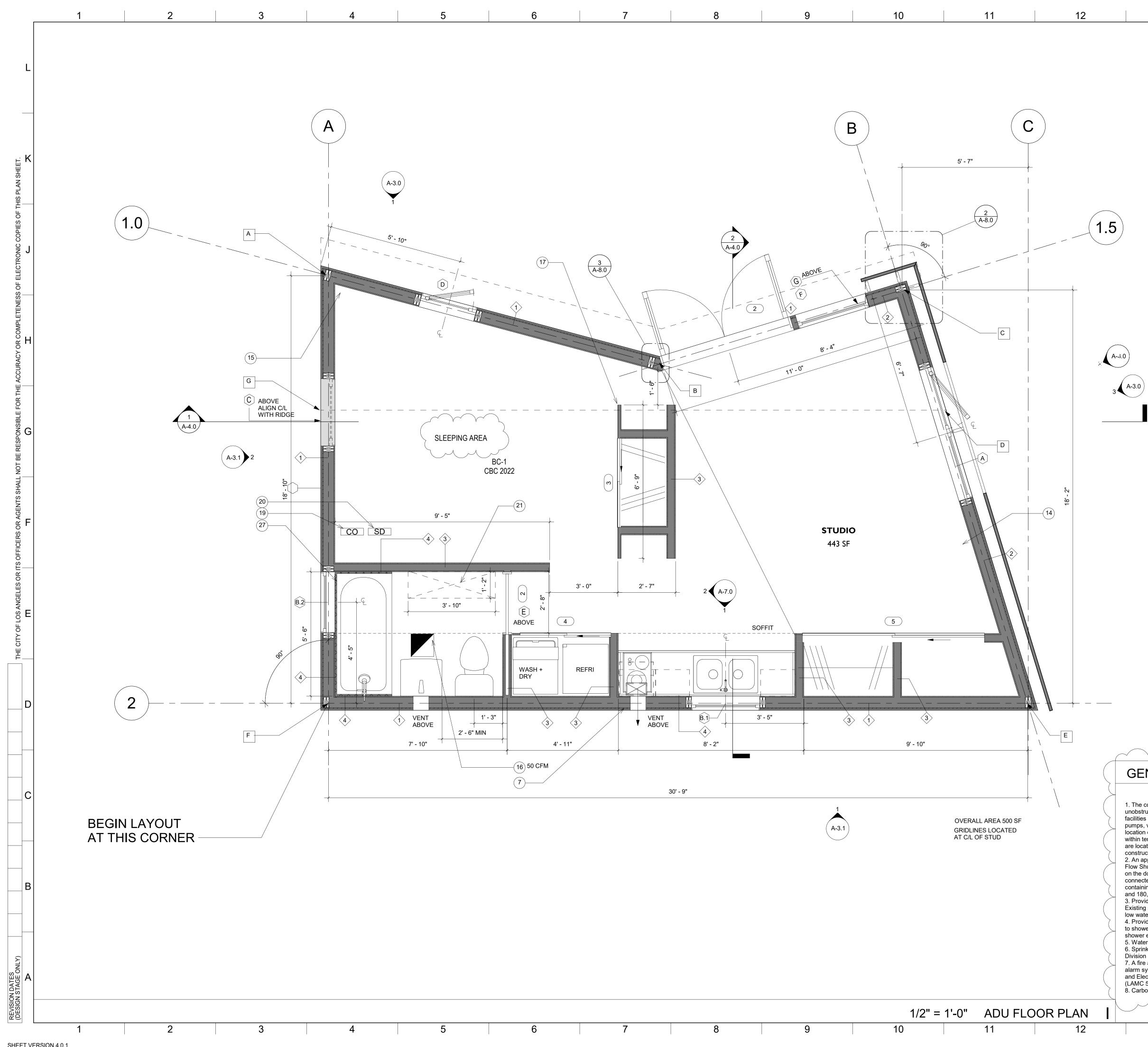
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THIS PLAN WAS ELECTRONICALLY • SIGNED AND STAMPED •										
BUREAU OF ENGINEERING	VERTICAL CONTROL:	HORIZONTAL CONTROL:		111LE 24		PROJECT:	STANDARD ADU		ADDRESS:	1 STANDARD PLAN WAY
C WORKS	DATE BY								.)	
EPARTMENT OF PUBLIC W	REVISION DESCRIPTION									
MENT	NO									
EPART	CITY ENGINEER	DATE	OVIC AIA							



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THIS PLAN WAS ELECTRONICALLY SIGNED AND STAMPED 								
BUREAU OF ENGINEERING	VERTICAL CONTROL:	HORIZONTAL CONTROL:	SHEET TITLE:	FLOOK FLAN	PROJECT:	STANDARD ADU	ADDRESS: 1 STANDARD DI AN WAY	LOS ANGELES, CALIFORNIA
C WORKS	DATE BY							XXXXX
DEPARTMENT OF PUBLIC W	REVISION DESCRIPTION						INDEX NO. D-XXXX	
DEPARTME	CITY ENGINEER	DATE:	EGOVIC AIA					
CITY OF LOS ANGELES	GARY LEE MOORE, P.E., ENV SP	DESIGN GROUP	ARCHITECT: MICHAEL LEHRER FAIA; NERIN KADRIBEGOVIC AIA	ENGINEER: OMAR L. GARZA SE	DESIGNED BY: Designer	DRAWN BY: Author	CHECKED BY: Checker	APPROVED BY: DIVISION HEAD
ITY OF L				IEET	02) She	

Note	
Number	Note Text
1	SHOWER
2	FRAMELESS MIRROR MEDICINE CABINET WITH SCONCE LIGHT
3	BATHTUB
4	LAVATORY
5	TOILET
7 8	<varies> KITCHEN ELECTRIC</varies>
-	COOKTOP
9	DECK MOUNTED KITCHEN FAUCET
10	PLASTIC LAMINATE UPPER CASEWORK, TYP.
11	PLASTIC LAMINATE LOWER CASEWORK, TYP.
12	SOLID SURFACE COUNTERTOP AND 4" BACKSPLASH
13	DUAL BOWL STAINLESS STEEL SINK
14	COLOR EPOXY
15	CLEAR SEAL CONCRETE LEVEL 3 FINISH
16	ENERGY STAR COMPLIANT BATHROOM EXHAUST FAN WITH HUMIDISTAT VENTED TO OUTSIDE
17	FREESTANDING CLOSET -
18	CONVENIENCE OUTLET
19	CARBON MONOXIDE DETECTOR
20	SMOKE DETECTOR
21	SKYLIGHT
22	MAINTAIN 18" MINIMUM CLEARANCE BETWEEN SOLAR PANELS AND ROOF EDGE
23	ALUMINUM RAIN DIVERTER FLASHING
24	BOX GUTTER AND DOWNSPOUT
25	ASPHALT SHINGLE COOL ROOF, CLASS A; UL ER2453-02
26	EAVES OVERHANG
27	FRP PANEL PER ELEVATION

TOP OF PLATE ELEVATIONS

A	+8' - 0"
В	+12' - 0"
С	+9' - 0"
D	+13' - 9"
E	+7' - 0"
F	+7' - 0"
G	+13' - 9"

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BC-1 CBC 2022

GENERAL NOTES

1. The construction shall not restrict a five-foot clear and unobstructed access to any water or power distribution facilities (Power poles, pull-boxes, transformers, vaults, pumps, valves, meters, appurtenances, etc.) or to the location of the hook-up. The construction shall not be within ten feet of any power lines-whether or not the lines are located on the property. Failure to comply may cause construction delays and/or additional expenses. 2. An approved Seismic Gas Shut Off Valve or Excess

Flow Shut Off Valve will be installed on the fuel gas line on the down-stream side of the utility meter and be rigidly connected to the exterior of the building or structure containing the fuel gas piping. (Per Ordinance 170,158 and 180,670) Separate plumbing permit is required. 3. Provide ultra-flush water closets for all new construction. Existing shower heads and toilets must be adapted for low water consumption.

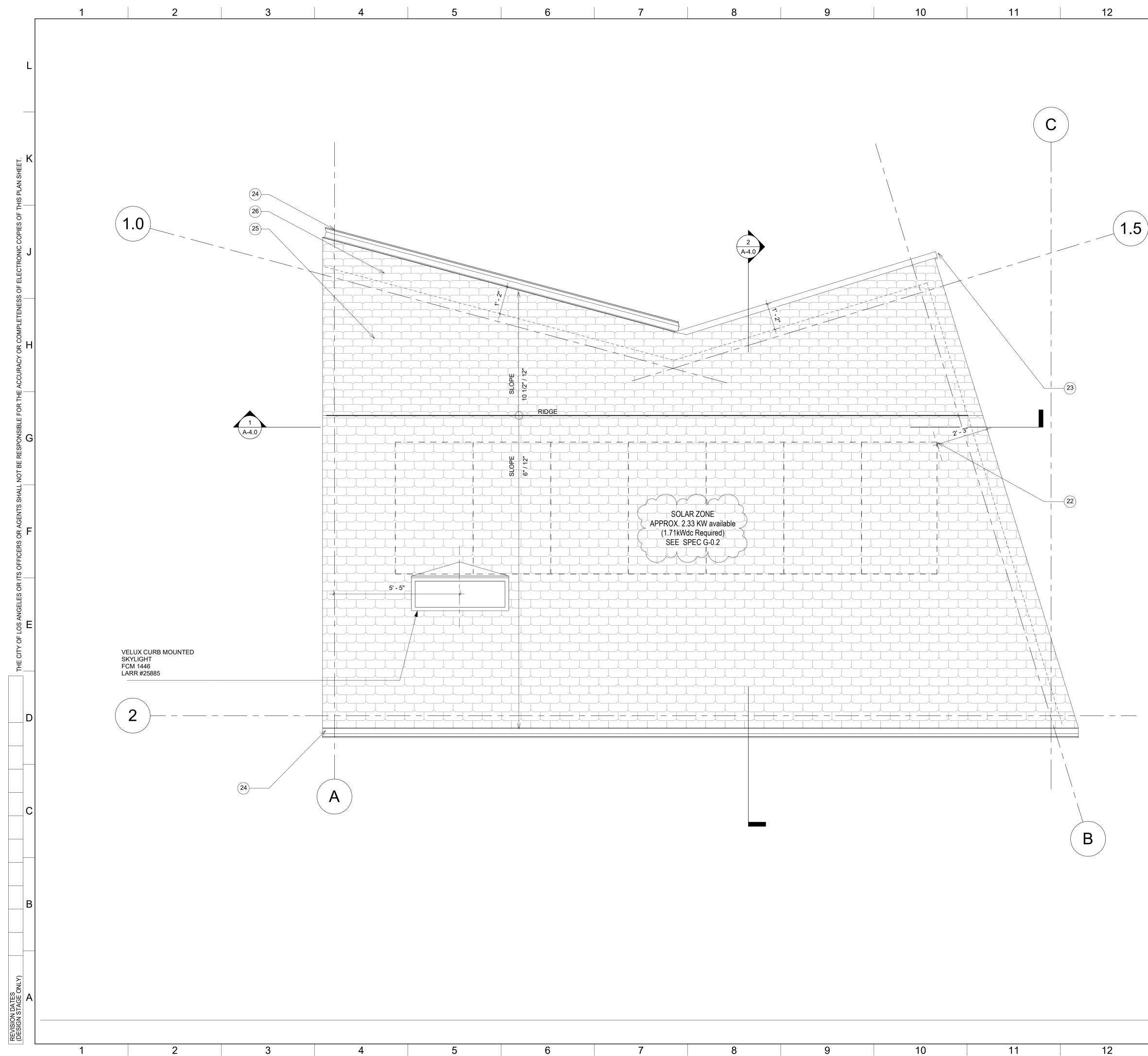
4. Provide (70) (72) inch high non-absorbent wall adjacent to shower and approved shatter-resistant materials for shower enclosure. (1210.2.3, 2406.4.5, R307.2, R308.4) 5. Water heater must be strapped to wall. (507.3 & LAPC) 6. Sprinkler system must be approved by the Mechanical Division prior to installation.

