GENERAL NOTES

1. THE WORK INCLUDED UNDER THIS CONTRACT CONSISTS OF ALL LABOR, MATERIALS, TRANSPORTATION, TOOLS AND EQUIPMENT NECESSARY FOR THE CONSTRUCTION OF THE PROJECT LEAVING ALL WORK READY FOR USE

2. ALL CONSTRUCTION SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING, MECHANICAL PLUMBING, ELECTRICAL AND THE 2019 CALIFORNIA ENERGY CODE. IN THE EVENT OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.

3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH AIA GENERAL CONDITIONS DOC. A-201, 2007 EDITION.

4. OMISSIONS FROM THE DRAWINGS AND SPECIFICATION OR THE MISDESCRIPTION OF THE WORK WHICH IS MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, OR WHICH IS CUSTOMARILY PERFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMMITTED OR MISDESCRIBED DETAILS OF THE WORK AS IF FULLY AND COMPLETELY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.

5. ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY TO THE EXISTING SITE. ANY ERRORS, OMMISSIONS, CONFLICTS, DISCREPANCIES AND UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE DESIGNER'S ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, THEY SHALL BE PROCEEDING AT HIS OWN RISK. ANY REVISION TO THE APPROVED SET OF PLANS MUST BE SUBMITTED TO AND APPROVED BY SCCOUNTY BUILDING DEPARTMENT PRIOR TO THE REVISION BEING COMPLETED. 6. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF THE CONSTRUCTION DOCUMENTS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL THE TRADES, AND SHALL PROVIDE ALL THE SUBCONTRACTORS WITH CURRENT CONSTRUCTION DOCUMENTS AS REQUIRED.

7. THE GENERAL CONTRACTOR SHALL VERIFY AND ASSUME RESPONSIBILITY FOR ALI DIMENSIONS AND SITE CONDITIONS. THE GENERAL CONTRACTOR SHALL INSPECT THE EXISTING PREMISES AND TAKE NOTE OF EXISTING CONDITIONS PRIOR TO SUBMITTING PRICES. NO CLAIM SHALL BE ALLOWED FOR DIFFICULTIES ENCOUNTERED WHICH COULD

HAVE REASONABLY BEEN INFERRED FROM SUCH AN EXAMINATION. 8. WRITTEN DIMENSIONS TAKE PRECEDENCE. DO NOT SCALE DRAWINGS.

9. ALL DIMENSIONS TO AND FROM NEW CONSTRUCTION WHEN SHOWN IN PLAN ARE TO FACE OF GYP. BOARD, FACE OF MASONRY, FACE OF CEMENT PLASTER UNLESS OTHERWISE NOTED. 10. ALL DIMENSIONS ON REFLECTED CEILING PLANS, ELEVATIONS, AND ELECTRICAL PLANS ARE FROM FACE OF FINISH TO CENTER LINE OF FIXTURE OR GROUP OF FIXTURES UNLESS OTHERWISE NOTED.

11. ALL VERTICAL DIMENSIONS ARE TO FACE OF FINISH AND FINISH FLOOR UNLESS OTHERWISE NOTED.

12. ALL DIMENSIONS NOTED "VIF" OR "VERIFY" ARE TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO CONSTRUCTION. IMMEDIATELY REPORT ANY VARIANCE TO THE

13. ALL WALLS ARE WOOD STUDS @ 16" O.C. UNLESS OTHERWISE NOTED.

14. CONTRACTOR SHALL PROVIDE ALL SEISMIC BRACING AND HOLD-DOWN CLIPS AS REQUIRED BY CODE FOR ALL SUSPENDED CEILING AND SOFFIT FRAMING CONDITIONS. 15. COORDINATE ALL WORK WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO: IRRIGATION PIPES, ELECTRICAL CONDUIT, WATER LINES, GAS LINES, DRAINAGE LINES, ETC. 16. PROVIDE ADEQUATE TEMPORARY SUPPORT AS NECESSARY TO ASSURE THE STRUCTURAL VALUE OR INTEGRITY OF THE BUILDING.

17. PROTECT ALL EXISTING BUILDING AND SITE CONDITIONS TO REMAIN INCLUDING WALLS, CABINETS, FINISHES, TREES AND SHRUBS, PAVING, ETC

18. DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS. 19. VERIFY ALL ARCHITECTURAL DETAILS WITH STRUCTURAL, CIVIL, KITCHEN EQUIPMENT AND SHOP OR DESIGN/BUILD DRAWINGS BEFORE ORDERING OR INSTALLATION OF ANY WORK.

20. WHERE LOCATIONS OF WINDOWS AND DOORS ARE NOT DIMENSIONED, THEY SHALL BE CENTERED IN THE WALL OR PLACED TWO STUD WIDTHS FROM ADJACENT WALL AS INDICATED ON THE DRAWINGS.

21. ALL REQUIRED EXITS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY

OR SPECIAL KNOWLEDGE. 22. ALL CHANGES IN FLOOR MATERIALS OCCUR AT CENTERLINE OF DOOR OR FRAMED

OPENING UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

23. INSTALL ALL FIXTURES, EQUIPMENT AND MATERIALS PER MANUFACTURERS RECOMMENDATIONS.

24. VERIFY CLEARANCES FOR FLUES, VENTS, CHASES, SOFFITS, FIXTURES, ETC. BEFORE ANY

CONSTRUCTION, ORDERING, OR INSTILLATION OF ANY ITEMS OF WORK. 25. SEALANT, CAULKING AND FLASHING, ETC. LOCATIONS SHOWN ON DRAWINGS ARE NOT INTENDED TO BE INCLUSIVE. FOLLOW MANUFACTURER'S INSTALLATION

RECOMMENDATIONS AND STANDARD INDUSTRY AND BUILDING PRACTICES 26. ALL ROOF DECK PENETRATIONS AND EXTERIOR WALL OPENINGS SHALL BE GUARANTEED

BY THE CONTRACTOR TO BE WATER TIGHT FOR A MINIMUM PERIOD OF FIVE YEARS AFTER SUBSTANTIAL COMPLETION OF ALL WORK UNDER THIS CONTRACT. 27. THE GENERAL CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS OF ALL

SUBCONTRACTORS AND TRADES ON A REGULAR BASIS, AND SHALL EXERCISE A STRICT CONTROL OVER JOB CLEANING TO PREVENT ANY DIRECT DEBRIS OR DUST FROM AFFECTING, IN ANY WAY, FINISHED AREAS IN OR OUTSIDE JOB SITE.

28. CONTRACTOR SHALL LEAVE PREMISES AND ALL AFFECTED AREAS CLEAN AND ORDERLY, READY FOR OCCUPANCY. THIS INCLUDES CLEANING OF ALL GLASS (INSIDE AND OUTSIDE) AND FRAMES, BOTH NEW AND EXISTING.

29. INSTALL SMOKE DETECTORS IN ACCORDANCE WITH THE SPECIFICATIONS AND IN

CONFORMANCE WITH LOCAL FIRE MARSHAL REQUIREMENTS.

30. ALL EXTERIOR DOORS AND WINDOWS ARE TO BE WEATHER STRIPPED PER TITLE 24 REQUIREMENTS, UNLESS OTHERWISE NOTED IN DOOR DETAILS

31. GLASS SUBJECT TO HUMAN IMPACT SHALL BE OF SAFETY GLAZING MATERIAL TO MEET

STATE AND FEDERAL REQUIREMENTS. 32. ANY SURVEY MONUMENTS WITHIN THE AREA OF CONSTRUCTION SHALL BE PRESERVED OR RESET BY A REGISTERED CIVIL ENGINEER OR A LICENSED LAND SURVEYOR.

33. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. 34. ACCESS FOR THE PHYSICALLY DISABLED IS REQUIRED BY THE TITLE 24 CALIFORNIA ADMINISTRATIVE CODE AND THE AMERICANS WITH DISABILITIES ACT. ALL REQUIRED FEATURES SHALL BE INCLUDED IN THE CONSTRUCTION WHETHER SPECIFICALLY DETAILED

OR NOT. 35. INSTALL FIRE EXTINGUISHERS AND SELF-ILLUMINATING EXIT SIGNS PER CODE TO THE SATISFACTION OF THE COUNTY of SANTA CLARA. REVIEW LOCATIONS WITH DESIGNER PRIOR TO INSTALLATION.

36. ALL DOOR HARDWARE TO MEET ADA AND TITLE 24 REQUIREMENTS FOR ACCESSIBILITY. 37. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION IN CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS, AND ALL CODE REQUIREMENTS UNDER WHICH THE PLANS AND SPECIFICATIONS WERE APPROVED.

LARSON RESIDENCE

Alum Rock

10818 Crothers Rd \\ San Jose, CA 95127

AREA CALCULATIONS

PROJECT TEAM

SURVEY

San Jose, CA 95128

engineering.com

ENGINEER

ACORN ONSITE, INC 2288

Buena Vista Ave Livermore, CA

BUILDING AREA:	3233 S q Ft
MAIN	675.5 Sq ['] Ft
CARPORT DETACHED GARAGE	3500 Sq Ft 7408.5 Sq Ft
TOTAL AREA: TOTAL	· .
PARCEL AREA:	6.58 Acres

DRAFTING/DESIGN **ECOSTRUCTION** PO BOX 62 Geyserville, CA 95441

ecostruction@att.net

831-588-0234 **GEOTECHNICAL ENGINEER**

BUTANO GEOTECHNICAL 213 Green Vally Rd. Suite E Freedom, CA 95019 (831724-2612 www.butanogeotech.com

94550 (800) 832-7711 www.AcornOnsite.com

OWNER/MANAGER Mack Larson & Jothi Murali-Larson larsonmack@icloud.com

STRUCTURAL ENGINEER CARROLL ENGINEERING THANG LE and 1101 S. Winchester Blvd. #H-184 **ASSOCIATES**

319 E. Foothill Blvd. Arcadia, CA 91006 (408) 261-9800 philip@carrollinfo@thanglese.com

> CIVIL ENGINEER DVC Group, Inc. 513 Center St. Healdsburg, CA 95448

(626) 538-2702

(707)775-8986

dan@dvcgroup.net **GEOLOGIST**

BAYSIDE GEOLOGY **BUTANO GEOTECHNICAI** 213 Green Vally Rd. Suite E Freedom, CA 95019 (831724-2612 www.butanogeotech.com

ADDITIONAL DOCUMENTS & REQUIREMENTS

GEOTECHNICAL INVESTIGATION / SOIL REPORT

SPRINKLER PLAN - Differed Submitttal

TITLE 24 CALIFORNIA ENERGY CODE COMPLIANCE - Attached

DUE TO THE SCOPE OF WORK FOR THIS PROJECT, NO ARBORIST REPORT HAS BEEN PREPARED. IN THE EVENT THAT PROJECT SCOPE CHANGES, CONTACT ARCHITECT & AUTHORITY HAVING JURISDICTION (AHJ) TO DETERMINE IF AN ARBORIST REPORT IS REQUIRED. NO WORK SHALL BE COMMENCED WITHIN THE DRIPLINE OF ANY TREE PROTECTED BY ANY AHJ PRIOR TO RETAINING A LICENSED ARBORIST.

COORDINATION REQUIREMENTS COORDINATE WITH DESIGNER

SEE CONSTRUCTION OBSERVATION NOTE ON THIS SHEET. PROVIDE ARCHITECT WITH MINIMUM 48 HOUR NOTICE OF MILESTONE REQUIRING CONSTRUCTION OBSERVATION. COPY ARCHITECT ON ALL CORRESPONDENCE WITH ALL PROJECT CONSULTANTS.

ABBREVIATIONS

	AMPERES	DR	DOOR	NCL.	"NOLUDE, INCLUSIVE"	死.	RADIUS
B.	ANCHOR BOLT	E.A.	EXPANSION ANCHOR	NSJL.	INSULATION	R.D.L.	ROOF DRAIN LEADER
F.F.	ABOVE FINISHED FLOOR	E.F.	EXHAUST FAN	INT.	INTERIOR	R.D.O.	ROOF DRAIN OVERFLOW
.G.	ABOVE FINISHED GRADE	E.J.	EXPANSION JOINT	J-BOX	JUNCTION BOX	R.O.	ROUGH OPENING
2				JCT	JUNCTION	R.O.W. or R/W	RIGHT OF WAY
	AIR CONDITIONING	E.N.	END NAILING				
	AGGREGATE BASE COURSE	E.W.	EACH WAY	JST.	Jost	BEL	REFRIGERATOR
ē.	ACRYLONITRILE-BUTADIENE-STYRENE	EA.	EACH	JT,	JONT	REF.	REFERENCE
	ABOVE	EL	ELEVATION	K-D	KNOCK DOWN	RENF.	REINFORCED
			THE PARTIES OF PARTIES AS TO	KD	KILN DRED	REQ'D.	REQUIRED
	ASBESTOS-CEMENT BOARD	ELECT.	"ELECTRIC, ELECTRICAL"				
J.	ACOUSTIC	ELEV.	ELEVATOR	K0	KNOCK OUT	RET.	RETURN
	ACOUSTICAL CEILING TILE	EMC	ELECTRICAL METALLIC CONDUIT	L.E.D.	LIGHT EMITTING DIODE	REV.	REVISION
	ADDITION or ADDENDUM	EMT	ELECTRICAL METALLIC TUBING	LFT	LINEAR FEET	RM	ROOM
				LAW	LAMINATE	RMV.	REMOVE.
	ABOVE GRADE	ENT	ELECTRICAL NON-METALLIC TUBING				
	AIR HANDLER UNIT	EQ.	EQUAL	LAT.	LATERAL	S.C.	SOUD COPE
or ALUM.	ALUMINUM	EQUIP.	EQUIPMENT	LAV	LAVATORY	S.D.	SMOKE DETECTOR
of hlow.				LD.	LEAD	S.O.V.	SHUT OFF WILVE
	ALTERNATE	EST.	ESTIMATE	LIN.	LINEAR		SKYLIGHT
5	ANNEALED	EVAP.	EVAPORATIVE COOLER			S/L	
H.	ASPHALT	EWC	ELECTRIC DRINKING COOLER	LINO.	LINOLEUM	5/5	STAINLESS STEEL
	AVERAGE	EXC	EXCAVATE	LT.	LIGHT	SC	SELF CLOSING
				LTG.	LIGHTING	SCHED:	SD-EDULE
	AMERICAN WIRE GAUGE	EXH.	EXHAUST				
	ANGLE	EXIST. or E	EXISTING	LVL	LAMINATED VENEER LUMBER	SEC1.	SECTION
	BENCH MARK	EXT.	EXTERIOR	W.B.	MACHINE BOLT	SES	SERVICE ENTRANCE SECTION
				M.H.	MANHOLE	SH	SHEET
	BOUNDARY NAILING	F.A.	FIRE ALARM				
	BOTTOM OF	F.C.	FAN COIL	MT	MALLEABLE IRON	SHT'G.	SHEATHING
	BOTTOM OF FOOTING	F.C.O.	FLOOR CLEAN OUT	W.O.	MASONRY OPENING	SM.	SMLAR
	BUILT UP	F.D.	FLOOR DRAIN	WAR	MARBLE	SPA.	SPACE
				WAS.	MASONRY	SPECS	SPECIFICATIONS
	BACK OF CURB	F.E.	FIRE EXTINGUISHER				arcunuA (MA)
	BOARD	F.N.	FIELD NAILING	MATE	MATERIAL	SPKR.	SPEAKER
	BUILDING	F.O.	FACE OF	MAX.	MAXIMUM	SQ. FT.	SQUARE FEET
				WECH.	MECHANICAL.	SQ. IN.	SQUARE NO ES
	BLOCK	F.S.	FLOOR SINK				
	BLOCKING	F/G	FIBERGLASS	MED.	MEDIUM	STC	SOUND TRANSMISSION CLASS
	BEAM	FAB.	FABRICATE	WFG.	MANUFACTURING	STD.	STANDARD
	BRASS	FACP	FIRE ALARM CONTROL PANEL	MFR.	MANUFACTURER	STL	STEEL
				MIN.	MANUN	SUSP.	SUSPENDED
	BEARING	FDC	FIRE DEPARTMENT CONNECTION				
	BRONZE	FDN.	FOUNDATION	WISC.	MISCELLANEOUS	SW	SWITCH
P	CONCRETE ASBESTOS PIPE	FHC	FIRE HOSE CABINET	W00	MODULAR	SYM	SYMMETRICAL
				MIL.	METAL	SYS.	SYSTEM
2	CONSTRUCTION DOCUMENTS	FIN.	FINISH				
,	CAST IN PLACE	FL	FLOOR	MUL	MULLION	TAG	TONGUE AND GROOVE
	CONTROL JOINT	FLG.	FLOORING	NJ.C.	NOT IN CONTRACT	T.B.	THROUGH BOLT
	CLEAN OUT	FLUOR.	FLUORESCENT	N.T.S.	NOT TO SCALE	T.M.B.	TELEPHONE MOUNTING BOARD
				16 F-25			
	CERAMIC TILE	FP	FIRE PROOF	1 NOW	NON-CORROSIVE METAL	1.0.	10P 0F
3	CABINET	FTG.	FOOTING	NFC	NOT FOR CONSTRUCTION	T.O.B.	TOP OF BEAM
V	CAMBER	FURN.	FURNISH	NLR.	NALER	T.O.C.	TOP OF CURB
				NO.	NUMBER	1.0.F.	TOP OF FOOTING
TV	CLOSED CIRCUIT TELEVISION	G.I.	GALVANIZED IRON				
1.	CEMENT	GA.	GAUGE	NOM.	NOMNAL.	1.0.1	TOP OF JOIST
	CERAMIC	GALV.	GALVANIZED	0.C.	ON CENTER	T.O.M.	TOP OF WASONRY
V				0.0.	OUTSIDE DIAMETER	1.0.5.	TOP OF SLAB
	CUBIC FEET PER MINUTE	GAR.	GARAGE				
or C	CHANNEL	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	0.H.	OVER HANG	T.O.W.	10P OF WALL
. BKR.	CIRCUIT BREAKER	GFI	GROUND FAULT INTERRUPTER	0.1.	ORNAMENTAL IRON	T.S.	TUBE STEEL
or Q	CENTERLINE	GL	GLASS	QR.	OUTSDE RADIUS	TV	TELEVISION OUTLET
v d							
	CEILING	GLB	GLUE LAMINATED BEAM	OWI	OUTSIDE AIR INTAKE	ÆL.	TELEPHONE
3.	CAULKING	GM	GRADE MARK	OH:	OVER HEAD	TH,	THRESHOLD
	CLOSET	GM	GATE VALVE	OPNG.	OPENING	H0.	THREADED
	CLEAR		GALVANIZED RIGID TUBING	OPPO.	OPPOSITE	THK.	140X
		GRC					
	CONCRETE MASONRY UNIT	GYP.	GYPSUM	P.C.	PRECAST CONCRETE	THRU	THROUGH
D.	CENTERED	GYP. BD.	GYPSUM BOARD	P.L. or P.	PROPERTY LINE	ILT.	TOLET
	COLUMN	H.B.	HOSE BIBB	PLAW.	PLASTIC LAWINATE	TRANS.	TRANSFORMER
,				P.O.C.	POINT OF DONNECTION	TYP.	
3.	COMBINATION	H.C.	HOLLOW CORE	P.O.L.			TYPICAL
C.	CONCRETE	H.M.	HOLLOW METAL	PERF.	PERFORATED	UNF.	UNFINISHED
ST.	CONSTRUCTION	H/C	HANDICAPPED	PERP. or 1	PERPENDICULAR	UR	URNAL
Τ.	CONTINUOUS	HDBD.	HARDBOARD	PH or #	PHASE	V.B.	VAPOR BARRER
TR.	CONTRACTOR	HDW	HARDWARE	PL.	PLASTER	V.F.	VERIFY IN FIELD
10.10	COPPER	HGT.	HEIGHT	PL or P	PLATE	W	VOLT AMPERE
	PENNY	HOR.	HORIZONTAL	PLAS.	PLASTIC	VCT	VIVYL COMPOSITION TILE
				PLUMB.	PLUMBING	VERT	VERTICAL.
	DRINKING FOUNTAIN	HTR	HEATER				
	DECOMPOSED GRANITE	HVAC	"HEATING, VENTILATING & AIR CONDITIONING"	PLYWD.	PLYW000	W/C	WATER CLOSET
	DOWN SPOUT	HW	HOT WATER	PORC.	PORCELAIN	WOW	WNDOW
	DISHWASHER	HYD.	HYDRAULIC	PREFAB.	PREF ABRICATED	WCT	WAINSDOT
	DOUBLE	I.C.	INTERCOM OUTLET	PSF	POUNDS PER SQUARE FOOT	WP	WEATHER PROOF
0	DEMOLITION	I.D.	INSIDE DIAMETER	PSI	POUNDS PER SQUARE INCH	WT.	WEIGHT
or Ø	DIAMETER	LF.	INSIDE FACE	PTN.	PARTITION	W/	WTH
or w							
	DIAGONAL	ID	IDENTIFICATION	PVC	POLYVINYSCLORIDE	W/0	WITHOUT
14	DIMENSION	IG	ISOLATED GROUND	PWR.	POWER	WD.	W000
			INTERMEDIATE METALLIC CONDUIT	0.7.	QUARRY TILE	W.L.	WROUGHT FROM
	DEAD LOAD	LIMC					
	DEAD LOAD DOWN	IMC IMPG	IMPREGNATED	QTY.	QUANTITY	YD.	YARD

CONSTRUCTION OBSERVATION REQUIRED

AFTER FINISH REMOVAL, PRIOR TO STRUCTURAL DEMOLITION

ROUGH ELECTRICAL, MOUNTED BOXES PRIOR TO PULLING WIRE

FRAMING & INSULATION, PRIOR TO COVERING FRAMING W/ FINISHES

WINDOW SELECTION, PRIOR TO ORDERING WINDOWS

GENERAL CONTRACTOR IS REQUIRED TO SCHEDULE & COORDINATE THE FOLLOWING

MANDATORY CONSTRUCTION OBSERVATION SITE VISITS WITH DESIGNER PRESENT.

PROVIDE NOTICE TO DESIGNER AT LEAST 48 HOURS PRIOR TO SUCH VISITS. PRIOR

ADDITIONALLY, CONTRACTOR SHALL SCHEDULE A MANDATORY WALK THRU WITH

BSTANTIAL COMPLETION PRIOR TO GRANTING OCCUPANCY

DESIGNER'S INITIALS ARE REQUIRED TO THE LEFT OF EACH SITE VISIT LISTED PRIOR TO

& PROVIDED WITH THE OPPORTUNITY TO OBSERVE CONSTRUCTION AT THAT PHASE.

PROCEEDING WITH SUBSEQUENT WORK & INDICATE ONLY THAT DESIGNER WAS PRESENT

PARCEL MAP

TO BEGINNING WORK, PROVIDE DESIGNER & OWNER WITH A CRITICAL PATH

PRE CONSTRUCTION SITE MEETING

SCHEDULE SHOWING THE FOLLOWING CONSTRUCTION MILESTONES:

REOD SITE VISIT MILESTONE

ROUGH FRAMING

DESIGNER & OWNER PRESENT AT SUBSTANTIAL COMPLETION.