7. A fire alarm (visual and audible) system is required. The alarm system must be approved by the Fire Department and Electrical Plan Check prior to installation. (LAMC 57.122)

8. Carbon monoxide alarm is required per (420.6, R315)

LEGEND

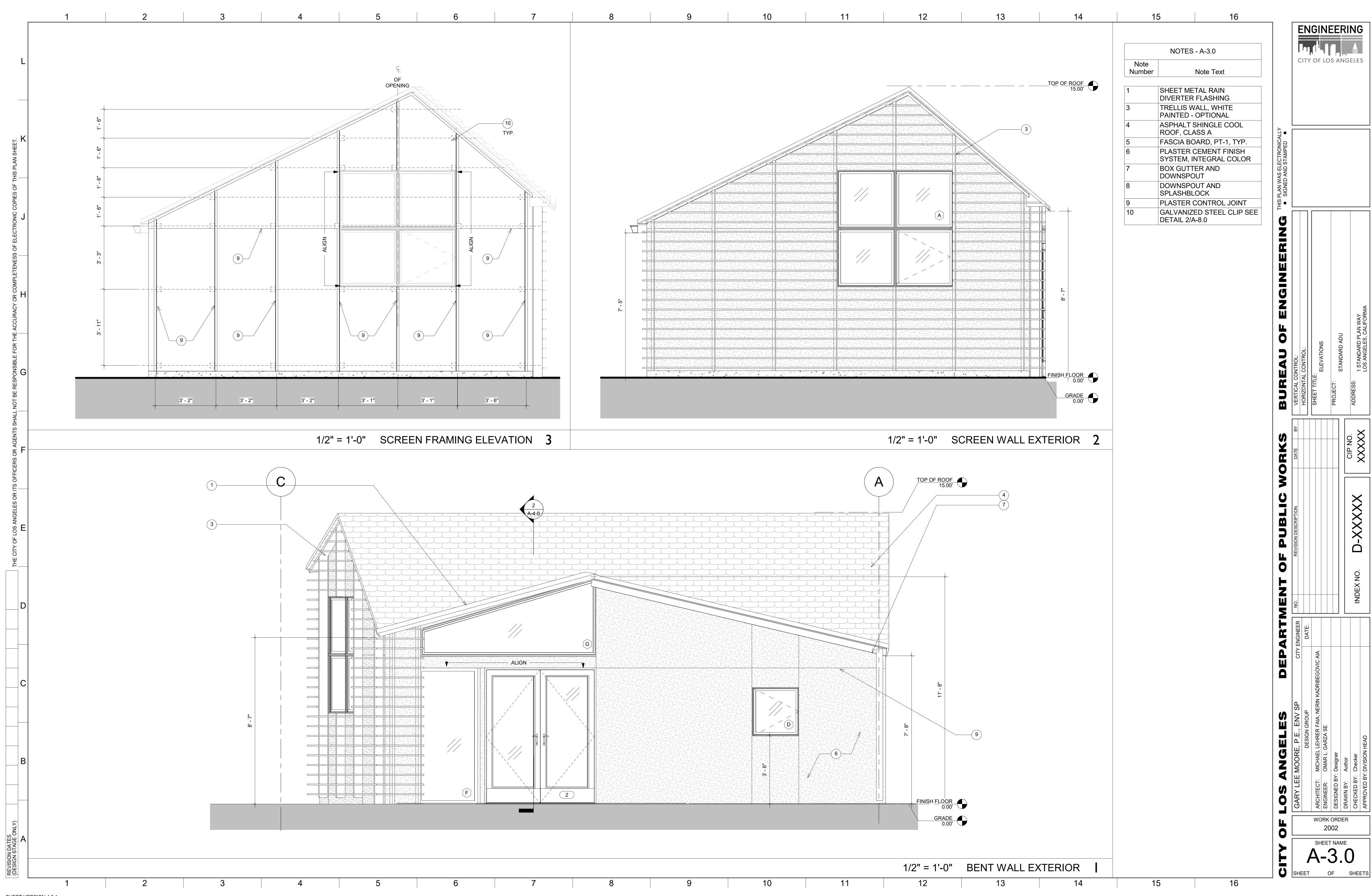
- (101) DOOR, SEE SCHEDULE A-7.0 (1t) WINDOW, SEE SCHEDULE A-7.0 (1) WALL, SEE SCHEDULE A-7.0
- A TOP PLATE ELEVATION, SEE SCHEDULE A-2.0
- (1) KEYNOTE, SEE SCHEDULE THIS SHEET



Note Number

16		E	N	GI	NE	ΞE	RI	N	3
TES - INTERIORS				¢	Π				
Note Text		С	ITY	OF	LO	S A	NG	ELE	S
AMELESS MIRROR DICINE CABINET WITH ONCE LIGHT THTUB									
/ATORY	≻,								
ILET aries>	 THIS PLAN WAS ELECTRONICALLY SIGNED AND STAMPED 								
CHEN ELECTRIC	TRON AMPE								
OKTOP CK MOUNTED KITCHEN	S ELEC								
JCET ASTIC LAMINATE UPPER	N WAS								
SEWORK, TYP.	s PLAN								
STIC LAMINATE LOWER	€IHI ●		_						
ID SURFACE INTERTOP AND 4"	5								
KSPLASH	Z								
L BOWL STAINLESS EL SINK									
OR EPOXY									
AR SEAL CONCRETE EL 3 FINISH	ENGINEE								
RGY STAR COMPLIANT HROOM EXHAUST FAN	5								
H HUMIDISTAT VENTED	Z								٨I
ESTANDING CLOSET -	ШШ р.								LOS ANGELES, CALIFORNIA
IONAL	ЦО								S, CA
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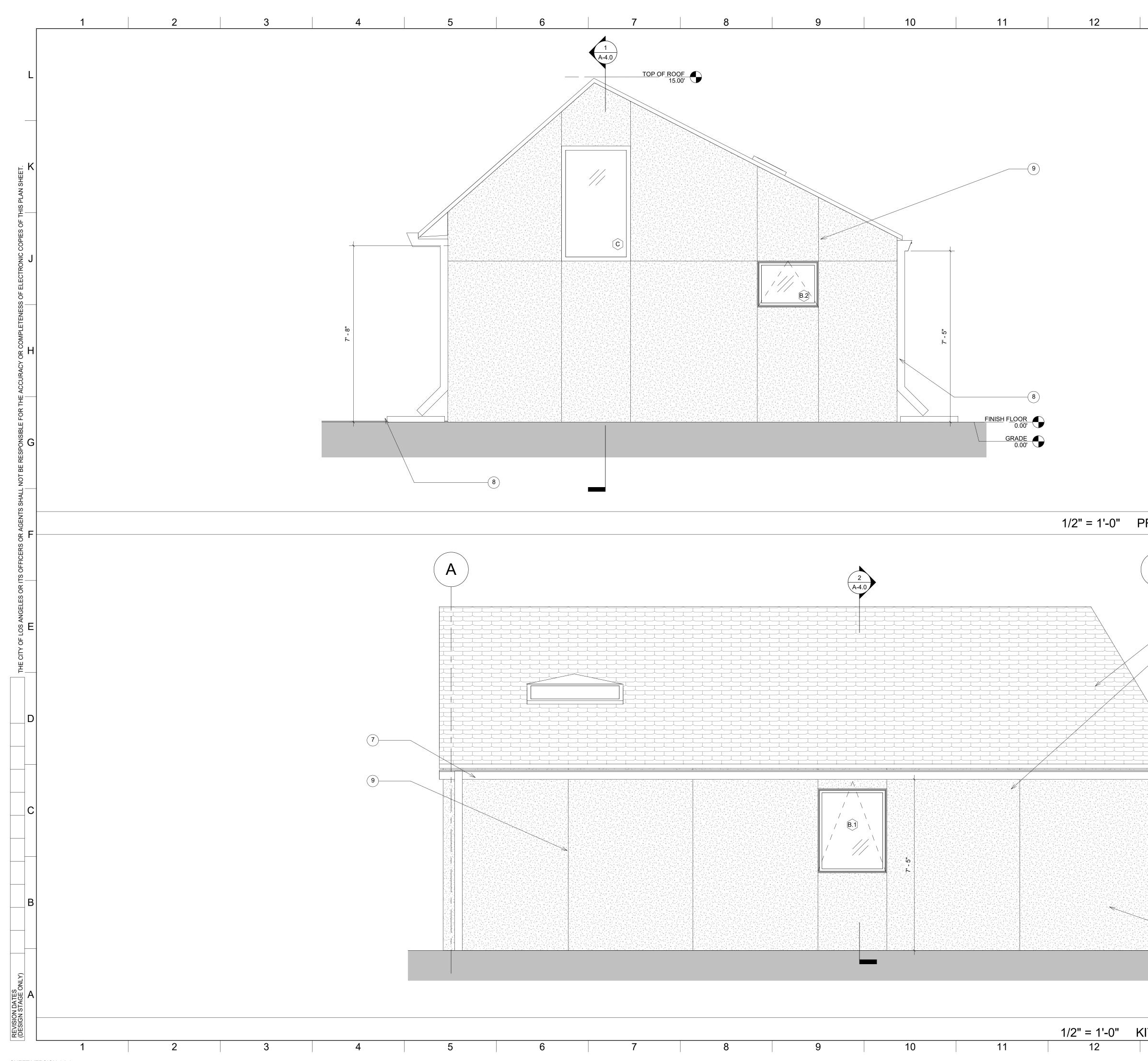
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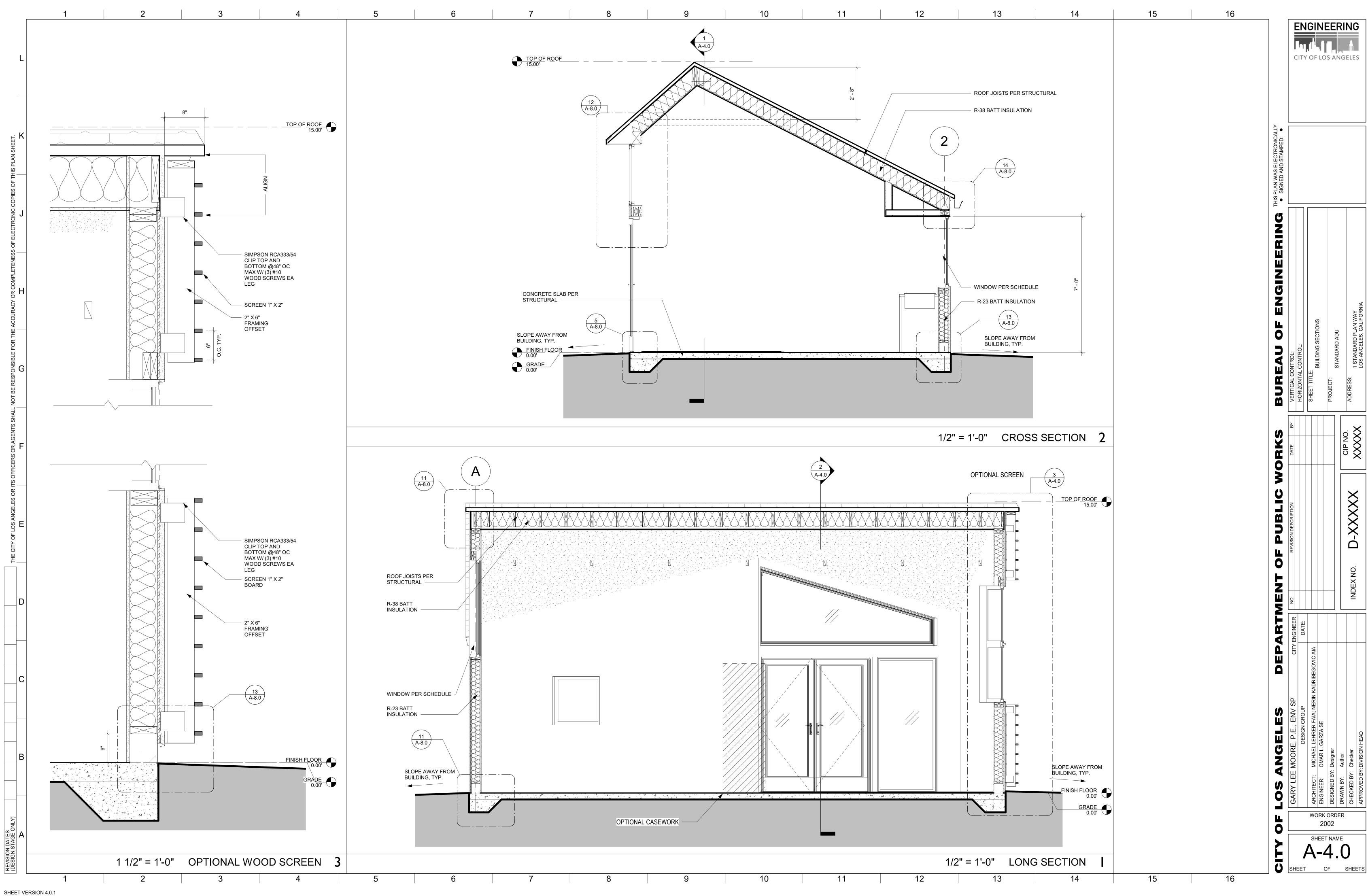
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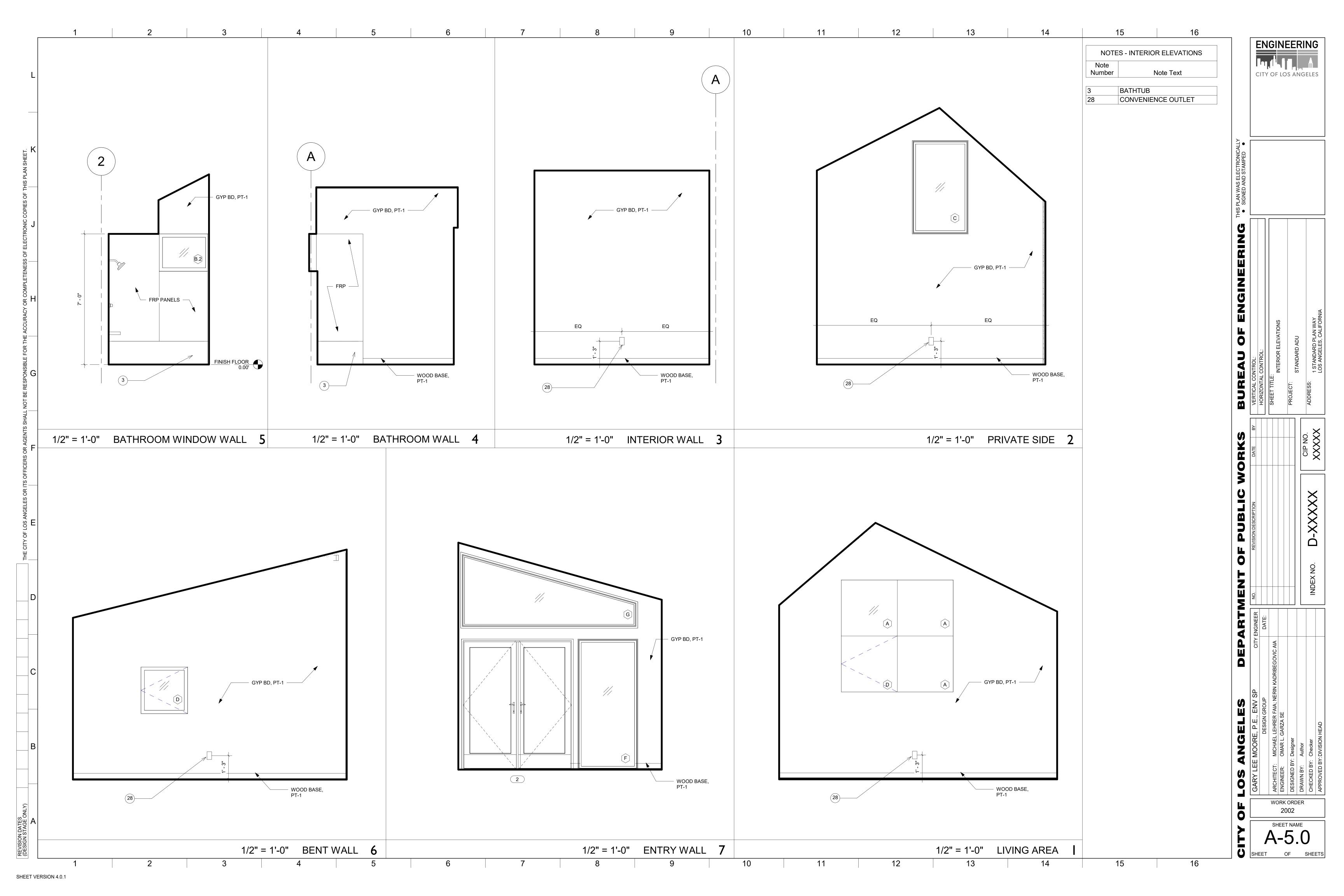
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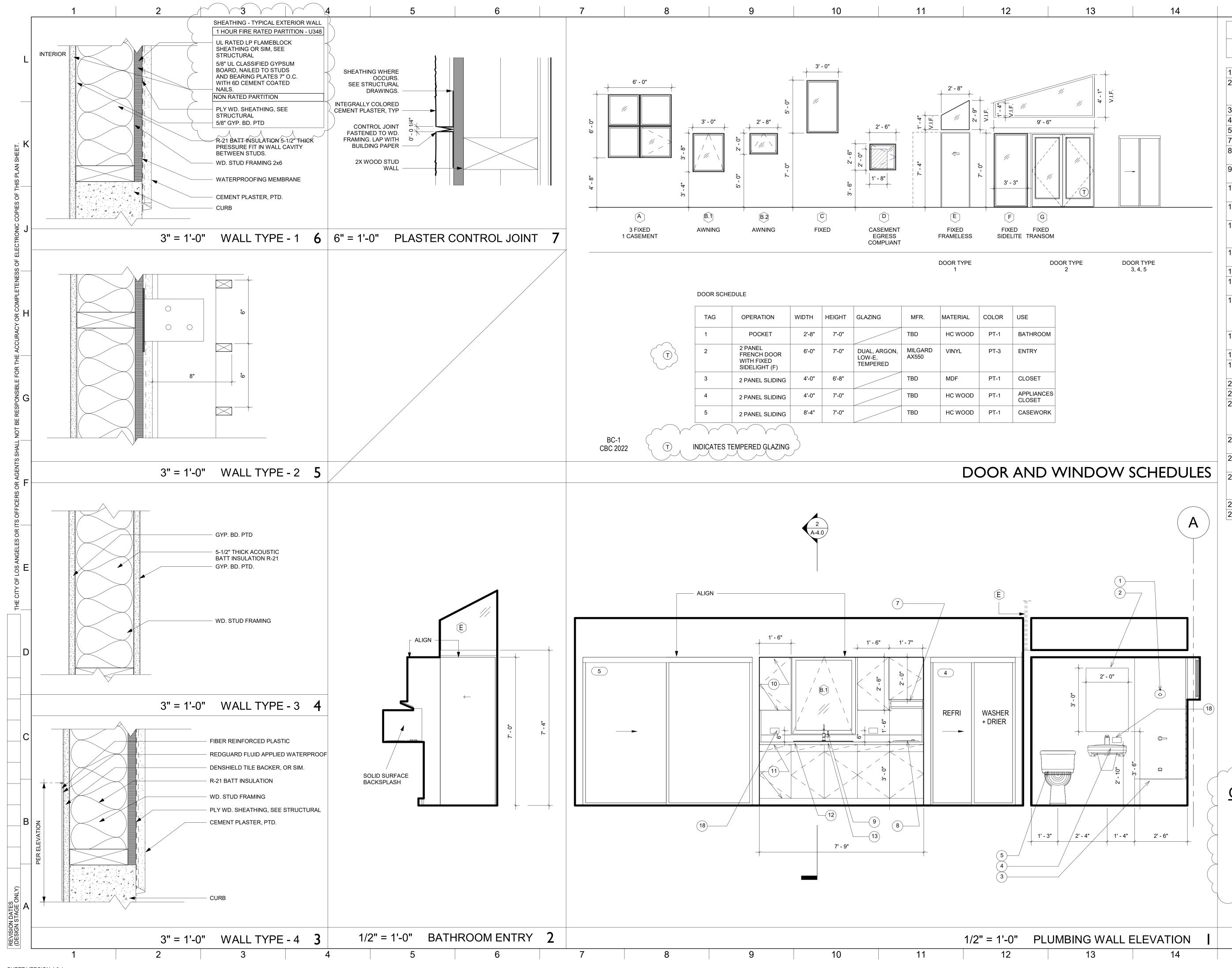