Please Note: Orientation of other plans within the set may vary from this Parcel Map

PROJECT DATA

PROJECT ADDRESS: 10818 Crothers Rd. San Jose, CA OWNER/MANAGER: Mack Larson & Jothi Murali-Larson APN:

612-44-033 **ZONING:**

Residential / Agricultural

LOT AREA: 6.58 Acres

BUILDING AREA: See Area Calculations on this sheet STORIES:

2 story residential CONSTRUCTION TYPE: Typ VA

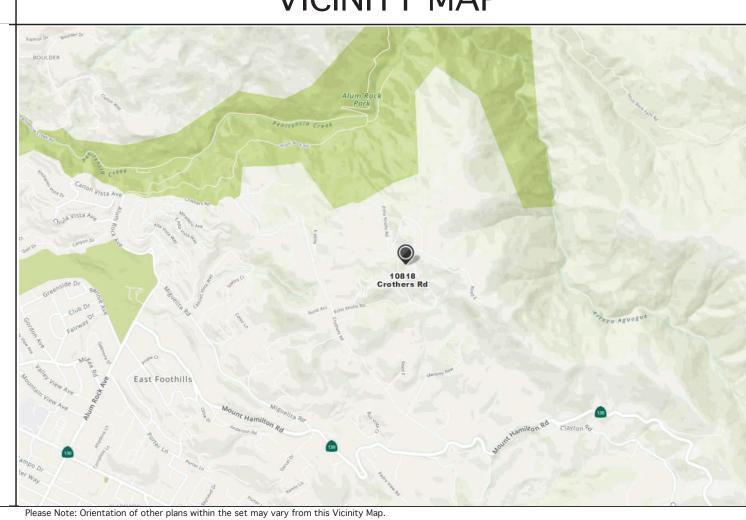
Deferred Submittal FIRE SPRINKLERS: Group R-4 **OCCUPANCY:**

County of Santa Clara Municipal Code APPLICABLE CODES:

2022 CA RESIDENTIAL BUILDING CODE

2022 CA Bldg Code, 2022 CA Res Bldg Code, 2022 CA Elec Code 20122 CA Mech Code, 2013 CA Plmbg Code, 2022 CA Energy Code 2022 CA Fire Code, 2022 CalGreen Code, 2022 CA Ref Stds Code All as amended by The State Of California and Local Jurisdiction(s).

VICINITY MAP



S-1-2 SITE PLAN/BOUNDARY CG-2 CAL GREEN WRK SHEET A-1 FLOOR PLAN CG-3 CAL GREEN WRK SHFLOOR PLAN A-1.1 1st FLOOR PLAN .25" CG-4 CAL GREEN WRK SHEET A-1.2 2nd FLOOR PLAN .25" S 1.1 STRUCTURAL GEN. NOTES A-2 ROOF PLAN S 1.2 STRUCRTURAL TYP. CONCRETE DTL S 1.3 BAMCORE DETAILS S 2.1 FOUNDATION ARCHITECTURAL DETAILS S 2,2 FRAMING DETAILS ARCHITECTURAL DETAILS \$ 2.3 ROOF FRAMING DETAILS ARCHITECTURAL DETAILS S 3.0 FOUNDATION DETAILS **BAMCORE DETAILS** S 4.0 FOUNDATION DETAILS S 5.0 FRAMING DETAILS **BAMCORE DETAILS** S 6.0 FRAMING DETAILS - SHEAR WALL C-1 PLC HOLD

SHEET INDEX

ELECTRICAL PLAN

C-2 PLC HOLD **RADIANT PLAN** C-3 PLC HOLD

WINDOW /DOOR SCHD

CAL GREEN WRK SHEET

*See CVR 2 for Full Table

C-5 OVERALL ROUGH GRADING C-6 RESIDENCE ROUGH GRADING

C-7 BARN ROUGH GRADING

C-4 PLC HOLD

EAS -1 EASEMENT APROACH

PROJECT SCOPE

New 3500sq. ft SFD with Garage, PV Solar System, and Gardens



Print Date: 02/02/2022

Project

FEB. 2022 As Noted Scale: Drawn by:

Sheet Title:

COVER SHEET &

PROJECT INFO

CVR

CVR-Cover Page

CVR2 - Table

A1 - Residence Plan View

A2 - Roof Plan View

A3 - Electrical 1

A4 - Electrical 2

D1 - Details

D2 - Details

D3 - Details

D4 - Bamcore Details

D6 - Bamcore Details

D7 - Velux

B1 - Bamcore

B2 - Bamcore

B3 - Bamcore

VSE-1 - Velux

VSE-2 E1 - Electrical

R1 - Radiant

R2 - Radiant SCH - Window/Door Schedule

T-24/EC1 - Energy Calcs

EC2

EC3 EC4

CG1 - Cal Green

CG2

CG3

CG4

S1.1 - Structural Cvr Page - Residence

S1.2 - Structural Plan

S1.3 - Structural S 2.1- Foundation

S 2.2 -Details

S 2.3 - Details

S 3.0 - Details

S 4.0 - Details

S 5.0 - Details S 6.0 - Details G1 - Garage Elevation

G2 - Garage Isometric

G3 - Plan

S1 - Structural CalcS2 - S22 - Heritage Building Assembly Drawings

SE1 - Electrical

SE2 - Electrical

S23 - S42 - Welding and Bolt Assembly Drawings

S 1.1 - Garage Foundation

S 1.2 - Foundation

S 2.0 - Details

S 3.0 - Details C1 - Overall Site Plan

C2 - Driveway

C3 - Driveway to Rd D C4 - Driveway Profile

C5 - Driveway Section

C6 - Grading Garage PadC7 - Grading Residence Pad

C8 - Section

C9 - Erosion Control Plan

C10 - Echo Knoll Approach Revision

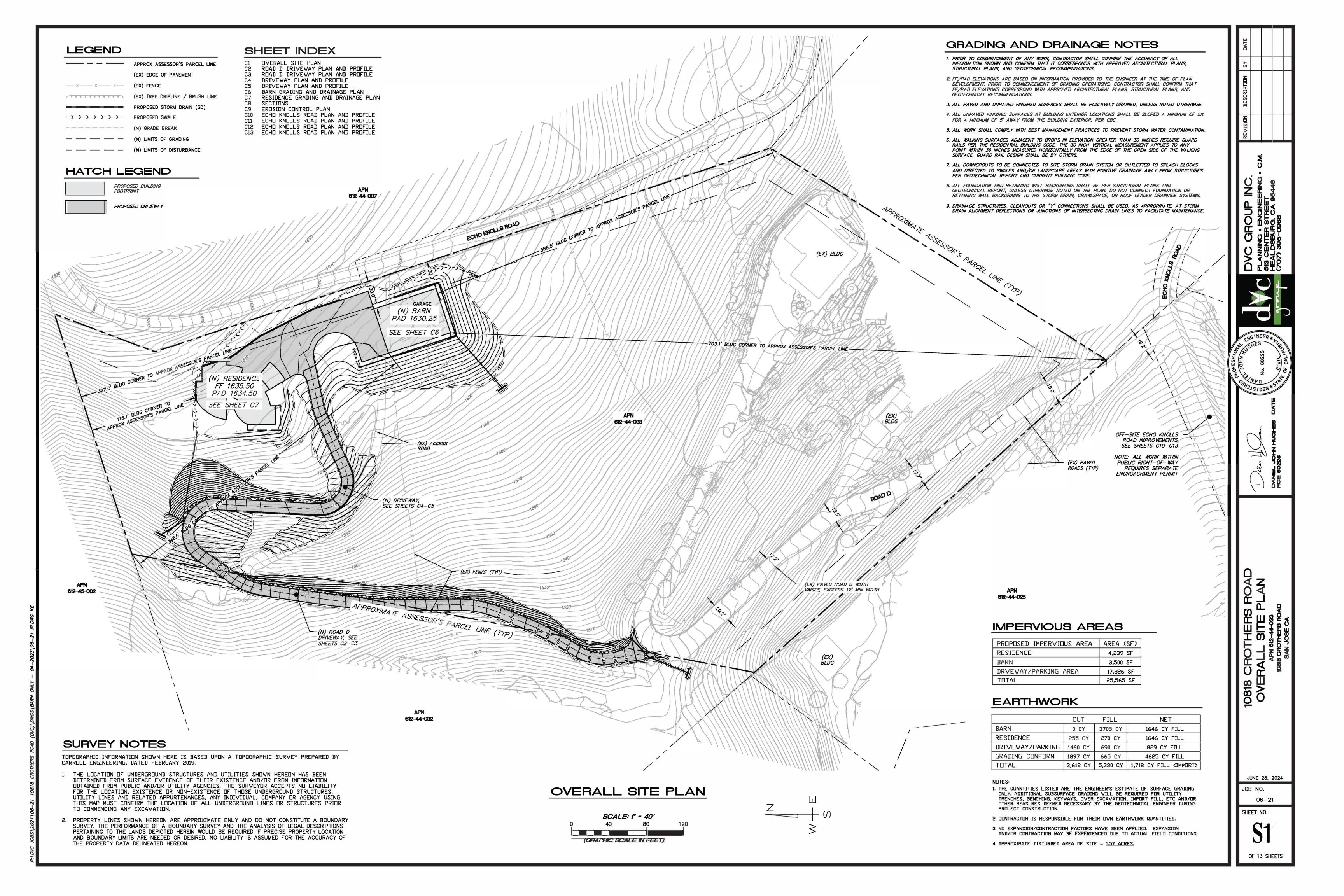
C11 - Echo Knoll Rd

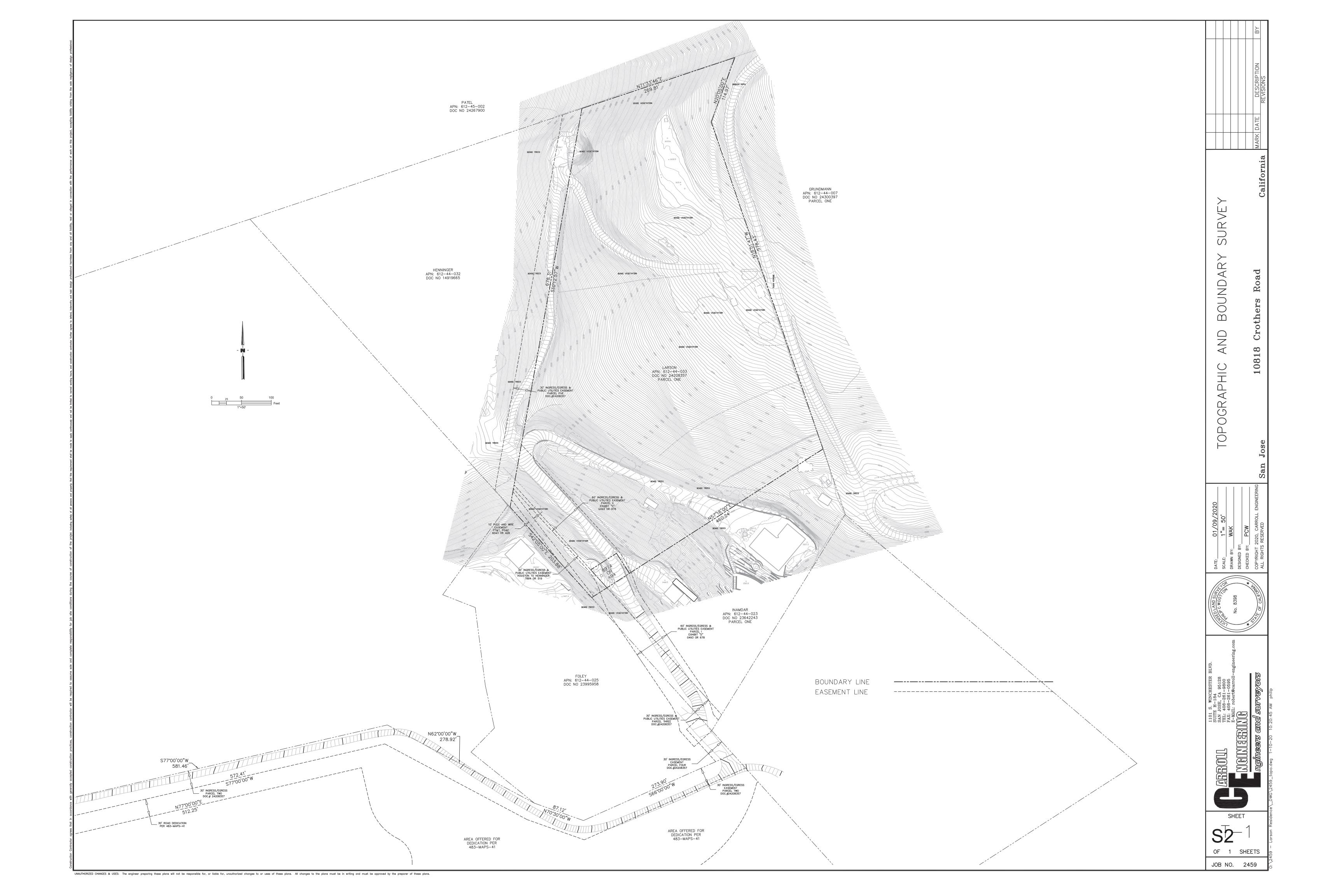
C12 - Echo Knoll Rd

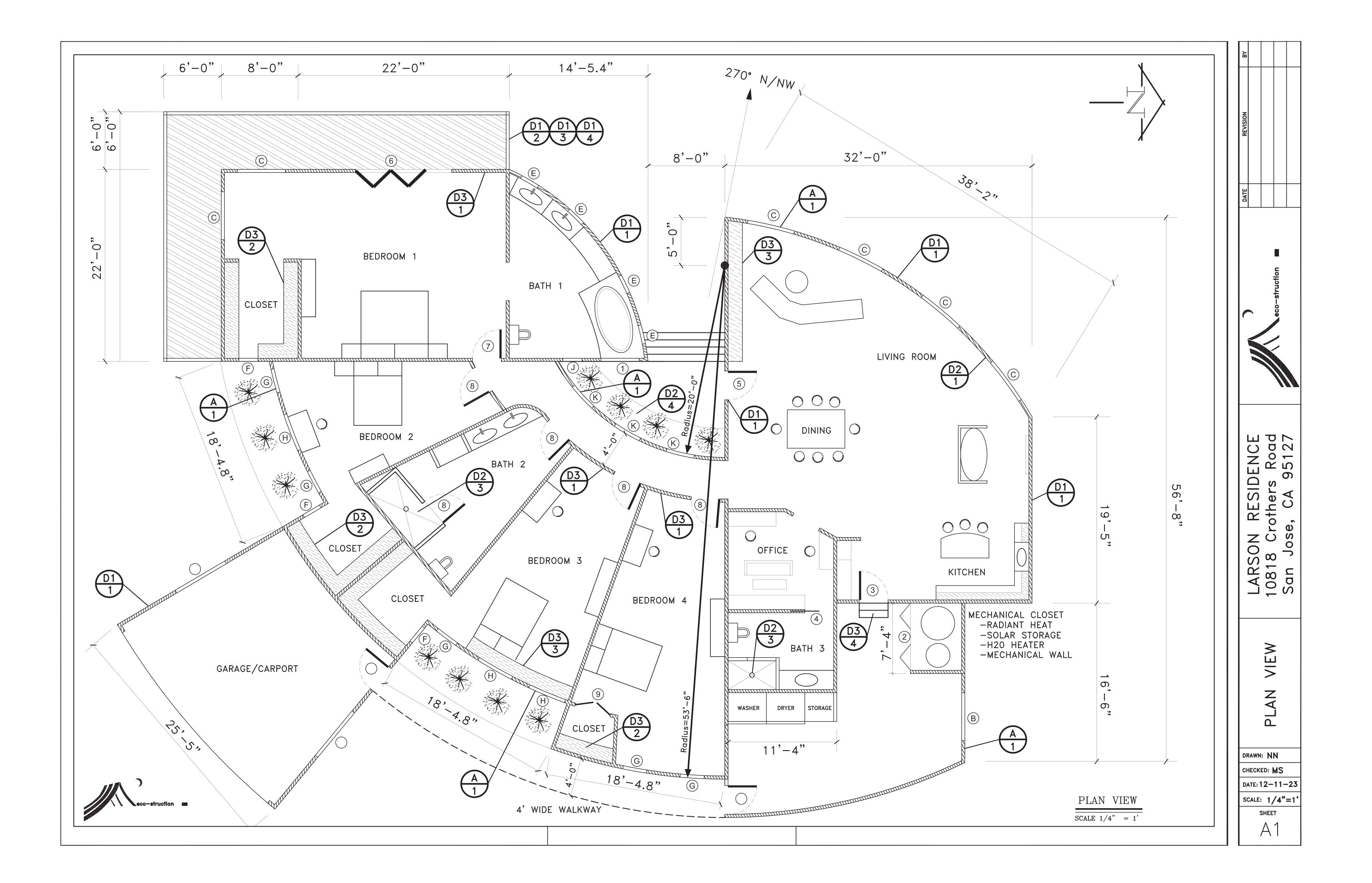
C13 - Echo Knoll Rd

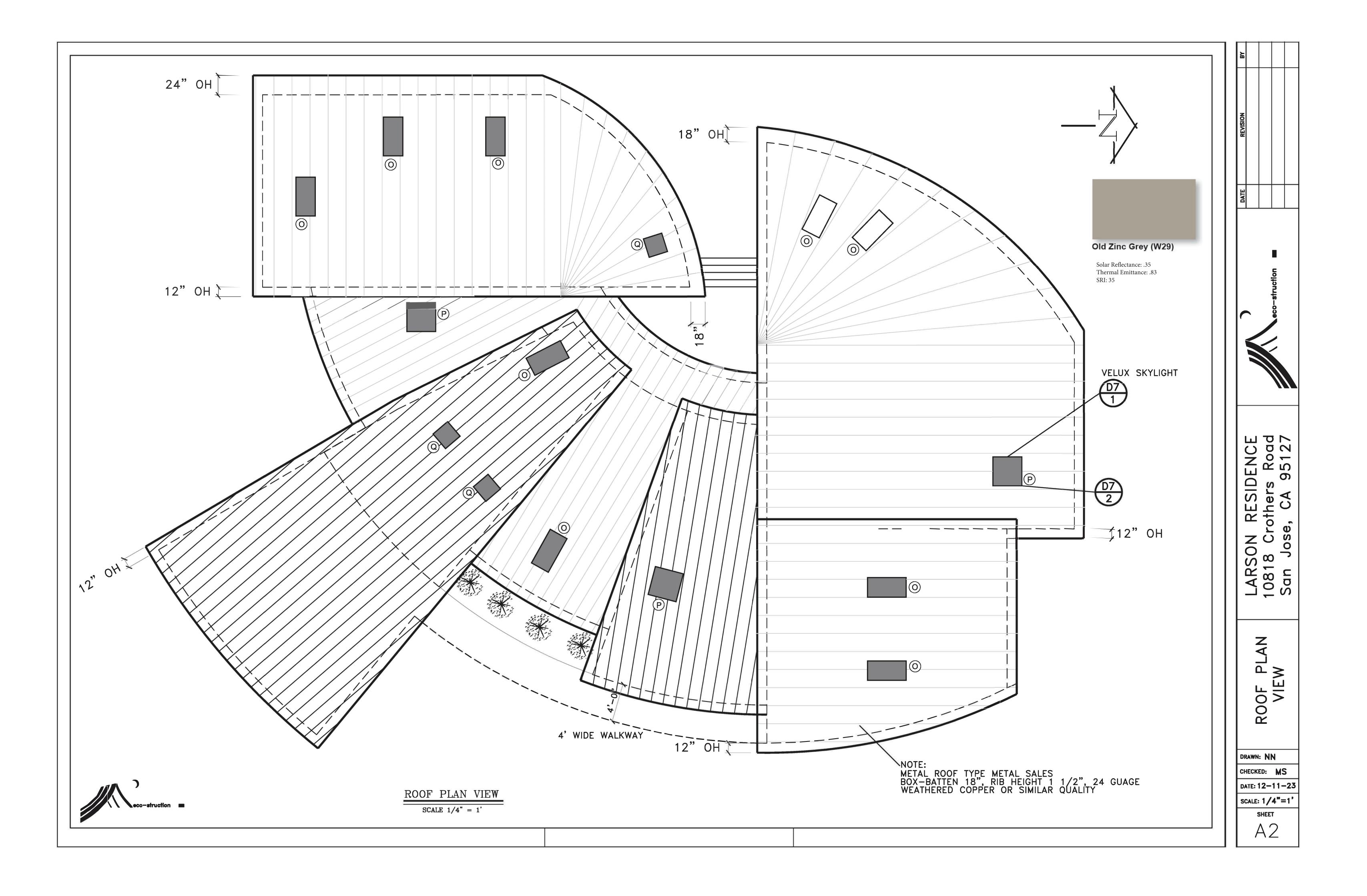


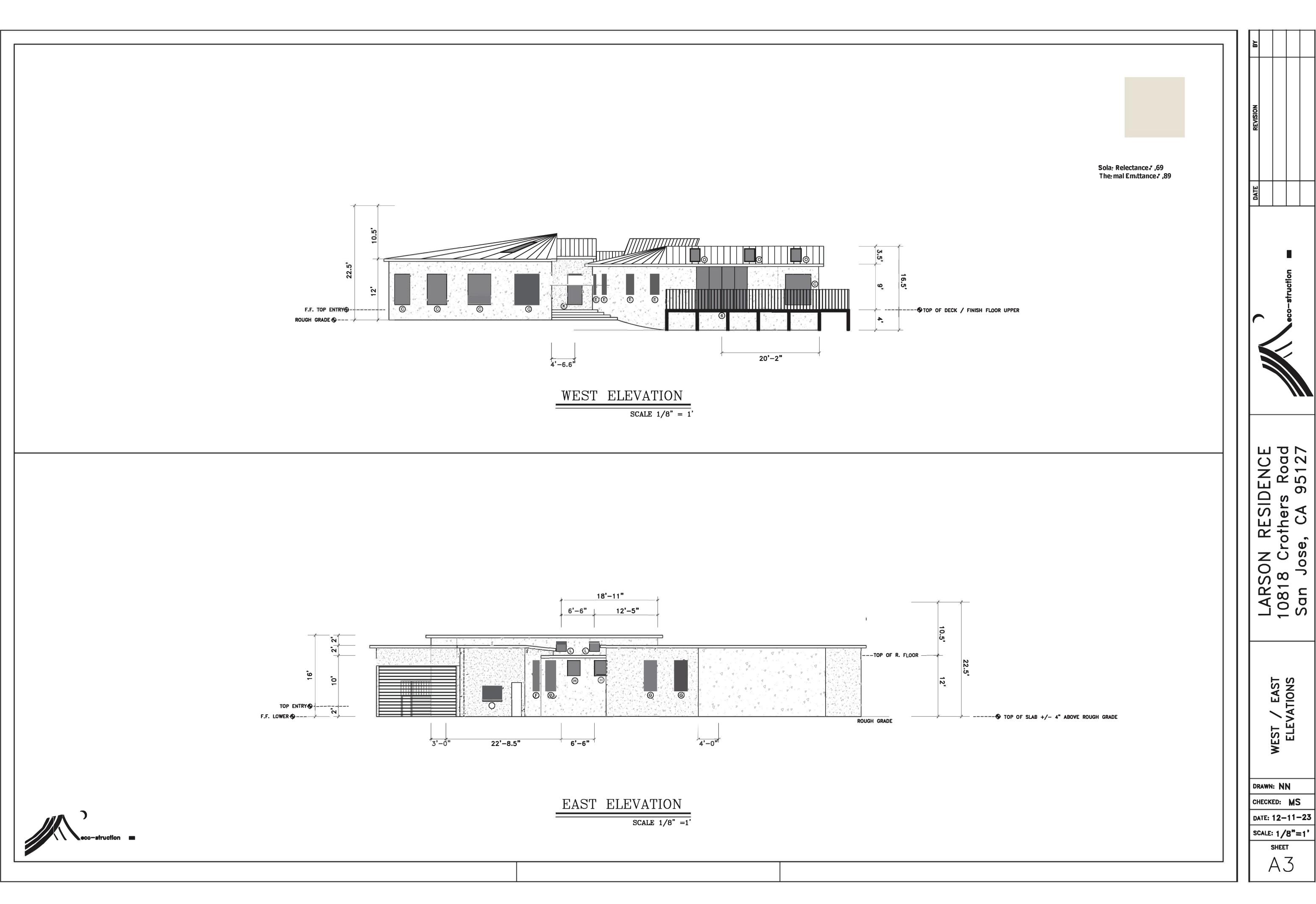


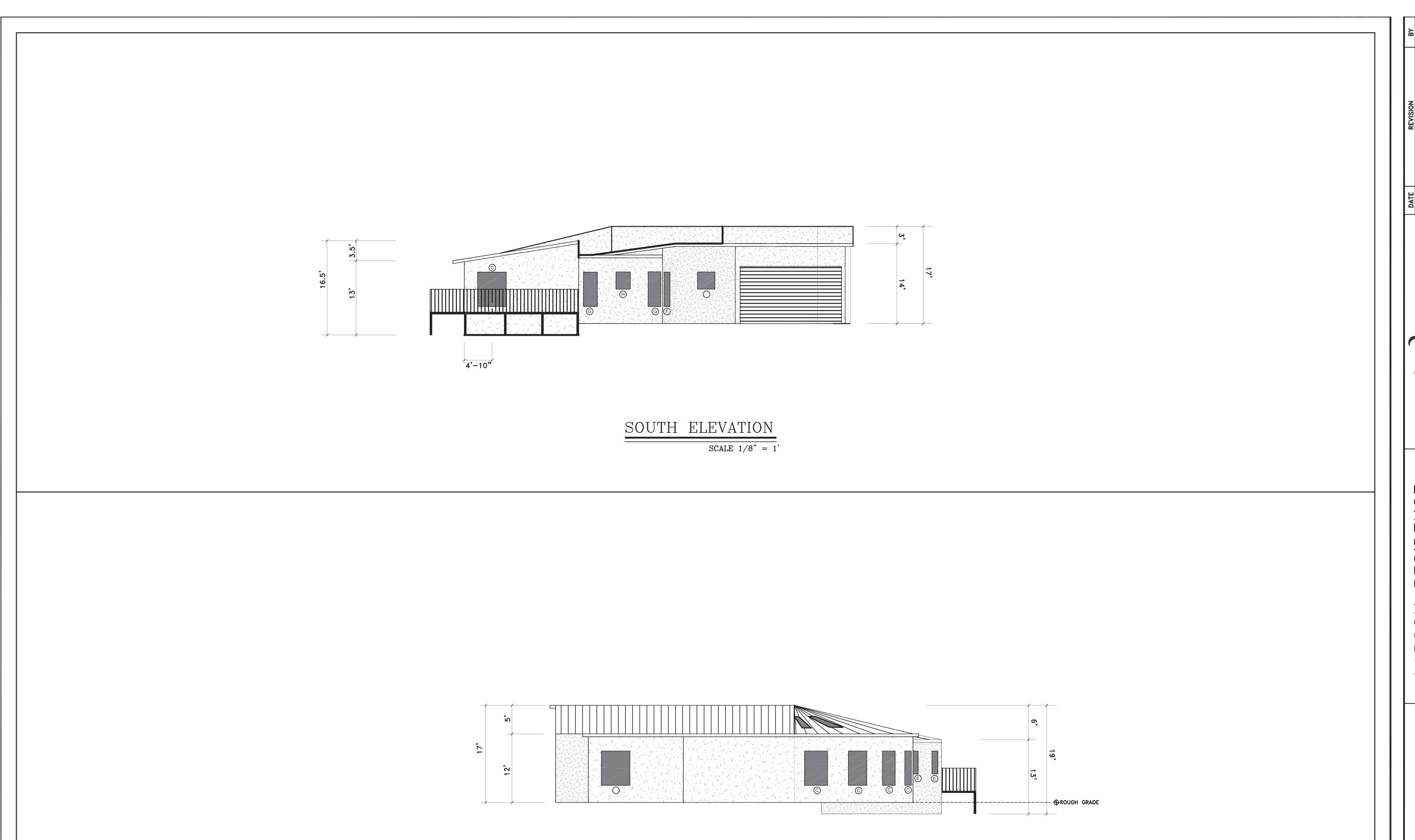












LARSON RESIDENCE 10818 Crothers Road San Jose, CA 95127

SOUTH / NORTH ELEVATIONS

DRAWN: NN CHECKED: MS

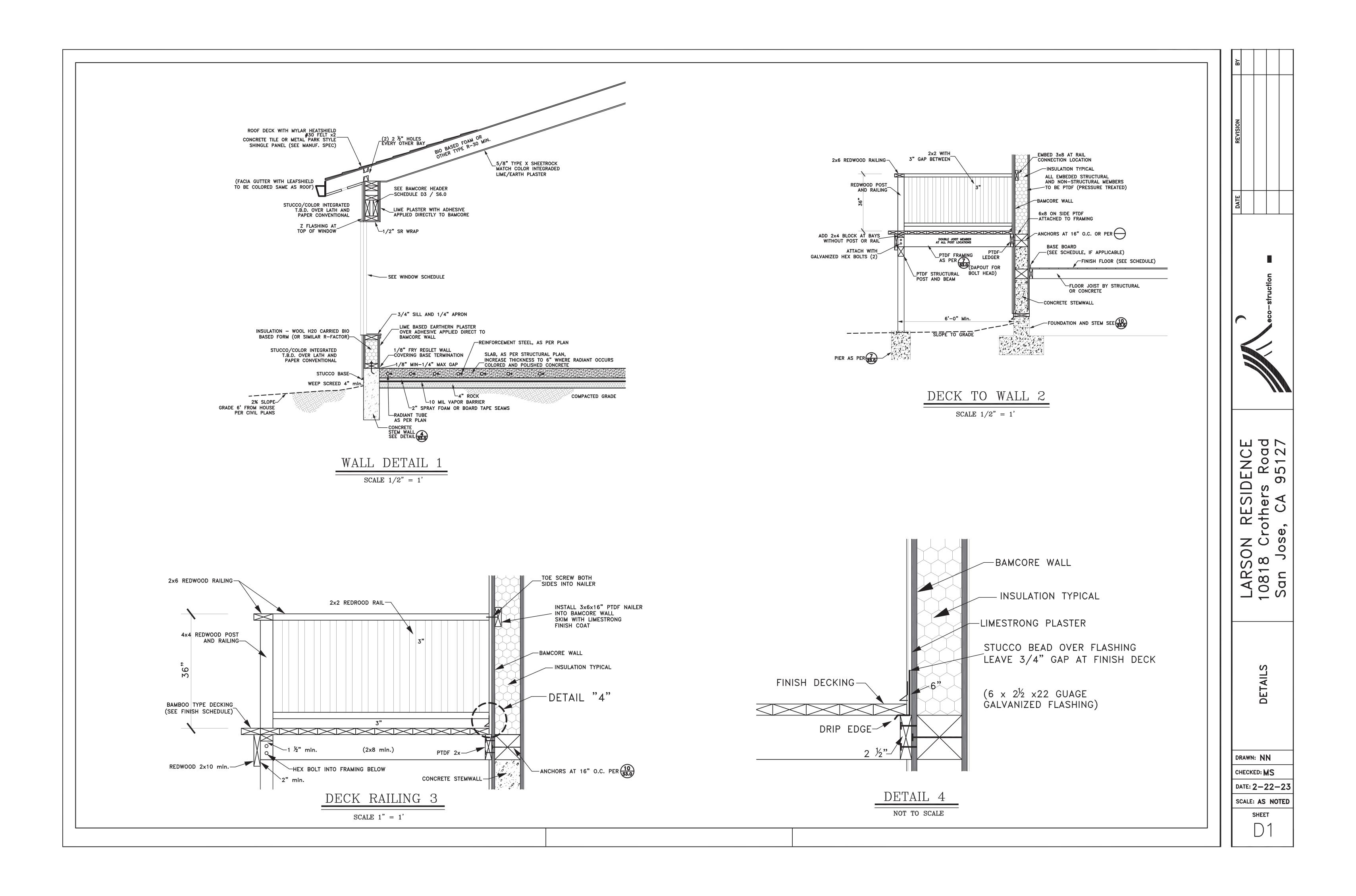
DATE: 12-11-23 SCALE: 1/8"=1'