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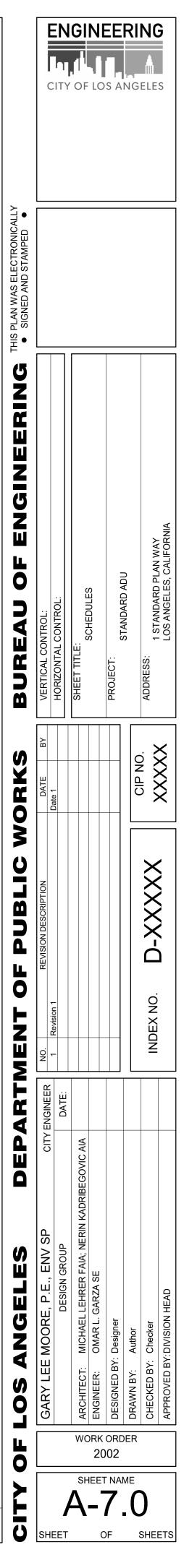


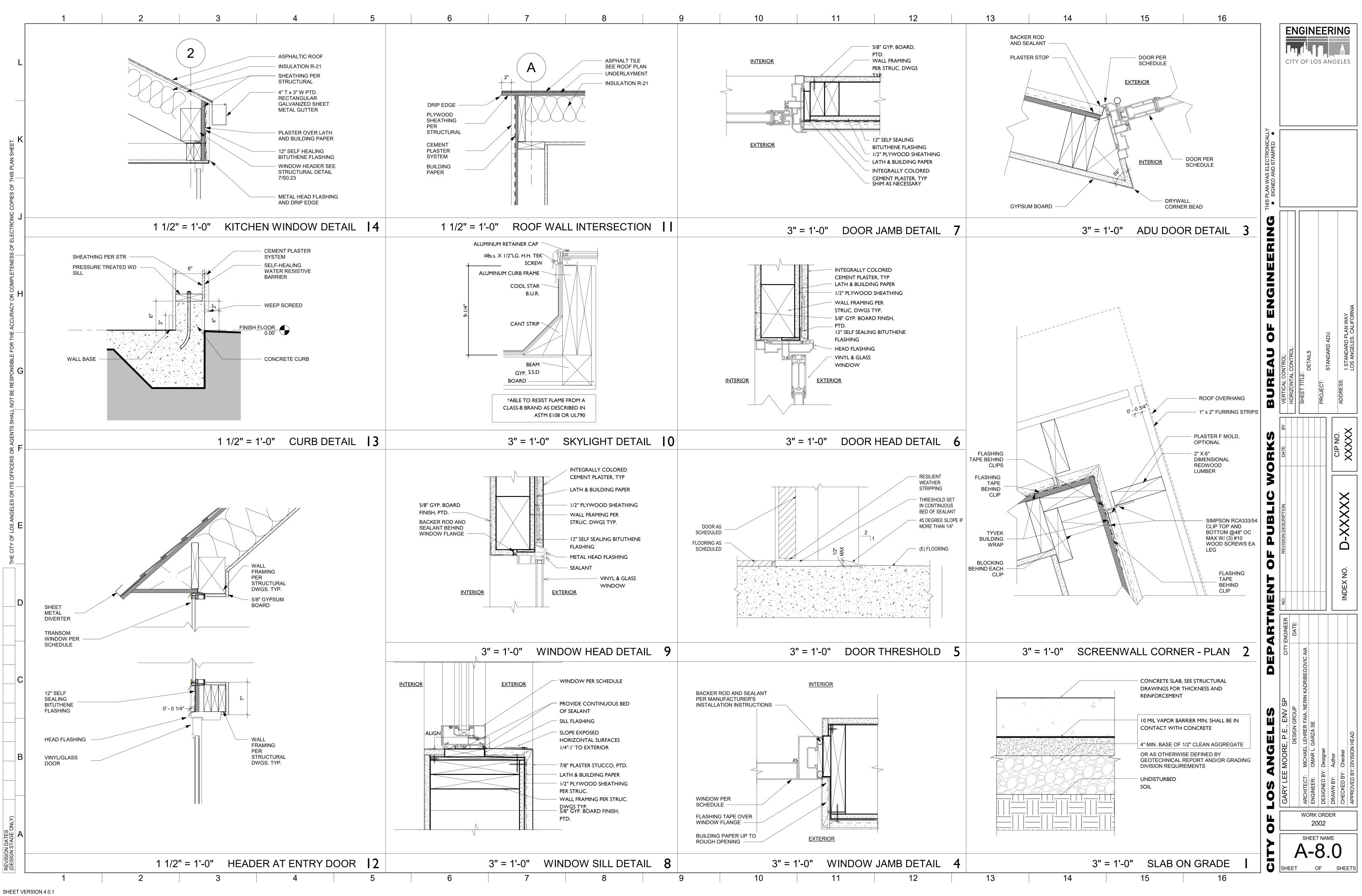
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	NOTES - INTERIORS
Note Number	Note Text
1	SHOWER
2	FRAMELESS MIRROR MEDICINE CABINET WITH SCONCE LIGHT
3	BATHTUB
4	LAVATORY
5 7	TOILET <varies></varies>
8	KITCHEN ELECTRIC
9	COOKTOP DECK MOUNTED KITCHEN FAUCET
10	PLASTIC LAMINATE UPPER CASEWORK, TYP.
11	PLASTIC LAMINATE LOWER CASEWORK, TYP.
12	SOLID SURFACE COUNTERTOP AND 4"
13	BACKSPLASH DUAL BOWL STAINLESS
14	STEEL SINK COLOR EPOXY
14	CLEAR SEAL CONCRETE
16	LEVEL 3 FINISH ENERGY STAR COMPLIANT
	BATHROOM EXHAUST FAN WITH HUMIDISTAT VENTED TO OUTSIDE
17	FREESTANDING CLOSET - OPTIONAL
18	CONVENIENCE OUTLET
19	CARBON MONOXIDE DETECTOR
20	SMOKE DETECTOR
21 22	SKYLIGHT MAINTAIN 18" MINIMUM
	CLEARANCE BETWEEN SOLAR PANELS AND ROOF
23	EDGE ALUMINUM RAIN DIVERTER
24	FLASHING BOX GUTTER AND
	DOWNSPOUT
25	ASPHALT SHINGLE COOL ROOF, CLASS A; UL
26	ER2453-02 EAVES OVERHANG
27	FRP PANEL PER ELEVATION
<u>GEN</u>	ERAL NOTES
	N HAZARDOUS LOCATIONS SHALL

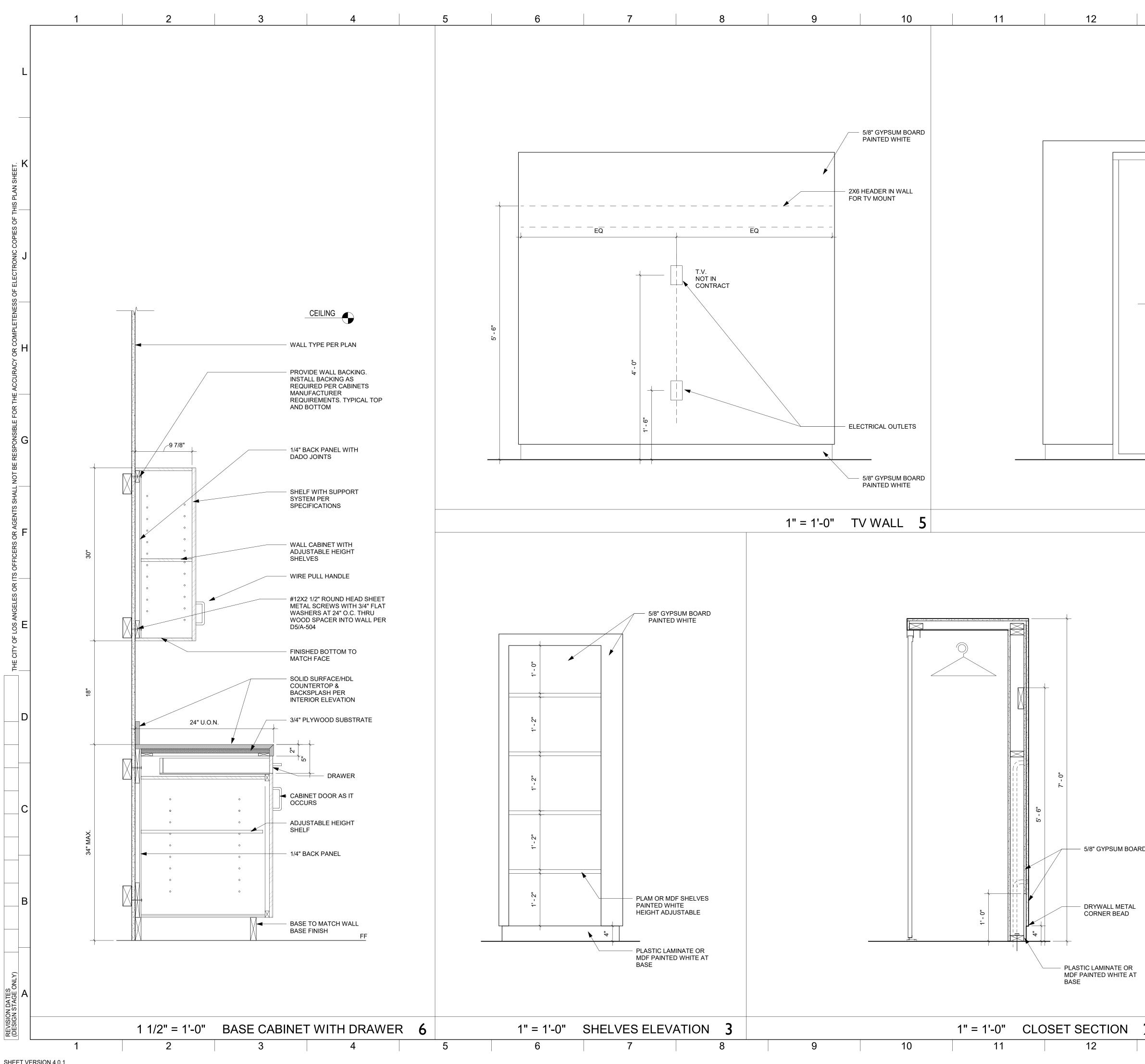
GLAZING IN HAZARDOUS LOCATIONS SHALL BE TEMPERED (2406.4, R308.4): A. INGRESS AND EGRESS DOORS B. PANELS IN SLIDING OR SWINGING DOORS C. DOORS AND ENCLOSURE FOR HOT TUB, BATHTUB, SHOWERS (ALSO GLAZING IN WALL ENCLOSING THESE COMPARTMENTS WITHIN 5' OF STANDING SURFACE) D. IF WITHIN 2' OF VERTICAL EDGE OF CLOSED DOOR AND WITHIN 5' OF STANDING SURFACE E. IN WALL ENCLOSING STAIRWAY LANDING F. GUARDS AND HANDRAILS