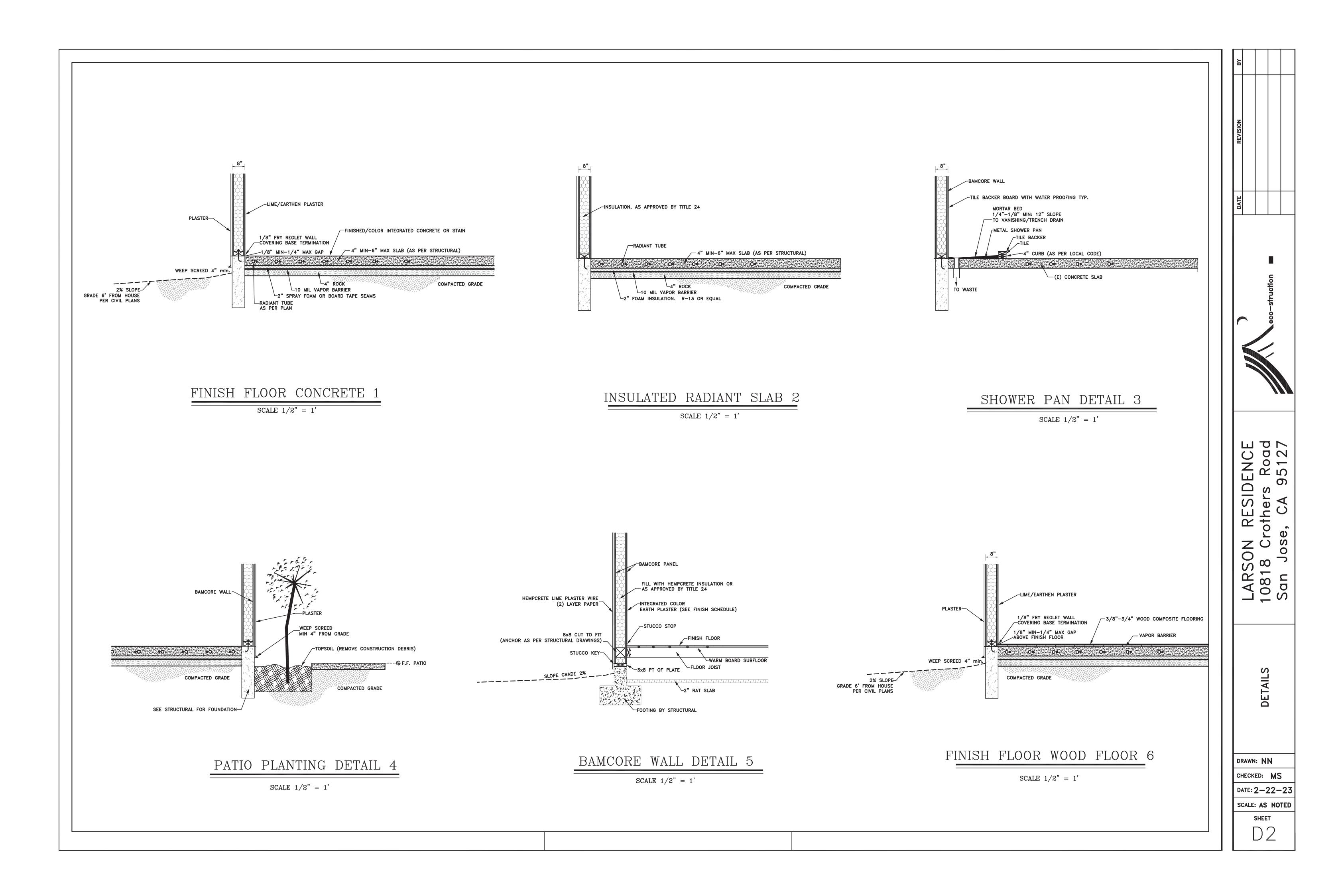
SHEET A4

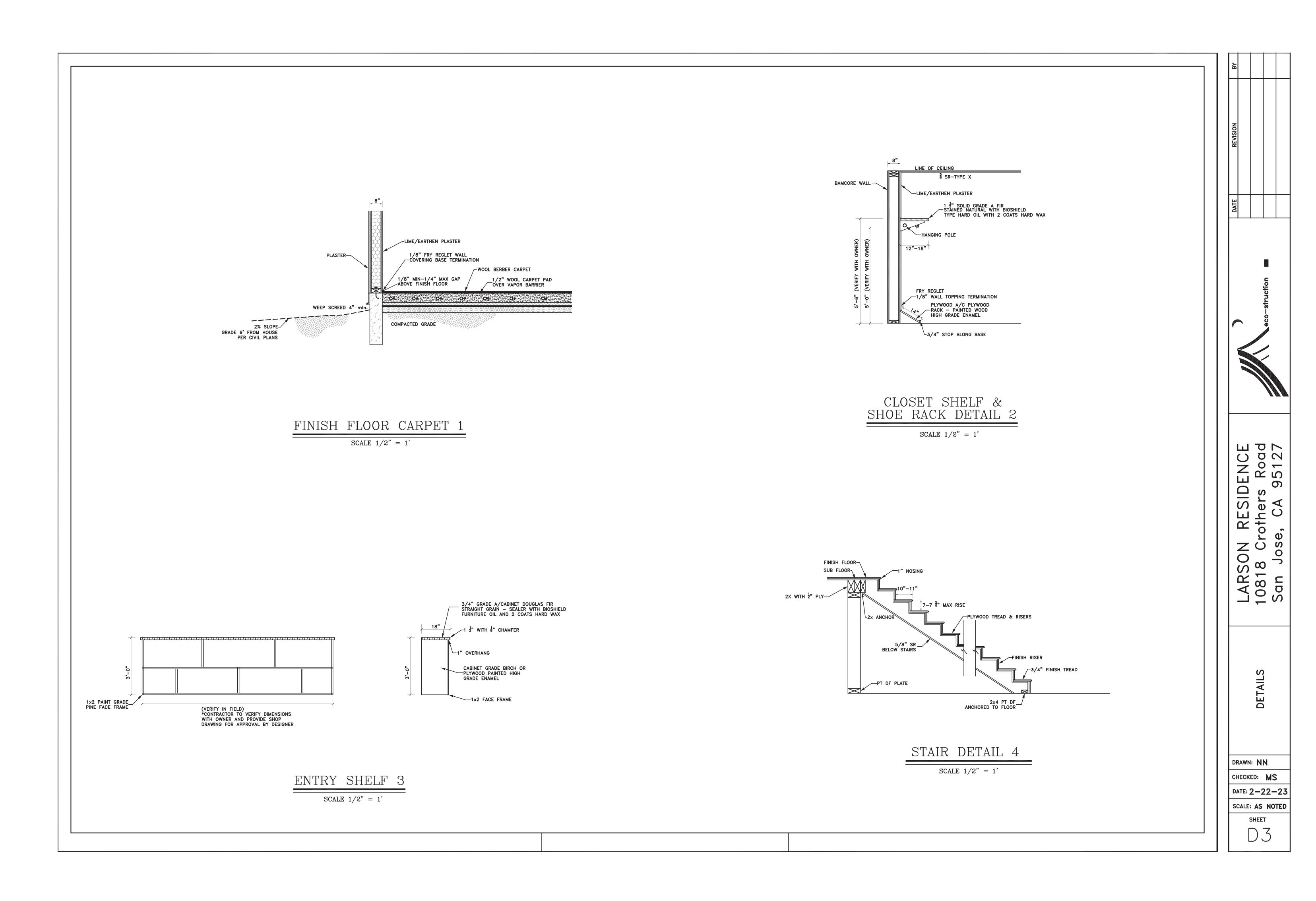
NORTH ELEVATION

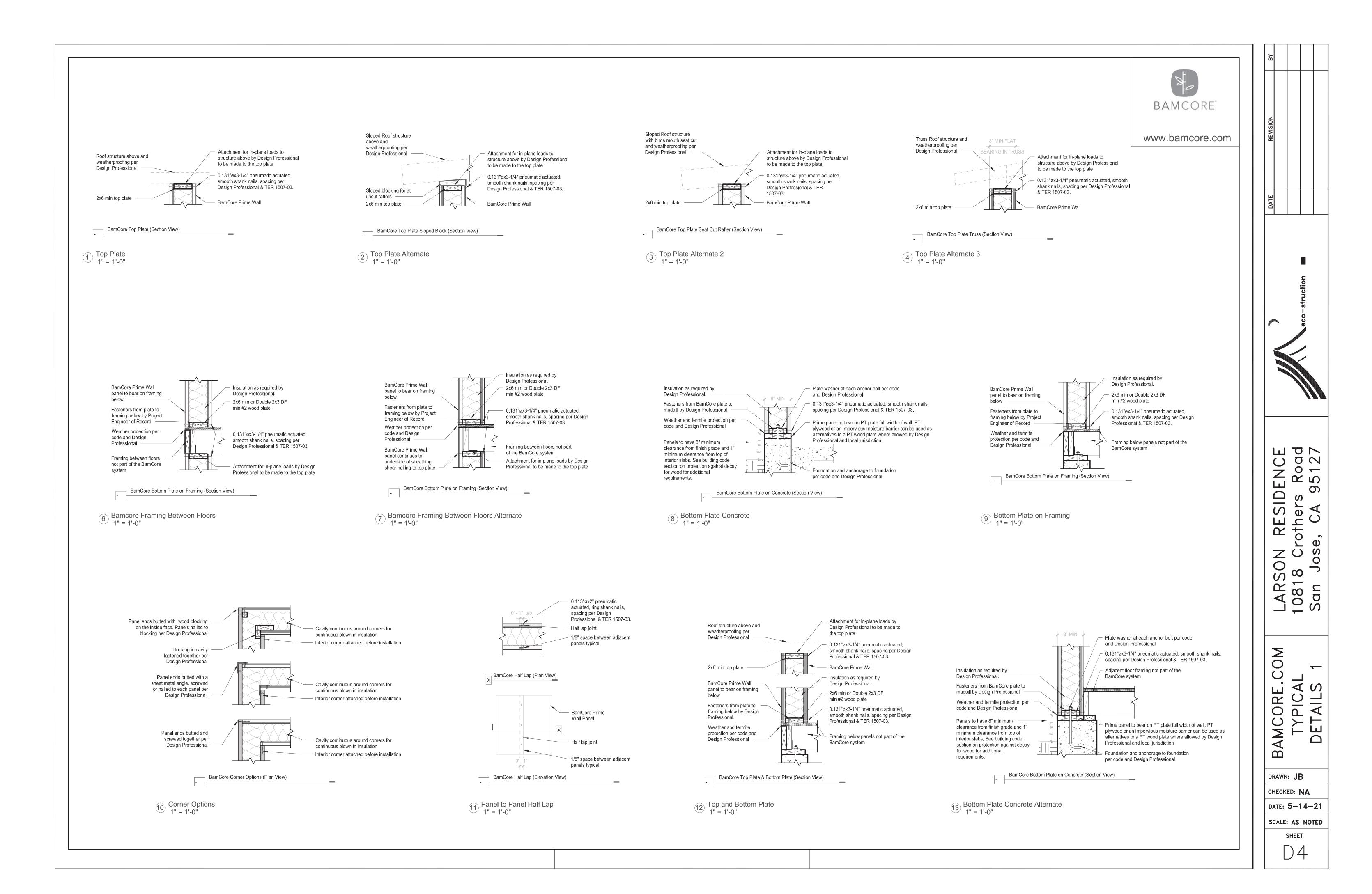
 $\overline{\text{SCALE } 1/8" = 1'}$

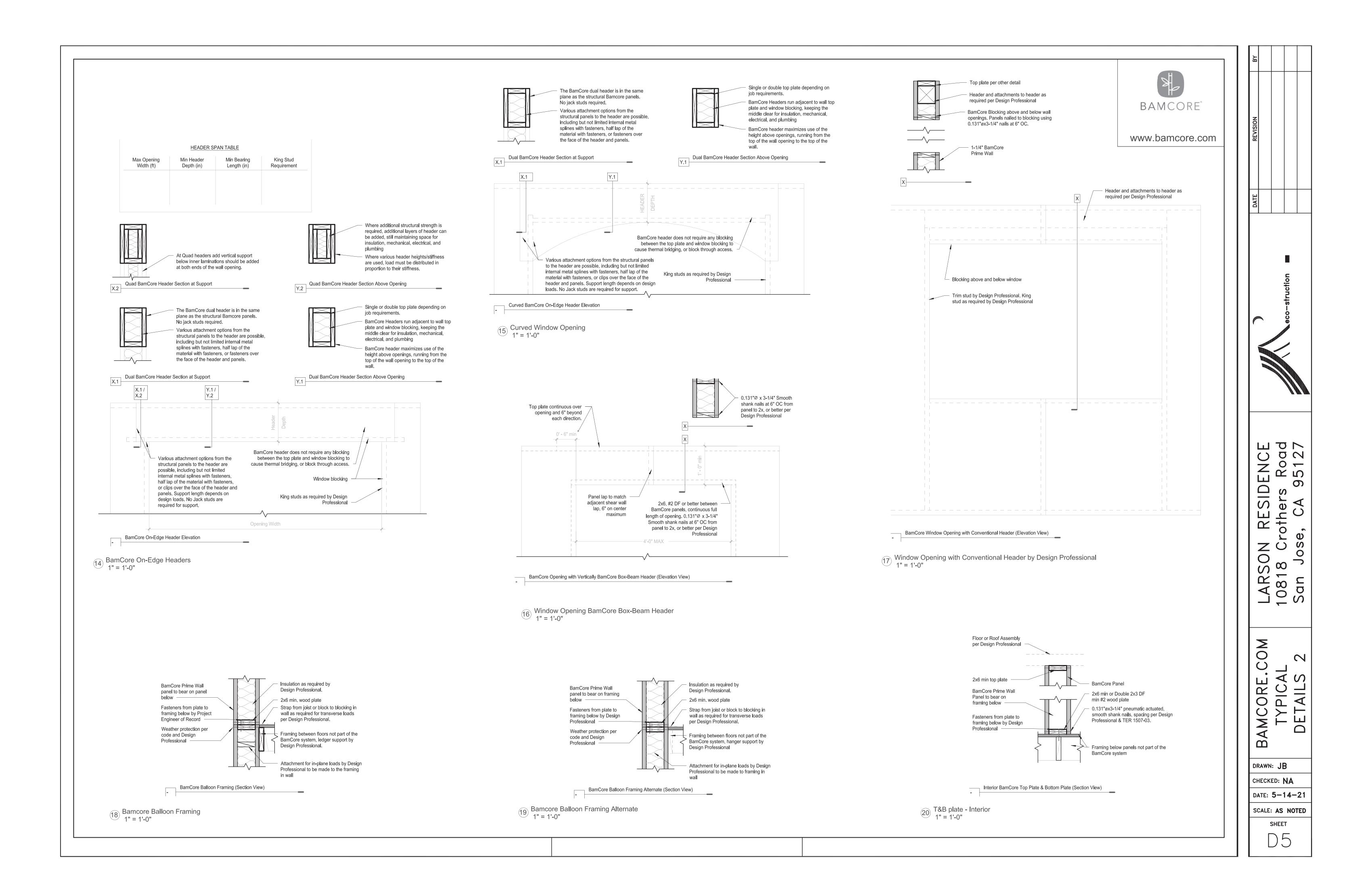


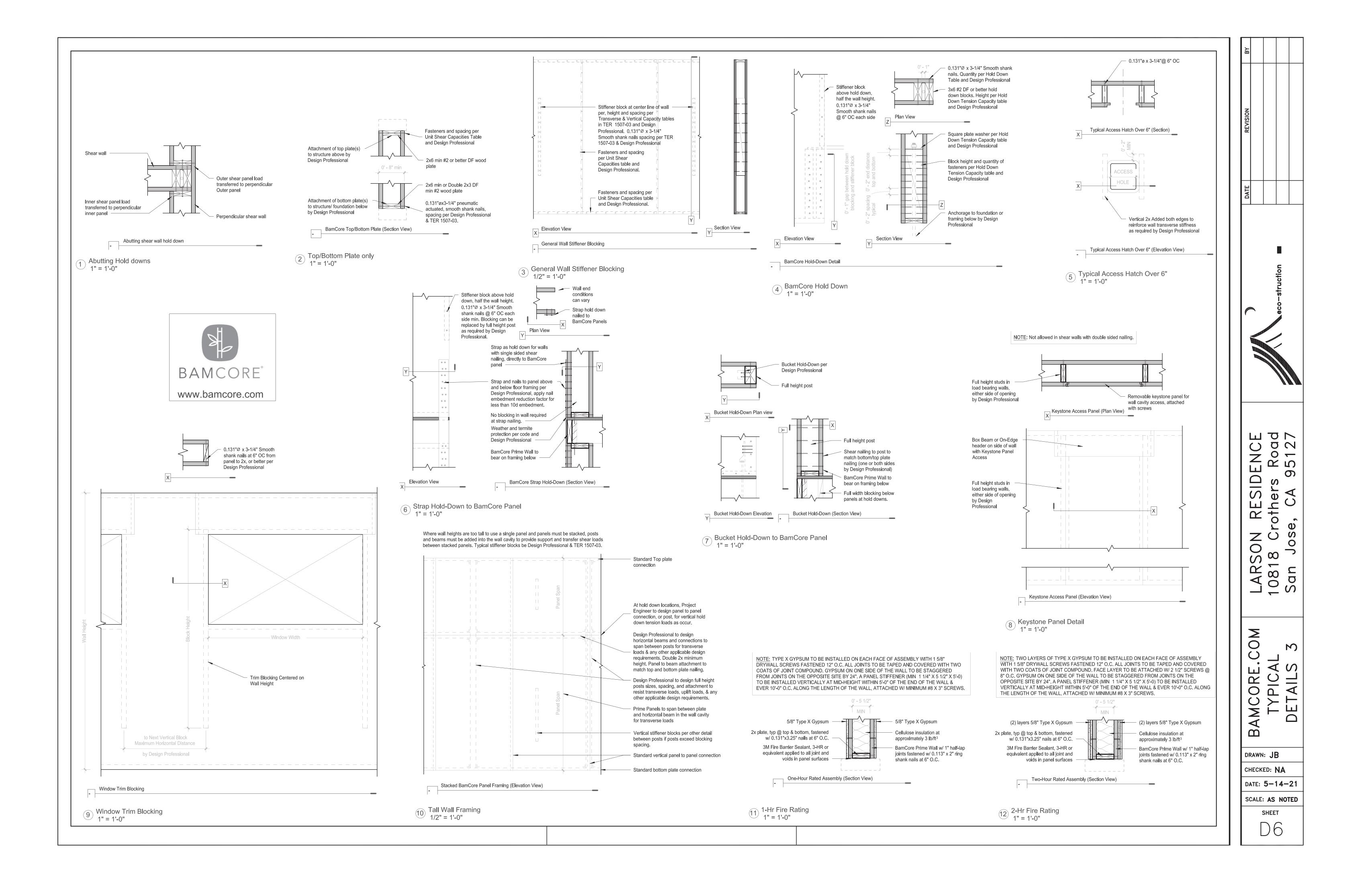


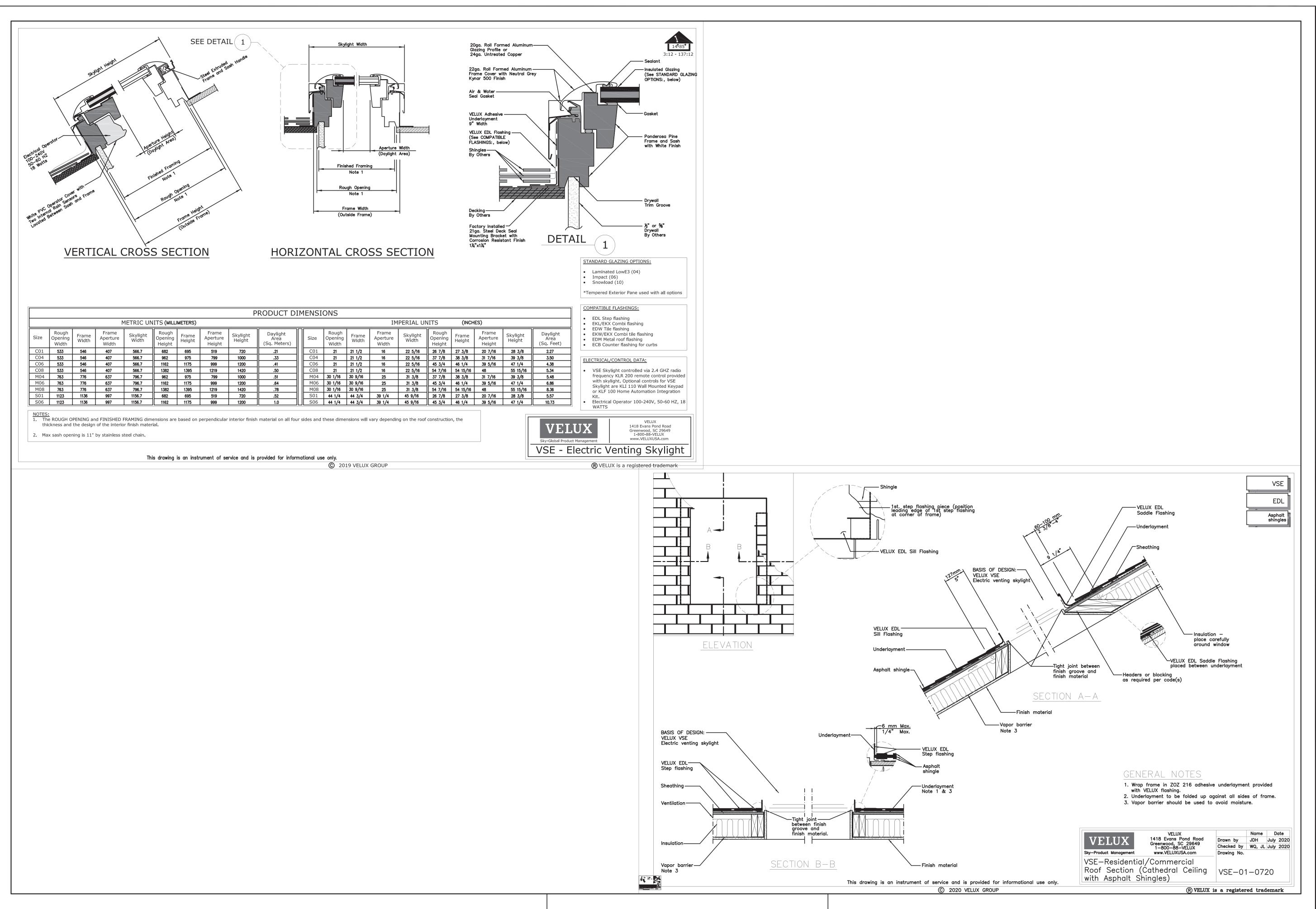


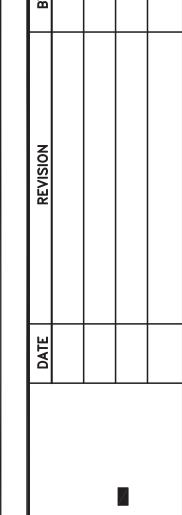












eco-structic

LARSON RESIDENCE 10818 Crothers Road San Jose, CA 95127

VELUX
VENTING SKYLIGHT
ROOF SECTION

DRAWN: JDH
CHECKED: WQ

DATE: 2-22-23

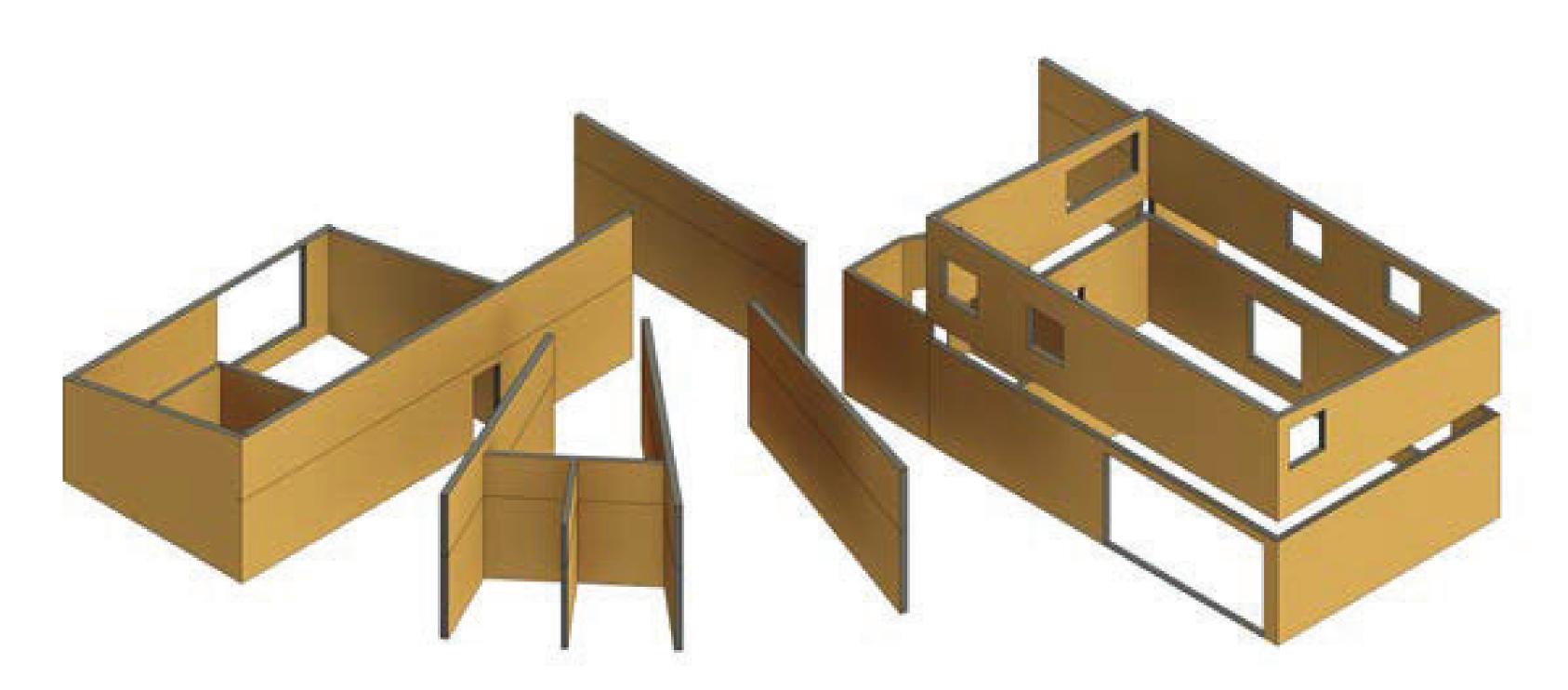
SCALE: AS NOTED
SHEET

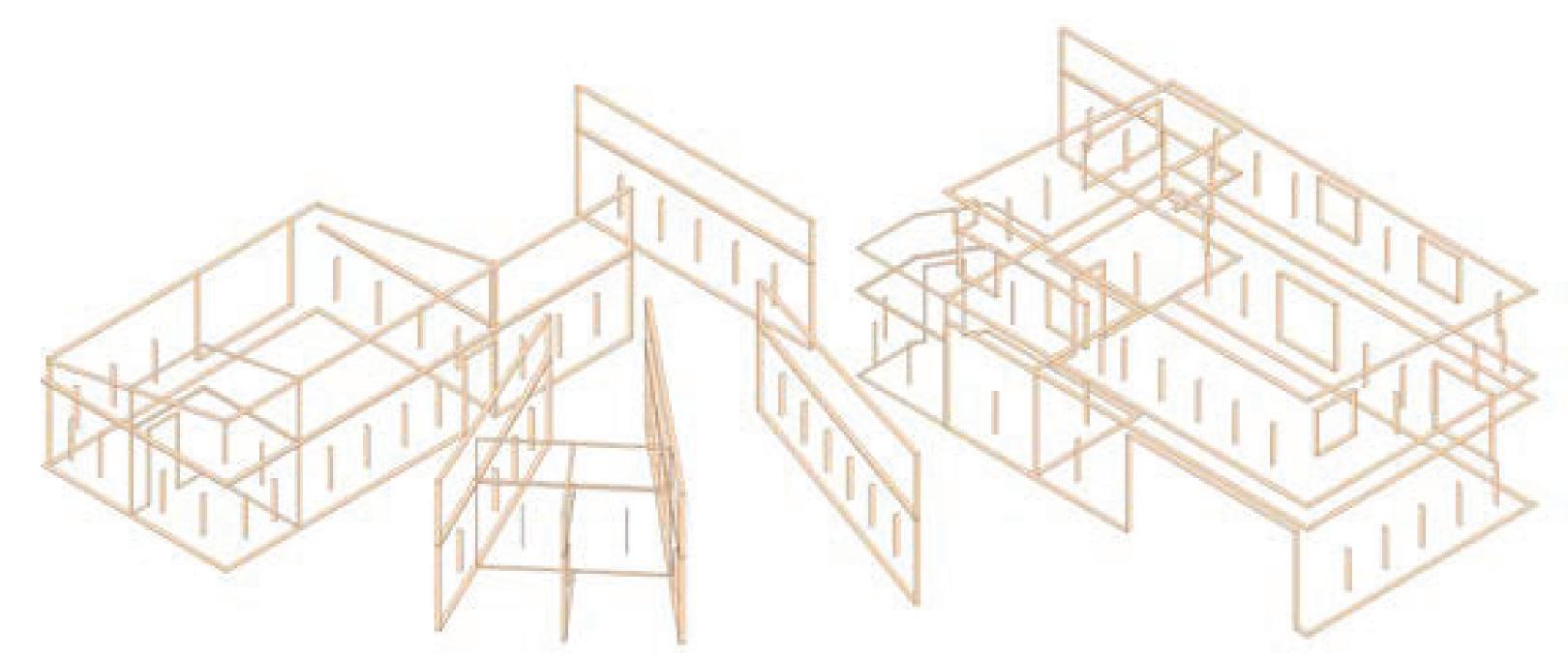


BamCore Takeoff

Larson Residence Ecostruction







Wall Takeoff

8' Panels: 235 10' Panels: 176

Area Feedstock: 14,560

Lumber Takeoff (linear feet)

2x4" Plate: 284 ft 2x6" Plate: 1,552 ft 2x4" Stud: 134 ft 2x6" Stud: 604 ft

*BamCore does not provide lumber, these numbers are for reference only

Square Footage

4,845 sq ft

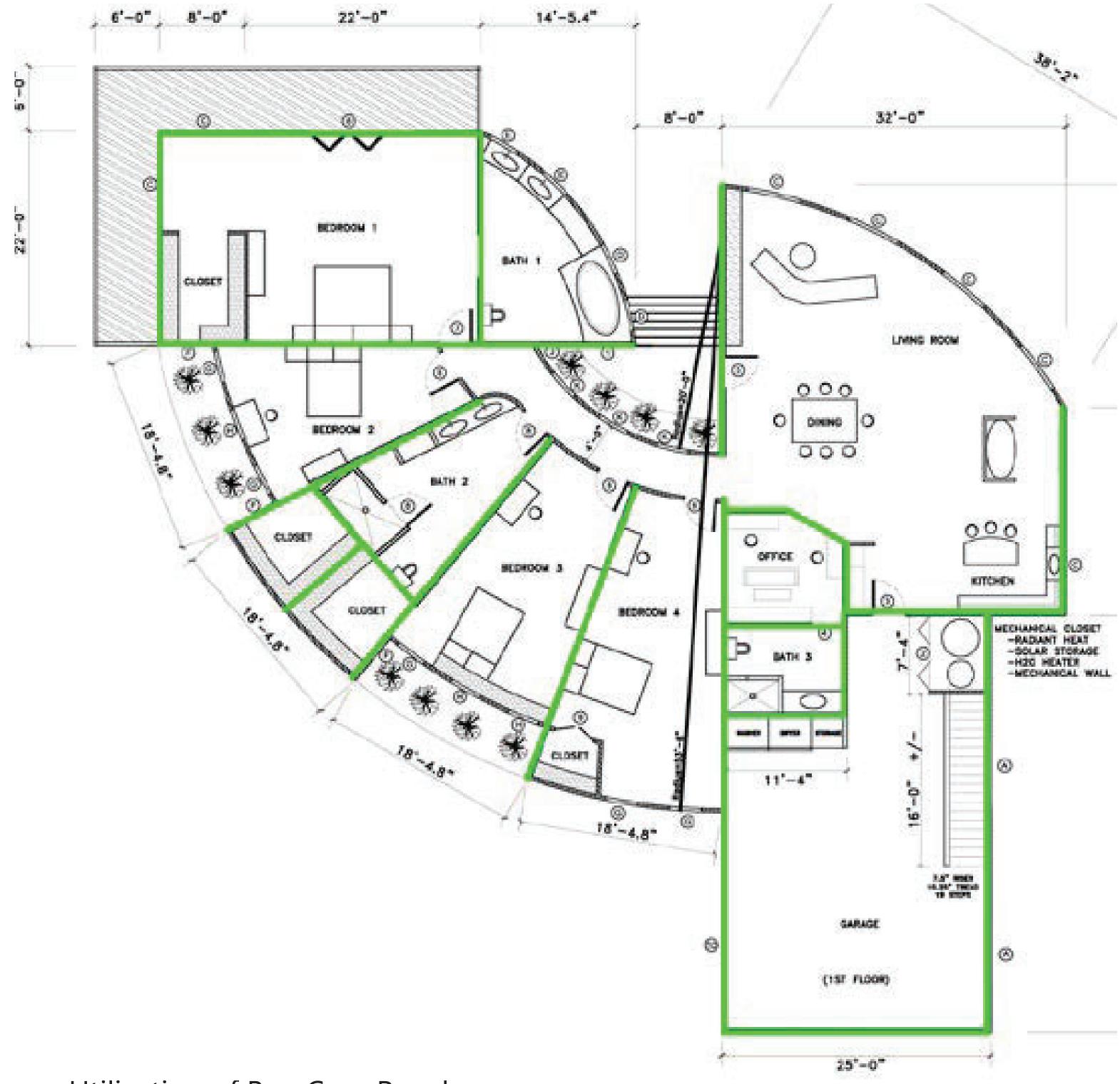
Pricing Estimate

\$80,080

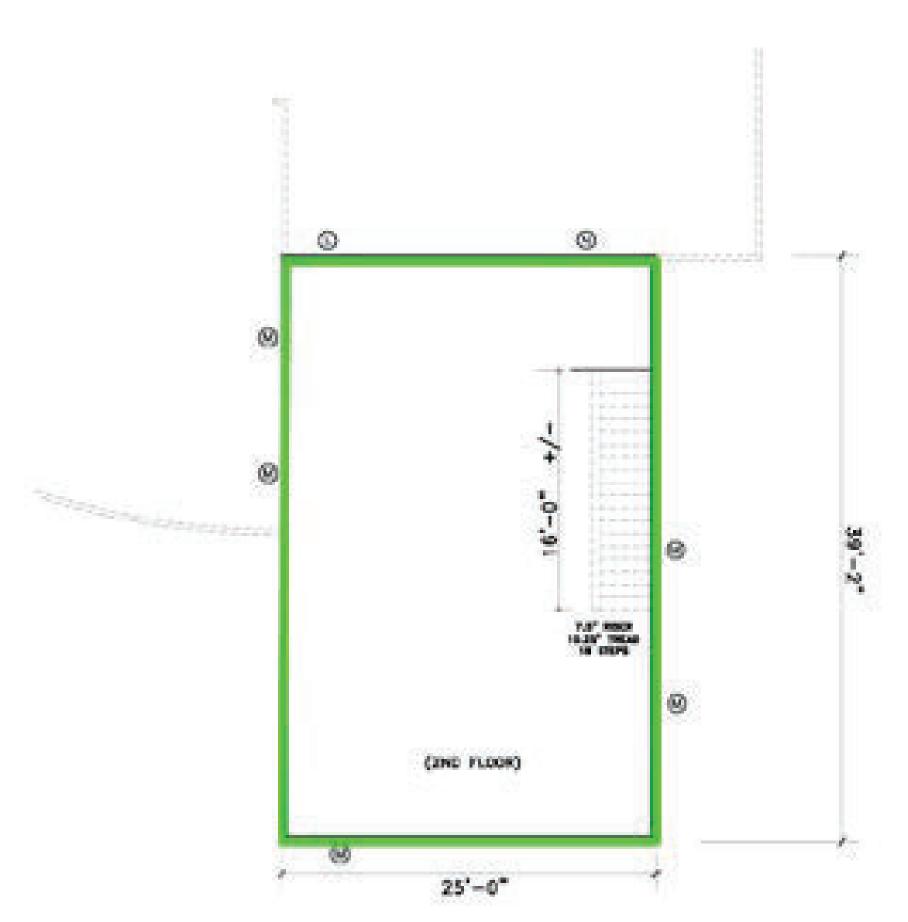
*Estimate is pre-tax and includes only BamCore panel system