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CC-1 CC-2 CC-3 CC-3 CC-4 CC-5 CC-6 CC-7 CC-8 CC-9 CC-10	PROPORTION, MIX, TRANSPORT, AND PLACE CAST-IN- "SPECIFICATIONS FOR STRUCTURAL CONCRETE," UOI CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLE SPECIFICALLY SHOWN OR WHERE DETAILS ARE NOT OF FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY TI ROUGHEN CONCRETE SURFACES OF CONSTRUCTION FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE OF SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NO AND APPROVAL PRIOR TO PROCEEDING WITH THE WO AT LOCATIONS WHERE CONCRETE IS CAST AGAINST E INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN AT LOCATIONS WHERE CONCRETE IS CAST AGAINST E SURFACES BY LIGHT SANDBLASTING OR OTHER SUIT/ AND LOOSE PARTICLES. REFER TO ARCHITECTURAL AND MECHANICAL DRAWI AND HOUSEKEEPING PADS NOT SHOWN. CONTINUOUSLY MOIST CURE CONCRETE SLABS-ON-OF PONDING, SATURATED ABSORPTIVE COVERS, OR MOI COMPOUNDS CAN BE USED BASED ON SATISFACTOR' CONTRACTOR TO SUBMIT SPECIFICATIONS FOR REVIE NON-SHRINK GROUT: NON-METALLIC AGGREGATE TYI DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF CONCRETE TYPES:	N. ESS OTHERWISE NOTED. WHERE REINFORCING GIVEN, PROVIDE REINFORCING SIMILAR TO THAT HE OWNER'S REPRESENTATIVE. N JOINTS TO 1/4 INCH AMPLITUDE AND CLEAN OF CONSTRUCTION JOINTS AS SHOWN ON THE DRA T SHOWN TO THE OWNER'S REPRESENTATIVE F DRK. EXISTING CONCRETE, ROUGHEN CONTACT SURI MATTER, AND LOOSE PARTICLES. EXISTING MASONRY, THOROUGHLY ROUGHEN C ABLE MEANS AND CLEAN OF LAITANCE, FOREIGH NGS FOR LOCATIONS OF ADDITIONAL CONCRET GRADE FOR 7 DAYS MINIMUM. WATER FOG SPRA ISTURE RETAINING COVERS MAY BE USED. CUR Y PERFORMANCE ON PREVIOUS APPLICATIONS. EW AND APPROVAL. PE, COMPLYING WITH ASTM C1107 AND CAPABLE DF 7,000 PSI AT 28 DAYS. TYPE W/C RATIO MAX AGGREGATE MAL WEIGHT 0.45 3/4" AS FOLLOWS: 2"	Initial RC RC-6 S NOT "SHOWN RC-7 LAITANCE, WINGS. OR REVIEW RC-8 FACES TO 1/4 RC-10 ONTACT MATTER, E CURBS YS, ING E OF	HOLD DOWN CONNECTOR BOLTS INTO WOOD F SHALL BE FINGER TIGHT AND 1/2 WRENCH TUR BOLTS INTO WOOD FRAMING REQUIRE STEEL F ANCHORAGE DEVICE. PLATE SHALL BE 0.299x3; HOLD-DOWN HARDWARE MUST BE SECURED IN INSTALL SOLID BLOCKING BETWEEN JOISTS AT BRIDGING, METAL BRIDGING, OR SOLID BLOCKING MAXIMUM AND WHERE INDICATED. DO NOT USE WOOD SHINGLE SHIMS UNDER ST NAILING: - A. DRIVE NAILS PERPENDICULAR TO THE GRA - B. PREDRILLED HOLES TO 3/4 OF NAIL DIA WH - C. AIR-DRIVEN NAILS TO BE FULL-HEADED NA - D. PANEL SHEATHING 1. AT DIAPHRAGM SHEATHING, USE RING SI 2. USE OF MACHINE NAILING IS SUBJECT TO AND APPROVAL BY THE OWNER'S REPRESENT/ WOULD BE NORMAL FOR A HAND HAMMER OR MAINTAINED THE INSTALLATION IS UNSATISFACE SHEATHING. 3. DIAPHRAGM NAILING TO BE INSPECTED IN PERPENDICULAR TO SUPPORTS. DIAPHRAGM SE CONFORM WITH TABLE 2304.8(1). 4. GLUE FLOOR SHEATHING AT ALL POINTS - E. PROVIDE MINIMUM NAILING PER TABLE 230 FAST AND AND HARGEN SHEATHING AT ALL POINTS - E. PROVIDE MINIMUM NAILING PER TABLE 2304.8(1). 1	NED JUST PRIOR TO COVERING WALL FR/PLATE WASHERS ON THE POST ON THE OF AND MIN. N PLACE PRIOR TO FOUNDATION INSPECT 'ENDS AND OVER SUPPORTS. PROVIDE 2 'ING BETWEEN JOISTS IN SPANS EQUALLY 'UDS, JOISTS, BEAMS, OR POSTS. AIN, UON HERE SPECIFIED AND WHEN WOOD TENDS 'AILS. DO NOT OVERDRIVE NAILS. HANK NAILS. USE SMOOTH SHANK NAILS OA SATISFACTORY JOB SITE DEMONSTRATIVE. NAIL HEADS THAT PENETRATE THE IF THE MINIMUM ALLOWABLE EDGE DISTACTORY. MACHINE NAILING IS NOT APPROV BEFORE COVERING. FACE GRAIN OF PLYN SHEATHING MUST BE BLOCKED AT EDGES OF CONTACT. 04.9.1 OF THE IBC/CBC, UON ENING SCHEDULE MILING STAPLES ON 3-3" 14 GA STAPLES ON 2-3" 14 GA STAPLES ON 3-3" 14 GA STAPLES ON 3-3" 14 GA STAPLES	SHERS; AND HOLD DOWNS AMING. CONNECTOR PPOSITE SIDE OF ION. INCH BY 3 INCH CROSS SPACED 8 FEET OC S TO SPLIT. AT WALLS. TION FOR EACH PROJECT COUTER PLY MORE THAN NCES ARE NOT YED IN 5/16" OR LESS VOOD TO BE . PLYWOOD SPANS SHALL	IO IO-1 IO-2 IO-3 IO-4 IO-5 IO-6 IN IO-7 IO-8 IO-9 IO-1 IO-1 IO-2 IO-3 IO-4 IO-4	STRUC AN INDEPENDENT TESTING AGENCY AND SI PERFORM THE FOLLOWING TESTS AND INSI AGENCY AS REQUIRED BY THE CONTRACT I CONTRACTORS RESPONSIBLE FOR THE CO COMPONENT AS LISTED IN THE "STATEMEN OF RESPONSIBILITY TO THE LADBS INSPEC ON SUCH A SYSTEM OR COMPONENT PER 1 IF INITIAL TESTS OR INSPECTIONS MADE BY THE WORK DOES NOT COMPLY WITH THE C NECESSARY REPAIRS WILL BE MADE AT THI THE FOLLOWING ITEMS REQUIRE TESTS AN CHAPTER "STRUCTURAL TEST AND INSPEC IN THE GENERAL SECTION OF THESE GENE INSPECTION & "X" PRESENT IN COLUMN "P"	CTURAL TEST AND INSPECTIONS PECIAL INSPECTORS WILL BE RETAINED BY SPECTION. PROVIDE ACCESS AND FURNISH DOCUMENTS. DNSTRUCTION OF A WIND OR SEISMIC FORM TO F SPECIAL INSPECTION' SHALL SUBMIT STORS AND THE OWNER PRIOR TO THE COM 1704.4. Y THE OWNER'S TESTING AGENCY REVEAL CONTRACT DOCUMENTS, ADDITIONAL TEST IE CONTRACTOR'S EXPENSE. ND INSPECTIONS IN ACCORDANCE WITH TH STIONS'' OF THE CODE OF THE GOVERNING ERAL NOTES. AN 'X'' PRESENT IN COLUMN 'C INDICATES PERIODIC INSPECTION. CONCRETE AND INSPECTIONS TRESSING TENDONS, AND VERIFY PLACEM DENED CONCRETE MEMBERS. ZONTALLY OR UPWARDLY INCLINED ION LOADS. INCHORS NOT DEFINED IN 4A. TE SPECIMENS FOR STRENGTH TESTS, AND DETERMINE THE TEMPERATURE OF THE EMENT FOR PROPER APPLICATION TECHNIG G TEMPERATURE AND TECHNIQUES. NAND DIMENSIONS OF CONCRETE MEMBERS.	BY THE OWNER TO SH SAMPLES TO THE RCE RESISTING SYSTE IT A WRITTEN STATEM DMMENCEMENT OF WC L THAT ANY PORTION OF TS, INSPECTIONS, AND HE REQUIREMENTS OF G JURISDICTION AS NO "C" INDICATES CONTIN C" C" C
	 #5 BAR, W31 OR D31 WIRE, AND SMALLER CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLABS, WALLS, JOISTS: #14 AND #18 BARS SLABS, WALLS, JOISTS: #11 AND SMALLER BEAMS, COLUMNS: PRIMARY REINFORCEMENT, TIES HOOPS 	1 1/2" 1 1/2" 3/4" S, STIRRUPS, SPIRALS AND 1 1/2"		6DOUBLE STUDS16d COMMO7ADOUBLE TOP PLATE16d COMMO7BDOUBLE TOP PLATE8-16d COMMO8BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE3-8d COMMO9RIM JOISTS TO TOP PLATE8d COMMOO10TOP PLATES, LAPS AND INTERSECTIONS2-16d COMMON	DN @ 24" OC 3" 14 GA STAPLES @ 8" OC DN @ 16" OC 3" 14 GA STAPLES @ 12" O MON 12-3" 14 GA STAPLES ON 3-3" 14 GA STAPLES N @ 6" OC 3" 14 GA STAPLES @ 6" OC MON 3-3" 14 GA STAPLES	FACE C TYP FACE LAP TOE NAIL TOE NAIL FACE	GR-2 GR-3	DATE OF SUBMISSION OF BID UNLESS THE VERIFY ALL DIMENSIONS, ELEVATIONS, & S REFER TO ARCHITECTURAL DRAWINGS FO	DOCUMENTS. TONS, STANDARDS, MANUFACTURER'S INS CIES IS TO THE LATEST PRINTED EDITION OI E DOCUMENT DATE IS SHOWN. SITE CONDITIONS BEFORE STARTING WOR	STRUCTIONS OR DF EACH IN EFFECT A RK.
<u>RC</u> RC-1	ROUGH FRAMING LUMBER: DOUGLAS FIR (COAST REGION) GR GRADING RULES NO. 17 OF THE WEST COAST LUMBE GRADING RULES, OF THE WESTERN WOOD PRODUCT GRADES: - A. SILLS: STUD GRADE PRESSURE OR PRESERVATIV REDWOOD; 19% MOISTURE CONTENT, UON. - B. STUDS: STUD GRADE; 19% MOISTURE CONTENT, - C. JOISTS, PLANKS AND PLATES: DF #2; 15% MOISTUR - D. BEAMS, DF #1; 19% MOISTURE CONTENT, UON. - E. POSTS, DF #1; 19% MOISTURE CONTENT, UON. - F. FRAMING, BLOCKING AND BRIDGING: STUD GRAD - G. PLYWOOD BLOCKING: DF #2; 19% MOISTURE CONT	R INSPECTION BUREAU (WCLIB) OR WESTERN L S ASSOCIATION (WWPA). USE LUMBER OF THE F VE TREATED, NATURALLY DURABLE, OR FOUNDA UON. JRE CONTENT, UON. DE; 15% MOISTURE CONTENT, UON.	UMBER OLLOWING	11CONT HEADER, TWO PIECES16d COMMO12CEILING JOISTS TO PLATE3-8d COMMO13CONT HEADER TO STUD4-8d COMMO14CEILING JOISTS, LAPS OVER PARTITIONS3-16d COMMO15CEILING JOISTS PARALLEL TO RAFTERS3-16d COMMO16RAFTER TO PLATE3-8d COMMOO17ABUILT-UP GIRDER BEAMS20d COMMOO17BBUILT-UP GIRDER BEAMS2-20d COMMOO18JOIST TO BAND JOIST3-16d COMMOO	ON 5-3" 14 GA STAPLES ON - MON 3-3" 14 GA STAPLES MON 4-3" 14 GA STAPLES MON 4-3" 14 GA STAPLES ON 3-3" 14 GA STAPLES ON 3-14 GA STAPLES ON 3-3" 14 GA STAPLES	16" OC ALONG EDGE TOE NAIL TOE NAIL FACE FACE TOE NAIL FACE TOE NAIL TOE NAIL FACE TOE NAIL FACE NAIL @ T&B STAGGERED FACE NAIL @ ENDS & EACH SPLICE TOE NAIL	GR-7 GR-8 GR-9	CONSTRUCTION, SUBJECT TO REVIEW BY THE CONTRACTOR IS RESPONSIBLE FOR O DIMENSIONS. NOTIFY THE OWNER'S REPR PROCEEDING WITH THE WORK. DO NOT SCALE THE DRAWINGS. PROVIDE MEASURES NECESSARY TO PRO INCLUDE, BUT MAY NOT BE LIMITED TO, BR REGISTERED CIVIL ENGINEER WHOM IS PF THE SITE BY THE OWNER'S REPRESENTAT INFORMATION SHOWN ON THE DRAWINGS KNOWLEDGE, BUT WITHOUT GUARANTEE CONTRACT DOCUMENTS TO THE OWNER'S	COORDINATING THE WORK OF ALL TRADES RESENTATIVE OF ANY DISCREPANCIES AND DTECT THE STRUCTURE DURING CONSTRUC RACING AND SHORING FOR LOADS DURING ROPERLY QUALIFIED TO DESIGN BRACING, TIVE WILL NOT INCLUDE OBSERVATION OF S RELATED TO EXISTING CONDITIONS REPR OF ACCURACY. REPORT CONDITIONS THAT S REPRESENTATIVE. DO NOT DEVIATE FRO	S AND FOR CHECKIN D RESOLVE BEFORE JCTION. SUCH MEAS G CONSTRUCTION. R S, SHORING, ETC. VIS THE ABOVE NOTED RESENTS THE PRES AT CONFLICT WITH TH DM THE CONTRACT
RC-2 RC-3	 H. BACKING: PER CONSTRUCTION; 19% MOISTURE C MANUFACTURED LUMBER: A. LVL: MICROLAM LVL 1.9E, ICC ESR-1387 & LARR 25 B. PSL: PARALLAM PSL 2.0E, ICC ESR-1387 & LARR 25 PANEL SHEATHING: IDENTIFY WOOD STRUCTURAL PA ENGINEERED WOOD ASSOCIATION AND MEET THE RE PS-2 AND APA PRP-108 PERFORMANCE STD. A. PANEL SHEATHING TO BE EXPOSURE 1. B. PLYWOOD PANELS TO BE 5-PLY MINIMUM, EXCEP 	CONTENT 5202. 5202. NELS WITH THE APPROPRIATE TRADEMARK OF EQUIREMENTS OF THE VOLUNTARY PRODUCT ST PT 3/8" PANELS TO BE 3-PLY MINIMUM.	APA-THE "D PS-1 OR RI	E E-1 FABRICATE AND PLACE REINFORCING S' REINFORCING" AND ACI 301 "SPECIFICAT E-2 ACCURATELY POSITION, SUPPORT, AND CONSTRUCTION, OR CONCRETE PLACEN	REINFORCING STEEL TEEL IN ACCORDANCE WITH ACI 315 "DET. TONS FOR STRUCTURAL CONCRETE," UOI SECURE REINFORCEMENT FROM DISPLA MENT OPERATIONS. LOCATE AND SUPPOI S, AND HANGERS AT A MAXIMUM 3-FOOT S	AILS AND DETAILING CONCRETE N. CING DUE TO FORMWORK, RT REINFORCING BY METAL		REFER TO ARCHITECTURAL DRAWINGS FO SHOWN ON THE STRUCTURAL DRAWINGS. WITH, BUT NOT LIMITED TO, ELECTRICAL, M LOCATION REQUIREMENTS OF OPENINGS THE CONTRACTOR IS SOLELY RESPONSIB REQUIREMENTS OF ALL APPLICABLE JURIS	5. COORDINATE THE SIZE AND LOCATION OF MECHANICAL AND PLUMBING TRADES. SUE TO THE OWNER'S REPRESENTATIVE FOR F	AND WALL OPENING F OPENINGS ASSOC BMIT FINAL SIZING A REVIEW. RK AND MEETING TH THE SAFETY OF PEF
RC-4	3/8 STRUC 7/16 STRUC 15/32 STRUC 19/32 AND 5/8 CD 3/4 CD 7/8 AND 1 CD	OSED TO WEATHER; CD GRADE ELSEWHERE. OOD WITH 10d NAILS WITH (6",6",12") OC, (BN, EN TINGS: M GRADE <u>ROOF/FLOOR R/</u> TURAL 1 24/0 TURAL 1 24/16 TURAL 1 24/16 TURAL 1 32/16 D/CC 40/20 D/CC 48/24 D/CC 54/32 D/CC 54/32 D/CC 54/32 D/CC 60/48 ATION FF-N-105B, STANDARD LENGTHS UON US EXTERIOR INSTALLATIONS AND WHEN PENETRAT R HEXAGONAL HEAD MACHINE BOLTS WITH ASTINUT WHEN IN CONTACT WITH WOOD. AT SILL PL/	RI RI RI TING FN FN FN FN FN FN FN FN FN FN	 E-5 REINFORCING STEEL #8 AND LARGER AN OTHER REINFORCING STEEL TO BE ASTI E-6 SMOOTH DOWELS IN SLAB ON GRADE TO N-1 GROUNDWATER IS NOT EXPECTED TO N-2 LOCATE AND PROTECT EXISTING UTILIT N-3 REMOVE ABANDONED FOOTINGS, UTILI OTHERWISE INDICATED. N-4 NOTIFY THE OWNER'S REPRESENTATIVE CISTERNS, FOUNDATIONS, ETC., ARE FOR N-5 THE CONTRACTOR IS SOLELY RESPONS UNDERPINNING AND PROTECTION OF E N-6 REMOVE LOOSE SOIL AND STANDING WARD 	D BE ASTM A36, 36KSI. FOUNDATION AND SITE WORK BE A FACTOR IN DEVELOPMENT OF SITE. FIES TO REMAIN DURING AND/OR AFTER C ITIES, ETC. WHICH INTERFERE WITH NEW /E IF ANY BURIED STRUCTURES NOT INDIG OUND. SIBLE FOR EXCAVATION PROCEDURES IN	ED TO BE ASTM A706, 60KSI. ALL CONSTRUCTION. CONSTRUCTION, UNLESS CATED, SUCH AS CESSPOOLS, CLUDING LAGGING, SHORING, PRIOR TO PLACING CONCRETE.	SU-2 SU-3 SU-4	SUBMITTAL REVIEW FOR ITEMS DESIGNED OTHERWISE AGREED. RFI REVIEW: ALLOW 5 BUSINESS DAY RESE SUBMIT COPIES OF REQUIRED SUBMITTAL CONCRETE REINFORCING STEEL: - A. SUBMIT CERTIFIED MATERIAL CERTIFI AND CONTRACTOR. - B. SUBMIT SHOP DRAWINGS FOR FABRIC ACCORDANCE WITH ACI 315 "DETAILS AND CAST-IN-PLACE CONCRETE: - A. SUBMIT MIX DESIGNS PREPARED, STA THE STATE OF CALIFORNIA FOR EACH CLA COMPRESSION TESTS USED TO ESTABLISI CERTIFICATES FOR EACH COMPONENT OF - B. SUBMIT PROPOSED CONSTRUCTION A - C. SUBMIT PRODUCT DATA FOR CURING - D. SUBMIT PRODUCT DATA FOR NON-SH ADHESIVE ANCHORS: SUBMIT PRODUCT D	PONSE UNLESS OTHERWISE AGREED. LS TO OWNER'S REPRESENTATIVE FOR REV CATION, BENDING AND PLACEMENT OF COL D DETAILING OF CONCRETE REINFORCEME AMPED AND SIGNED BY A PROFESSIONAL E ASS OF CONCRETE. INCLUDE RESULTS OF SH MIX PROPORTIONS. ALSO INCLUDE CERT F THE MIX. JOINT LOCATIONS FOR REVIEW. G MATERIALS. HRINK GROUT.	EVIEW. D BY THE MANUFAC DNCRETE REINFORG ENT." ENGINEER REGIST SLUMP, SHRINKAG RTIFIED MATERIAL
	 5/8" DIA ANCHOR BOLTS = 3"X3"X1/4" SQ. WASHER 3/4" DIA ANCHOR BOLTS = 3"X3"X5/16" SQ. WASHER 7/8" DIA ANCHOR BOLTS = 3"X3"X5/16" SQ. WASHER 1" DIA ANCHOR BOLTS = 3 1/2"X3 1/2"X3/8" SQ. WASHER 1" DIA ANCHOR BOLTS = 3 1/2"X3 1/2"X3/8" SQ. WASHER C. LAG SCREWS: ASTM A307, ANSI/ASME STANDARD IN CONTACT WITH WOOD. D. SCREWS: ASTM A307, ANSI/ASME STANDARD B18 SCREWS AT STEEL TO WOOD AND WOOD TO WOOD C E. BOLTS, NUTS, WASHERS, STRAPS AND OTHER HAGALVANIZED OR STAINLESS STEEL. F. FRAMING CLIPS, SHEET METAL STRAPS, ETC.: SIM DESIGNATIONS ON DRAWINGS ARE BASED ON SIMPS 25814). PROVIDE THE TYPE OF NAILS SPECIFIED BY TH HOLES OF THE CONNECTOR UNLESS NOTED OTHERW GALVANIZED OR HAVE ANOTHER FACTORY APPLIED FRESTRAINT. SOLID BLOCKING REQUIRED BETWEEN J0 	D B18.2.1. USE ANSI B18.22.1 WASHERS UNDER H .6.1. USE CADMIUM-PLATED PAN OR ROUND HEA CONNECTIONS. ARDWARE EXPOSED TO THE WEATHER TO BE H MPSON, UNIVERSAL, OR EQUIVALENT, WITH LAR ION CATALOGUE NUMBERS (IAPMO UES ER 112 & HE MANUFACTURER AND FULLY DRIVE NAILS IN VISE ON THE PLANS. ALL CONNECTORS SHALL B FINISH. ALL STEEL FRAMING HANGERS TO BE TO	DED OT-DIPPED R REPORTS. LARR TO ALL E RSIONAL							
RC-5	 NCLOTINE SOCIED BLOOKING REQUIRED BETWEEN SOCCUR. BOLT AND SCREW INSTALLATION A. DRILL BOLT HOLES 1/32 TO 1/16 (MAX) INCH LARG B. DRILL PRE-BORED LEAD HOLES FOR WOOD SCRE 1. PROVIDE LEAD HOLE 40% - 70% OF THREADED SI 2. DRILL LEAD HOLE FOR THE SHANK TO A DEPTH E THE MAIN MEMBER. USE A DRILL BIT 7/8 THE DIA OF TH 3. EXTEND THE LEAD HOLE FOR THE THREADED PC 40%-70% THE DIA OF THE SCREW AT THE ROOT OF TH 4. INSERT THE SCREW INTO LEAD HOLE BY TURNIN 5. LUBRICATE WITH SOAP OR BEESWAX TO FACILIT C. DRILL PRE-BORED LEAD HOLES FOR LAG SCREW 1. PROVIDE LEAD HOLE FOR THE SHANK TO A DEPTH E THE MAIN MEMBER. USE A DRILL BIT OF THE SAME DIA 3. EXTEND THE LEAD HOLE FOR THE THREADED PC 60 PERCENT OF THE NOMINAL LAG SCREW DIA. 	ER IN DIA THAN THE BOLT NOMINAL DIA. EWS AS FOLLOWS. HANK DIA AND FULL DIA FOR SMOOTH SHANK PO EQUAL TO THE LENGTH OF THE UNTHREADED PO TE WOOD SCREW. ORTION OF THE SCREW WITH A DRILL BIT WHOSE IE THREAD. IG. DO NOT DRIVE WITH A HAMMER. TATE INSTALLATION. /S AS FOLLOWS. SHANK DIA AND FULL DIA FOR SMOOTH SHANK PO EQUAL TO THE LENGTH OF THE UNTHREADED F A AS THE LAG SCREW.	DRTION. DRTION IN E DIA IS DRTION. ORTION IN							