*Shipping not included. Cost spot check can be provided upon request

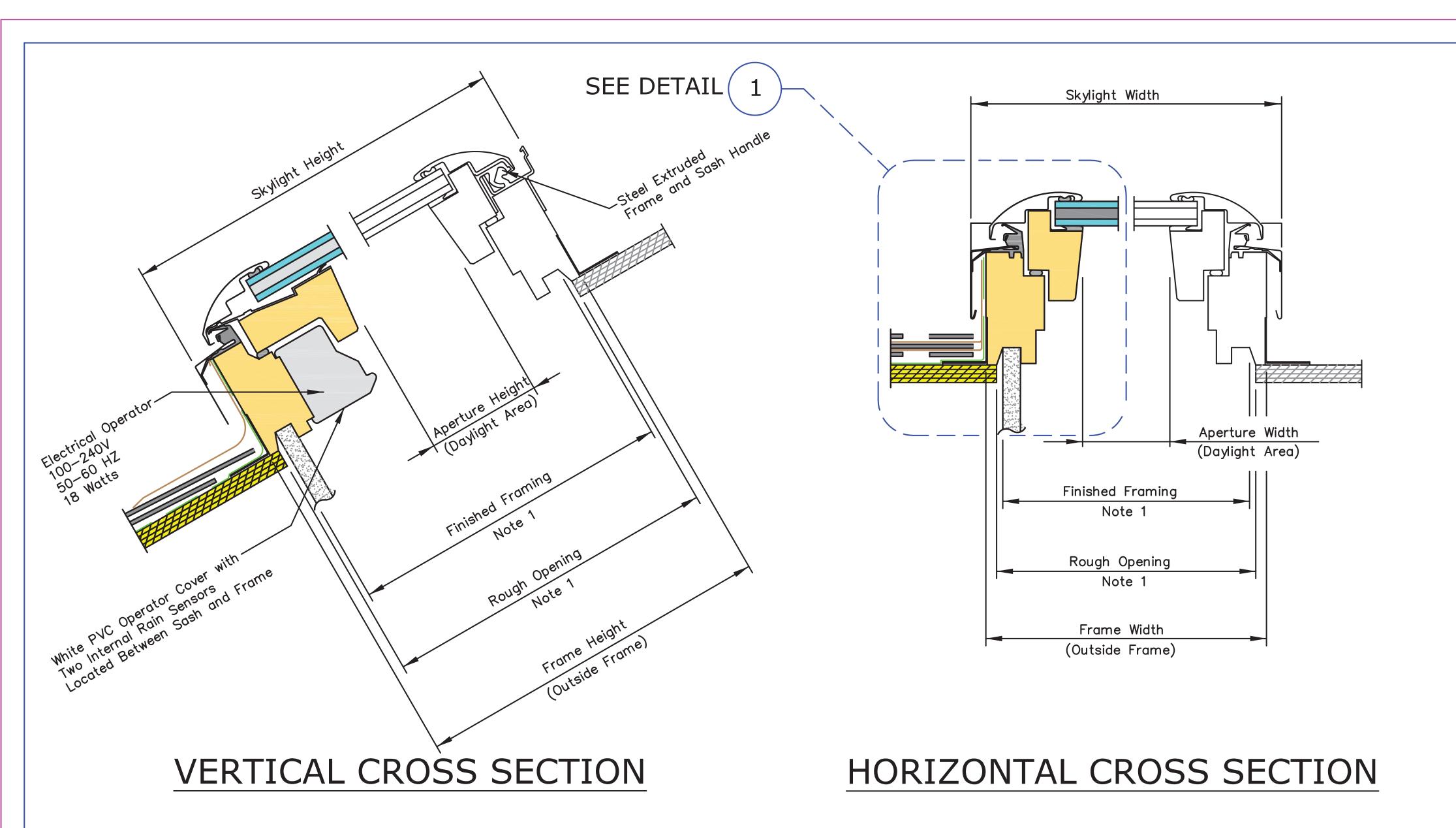
BamCore Takeoff Larson Residence

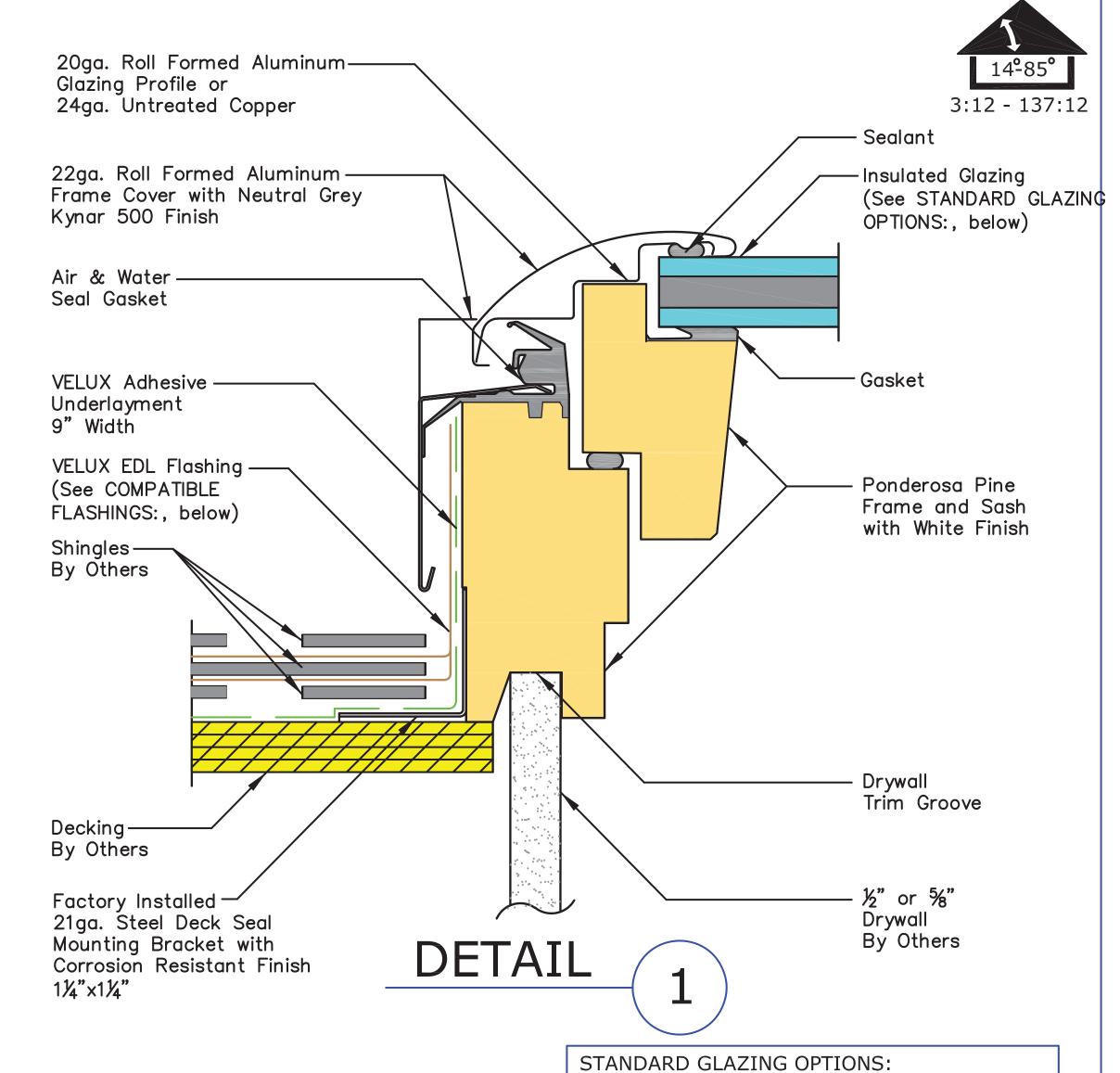


Utilization of BamCore Panels Level 1



Utilization of BamCore Panels Level 2





PRODUCT DIMENSIONS

METRIC UNITS (MILLIMETERS) Rough Rough Frame Frame Daylight Skylight Skylight Frame Frame Aperture Opening Opening Aperture Area Width Height Height Width (Sq. Meters) Height Width Width Height C01 720 533 546 566.7 695 519 407 .21 C04 1000 533 799 .33 546 407 566.7 975 C06 533 1175 999 1200 546 566.7 407 .41 533 1395 1219 .50 566.7 1420 546 407 1382 1000 763 799 776 637 796.7 975 .51 763 1175 999 1200 776 637 796.7 .64 1395 1219 1420 .78 763 776 637 796.7 1382 S01 1123 1136 .52 997 1156.7 695 S06 1123 997 1156.7 1162 1175 1136 999 1200 1.0

			IM	PERIAL UN	IITS	(INCH	ES)		
Size	Rough Opening Width	Frame Width	Frame Aperture Width	Skylight Width	Rough Opening Height	Frame Height	Frame Aperture Height	Skylight Height	Daylight Area (Sq. Feet)
C01	21	21 1/2	16	22 5/16	26 7/8	27 3/8	20 7/16	28 3/8	2.27
C04	21	21 1/2	16	22 5/16	37 7/8	38 3/8	31 7/16	39 3/8	3.50
C06	21	21 1/2	16	22 5/16	45 3/4	46 1/4	39 5/16	47 1/4	4.38
C08	21	21 1/2	16	22 5/16	54 7/16	54 15/16	48	55 15/16	5.34
M04	30 1/16	30 9/16	25	31 3/8	37 7/8	38 3/8	31 7/16	39 3/8	5.48
M06	30 1/16	30 9/16	25	31 3/8	45 3/4	46 1/4	39 5/16	47 1/4	6.86
M08	30 1/16	30 9/16	25	31 3/8	54 7/16	54 15/16	48	55 15/16	8.36
S01	44 1/4	44 3/4	39 1/4	45 9/16	26 7/8	27 3/8	20 7/16	28 3/8	5.57
S06	44 1/4	44 3/4	39 1/4	45 9/16	45 3/4	46 1/4	39 5/16	47 1/4	10.73

COMPATIBLE FLASHINGS:

• Laminated LowE3 (04)

- EDL Step flashing
- EKL/EKX Combi flashing

• Impact (06)

• Snowload (10)

- EDW Tile flashing
- EKW/EKX Combi tile flashing
- EDM Metal roof flashing
- ECB Counter flashing for curbs

ELECTRICAL/CONTROL DATA:

 VSE Skylight controlled via 2.4 GHZ radio frequency KLR 200 remote control provided with skylight. Optional controls for VSE Skylight are KLI 110 Wall Mounted Keypad or KLF 100 Home Automation Integration Kit.

*Tempered Exterior Pane used with all options

 Electrical Operator 100-240V, 50-60 HZ, 18 WATTS



VELUX 1418 Evans Pond Road Greenwood, SC 29649 1-800-88-VELUX www.VELUXUSA.com

VSE - Electric Venting Skylight

thickness and the design of the interior finish material.

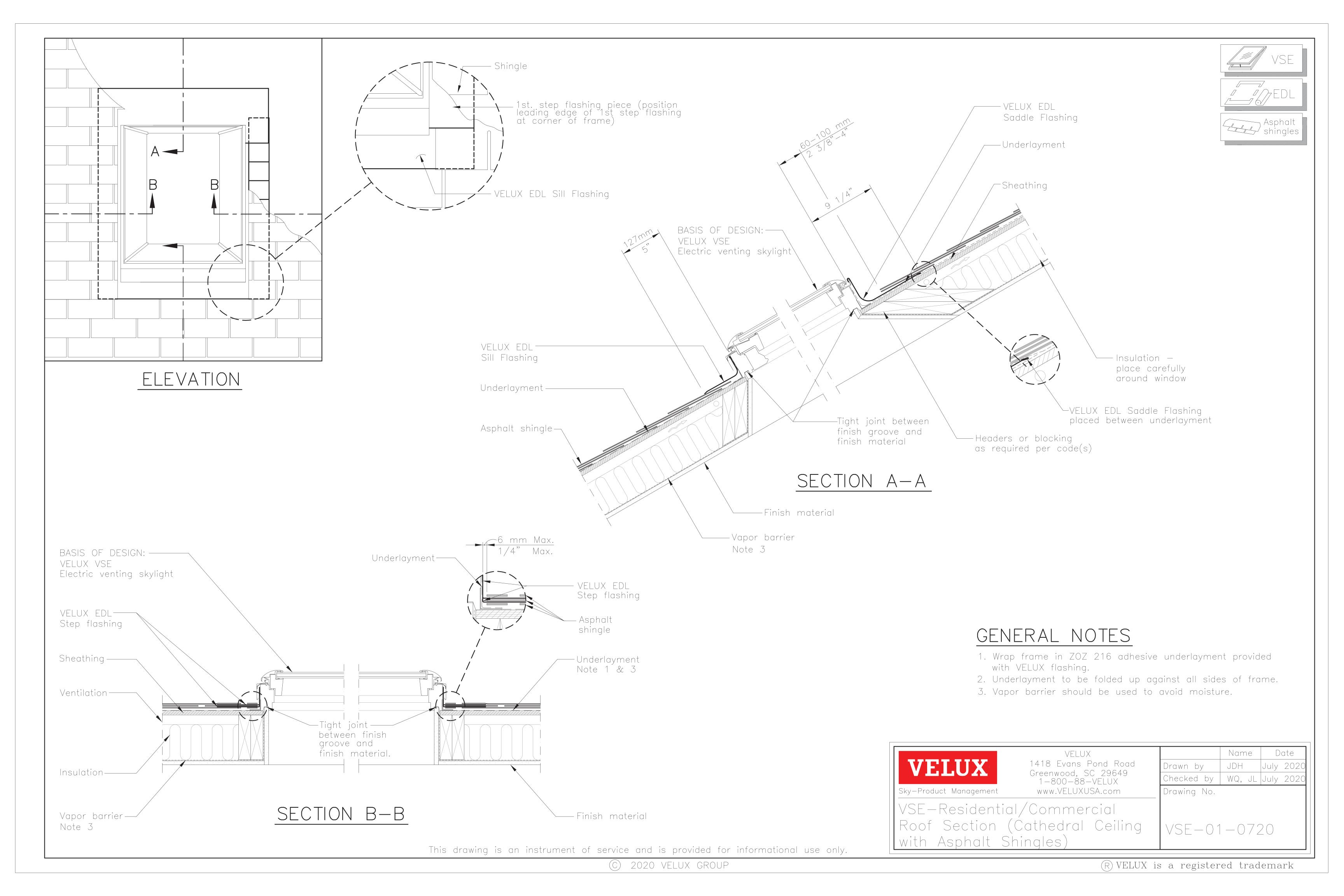
NOTES:

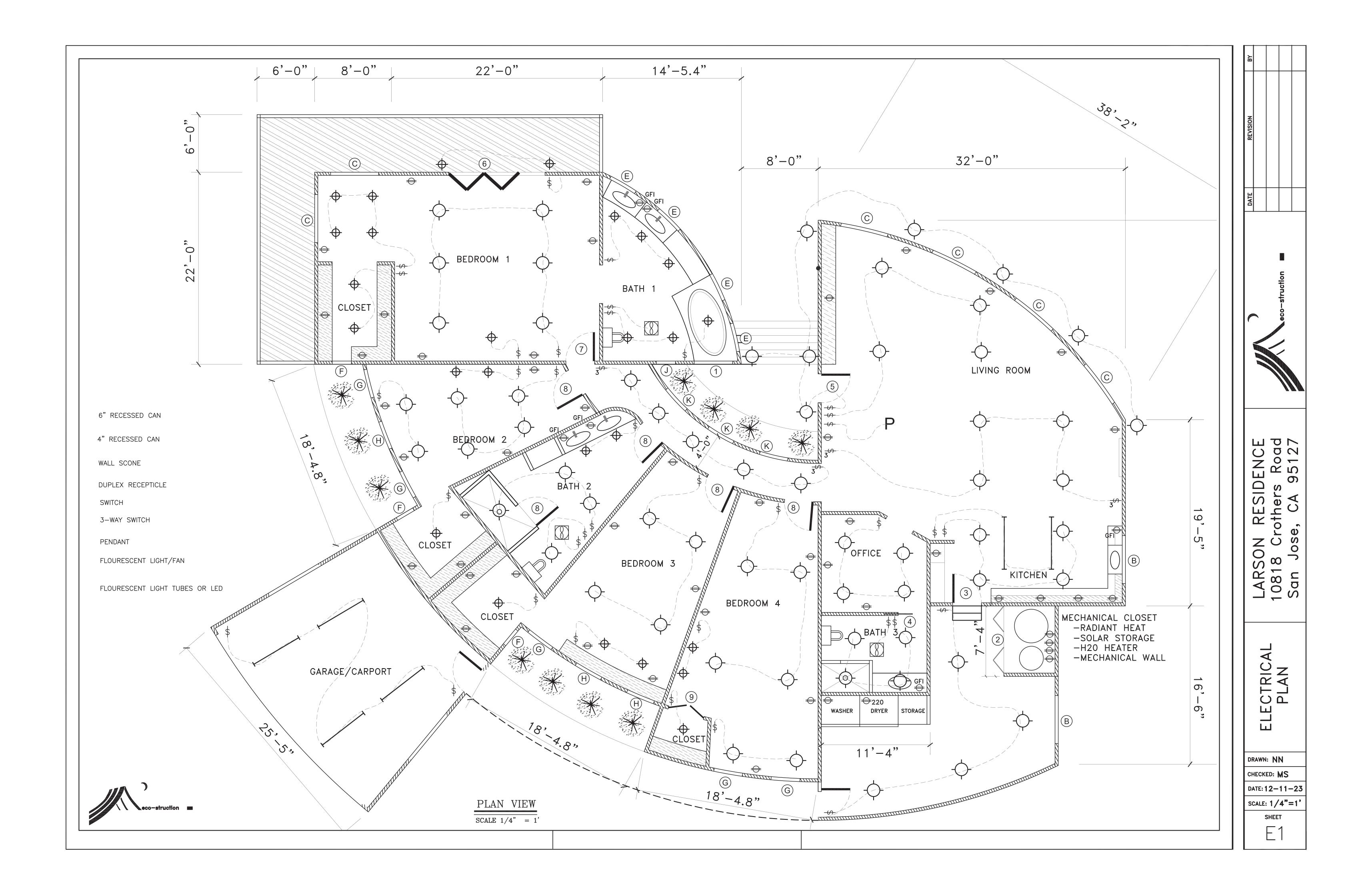
This drawing is an instrument of service and is provided for informational use only.

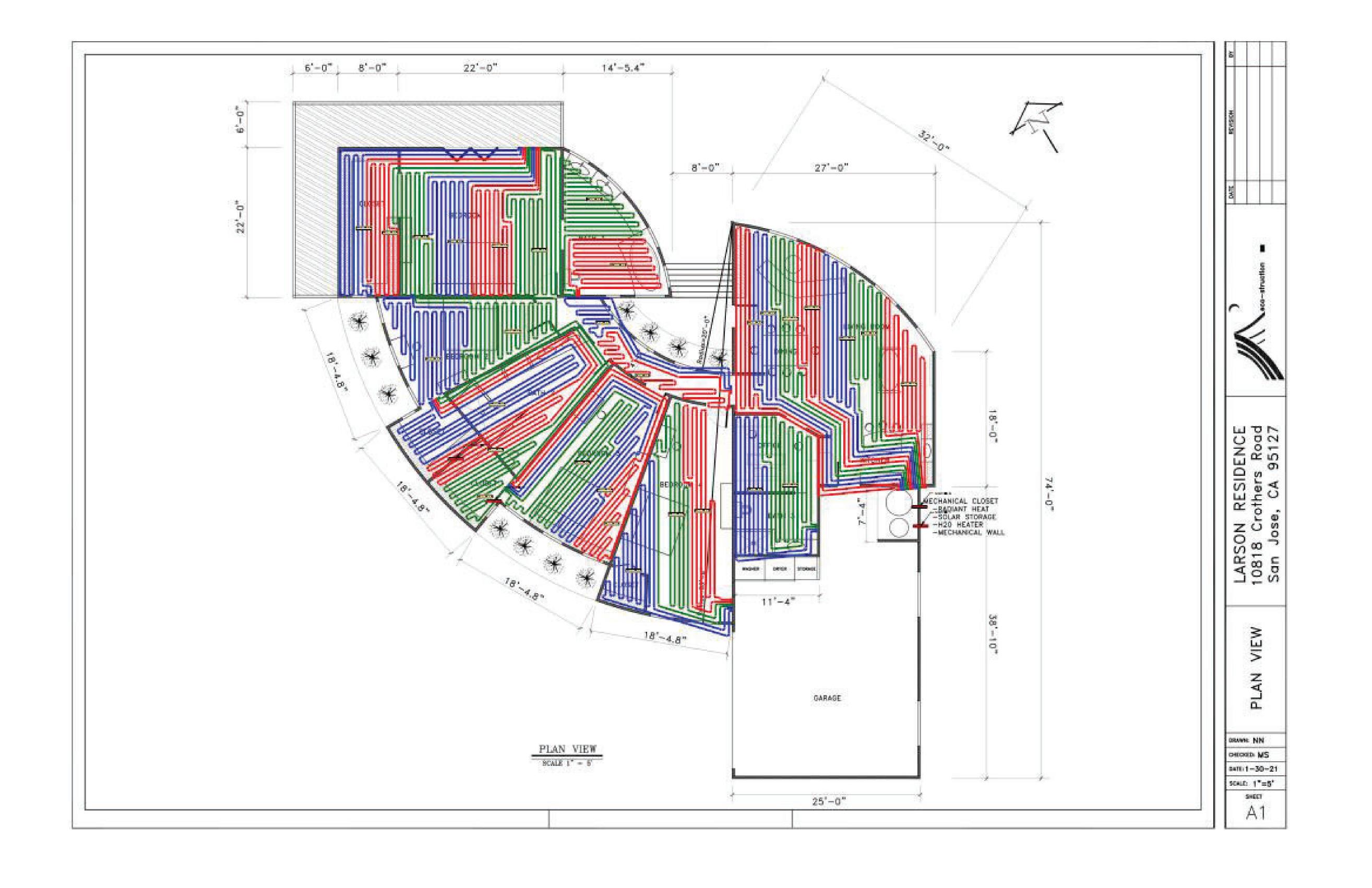
1. The ROUGH OPENING and FINISHED FRAMING dimensions are based on perpendicular interior finish material on all four sides and these dimensions will vary depending on the roof construction, the

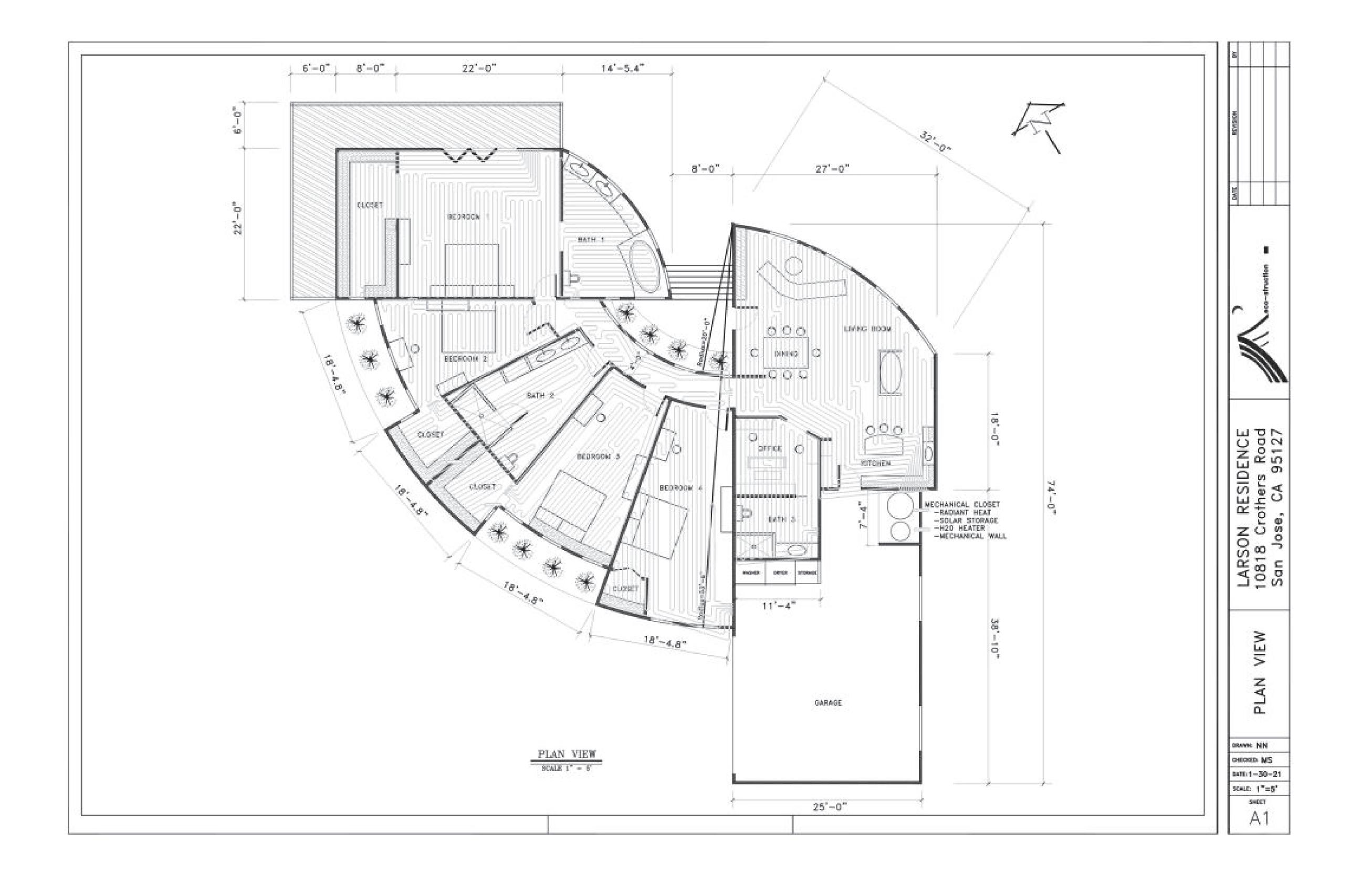


^{2.} Max sash opening is 11" by stainless steel chain.