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	STRUCTURAL DRAWING LIST								
Sheet Number Sheet Name									
S0 SERIES: SHEET LIST, GENERAL NOTES, TYPICAL DETAILS									
S0.00	GENERAL NOTES & SHEET LIST								
S0.10	TYPICAL CONCRETE DETAILS								
S0.10 TYPICAL CONCRETE DETAILS S0.20 TYPICAL WOOD DETAILS									
S0.20 TYPICAL WOOD DETAILS S0.21 TYPICAL WOOD DETAILS									
S1 SERIES: FOUNDATION & FRAM	L NG PLANS								
S1.00	FOUNDATION & ROOF FRAMING PLANS								
S8 SERIES: PROJECT SPECIFIC DR	l ETAILS								
S8.1	CASEWORK DETAILS								

DESIGN CRITERIA DC

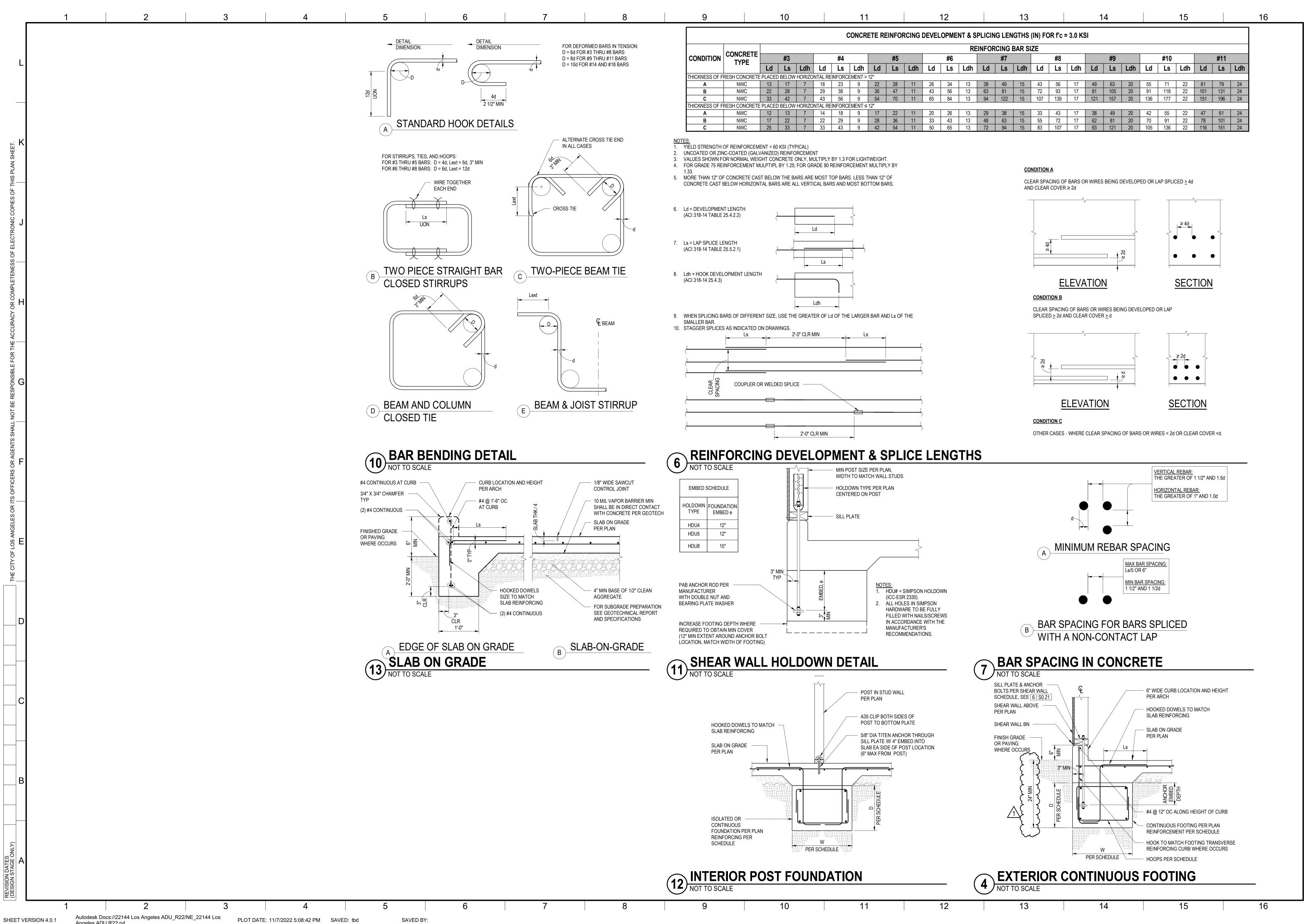
DC-1	APPLICABLE CODE: 2019 CALIFORNIA BUILDING CODE WITH CITY OF LOS ANGELES AMENDMENTS
DC-2	PROJECT TYPE: NEW ADU
DC-3	TYPE OF CONSTRUCTION: LIGHT-FRAMED WOOD CONSTRUCTION ON SHALLOW FOUNDATIONS
DC-4	FOUNDATION DESIGNS ARE IN ACCORDANCE WITH THE MINIMUM DESIGN RECOMMENDATIONS FOUND IN CHAPTER 18 OF THE CALIFORNIA BUILDING CODE.
	ALLOWABLE NET SOIL PRESSURE = 1500 PSF
	ADU DESIGNED FOR LEVEL GRADE. CITY OF LOS ANGELES TO APPROVE ADU LOCATION. CONTRACTOR TO VERIFY CONSTRUCTION WILL NOT UNDERMINE OR SURCHARGE ADJACENT PROPERTIES.
DC-5	THE STRUCTURAL SCOPE INVOLVES THE CONSTRUCTION OF A NEW 1-STORY ADU.
DC-6	GRAVITY LOADS:
	DEAD LOADS
	ROOF = 15 PSF
	LIVE LOADS
	ROOF = 20 PSF (REDUCIBLE)
DC-7	SEISMIC DESIGN: THE STRUCTURE HAS BEEN EVALUATED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE. THE FOLLOWING VALUES HAVE BEEN USED FOR THE DESIGN OF THE LATERAL FORCE RESISTING SYSTEM. SEISMIC DESIGN CATEGORY, SITE CLASS AND ALL SPECTRAL ACCELERATIONS SHOULD BE REVIEWED FOR SITE SPECIFIC VALUES.
	SITE CLASS = D (DEFAULT) ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE RHO = 1.3
	S _S = 2.000
	$S_1 = 0.740$ $S_{DS} = 1.600$
	S _{D1} = 0.839
	I = 1.0 FOR OCCUPANCY CATEGROY (II)
	STRUCTURE: ADU LFRS = LIGHT-FRAMED WOOD SHEAR WALLS R = 6.5 OVERSTRENGTH = 2.5 Cs = 0.246 BASE SHEAR V= 8.24 K
DC-8	WIND DESIGN:
	BASIC WIND SPEED, V = 95MPH (3 SECOND GUST) EXPOSURE CATEGORY = B GUST EFFECT FACTOR = 0.85 Kd = 0.85 Kz = 0.70 ENCLOSURE CLASSIFICATION = ENCLOSED INTERNAL PRESSURE COEFFICIENT GCpi = ± 0.18 qz = 13.75 PSF

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600 WILSHIRE BLVD, SUITE 760 LOS ANGELES, CA 90017 213 627 6687 CONTACT@NOUSENGINEERING.COM -ROFESSION ENGINEERING SHEET LIST