WINDOW SCHEDULE

<u>LABEL</u>	BRAND	<u>SERIES</u>	QTY	STYLE	MATERIAL Int/ Ext.	SIZE WxH	TEMPERED	GLASS TYPE	LOW E	SWING	COLOR	SHUTTER	SCREEN	PLACEMENT	Int. Lintel	Ext. Lintel	SILL	RO - W/H
Α	Anderson	Е	2	GLIDE	Wood/Aluminum	4/0 - 4/0	N	Clr	Low E4/heatlock	ОХ	Sandtone	No	Yes	Exterior	N	N	Int - Wood	
В	Anderson	Е	1	GLIDE	Wood/Aluminum	5/0 - 3/0	Υ	Clr	Low E4/heatlock	ОХ	Sandtone	No	Yes	Exterior	N	N	Int - Wood	
С	Anderson	E	6	FIXED	Wood/Aluminum	5/0 - 6/0	Υ	Clr	Sun Glass	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
D	Anderson	E	2	FIXED	Wood/Aluminum	3/0 - 5/0	Υ	Clr	Smart Sun/heatlock	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
E	Anderson	E	3	FIXED	Wood/Aluminum	2/0 - 4/0	Υ	Clr	Smart Sun/heatlock	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
F	Anderson	E	3	FIXED	Wood Aluminum	2/0 - 6/0	Υ	Clr	Low E4/heatlock	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
G	Anderson	E	5	FIXED	Wood/Aluminum	2/6 - 6/0	Υ	Clr	Low E4/heatlock	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
н	Anderson	E	3	GLIDE	Wood/Aluminum	4/0 - 3/0	Υ	Clr	Low E4/heatlock	ОХ	Sandtone	No	No	Exterior	N	N	Int - Wood	
1	Anderson	E	1	FIXED	Wood/Aluminum	2/0 - 4/0	Υ	Cascade	Low E4/heatlock	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
J	Anderson	E	1	FIXED	Wood/Aluminum	1/6 - 6/0	Υ	Cascade	Low E4/heatlock	0	Sandtone	No	No	Exterior	N	N	Int - Wood	
К	Anderson	E	3	FIXED	Wood Aluminum	3/0 - 6/0	Υ	Clr	Low E4/heatlock	0	Sandtone	No	No	Exterior	N	N	Int-Wood	
L	Anderson	Е	3	AWNING	Wood Aluminum	2/0 - 2/0	Υ	Clr	Low E4/heatlock	Х	Santone	No	Yes	Exterior	N	N	Int - Wood	
M	Anderson	Е	5	FIXED	Wood/Aluminum	R=4' - Circular	Υ	Clr	Smart Sun/heatlock	0	Sandtone	No	No	Exterior	N	N	Int. Wood	
N	Anderson	E	1	FIXED	Wood/Aluminum	8/0 - 4/0 custom top	Υ	Clr	Smart Sun/heatlock	0	Sandtone	No	No	Exterior	N	N	Int-Wood	
О	Velux	VCE	10	Electric	Wood/Aluminum	2/0 - 4/0	Υ	Clr	Low E	Х	Brn	Yes	Yes	Curb Mounted	N	N	Sheetrock Wrap	
Р	Velux	FS	2	FIXED	Wood/Aluminum	3/0 - 3/0	Υ	Clr	Low E	0	Brn	Yes	No	Curb Mounted	N	N	Sheetrock Wrap	
Q	Velux	FS	3	FIXED	Wood/Aluminum	2/0 - 2/0	Υ	Clr	Low E	0	Brn	Yes	No	Curb Mounted	N	N	Sheetrock Wrap	

DOOR SCHEDULE

				_		_						_	_	_	_	_		
LABEL	BRAND	<u>SERIES</u>	QTY	<u>STYLE</u>	MATERIAL Int/ Ext.	SIZE WxH	TEMPERED	GLASS TYPE	LOW E	SWING	<u>COLOR</u>	1HR FIRE	<u>SCREEN</u>	<u>PLACEMENT</u>	Int. Lintel	Ext. Lintel	<u>SILL</u>	<u>RO - W</u>
1	Simpson	55	1	POCKET	Wood - Fir	3/0 - 7/0	N/A	N/A	N/A	PCKT	Stain	No	No	Center	N	N	No	
2	Simpson	63	2	BIFOLD	Wood - Fir	3/0 - 6/8	N/A	NA	N/A	TRACK	Stain	Yes	No	Exterior of Closet	N	N	Metal - By Others	
3	Simpson	55	1	SINGLE	Wood - Fir	3/0 - 7/0	N/A	NA	N/A	LHS	Stain	Yes	No	Center	N	N	No	
4	Simpson	55	1	POCKET	Wood - Fir	3/0 - 6/8	N/A	N/A	N/A	PCKT	Stain	No	No	Center	N	N	No	
5	Anderson	PIVOT	1	SINGLE	Glass/Aluminum	3/0 - 7/0	Υ	Monolythic	Smart Sun/heatlock	LHS	Sandtone	No	Yes	Interior	N	N	High performance Flush	
6	Anderson	FOLDING	1	4PNL	Glass/Aluminum	10/0 - 7/0 (2/6-3/8)	Υ	Clr	Smart Sun/heatlock	3L1R	Sandtone	No	Yes	Interior	N	N	High performance Flush	
7	Simpson	55	1	SINGLE	Wood - Fir	3/0 - 7/0	N/A	N/A	N/A	RHS	Stain	No	No	Exterior towards Hall	N	N	No	
8	Simpson	55	4	SINGLE	Wood - Fir	3/0 - 6/8	N/A	N/A	N/A	LHS	Stain	No	No	Exterior of Hall	N	N	No	
9	Simpson	FOLDING	1	BIFOLD	Wood - Fir	4/0 - 6/8	N/A	N/A	N/A	TRACK	Stain	No	No	Exterior of Room	N	N	No	
10	Carriage	SONOMA	1	GARAGE	Glass/Wood	18/0 - 7/0	No	Obscure	N/A	x	Stain	No	No	Center	N	N	As per Manuf.	

LARSON RESIDENCE 10818 Crothers Road San Jose, CA 95127

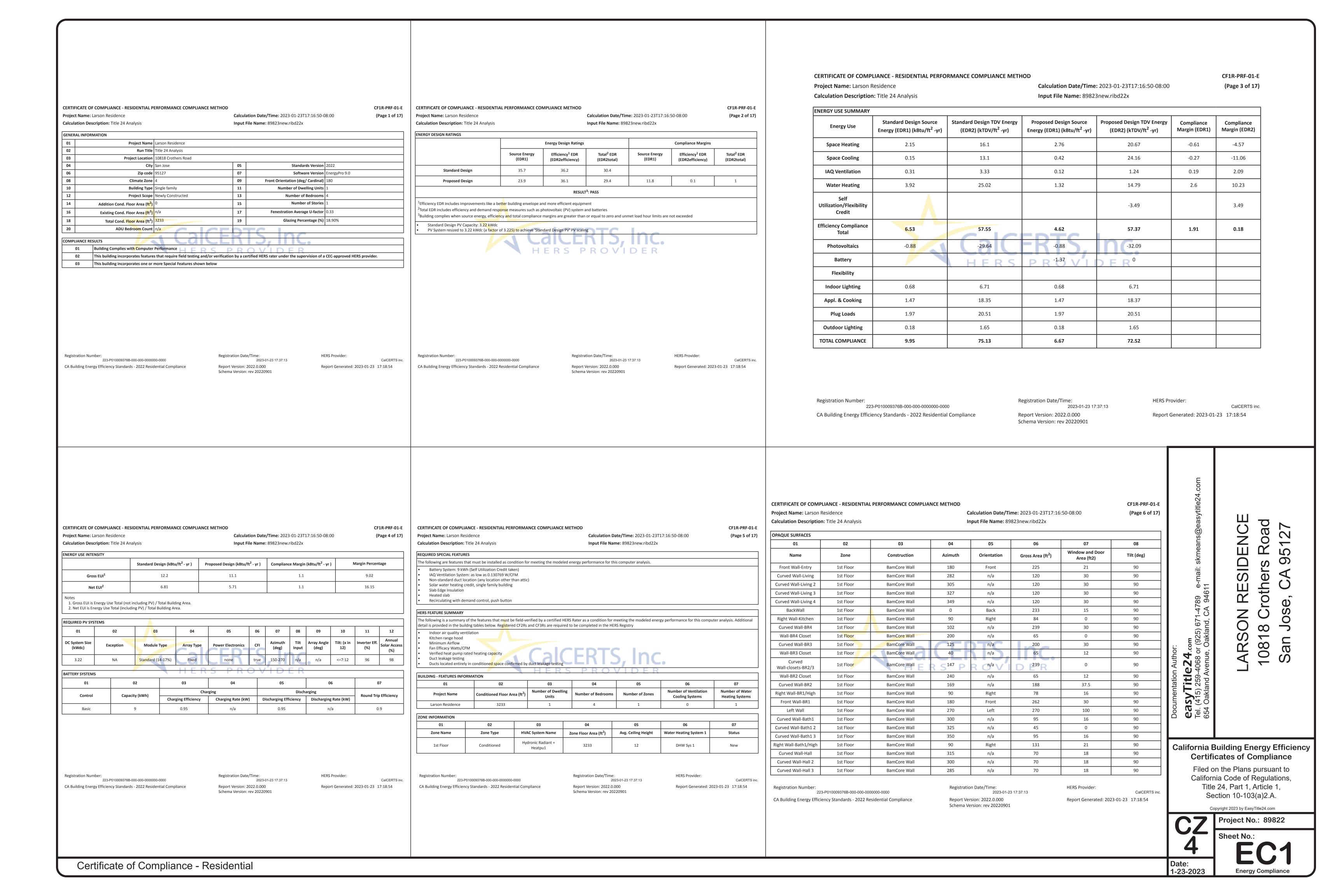
WINDOW SCHEDULE
DOOR SCHEDULE

CHECKED: MS

DATE: 2-22-23

SCALE: AS NOTED

SHEET



Roof 3:12	CERTIFICATE OF Project Name: I Calculation Des OPAQUE SURFAC	arson	Residenc		PERFORMA	NCE C	OMPLIA	ANCE ME	тно
BamCore Adj.Garage	01			02		03			04
2x6 Adj.Garage								1	
GarageWallLeft							l1	+	
GarageWallBack								+	
OPAQUE SURFACES - CATHEDRAL CEILINGS 01 02 03 04 05 Name Zone Construction Azimuth Orientation Roof 3:12 Liv/Din 1st Floor R-30 No Attic 315 n/a Roof 3:12 Kit/Off 1st Floor R-30 No Attic 90 Right Roof 5:12 BR4 1st Floor R-30 No Attic 285 n/a Roof 0.25:12 BR2/BR3/Hall 1st Floor R-30 No Attic 300 n/a Roof 2:12 closets/bath 2 1st Floor R-30 No Attic 315 n/a Roof 2:12 BR1 1st Floor R-30 No Attic 270 Left Roof 2:12 Bath1 1st Floor R-30 No Attic 325 n/a Mezzanine Roof 1.5:12 Garage Garage Roof 0 Back Registration Number: 223-P010009376B-000-000-0000000000000000000000000000									
01 02 03 04 05 Name Zone Construction Azimuth Orientation Roof 3:12 Liv/Din 1st Floor R-30 No Attic 315 n/a Roof 3:12 Kit/Off 1st Floor R-30 No Attic 90 Right Roof 3:12 Kit/Off 1st Floor R-30 No Attic 285 n/a Roof 5:12 BR4 1st Floor R-30 No Attic 300 n/a Roof 2:12 BR2/BR3/Hall 1st Floor R-30 No Attic 315 n/a Roof 2:12 closets/bath 2 1st Floor R-30 No Attic 270 Left Roof 2:12 BR1 1st Floor R-30 No Attic 325 n/a Mezzanine Roof 1.5:12 Garage Garage Roof 0 Back Registration Number: 223-P010009376B-000-000-0000000000000000000000000000	GarageWallRi	ght	(Garage	BamC	ore Wa	II		90
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Roof 0.25:12 BR2/BR3/Hall 1st Floor R-30 No Attic 300 n/a Roof 2:12 closets/bath 2 1st Floor R-30 No Attic 315 n/a Roof 2:12 BR1 1st Floor R-30 No Attic 270 Left Roof 2:12 Bath1 1st Floor R-30 No Attic 325 n/a Mezzanine Roof 1.5:12 Garage Garage Roof 0 Back Registration Number: 223-P010009376B-000-000-00000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance	Kit/Off					П			
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	CA Building Ener	22				pliance			Rep
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Name Type Surface Orientation Azimuth (ft) (ft) K 2 Window Curved Wall-Hall 2 285 M X 2 Window GarageWallFro nt 180 L 3 Window GarageWallLeft Left 270 N Window GarageWallLeft Left 270 M Window GarageWallBac Back 0 A X 2 Window GarageWallRig ht Pight 90 M X 2 Window GarageWallRig Right 90 M X 2 Window GarageWallRig Right 90 Roof 3:12	CERTIFICATE OF Project Name: It Calculation Des FENESTRATION / 01 Name K 2 K 3 M X 2 L 3 N M A X 2 M X 2.	gy Efficiency Efficien	PLIANCE Residence On: Title 2 NG O2 ype Indow	- RESIDENTIAL Cee. 24 Analysis O3 Surface Curved Wall-Hall 2 Curved Wall-Hall 3 GarageWallFro nt GarageWallLeft GarageWallRig ht GarageWallRig ht GarageWallRig ht	PERFORMA O4 Orientation Front Left Left Back Right	Azi	OMPLIA 05 muth 285 180 270 0 90	06 Width	THC O Hei
Name Type Surface Orientation Azimuth (ft) (ft) (ft) K 2 Window Curved Wall-Hall 2 300 300 300 K 3 Window Curved Wall-Hall 3 285 300 M X 2 Window GarageWallFro nt Front 180 L 3 Window GarageWallLeft Left 270 N Window GarageWallBac Back 0 0 M Window GarageWallRig Right 90 0 M X 2 Window GarageWallRig Right Right 90 VCE 2246 O X 2 Skylight Roof 3:12 Liv/Din 315	CERTIFICATE OF Project Name: It Calculation Des FENESTRATION / 01 Name K 2 K 3 M X 2 L 3 N M A X 2 M X 2 M X 2	gy Efficiency Efficien	PLIANCE Residence On: Title 2 NG O2 ype Indow	- RESIDENTIAL Idea 24 Analysis 03 Surface Curved Wall-Hall 2 Curved Wall-Hall 3 GarageWallFro nt GarageWallLeft GarageWallRig ht GarageWallRig ht Roof 3:12 Liv/Din	PERFORMA O4 Orientation Front Left Left Back Right	Azi	OMPLIA 05 muth 285 180 270 0 90	06 Width	Reg Sch
Name Type Surface Orientation Azimuth (ft) (ft) K 2 Window Curved Wall-Hall 2 300 285 K 3 Window Curved Wall-Hall 3 285 M X 2 Window GarageWallFro nt Front 180 L 3 Window GarageWallLeft Left 270 N Window GarageWallLeft Left 270 M Window GarageWallBac k Back 0 A X 2 Window GarageWallRig ht Right 90 M X 2. Window Roof 3:12 315	CERTIFICATE OF Project Name: It Calculation Des FENESTRATION / 01 Name K 2 K 3 M X 2 L 3 N M A X 2 M X 2. VCE 2246 O X 2	gy Efficiency F COMIL Arson Criptic GLAZII Wir Wir Wir Wir Wir Wir Sky	PLIANCE - Residence On: Title 2 NG O2 ype Indow	- RESIDENTIAL Cee 24 Analysis 03 Surface Curved Wall-Hall 2 Curved Wall-Hall 3 GarageWallFro nt GarageWallLeft GarageWallRig ht GarageWallRig ht Roof 3:12 Liv/Din Roof 3:12	PERFORMA O4 Orientation Front Left Left Back Right	Azi	OMPLIA 05 muth 800 285 180 270 0 90 91	06 Width	Reg Sch

OMPLIANCE METHOD CF1R-PRF-01-E (Page 10 of 17) Calculation Date/Time: 2023-01-23T17:16:50-08:00 Input File Name: 89823new.ribd22x 14 SHGC SHGC Source 0.3 NFRC 0.24 NFRC NFRC 0.3 0.24 Bug Screer 0.3 NFRC 0.24 Bug Screer 0.24 NFRC Bug Screen 0.3 NFRC 0.24 NFRC Bug Screen NFRC Bug Screen 48 0.31 NFRC 0.22 NFRC Bug Screen NFRC 0.24 NFRC Bug Screen 0.52 NFRC 0.24 NFRC NFRC 0.26 NFRC NFRC NFRC FS M02 P 2 Skylight Roof 5:12 BR4 285 0.44 0.26 Roof 0.25:12 300 0.52 NFRC NFRC VCE 2246 O 0.24 BR2/BR3/Hall Roof 0.25:12 FS M02 P 3 300 6.26 0.44 NFRC 0.26 NFRC BR2/BR3/Hall HERS Provider: Registration Date/Time: 223-P010009376B-000-000-0000000-0000 2023-01-23 17:37:13 CalCERTS inc CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Generated: 2023-01-23 17:18:54 Report Version: 2022.0.000 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Larson Residence

Calculation Description: Title 24 Analysis

CF1R-PRF-01-E

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08

Tilt (deg)

n/a

90

90

No

No

No

No

No

CalCERTS inc

Window and Door

Area (ft2)

151.13

34

12.57

73.13

0.85

0.85

0.85

0.85

0.85

0.85

0.85

Report Generated: 2023-01-23 17:18:54

Roof

Reflectance

0.1

0.1

0.1

0.1

HERS Provider:

Calculation Date/Time: 2023-01-23T17:16:50-08:00

Gross Area (ft²)

524

160

678

Roof Rise (x in

12)

0.3

Input File Name: 89823new.ribd22x

Orientation

n/a

Back

Right

(ft²)

6.26

21.8

3.58

2023-01-23 17:37:13

Area (ft²)

358

616

572

200

Registration Date/Time:

Report Version: 2022.0.000

Schema Version: rev 20220901

Calculation Date/Time: 2023-01-23T17:16:50-08:00 Input File Name: 89823new.ribd22x

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Door 5	Window	Front Wall-Entry	Front	180			1	21	0.35	NFRC	0.17	NFRC	Bug Screen
С	Window	Curved Wall-Living		282			1	30	0.3	NFRC	0.24	NFRC	Bug Screen
C 2	Window	Curved Wall-Living 2		305			1	30	0.3	NFRC	0.24	NFRC	Bug Screen
C 3	Window	Curved Wall-Living 3		327			1	30	0.3	NFRC	0.24	NFRC	Bug Screen
C 4	Window	Curved Wall-Liv <mark>in</mark> g 4		349		E	1	30	0.3	NFRC	0.24	NFRC	Bug Screen
В	Window	BackWall	Back	0			1	15	0.31	NFRC	0.22	NFRC	Bug Screen
G X 2	Window	Curved Wall-BR4		102	i ()		1	30	0.3	NFRC	0.24	NFRC	Bug Screen
H X 2	Window	Curved Wall-BR3		125			1	15	0.31	NFRC	0.22	NFRC	Bug Screen
G	Window	Curved Wall-BR3		125			1	15	0.3	NFRC	0.24	NFRC	Bug Screen
F	Window	Wall-BR3 Closet		40			1	12	0.3	NFRC	0.24	NFRC	Bug Screen
F 2	Window	Wall-BR2 Closet		240			1	12	0.3	NFRC	0.24	NFRC	Bug Screen
G X 2.	Window	Curved Wall-BR2		169			1	30	0.3	NFRC	0.24	NFRC	Bug Screen

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

315

315

270

325

02___

Side of Building

2x6 Adj.Garage

GarageWallFront

Perimeter (ft)

329

128

03

Area (ft²)

3233

762

Surface

closets/bath 2

closets/bath 2

Roof 2:12 BR1

Roof 2:12

Mezzanine

Roof 1.5:12

Project Name: Larson Residence

FENESTRATION / GLAZING

Name

FS D26 Q X 2

VCE 2246 O 2

VCE 2246 O X 3

FS D26 Q

Skylight O X 3

OPAQUE DOORS

SLAB FLOORS

01

Heated Slab

GarageSlab

Calculation Description: Title 24 Analysis

Туре

Skylight

Skylight

Skylight

Skylight

Skylight

Name

Door 3

GarageDoor 10

1st Floor

__Garage__

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-23 17:37:13 Report Version: 2022.0.000 Schema Version: rev 20220901

Calculation Date/Time: 2023-01-23T17:16:50-08:00

U-factor

0.44

0.52

0.52

0.44

0.52

03

Area (ft²)

126

Edge Insul. R-value

and Depth

none

2023-01-23 17:37:13

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Report Version: 2022.0.000

Schema Version: rev 20220901

U-factor Source

NFRC

NFRC

NFRC

NFRC

NFRC

06

Edge Insul. R-value

and Depth

48

0

SHGC

0.26

0.24

0.26

0.24

Carpeted Fraction

0%

HERS Provider:

SHGC Source

NFRC

NFRC

NFRC

NFRC

NFRC

U-factor

0.2

Report Generated: 2023-01-23 17:18:54

80

Yes

No

CalCERTS inc.

Input File Name: 89823new.ribd22x

HERS Provider: CalCERTS inc. Report Generated: 2023-01-23 17:18:54

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14

Exterior Shading

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **Project Name:** Larson Residence

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-23T17:16:50-08:00

Input File Name: 89823new.ribd22x

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CalCERTS inc.

ENCE

SID

R

SON

Road

0

0

W

S

0

an

08

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Н	Window	Curved Wall-BR2		169			1	7.5	0.31	NFRC	0.22	NFRC	Bug Screen
F 3	Window	Right Wall-BR1/High	Right	90			1	12	0.31	NFRC	0.22	NFRC	Bug Screen
L	Window	Right Wall-BR1/High	Right	90			1	4	0.31	NFRC	0.22	NFRC	Bug Screen
C 5	Window	Front Wall-BR1	Front	180			1	30	0.3	NFRC	0.24	NFRC	Bug Screen
C 6	Window	Left Wall	Left	270			1	30	0.3	NFRC	0.24	NFRC	Bug Screen
Door 6	Window	Left Wall	Left	270			1	70	0.3	NFRC	0.2	NFRC	Bug Screen
E X 2	Window	Curved Wall- <mark>Bat</mark> h1	7	300	RS	م ا	R C	16	0.3	NFRC	0.24	NFRC	Bug Screen
E X 2.	Window	Curved Wall-Bath1 3		350)		1	16	0.3	NFRC	0.24	NFRC	Bug Screen
I	Window	Right Wall- Bath1/High	Right	90			1	8	0.31	NFRC	0.22	NFRC	Bug Screen
J	Window	Right Wall- Bath1/High	Right	90			1	9	0.31	NFRC	0.22	NFRC	Bug Screen
L 2	Window	Right Wall- Bath1/High	Right	90			1	4	0.31	NFRC	0.22	NFRC	Bug Screen
К	Window	Curved Wall-Hall		315			1	18	0.3	NFRC	0.24	NFRC	Bug Screen

223-P010009376B-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Project Name: Larson Residence Calculation Description: Title 24 Analysis

Registration Number:

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Calculation Date/Time: 2023-01-23T17:16:50-08:00 Input File Name: 89823new.ribd22x

Registration Date/Time:

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HERS Provider:

Report Generated: 2023-01-23 17:18:54

easyTitle Tel. (415) 259-40 654 Oakland Ave

OPAQUE SURFACE CONSTRUCTIONS 08 06 Interior / Exterior **Total Cavity Construction Name** Surface Type **Construction Type U-factor Assembly Layers** Continuous R-value R-value Inside Finish: Gypsum Board Sheathing / Insulation: R-5 Sheathing BamCore Wall Wood Framed Wall 2x6 @ 24 in. O. C. R-23 5 / None 0.045 **Exterior Walls** Cavity / Frame: R-23 / 2x6 Exterior Finish: 3 Coat Stucco Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Wood Framed **Cathedral Ceilings** R-0 0.494 Garage Roof 2x4 @ 24 in. O. C. None / None Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood None / None Wood Framed R-30 R-30 No Attic 2x12 @ 16 in. O. C. 0.036 Cathedral Ceilings Siding/sheathing/decking Cavity / Frame: R-30 / 2x12 Inside Finish: Gypsum Board DC DD Inside Finish: Gypsum Board Sheathing / Insulation: R-5 Sheathing BamCore Wall1 2x6 @ 24 in. O. C. R-23 0.043 Wood Framed Wall 5 / None Interior Walls Cavity / Frame: R-23 / 2x6 Other Side Finish: Gypsum Board Inside Finish: Gypsum Board R-21 0.064 Cavity / Frame: R-21 / 2x6 Wood Framed Wall 2x6 @ 16 in. O. C. None / None 2x6 Wall Interior Walls Other Side Finish: Gypsum Board

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

Registration Number: 223-P010009376B-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-23 17:37:13 Report Version: 2022.0.000 Schema Version: rev 20220901

HERS Provider: CalCERTS inc. Report Generated: 2023-01-23 17:18:54

California Building Energy Efficiency **Certificates of Compliance**

Filed on the Plans pursuant to California Code of Regulations, Title 24, Part 1, Article 1, Section 10-103(a)2.A.

Copyright 2023 by EasyTitle24.com **Sheet No.:**

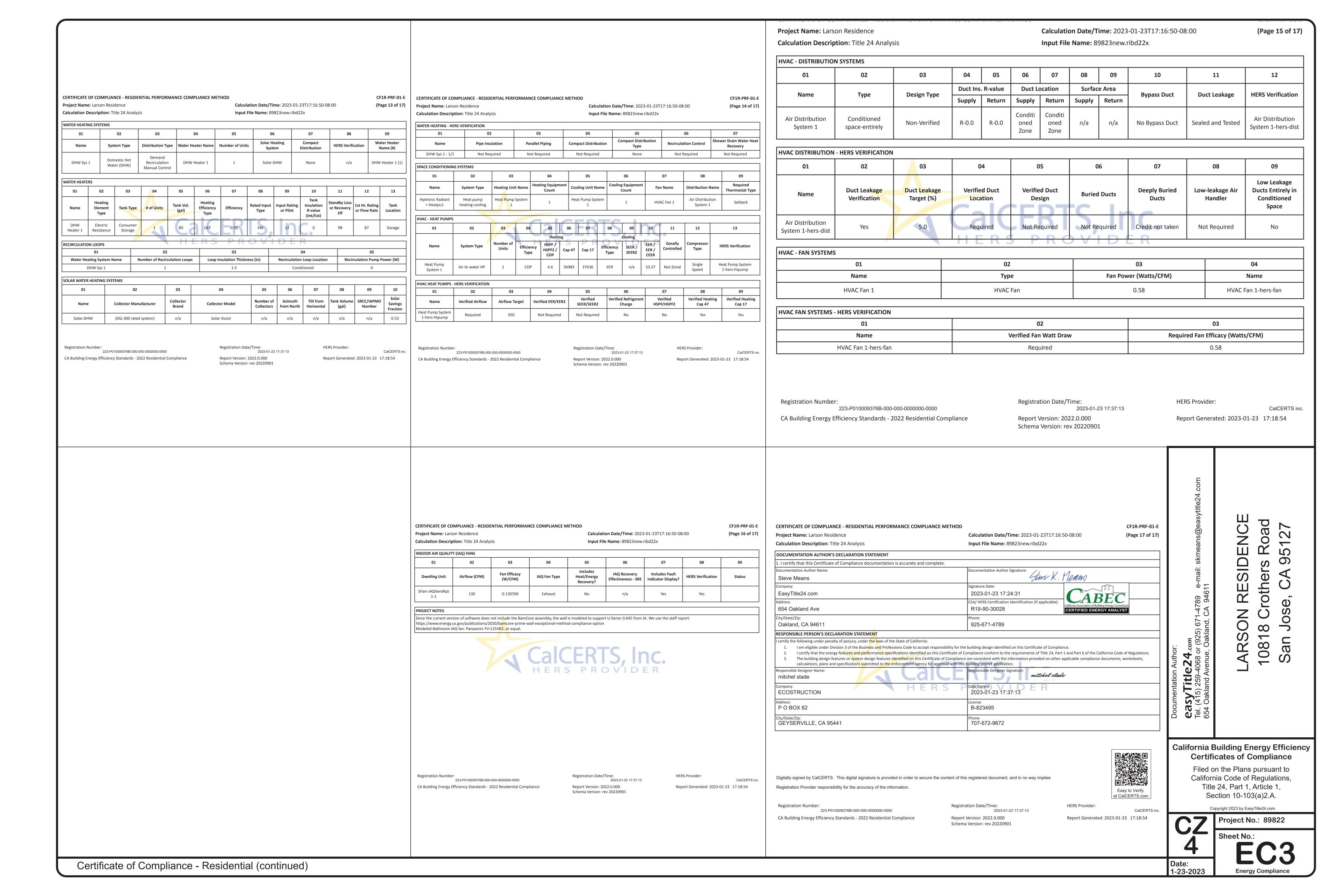
Project No.: 89822

Certificate of Compliance - Residential

Date:

1-23-2023

Energy Compliance





2022 Single-Family Residential Mandatory Requirements Summary

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

§ 150.0(e)3:

§ 110.2(c):

Space Conditioning, Water Heating, and Plumbing System:

(04/2022)	
Building Envelo	pe:
§ 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.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.
Fireplaces, Dec	orative 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.
8 150 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.

the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.

Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other

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

Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a

nsulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with

HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *

Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

§ 110.0-§ 110.3: regulated appliances must be certified by the manufacturer to the California Energy Commission

Kitchen Range Hoods

hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

Airflow, controls, and HERS verification requirements for range hoods depend on the kitchen configuration (enclosed or nonenclosed), area of the dwelling unit, and whether the range is electric or gas. Demand controlled range hoods with minimum Capture Efficiency [CE] rating or minimum CFM ratings, according to the Table below may be installed in any kitchen. The maximum sound rating is 3.0 Sones at any speed setting of 100 CFM or higher (per ASHRAE 62.2). Range hoods must be chosen from this directory: https://www.hvi.org/hvi-certifiedproducts-directory/section-i-complete-product-listing/, or this one: https://www.aham.org/AHAM/What_We_Do/Range_Hood_Program_ Company Listing.aspx. Be careful when choosing. Save the box the unit comes in to show the HERS Rater. The HERS Rater will need to

Dwelling Unit Floor Area (ft2)	Hood Over Electric Range	Hood Over Natural Gas Range
> 1500	50% CE or 110 CFM	70% CE or 180 CFM
> 1000 - 1500	50% CE or 110 CFM	80% CE or 250 CFM
750 - 1000	55% CE or 130 CEM	85% CE or 280 CEM

Fan HERS Measures - Basic Descriptions

verify that the installed unit is listed in the above database, and meets all criteria. In-line and remote mounted fans that are further than 4 feet from the grille/register have no sound requirements. For enclosed kitchens only: "local exhaust" and/or "Indoor Air Quality" requirements may be met by a range hood, or

wall or ceiling exhaust fan that can provide 5 Air Changes per Hour (ACH) of *continuous* ventilation for the room. [Such a fan may be the exhaust component of a balanced IAQ system

without heat exchange, if desired. See "IAQ (Indoor Air Quality) Fans" - "Balanced" below].

IAQ (Indoor Air Quality) Fans If the "IAQ (Indoor Air Quality) Fans" section of Title 24 form CF1R-PRF-01E says "Not Required" under **HERS Verification**, then this type of fan is <u>not</u> required. If it says "Yes" under **HERS Verification**, then this type of fan <u>is</u> required. Fans must be manually switched (no humidistat), and rated for continuous operation. The fan switch must be labeled as the "... indoor air quality ventilation for the house..." as required by ASHRAE 62.2. Appropriate products must normally be chosen from this directory: https://www.hvi.org/hvi-certified-products-<u>directory/section-i-complete-product-listing/</u>. For very small dwellings, a thru-wall unit might be ideal; however, those are not currently listed in the directory (see Note at bottom). Be sure to save the box the unit comes in to show the HERS Rater. Next, look under the heading IAQ **Fan Type** and go to the appropriate bullet-point:

- Exhaust: This is an exhaust-only (negative pressure) system. Often, a Bathroom exhaust fan will double as the IAQ fan. Kitchen Range Hoods are not allowed to provide exhaust-only IAQ ventilation. The fan's sound rating cannot be higher than 1.0 Sones at a rate no less than the IAQ CFM requirement (unless it is a remote in-line fan at least 4 feet from the grille/register). The number under IAQ CFM is the minimum CFM rating at a static pressure of 0.25 in. The number under IAQ Watts/CFM is multiplied times the CFM rating of the chosen fan to determine the wattage rating that it cannot exceed. If the chosen fan's wattage is too high, then you must choose a different product that meets the given fan watt efficacy. IAQ fans are exempt from CalGreen's humidistat control requirement, and occupants must be able to override any automatic controls, because--in theory--this fan must be on at all times when the building is occupied. Do not switch together with a light. The HERS Rater will measure the airflow, and look at product specifications to find the rated wattage.
- Balanced: This is normally a Heat Recovery Ventilator (HRV); although systems without heat exchange may be installed if the Certificate of Compliance has no SRE nor ASRE requirements. The same sound requirements given above for *Exhaust* systems apply to fans in balanced systems without heat exchange. In addition to meeting the minimum IAQ CFM and maximum IAQ Watts/ **CFM** (for the average supply/return airflow), these fans have these additional requirements: 1) The Sensible Recovery Efficiency (SRE) in the directory must be equal to, or greater than, the number under IAQ Recovery Effectiveness - SRE on the Certificate of Compliance; 2) The Apparent Sensible Recovery Efficiency (ASRE) in the directory must be equal to, or greater than, the number under IAQ Recovery Effectiveness - ASRE on the Certificate of Compliance; 3) The installed exhaust airflow rate cannot be more than 20% more or less than the <u>supply</u> airflow rate; 4) Meet any additional requirements listed in the **REQUIRED SPECIAL FEATURES** section of the Certificate of Compliance; and 5) MERV-13 or HEPA filtration on the intake (check manufacturer's literature). These criteria may not be immediately apparent in the directory listing, and these units often have variable speed settings. To discover if a particular fan—at a particular speed setting—meets these requirements at 32°F and 0.25 in WC, you have to click the "More Details" button for the particular fan within the directory. HRV fans have 4 ports: exhaust from inside, supply to inside, exhaust to outside, and intake from outside. Only the exhaust from inside leg may run from a Bathroom (in which case, the unit must be controlled from inside that Bathroom), but it must not come from an enclosed kitchen, nor from within 12 feet of an oven or range to keep grease and other contaminants out of the heat exchanger. Follow manufacturer's installation instructions. Units must be accessible for filter changing. Jump ducts, and/or significant door undercuts may be necessary for good airflow throughout the dwelling. The HERS Rater will measure both the supply and exhaust airflows, and look at product specifications to find the rated wattage and

Note: If a thru-wall HRV fan is mentioned in the PROJECT NOTES section of the Certificate of Compliance, allowing it is at the discretion of the building official (planchecker), because those kinds of units are not yet listed by HVI. This note hereby brings this to the attention of the building official. If these plans are approved, then the fan mentioned in PROJECT NOTES is allowed.

Note: If an HRV unit will be connected to the HVAC return, and controlled in tandem with the cycling FAU fan, then the minimum IAQ CFM shall be **triple** that listed in this report. (HVAC fans are assumed to be on 20 minutes each hour.)



2022 Single-Family Residential Mandatory Requirements Summary

EMERGY COMMISSION	
§ 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.
ucts 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.
	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC

CIS allu Falls.	
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 ½", 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.
	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. Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic § 150.0(m)7: Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, § 150.0(m)8: manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. **Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. § 150.0(m)9: 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 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.

Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
olar Readiness	
§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
	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

requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 §110.10(b)1A: 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. Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for

roof dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family

circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

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 be 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 pole

Electric and Energy Storage Ready:



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 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

Ventilation and Indoor Air Quality

entilation and In	ndoor Air Quality:
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed 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 must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G
ool and Spa Sys	stems and Equipment:
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
	Directional Inlets and Time Switches for Pools Pools must have directional inlets that adequately mix the nool water, and a time

110.1(a).	the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.

Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump

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

Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.

§ 110.5:

2022 Single-Family Residential Mandatory Requirements Summary

ENERGY COMMISSION	
§ 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."

*Exceptions may apply.

§10-103(b)1.A: Compliance Information. At final inspection, builder/installers shall leave in the building copies of the completed, signed, and submitted compliance documents for the building owner at occupancy. For low-rise residential buildings, such information shall, at a minimum, include copies of all Certificate of Compliance, Certificate of Installation, and Certificate of Verification documentation submitted. These documents shall be in paper or electronic format and shall conform to the applicable requirements of Section 10-103(a).

Documents to be Provided to Owner

§10-103(b)2: Operating Information. At occupancy, builder installers shall leave in the building, or with the owner, operating information for all applicable features, materials, components, and mechanical devices installed in the building. Operating information shall include instructions on how to operate the features, materials, components, and mechanical devices correctly and efficiently. For dwelling units, such information shall be provided to the person(s) responsible for operating the feature, material, component or mechanical device installed in the building. This operating information shall be in paper or electronic format.

§10-103(b)3: Maintenance Information. At occupancy, builder/installers shall leave in the building maintenance information for all features, materials, components, and manufactured devices that require routine maintenance for efficient operation. Required routine maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label may be limited to identifying, by title and/or publication number, the operation and maintenance manual for that particular model and type of feature, material, component or manufactured device. For low-rise residential buildings, this information shall include a schedule of all interior luminaires and lamps installed to comply with Section 150.0(k). For dwelling units, such information shall be provided to the person(s) responsible for operating the feature, material, component or mechanical device installed in the building (often the owner). This operating information shall be in paper or electronic format.

§10-103(b)4: Ventilation Information. New dwellings and additions larger than 1,000 sqft: At occupancy, builder/ installers shall leave in the building for the building owner at occupancy, a description of the quantities of outdoor air that the ventilation system(s) are designed to provide to the building's conditioned space, and instructions for proper operation and maintenance of the ventilation system. For buildings or tenant spaces that are not individually owned and operated, or are centrally operated, such information shall be provided to the person(s) responsible for operating and maintaining the feature, material, component or mechanical ventilation device installed in the building. This information shall be in paper or

Installation and Acceptance forms are filled out within the project on the HERS Provider's website. Installers and HERS Raters will need to be Added to, or "Shared" within the project.

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Certified HERS raters can be contacted through the HERS providers' websites linked here: https://www.energy.ca.gov/ programs-and-topics/programs/home-energy-rating-system-hers-program

California Building Energy Efficiency **Certificates of Compliance**

> Filed on the Plans pursuant to California Code of Regulations, Title 24, Part 1, Article 1, Section 10-103(a)2.A.

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Date:

Project No.: 89822

1-23-2023

Mandatory Measures Summary: Residential (continued)



COUNTY OF SANTA CLARA

2022 CALGREEN RESIDENTIAL CHECKLIST (MANDATORY+TIER 1)

County Amendments to CALGreen are in Italics.

- Designer to cross out items that are not applicable to the project.

- Installer or designer shall verify all applicable requirements have been satisfied and sign and date each row. County Inspectors will verify completion signatures and supporting documentation DURING CONSTRUCTION.

					T TO COMPLETE	Ins	staller or Designer Verification
		CALGreen					
		CODE		REFERENCE	Note or Detail		Installer or Designer
ITE	M #	SECTION	REQUIREMENT	SHEET	No.	Date	Signature
			PLANNING AND DESIGN: MAND A plan is developed and implemented	CG-3	NOTE 1		
:	1	4.106.2	to manage storm water drainage during construction.	CG-3	NOTE 1		
:	2	4.106.3	Construction plans indicates how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.	CG-3	NOTE 2		
3		4.106.4.1	For new dwellings with attached garages and rebuild of existing dwellings that include a panel upgrade or construction between panel and parking area, a Level 2 EV Ready Space and Level 1 EV Ready Space, is installed.	CG-3	NOTES 3 & 4		
			PLANNING AND DESIGN: TIER 1 M		REQUIREMENTS		
4	4	A4.106.2.3	Displaced topsoil is stockpiled for reuse in a designated area and covered or protected from erosion.	CG-4	NOTE 7		
!	5	A4.106.4	Not less than 20 percent of the total parking, walking or patio surfaces are permeable.	CG-4	NOTE 9		
			PLANNING AND DESIGN: TIER 1	ELECTIVE R	EQUIREMENTS		
able	6	A4.103.1	Building site is an infill site, greyfield site or EPA-recognized and Brownfield	CG-4	NOTE 1		
pplic	7	A4.103.2	site. Community connectivity is facilitated by one of the approved methods.	CG-4	NOTE 2		
s - Cross out the rows not applicable	8	A4.104.1	An individual with oversight responsibility for the project has participated in an educational program promoting environmentally friendly design or development and has provided instruction to appropriate	CG-4	NOTE 3		
	9	A4.105.2	entities. Existing buildings are disassembled for reuse or recycling of building materials. The proposed structure utilizes at least one of the listed materials.	CG-4	NOTE 4		
e measur	10	A4.106.2.1	Soil analysis is performed by a licensed design professional and the findings are utilized in the structural design of the building.	CG-4	NOTE 5		
electiv	11	A4.106.2.2	Soil disturbance and erosion are minimized by using one or more of the methods listed	CG-4	NOTE 6		
Comply with at least two Tier 1 elective measures	12	A4.106.3	Landscape areas disrupted during construction are restored to be consistent with native vegetation and/or at least 75% native California or drought tolerant plant and tree are utilized.	CG-4	NOTE 8		
with at lea	13	A4.106.6	A vegetated roof for at least 50% of the roof area is installed. Vegetated roof complies with CBC chapters 15 and 16.	CG-4	NOTE 10		
Comply v	14	A4.106.7	Nonroof heat islands are reduced for 50% of sidewalks, patios, driveways, or other paved areas by using one or more of the methods listed.	CG-4	NOTE 11		
			ENERGY EFFICIENCY: MANDA	ATORY REQU	JIRMENTS		
1	.5	4.201.1	Building meets or exceeds the requirements of the California Building	T24 SHEETS			
		<u> </u>	Energy Efficiency Standards. ATER EFFICIENCY & CONSERVATION	N: MANDATO	RY REQUIREMEN	NTS	
			Plumbing Fixtures (water closets and				
16		4.303.1	urinals) and fittings (faucets and showerheads) installed in residential buildings comply with CALGreen Sections 4.303.1.1 through 4.303.1.4.	CG-3	NOTE 5		
1	.7	4.303.3	Plumbing fixtures and fittings required in CALGreen Section 4.303.1 are installed in accordance with the CPC and meet the applicable referenced standards.	CG-3	Note 6		
1	.8	4.304.1	Outdoor potable water use in landscape areas comply with a local water efficient landscape or the current California DWR MWELO, whichever is more stringent.	CG-3	Note 7		

					T TO COMPLETE	Ins	staller or Designer Verification
ITE	M #	CALGreen CODE SECTION	REQUIREMENT	REFERENCE SHEET	No.	Date	Installer or Designe Signature
	Π		TER EFFICIENCY & CONSERVATION : Kitchen faucet maximum flow rate		CTIVE REQUIREN	IENTS	
cable	19 20	A4.303.1 A4.303.2	does not exceed 1.5 gpm at 60 psi. See exceptions. Alternate nonpotable water resources are used for indoor potable water	CG-4	NOTE 14 NOTE 15		
t applic		A4.303.2	reduction and are installed in accordance with CPC. At least one qualified ENERGY STAR		1012 13		
ws no	21	A4.303.3	dishwasher or clothes washer is installed. Nonwater urinals or composting toilets	CG-4	NOTE 16		
the ro	22	A4.303.4	are installed. Dwelling is equipped with a demand	CG-4	NOTE 17		
Cross out the rows not applicable	23	A4.303.5	hot water recirculation system. The system is installed per CPC, CEnC, and the manufacturer's installation instructions. An approved rainwater catchment	CG-4	NOTE 18		
elective measures -	24	A4.304.1	system is designed and installed to use rainwater generated by at least 65% of the available roof area. The system is installed per CPC. A water efficient landscape irrigation design that eliminates the use of		NOTE 19		
o Tier 1 electi	25	A4.304.2	potable water, is provided. Method used to accomplish the requirements comply with California Building Standards Code and one or more of listed methods. Separate submeters or metering	CG-4	NOTE 20		
t least two Tier 1	26	A4.304.3	devices for outdoor potable water use is provided for landscape areas less than 5000 sq.ft. Alternative plumbing piping is installed	CG-4	NOTE 21		
Comply with at	27	A4.305.1	to permit the discharge from the clothes washer or other fixtures to be used for an irrigation system in compliance with CPC.	CG-4	NOTE 22		
Com	28	A4.305.2	Dual water piping is installed for future use of recycled water at listed locations.	CG-4	NOTE 23		
	29	A4.305.3	Recycled water is used for landscape irrigation.	CG-4	Note 24		NTC
		MATERIA	AL CONSERVATION & RESOURCE EFFI	CIENCY: MA	ANDATORY REQU	TKEME	NIS
3	30	4.406.1	cables, conduits or other openings in plates at exterior walls are protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the County of Santa Clara.	CG-3	Note 9		
3	31	4.408.1	Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Submit either a Construction Waste management plan (CALGreen 4.408.2) or Utilize a waste management company (CALGreen 4.408.3).	CG-3	Note 10		
3	32	4.408.5	Documentation is provided to County of Santa Clara which demonstrates compliance with CALGreen sections 4.408.2 or 4.408.3.	CG-2 CG-3	Construction Waste Management Forms Note 11		
3	33	4.410.1	An operation and maintenance manual is placed in the building at the time of final inspection.	CG-3	Note 12		
			ONSERVATION & RESOURCE EFFICIE Reduction in cement use in foundation			EQUIRI	MENTS
	34	A4.403.2 A4.405.3.1	mix design is not less than 20 percent. Use materials with a total RCV (recycled content value) not less than a 10 percent of the total material cost of the project except structural framing	CG-4	Note 26 Note 33		
3	36	A4.408.1	material. Reduce construction waste by at least 65%. Documentation is submitted to the County of Santa Clara	CG-2	Construction Waste Management Forms		
		MATERIAL	demonstrating compliance. CONSERVATION & RESOURCE EFFICE	CG-3	Note 41	NIITDEN	MENTS
		MATERIAL	A Frost-Protected Shallow Foundation (FPSF) is utilized in compliance with	LENCY. HER	T ELECTIVE RE	SOTKEN	IENIS
	37	A4.403.1	CRC. The required manual includes instructions to the owner or occupant regarding the necessity for heating the structure per CRC R403.3.	CG-4	NOTE 25		
plicable	38	A4.404.1	Beams, headers and trimmers are sized and installed as specified in Chapter 23 of CBC or Chapter 6 of CRC.	CG-4	NOTE 27		
ws not ap	39	A4.404.2	Building dimensions and layouts are designed to minimize waste by one or more of the listed measures in at least 80% of the structure. Premanufactured building system, as	CG-4	NOTE 28		
the rc	40	A4.404.3	listed, is used to eliminate solid sawn lumber	CG-4	NOTE 29		
- Cross out the rows not applicable	41	A4.404.4	Material lists are included in the plans which specify the material quantity and direction for on-site cuts, for the listed systems. Prefinished building materials are	CG-4	NOTE 30		
sures -	42	A4.405.1	utilized which do not require additional painting or staining. Acceptable material list is per CALGreen A4.405.1.	CG-4	NOTE 31		
mea	43	A4.405.2	Concrete floors that do not require additional coverings are used.	CG-4	NOTE 32		
ctive	44	A4.405.4	One or more of the listed materials from rapidly renewable sources or	CG-4	NOTE 34		
Fier 1 ele	45	A4.407.1	agricultural byproducts are used. Foundation and landscape drains with discharge to an approved on-site location is installed.	CG-4	NOTE 35		
least two	46	A4.407.2	Roof gutter and downspout system is installed to route water at least 5 feet away from the foundation or connect to landscape drains with approved onsite discharge.	CG-4	NOTE 36		
Comply with at least two Tier 1 elective measures	47	A4.407.3	Flashing details complying with accepted industry standards or manufacturer's instructions are provided on the plans. Building materials delivered to the	CG-4	NOTE 37		
Con	48	A4.407.4	construction site are protected from rain and other sources of moisture.	CG-4	NOTE 38		
	49	A4.407.6	Exterior doors are covered to prevent water intrusion by one or more listed methods.	CG-4	NOTE 39		
	50	A4.407.7	A permanent overhang or awning at least two feet in depth is provided at all exterior walls.	CG-4	Note 40		