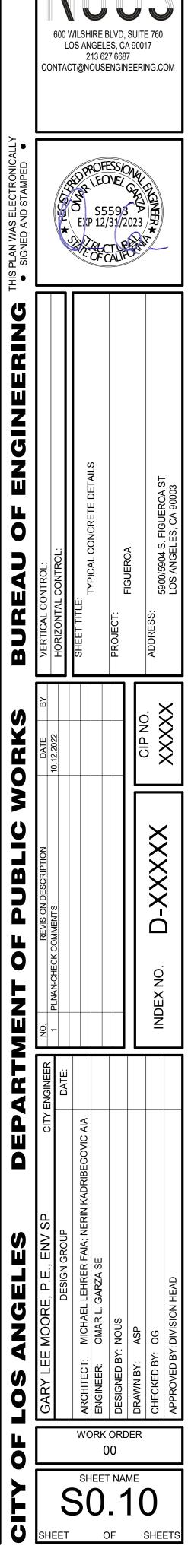
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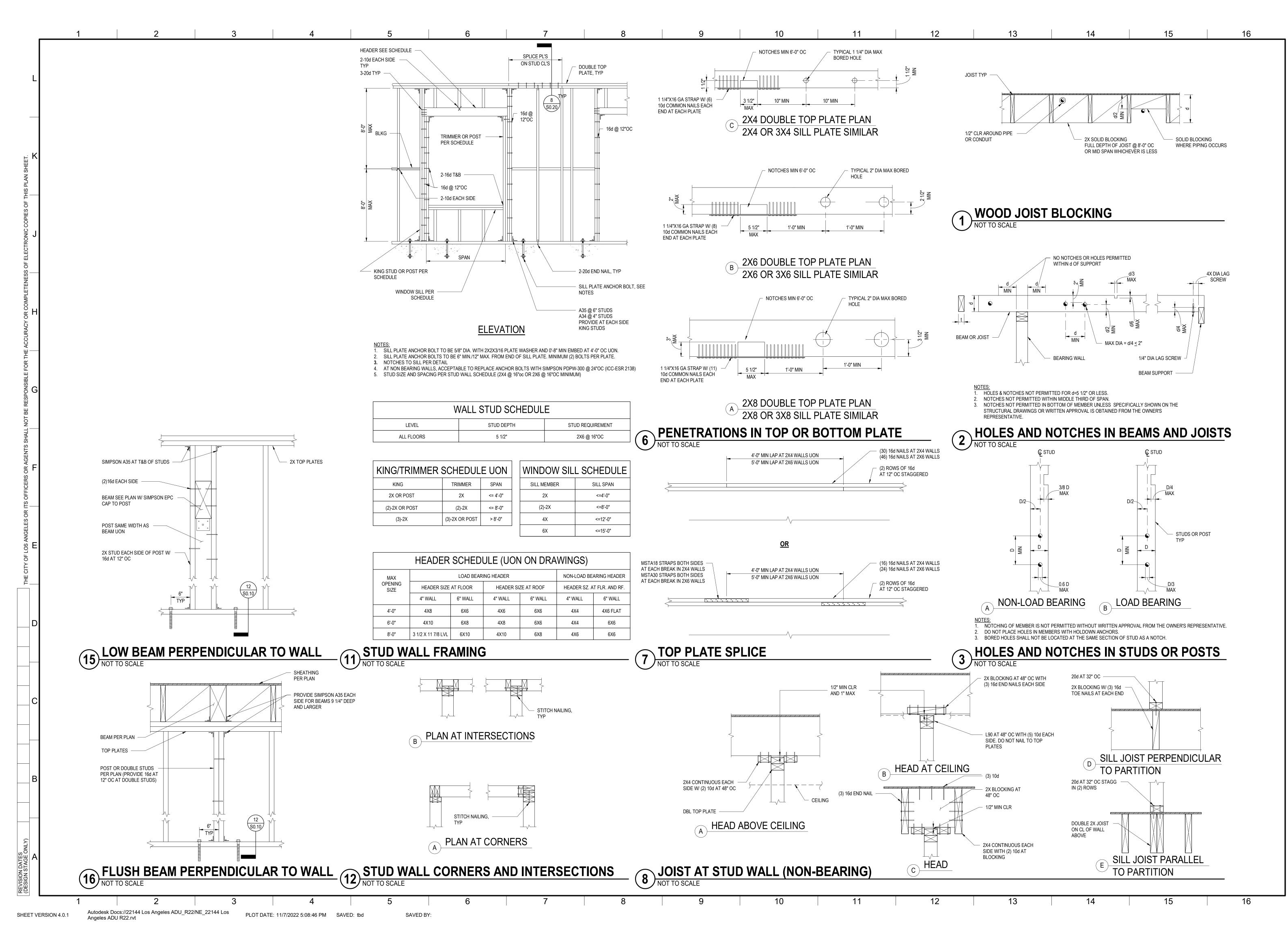
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SHI			GARY LEE MOORE, P.E., ENV SP	CITY ENGINEER	NO.	REVISION DESCRIPTION	DATE	BΥ	VERTICAL CONTROL:
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С		ork 0	ENGINEER: OMAR L. GARZA SE						
)F		ori 0	DESIGNED BY: NOUS						PROJECT:
		DER	DRAWN BY: ASP						FIGUEROA
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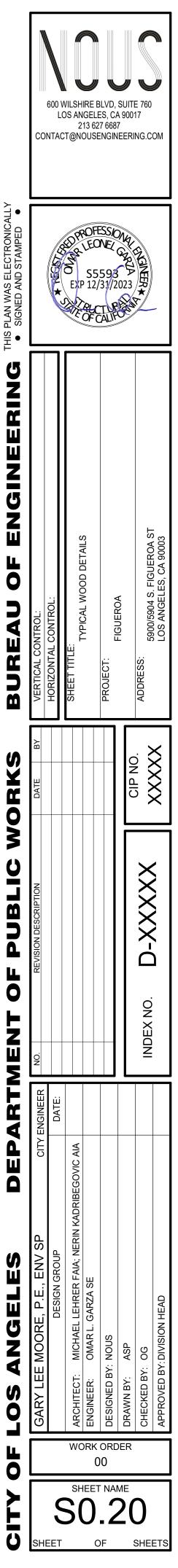


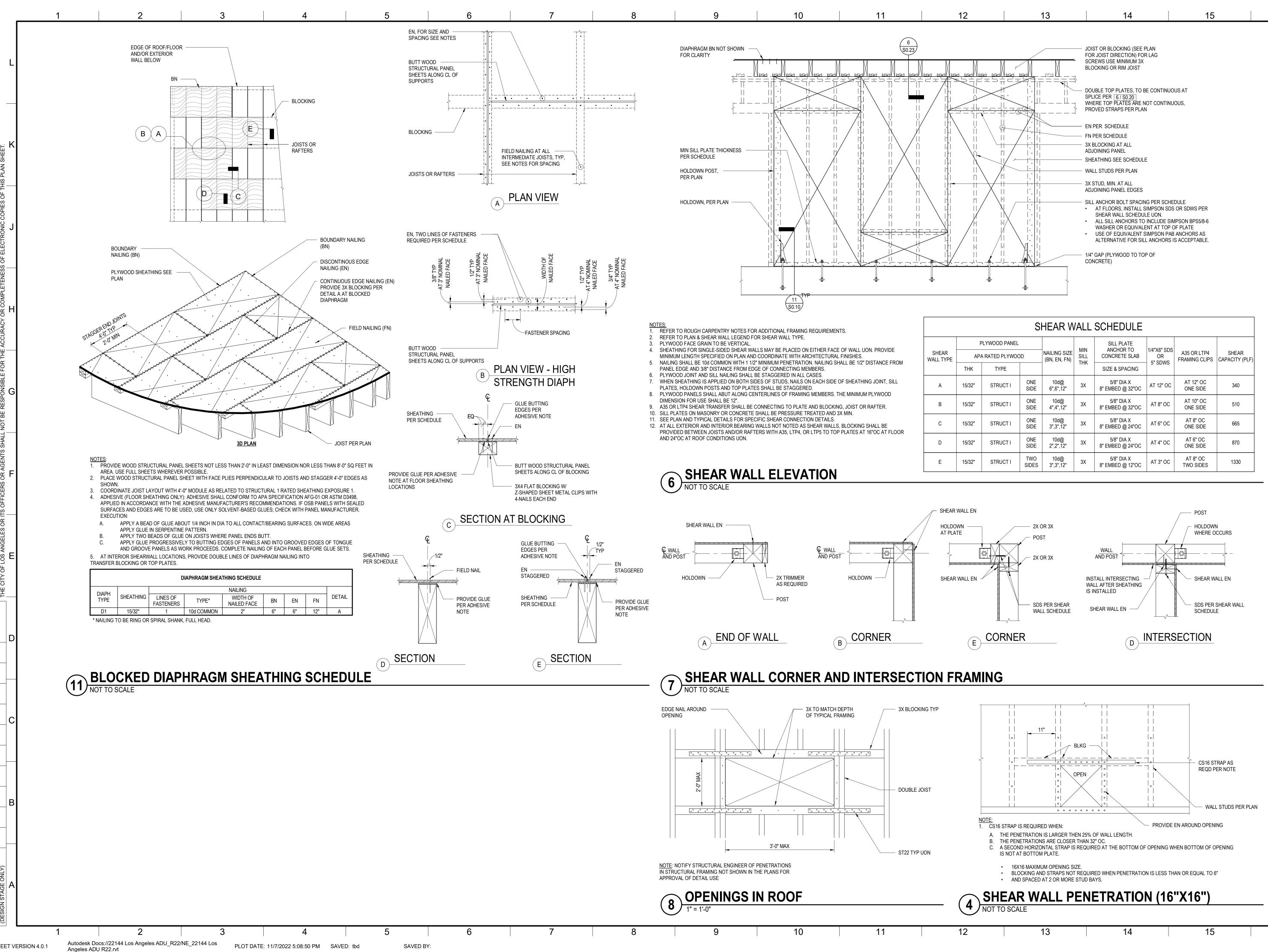
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63	81	15	72	93	17	81	105	20	91	118	22	101	131	24
94	122	15	107	139	17	121	157	20	136	177	22	151	196	24
29	38	15	33	43	17	38	49	20	42	55	22	47	61	24
48	63	15	55	72	17	62	81	20	70	91	22	78	101	24
72	94	15	83	107	17	93	121	20	105	136	22	116	151	24

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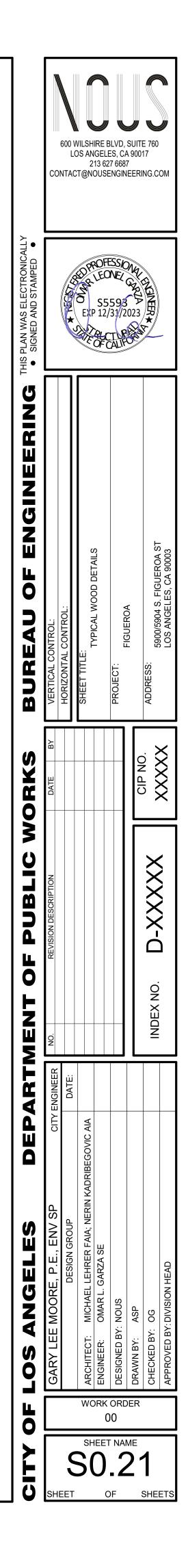


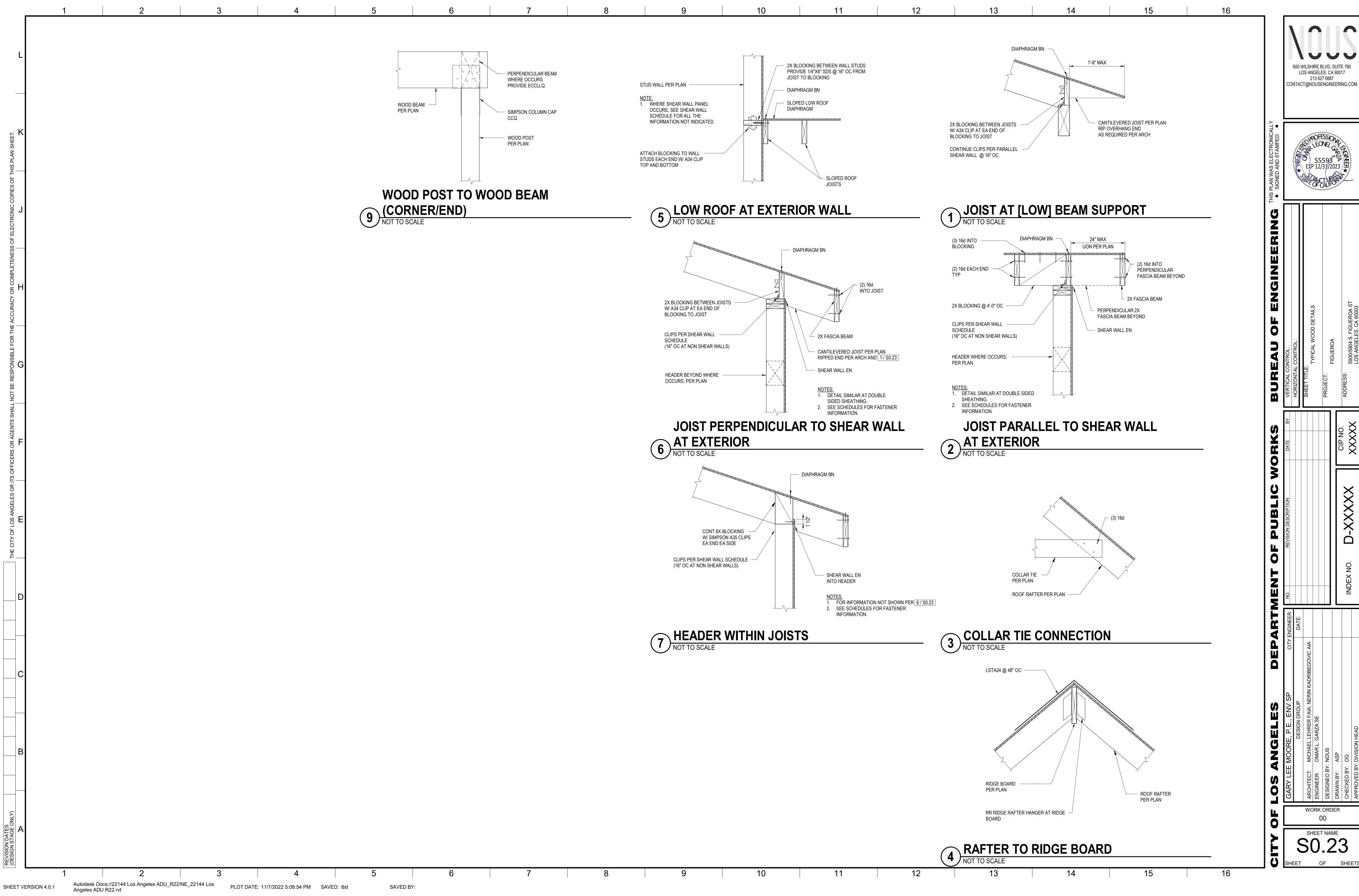


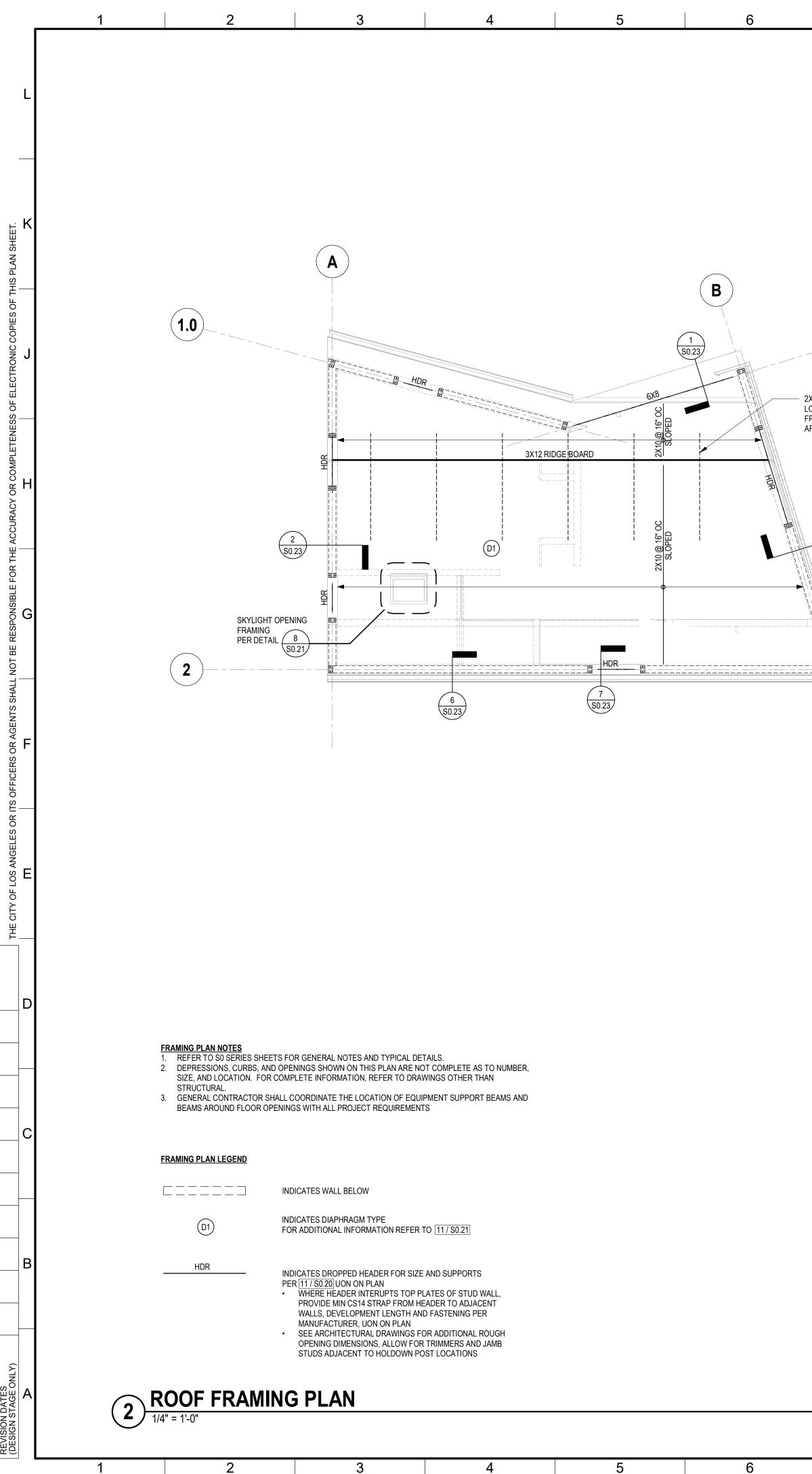
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SHEAR WALL SCHEDULE										
D PANEL			MIN	SILL PLATE ANCHOR TO	1/4"X6" SDS					
PLYWOC	D	NAILING SIZE (BN, EN, FN)	SILL	CONCRETE SLAB	OR 5" SDWS	A35 OR LTP4 FRAMING CLIPS	SHEAR CAPACITY (PLF)			
ΈE			11 IIX	SIZE & SPACING	5 5000					
UCTI	ONE SIDE	10d@ 6",6",12"	3X	5/8" DIA X 8" EMBED @ 32"OC	AT 12" OC AT 12" OC ONE SIDE		340			
UCTI	ONE SIDE	10d@ 4",4",12"	3X	5/8" DIA X 8" EMBED @ 32"OC	AT 8" OC	AT 10" OC ONE SIDE	510			
UCTI	ONE SIDE	10d@ 3",3",12"	3X	5/8" DIA X 8" EMBED @ 24"OC	AT 6" OC	AT 8" OC ONE SIDE	665			
UCTI	ONE SIDE	10d@ 2",2",12"	3X	5/8" DIA X 8" EMBED @ 24"OC	AT 4" OC	AT 6" OC ONE SIDE	870			
UCT I	TWO 10d@ SIDES 3",3",12"		3X	5/8" DIA X 8" EMBED @ 12"OC	AT 3" OC	AT 8" OC TWO SIDES	1330			







SAVED BY:

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FOUNDATION PLAN

1 I	FUUNDATI	U
/	1/4" = 1'-0"	

	EQUIDMENT DETAILS STEDS FTC. SEE DRAWINGS OTHER THAN STRUCTURAL
	EQUIPMENT DETAILS, STEPS, ETC., SEE DRAWINGS OTHER THAN STRUCTURAL.
9.	SLAB CONSTRUCTION AND CONTROL JOINT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO
	PLACING ANY CONCRETE.
10	PROVIDE A 6" CURB AT EXTERIOR TIMBER WALLS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.
10:	HOWER AU OUR AT EXTENSION HIMBER WALLS. SEE ANOTHER FORMAL DRAWINGS FOR LOOATIONS.

6. SEE ARCH DWGS FOR EDGE OF SLAB LOCATIONS.

FOUNDATION PLAN NOTES

HEIGHT, AND THICKNESS.

DRAWINGS.

1. TOP OF FOOTING ELEVATION TO BE 1'-0" BELOW TOP OF SLAB OR FINISHED GRADE, UON.

SHAPE OF THE STRUCTURE. NO MATERIAL IS TO BE EXCAVATED UNNECESSARILY.

3. ALL SETTING OUT DIMENSIONS ARE TO BE READ IN CONJUNCTION AND CONFIRMED WITH ARCHITECTURAL

4. EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND

7. VERIFY LOCATION OF UNDERGROUND UTILITIES BEFORE EXCAVATIONS. NOTIFY ARCHITECT PRIOR TO

8. FOR DRAINAGE DETAILS, SUMPS, PITS, DAMP PROOFING, TRENCHES, CURBS, EXTERIOR WALKS, UTILITIES,

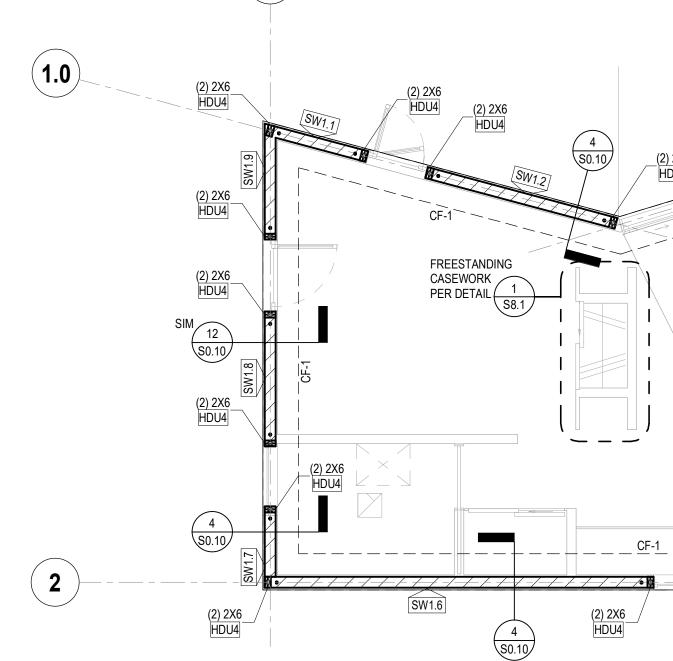
5. CURBS AND DEPRESSIONS ARE SHOWN FOR REFERENCE ONLY. SEE ARCH DWGS FOR LOCATIONS,

2. REFER TO S0 SERIES SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS.

EXCAVATION IN THE EVENT SUCH UTILITIES ARE ENCOUNTERED.

CONTINUOUS FOOTING SCHEDULE TYPE MARK WIDTH, W DEPTH, D TOP BARS BOTTOM BARS TIES CF-1 1' - 6" 2'-0" (3) #5 (3) #5 #4 @ 12" OC





2X6 COLLAR TIES @ 4'-0" OC. ATTACH PER DETAIL 3 / S0.23
 LOCATION OF COLLAR TIE CAN VARY
 FROM 1/2 TO 1/3 HEIGHT OF ROOF.
 ARCH TO FINALIZE.

(1.5)

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							L	WILSHIRE E DS ANGELI 213 62 CT@NOUSE	ES, CA 9 27 6687	0017	
B	(2) 2X6	1.5				THIS PLAN WAS ELECTRONICALLY SIGNED AND STAMPED	× MCSTER	EXPROFI S S EXP 12/ D EXP 12/ D EXP 12/ C F (C F (ESSION NEZ (3593) /31/202 TUP	ST-BLA 3 XM	
4" THK SLAB ON GRADE W/#4 @ 16" OC EA WAY CENTERED IN SLAB OVER 10MIL VAPOR BARRIER, 2" OF CLEAN SAND, AND COMPACTED BASE	(2) 2X6 HDU4 2X6 2U4 (2) 2X6 HDU4 (2) 2X6 HDU4 (2) 2X6 (2) 2X6 (2) 2X6 (2) 2X6 (2) 2X6					BUREAU OF ENGINEERING	VERTICAL CONTROL: HORIZONTAL CONTROL:	SHEET TITLE: FOUNDATION & ROOF FRAMING PLANS	PROJECT: FIGUEROA	ADDRESS: 5900/5904 S. FIGUEROA ST	LOS ANGELES CA DOOD3
(2) 2X6 HDU4	(2) 2X6 HDU4					WORKS	DATE BY 10.12.2022			CIP NO.	
WOOD SWALL IDSHEAR W.SW1.1ESW1.2ESW1.3ESW1.4ESW1.5ESW1.6ESW1.7ESW1.8ESW1.9E	3 4'-0" 3 8'-0" 3 4'-0" 3 9'-6" 3 12'-0" 3 16'-0" 3 5'-6" 3 5'-6" 3 4'-6"	WIDTH 5 1/2" 5 1/2"				MENT OF PUBLIC	NO. REVISION DESCRIPTION 1 PLNAN-CHECK COMMENTS			INDEX NO. D-XXXXX	
	INDICATES STUD/BEARING WALL P THICKNESS AND LOCATION PER AF					DEPARTN	CITY ENGINEER DATE:	AIA			
SW1.1 SW1.1 6x6 HDU8 HDU8	 INDICATES WALL PER ARCH INDICATES WOOD SHEAR WALL ID, REFER TO "SHEAR WALL SCHEDUL FOR SHEAR WALL CONSTRUC REFER TO 6/ S0.21 INDICATES LOCATION OF POST AN POST SIZE PER PLAN HOLDOWN TYPE PER PLAN ADDITIONAL HOLDOWN, ANCH INFORMATION SEE 11 / S0.10 INDICATES TRIMMER AT OPENING 	LE" FOR ADDITION TION PER "SHEAF ID HOLDOWN, IOR ROD, AND EM WHERE OCCURS	ial Information R Wall Type" IBED			LOS ANGELES	GARY LEE MOORE, P.E., ENV SP DESIGN GROUP	ARCHITECT: MICHAEL LEHRER FAIA; NERIN KADRIBEGOVIC ENGINEER: OMAR L. GARZA SE	.∵ 	DRAWN BY: ASP CHECKED BY: OG	
	INDICATES WOOD SHEAR WALL EX LENGTH SHOWN IN SCHEDULE IND OF SHEAR WALL, ACTUAL LENGTH	ICATES APPROXI				Y OF		SHEET)0 T NAME		_
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THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET. \square \square \square \square \square											
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2 CLOS 1 1/2" = 1'-0	ET SECTION				
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