					T TO COMPLETE ck Review Data	1115	taller or Designer Verification
1751	A 44	CALGreen CODE	DECUMPEMENT	REFERENCE	Note or Detail	Data	Installer or Design
ITEN	/1 #	SECTION	REQUIREMENT ENVIRONMENTAL QUALITY: MAN	SHEET	No.	Date	Signature
			Any installed gas fireplace is a direct-	IDATORT KI	QUIREMENTS		
5:	1	4.503.1	vent sealed-combustion type. Any installed woodstove or pellet stove comply with US EPA Phase II emission limits where applicable.	CG-3	Note 13		
52	2	4.504.1	Duct openings and other related air distribution component openings are covered during construction until final startup of the HVAC equipment.	CG-3	Note 14		
53	3	4.504.2.1	Adhesives, sealants and caulks are compliant with VOC and other toxic compound limits.	CG-2 CG-2	Table 4.504.1 Table 4.504.2 Note 15		
54	4	4.504.2.2	Architectural paints and coatings are compliant with VOC limits.	CG-2 CG-3	Table 4.504.3 Note 16		
55	5	4.504.2.3	Aerosol paints and coatings are compliant with product weighted MIR limits for ROC and other toxic compounds.	CG-3	Note 17		
56	5	4.504.2.4	Documentation are provided to the County of Santa Clara to verify that compliant VOC limit finish materials have been used.	CG-3	Note 18		
57	7	4.504.3	Carpet and carpet systems meet the applicable testing and product requirements.	CG-2 CG-3	Table 4.504.1 Note 19		
58	8	4.504.5	Hardwood plywood, particleboard and medium density fiberboard composite wood meet formaldehyde limits.	CG-1 CG-3	Table 4.504.5 Note 21		
59	9	4.504.5.1	Documentation is provided to the County of Santa Clara to verify composite wood meets applicable formaldehyde limits.	CG-3	Note 22		
60	0	4.505.2	Vapor retarder and capillary break is installed at slab-on-grade foundations.	CG-3	Note 23		
6:	1	4.505.3	Moisture content of building materials used in wall and floor framing do not exceed 19% prior to enclosure and is checked before enclosure. Insulation products are dry prior to enclosure.	CG-3	Note 24		
62	2	4.506.1	Each bathroom is mechanically ventilated and comply with applicable requirements.	CG-3	Note 25		
63	3	4.507.2	Heating and air-conditioning systems are sized, designed, and equipment is selected by using one of the methods listed.	CG-3	Note 26		
			ENVIROMENTAL QUALITY: TIER 1	1ANDATORY	REQUIREMENTS	S	
64	4	A4.504.2	At least 90% of resilient flooring complies with applicable VOC limits.	CG-4	Note 43		
65	5	A4.504.3	Thermal insulation in the building is installed in compliance with applicable standards.	CG-4	Note 44		
		T	ENVIROMENTAL QUALITY: TIER 1	ELECTIVE	REQUIREMENTS		
one Tier - Cross Slicable	66	A4.504.1	Composite wood products made with NAF or ULEF resins are used.	CG-4	Note 42		
	67	A4.506.2	Filters at MERV 8 or higher are used on return air openings, during construction.	CG-4	Note 45		
Comply with at least one lie 1 elective measures - Cross out the rows not applicable	68	A4.506.3	Direct vent heating and cooling equipment are utilized where the equipment will be located in the conditioned space or the space heating and water heating equipment is installed in an isolated mechanical room.	CG-4	Note 46		
		INSTALLE	R AND SPECIAL INSPECTOR QUALIFI		IANDATORY REQ	UIREM	NTS
69	9	702.1	HVAC system installers are trained and certified in the proper installation of HVAC systems.	CG-3	Note 27		
70	0	702.2	If required by County of Santa Clara, owner or owner's agent shall employ special inspector who are qualified and able to demonstrate competence in the discipline they are inspecting. Documentation used to show	CG-3	Note 28		
7:	1	703.1	compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to County of Santa Clara which show substantial conformance.	CG-3	Note 29		

APPLICANT TO COMPLETE Installer or Designer

TABLE 4.504.5 FORMALDEHYDE LIMITS¹

Maximum Formaldenyde Emissions in Parts per Million				
PRODUCT	CURRENT LIMIT			
Hardwood plywood veneer core	0.05			
Hardwood plywood composite core	0.05			
Particleboard	0.09			
Medium density fiberboard	0.11			
Thin medium density fiberboard ²	0.13			

^{1.} Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E1333. For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12.

2. Thin medium density fiberboard has a maximum thickness of $\frac{5}{16}$ inch (8 mm).

TABLE A4.106.10 MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS^{1,2}

MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS								
ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTING ZONE 2	LIGHTING ZONE 3	LIGHTING ZONE 4				
Maximum Allowable Backlight Rating ³								
Luminaire greater than 2 mounting heights (MH) from property line	No Limit	No Limit	No Limit	No Limit				
Luminaire back hemisphere is 1 – 2 MH from property line	B2	В3	B4	B4				
Luminaire back hemisphere is 0.5 – 1 MH from property line	B1	B2	В3	В3				
Luminaire back hemisphere is less than 0.5 MH from property line	В0	В0	B1	B2				
Maximum Allowable Uplight Rating								
For area lighting ⁴	U0	U0	U0	U0				
For all other outdoor lighting, including decorative luminaires	U1	U2	U3	U4				
Maximum Allowable Glare Rating ⁵								
Luminaire greater than 2 MH from property line	G1	G2	G3	G4				
Luminaire front hemisphere is 1 – 2 MH from property line	G0	G1	G1	G2				
Luminaire front hemisphere is 0.5 – 1 MH from property line	G0	G0	G1	G1				
Luminaire back hemisphere is less than 0.5 MH from property line	G0	G0	G0	G1				

^{1.} IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the California Energy Code and Chapter 10 of the California Administrative Code.

Project Information





^{2.} For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

 ^{3.} If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.
 4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas

shall meet U-value limits for "all other outdoor lighting."

5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

VCT and asphalt tile adhesives

Aultipurpose construction adhesives

Single-ply roof membrane adhesives

Other adhesives not specifically listed

SPECIALTY APPLICATIONS

Drywall and panel adhesives

Structural glazing adhesives

Cove base adhesives

CPVC welding

ABS welding

Plastic cement welding

Top and trim adhesive

Metal to metal

Plastic foams

Contact adhesive

Adhesive primer for plastic

Special purpose contact adhesive ructural wood member adhesive

Porous material (except wood)

SUBSTRATE SPECIFIC APPLICATIONS

TABLE 4.504.3 VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS^{2, 3} Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds COATING CATEGORY

SPECIALTY COATINGS

Vonflat-high gloss coatings

num roof coatings

ment specialty coatings

inous roof coatings

inous roof primers

eatment wash primers

ners, sealers, and undercoaters

VOC LIMIT 400

420

Reactive penetrating sealers Recycled coatings 1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed. Rust preventative coatings 2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule

SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter SEALANTS VOC LIMIT Marine deck Nonmembrane roof Single-ply roof membrane SEALANT PRIMERS Architectural Nonporous Modified bituminous Marine deck

Concrete curing compounds Concrete/masonry sealers Driveway sealers Dry fog coatings Faux finishing coatings Fire resistive coatings Floor coatings Form-release compounds Graphic arts coatings (sign paints) High temperature coatings 420 istrial maintenance coatings Low solids coatings¹ 450 gnesite cement coatings lastic texture coatings Metallic pigmented coatings ulticolor coatings

550 Specialty primers, sealers and undercoaters vimming pool coatings

Zinc-rich primers 1. Grams of VOC per liter of coating, including water and including exempt

2. The specified limits remain in effect unless revised limits are listed in

3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

Construction Waste Management (CWM) Plan

Fill out the form including diversion rate and facility names and addresses

Project Name: Job #: Project Manager: _ Sorting Facility Name and Location Waste Hauling Company: ___ Disposal Service Company Contact Name:

All Subcontractors shall comply with the project's Construction Waste Management Plan. All Subcontractor foremen shall sign the CWM Plan Acknowledgment Sheet.

is generated on this jobsite will be diverted from the landfill and recycled for other use.

Subcontractors who fail to comply with the Waste Management Plan will be subject to backcharges or withholding of payment, as deemed appropriate. For instance, Subcontractors who contaminate debris boxes that have been designated for a single material type will be subject to backcharge or withheld payment, as deemed appropriate.

1. The project's overall rate of waste diversion will be ______% 2. This project shall generate the least amount of waste possible by planning and ordering carefully, following all proper storage and handling procedures to reduce broken and damaged materials and reusing materials whenever possible. The majority of the waste that

3. Spreadsheet 1, enclosed, identifies the waste materials that will be generated on this project, the diversion strategy for each waste type and the anticipated diversion rate. 4. Waste prevention and recycling activities will be discussed at the beginning of weekly subcontractor meetings. As each new subcontractor comes on-site, the WMP Coordinator will present him/her with a copy of the CWM Plan and provide a tour of the jobsite to identify materials to be salvaged and the procedures for handling jobsite debris. All Subcontractor foremen will acknowledge in writ-

5. Salvage: Excess materials that cannot be used in the project, nor returned to the vendor, will be offered to site workers, the owner, or donated to charity if feasible.

ing that they have read and will abide by the CWM Plan. Subcontractor Acknowledgment Sheet enclosed. The CWM Plan will be

will provide a commingled drop box at the jobsite for most of the construction waste. These commingled drop boxes will be taken to ______. The average diversion rate for commingled waste will be ______%. As site conditions permit, additional drop boxes will be used for particular phases of construction (e.g., concrete and wood waste) to ensure the highest waste diversion rate possible.

7. In the event that the waste diversion rate achievable via the strategy described in (6) above, is projected to be lower than what is required, then a strategy of source-separated waste diversion and/or waste stream reduction will be implemented. Source separated waste refers to jobsite waste that is not commingled but is instead allocated to a debris box designated for a single material type, such as clean wood or metal.

1. Waste stream reduction refers to efforts taken by the builder to reduce the amount of waste generated by the project to below four (4) pounds per square foot of building area. 2. When using waste stream reduction measures, the gross weight of the product is subtracted from a base weight of four (4) pounds per square foot of building area. This reduction is considered additional diversion and can be used in the waste reduc-

tion percentage calculations. will track and calculate the quantity (in tons) of all waste leaving the project and calculate the waste diverwill provide Project Manager with an updated monthly report on gross weight hauled and the waste diversion rate being achieved on the project. monthly report will track separately the

gross weights and diversion rates for commingled debris and for each source-separated waste stream leaving the project. In the event does not service any or all of the debris boxes on the project, the with the responsible parties to track the material type and weight (in tons) in such debris boxes in order to determine waste diversion

9. In the event that Subcontractors furnish their own debris boxes as part of their scope of work, such Subcontractors shall not be excluded from complying with the CWM Plan and will provide weight and waste diversion data for their

10. In the event that site use constraints (such as limited space) restrict the number of debris boxes that can be used for collection of designated waste the project Superintendent will, as deemed appropriate, allocate specific areas onsite where individual material types are to be consolidated. These collection points are not to be contaminated with non-designated waste types.

11. Debris from jobsite office and meeting rooms will be collected by will, at a minimum, recycle office paper, plastic, metal and cardboard.

DECLARATION STATEMENT:

Construction Waste Management (CWM) Worksheet

Project Name:			
Job Number:			
Project Manager:			
Waste Hauling Company:			
Construction Waste Management (CWM) Plan		
	DIVERSION I	METHOD:	PROJEC
WASTE MATERIAL TYPE	COMMINGLED AND SORTED OFF SITE	SOURCE SEPARATED ON SITE	DIVERSION

	DIVERSION I	PROJECTED	
WASTE MATERIAL TYPE	COMMINGLED AND SORTED OFF SITE	SOURCE SEPARATED ON SITE	DIVERSION RATE
Asphalt			
Concrete			
Shotcrete			
Metals			
Wood			
Rigid insulation			
Fiberglass insulation			
Acoustic ceiling tile			
Gypsum drywall			
Carpet/carpet pad			
Plastic pipe			
Plastic buckets			
Plastic			
Hardiplank siding and boards			
Glass			
Cardboard			
Pallets			
Job office trash, paper, glass & plastic bottles, cans, plastic			
Alkaline and rechargeable batteries, toner cartridges, and electronic devices			
Other:			

Construction Waste Management (CWM) Acknowledgment

Project Name:			
Job Number:			
Project Manager:			
Waste Hauling Company:			
CWM Plan Acknowledgment			
The Foreman for each new Subc	ontractor that comes on site is to receive a	copy of the Construction Waste N	Management Plan and
	t Plan for the project; I understand the goals of	this plan and agree to follow the pr	rocedures described in thi
DATE	SUBCONTRACTOR COMPANY NAME	FOREMAN NAME	SIGNATURE

Table 1 - Recycled Content Value Calculations

Traffic marking coatings

Tub and tile refinish coatings

Vaterproofing membranes

Wood coatings

Wood preservatives

Α	В	С	D	E	F	G	Н
		Recycled		Post-	Pre-		
		Content	Material/	Consumer	Consumer	Recycled	Recycled
		Information	Assembly	Recycled	Recycled	Content	Content
Material/Assembly *	Manufacturer	Source	Cost (\$)	Content (%)	Content (%)	(%)	Value (\$)
				Total Pocy	iclad Cantan	t Value (\$):	
For calculating the total ma	etarial cost, chaosa ONI	V ONE of the three o	entions holows	Total Recy	cied Conten	it value (3).	
	aterial cost, choose one		ptions below.	v 450/ -	Total Matar	ial Cast (¢).	
1.Size of project (sf): Cost per sf:			x 45% = Total Material Cost (\$):				
2.Estimated project cos	x 45% = Total Material Cost (\$):						
3.Sum of estimated and/or actual cost of materials used in the project					Total Mater	ial Cost (\$):	
	Total Recy	cled Content Va	lue as a per	centage of t	he Total Ma	terial Cost:	
* Materials used as compon	nents of the structural fra	me shall not be used	l to calculate re	cycled content.	The structural	frame includes t	he load bearing
structural elements, such a	s wall studs, plates, sills	, columns, beams, gi	rders, joists, ra	fters, and truss	es.		
The sum of post-consumer	and pre-consumer recyc	led contents of each	material canno	ot exceed 100%.			

Table 2 - Assembly Product Recycled Content Calculations *

Α	В	С	D	E	F	G	Н	T I
			Post-	Post-	Pre-	Pre-	Proportional	Proportion
			Consumer	Consumer	Consumer	Consumer	Post-	Pre-
	Material	Material	Recycled	Recycled	Recycled	Recycled	Consumer	Consume
Assembly Product**	Weight (lb)	Weight (%)	Content(lb)	Content (%)	Content(lb)	Content (%)	Content (%)	Content (
Total Weight:								
			Assei	mbly Post-Co	nsumer Recyc	cled Content:		
				Ass	embly Pre-Co	nsumer Recy	cled Content:	
Use one sheet ner asser	nbly product							
 Use one sheet per asser Materials used as composaring structural elemen 	onents of the						ıral frame includ	es the load

RECYCLED CONTENT - DECLARATION STATEMENT

Project Name:	
Project Location:	
Project Manager:	
Project Owner:	

The following section shall be completed by a person with overall responsibility for the planning and design portion of the project.

• I certify under penalty of perjury, under the laws of the State of California, the information provided is true and correct.

• I certify that the materials, components, assembly products or manufactured devices identified on this certificate conform to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcing

Responsible Person's Name:	Responsible Person's Signature:	
Date Signed:	Position/Title:	
Notes:	Attachments:	

Table 3 - Pacycled Content Conversion Table (Pounds to %) *

A	В	С	D	E	F
		Post-	Post-		
		Consumer	Consumer	Pre- Consumer	Pre- Consume
ſ	Material	Recycled	Recycled	Recycled	Recycled
e of Material W	eight (lb)	Content(lb)	Content (%)	Content(lb)	Content (%)

Step 1 - Insert the type of material into Column A.

Step 2 - Insert the weight of material (provided by the manufacturer or other source) into Column B.

Step 3 - Insert the weight of Post-Consumer Recycled Content (provided by the manufacturer or other source) into Column C.

Step 4 - Insert the weight of Pre-Consumer Recycled Content (provided by the manufacturer or other source) into Column E. Step 5 - Divide the values in Column C by the values in Column B; insert the Post-Consumer Recycled Content of each

material in percentages into Column D.

Step 6 - Divide the values in Column E by the values in Column B; insert the Pre-Consumer Recycled Content of each material

Step 7 - Transfer the percentages of Post-Consumer and Pre-Consumer Recycled Content from Column D and Column F to Table 1, Columns E and F.



CALGREEN 2022 NOTES - MANDATORY REQUIREMENTS:

1. PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF SOIL AND ARE NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT WHICH IN TOTAL DISTURBS ONE ACRE OR MORE, SHALL MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION. SEE CALGREEN 4.106.2 FOR FURTHER DETAILS.

2. CONSTRUCTION PLANS SHALL INDICATE HOW THE SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. SWALES, WATER COLLECTION AND DISPOSAL SYSTEMS, FRENCH DRAINS, WATER RETENTION GARDENS, AND OTHER MEASURES CAN BE USED. EXCEPTION: ADDITIONS AND ALTERATIONS NOT ALTERING THE DRAINAGE PATH.

3. FOR ANY NEW DWELLING UNITS WITH ATTACHED GARAGES AND FOR REBUILDS OF EXISTING DWELLING UNITS THAT INCLUDE A PANEL UPGRADE OR CONSTRUCTION BETWEEN THE PANEL AND PARKING AREA, INSTALL A LEVEL 2 EV READY SPACE AND LEVEL 1 EV READY SPACE. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "LEVEL 2 EV-READY."

EXCEPTION: FOR EACH DWELLING UNIT WITH ONLY ONE PARKING SPACE, INSTALL A LEVEL 2 EV READY SPACE.

LEVEL 1 EV READY SPACE IS A PARKING SPACE SERVED BY A COMPLETE ELECTRIC CIRCUIT WITH A MINIMUM OF 110/120 VOLT, 20-AMPERE CAPACITY, INCLUDING ELECTRICAL PANEL CAPACITY; AN OVERPROTECTION DEVICE; A MINIMUM 1" DIAMETER RACEWAY THAT MAY INCLUDE MULTIPLE CIRCUITS AS ALLOWED BY THE COUNTY ELECTRICAL CODE; PROPERLY SIZED CONDUCTORS; GROUNDING AND BONDING; AND EITHER (A) A RECEPTACLE LABELLED "ELECTRIC VEHICLE OUTLET" WITH AT LEAST A ½" FONT ADJACENT TO THE PARKING SPACE, OR (B) LABELED ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).

LEVEL 2 EV READY SPACE IS A PARKING SPACE SERVED BY A COMPLETE ELECTRIC CIRCUIT WITH A MINIMUM OF 208/240 VOLT, 40-AMPERE CAPACITY, INCLUDING THE REQUIRED ELECTRICAL PANEL CAPACITY; AN OVERCURRENT PROTECTION DEVICE; A MINIMUM 1" DIAMETER RACEWAY THAT MAY INCLUDE MULTIPLE CIRCUITS AS ALLOWED BY THE COUNTY ELECTRICAL CODE; PROPERLY SIZED CONDUCTORS; GROUNDING AND BONDING; AND EITHER (A) A RECEPTACLE LABELED "ELECTRIC VEHICLE OUTLET" WITH A MINIMUM ½" FONT, ADJACENT TO THE PARKING SPACE, OR (B) A BLANK LABELED ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) WITH A MINIMUM OUTPUT OF 40 AMPERES.

4. ACCESSORY DWELLING UNITS (ADU) AND JUNIOR ACCESSORY DWELLING UNITS (JADU) WITHOUT ADDITIONAL PARKING SPACES AND WITHOUT ELECTRICAL PANEL UPGRADE OR NEW PANEL INSTALLATION ARE EXEMPT FROM REQUIREMENTS ON NOTE 3. ADUS AND JADUS WITHOUT ADDITIONAL PARKING BUT WITH ELECTRICAL PANEL UPGRADES OR NEW PANELS MUST HAVE RESERVED BREAKERS AND ELECTRICAL CAPACITY ACCORDING TO THE REQUIREMENTS OF NOTE 3.

5. ALL NONCOMPLIANT PLUMBING FIXTURES SHALL BE REPLACED WITH WATER-CONSERVING PLUMBING FIXTURES. PLUMBING FIXTURE REPLACEMENT IS REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF FINAL COMPLETION, CERTIFICATE OF OCCUPANCY, OR FINAL PERMIT APPROVAL BY BUILDING AND INSPECTION DIVISION. SEE CIVIL CODE SECTION 1101.1, ET SEQ., FOR THE DEFINITION OF A NONCOMPLIANT PLUMBING FIXTURE, TYPES OF RESIDENTIAL BUILDINGS AFFECTED AND OTHER IMPORTANT ENACTMENT DATES.

- A. THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS.
- B. SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS.
- C. WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWER-HEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME. A HAND-HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.
- D. THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI.
- E. THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.
- **6.** PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1701.1 OF THE CALIFORNIA PLUMBING CODE.

7. RESIDENTIAL DEVELOPMENTS SHALL COMPLY WITH COUNTY OF SANTA CLARA WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), WHICHEVER IS MORE STRINGENT.

8. Not used.

9. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR A SIMILAR METHOD ACCEPTABLE TO THE COUNTY OF SANTA CLARA.

- A. A CONSTRUCTION WASTE MANAGEMENT PLAN IS PROVIDED. THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE AVAILABLE DURING CONSTRUCTION FOR EXAMINATION BY THE COUNTY OF SANTA CLARA.
- 1. IDENTIFY THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.
- 2. SPECIFY IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM).
- 3. IDENTIFY DIVERSION FACILITIES WHERE THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE TAKEN.
- 4. IDENTIFY CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE GENERATED.
- 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.
- B. A WASTE MANAGEMENT COMPANY CAN BE UTILIZED IF APPROVED BY THE COUNTY OF SANTA CLARA. SEE CALGREEN 4.408.3 FOR FURTHER .DETAILS

11. DOCUMENTATION SHALL BE PROVIDED TO THE COUNTY OF SANTA CLARA WHICH DEMONSTRATES COMPLIANCE WITH NOTE 10.

12. AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE, OR OTHER MEDIA ACCEPTABLE TO THE COUNTY OF SANTA CLARA INCLUDES ALL OF THE REQUIRED INFORMATION, SHALL BE PLACED IN THE BUILDING. SEE CALGREEN 4.410.1 FOR DETAILS OF REQUIRED INFORMATION.

13. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE SANTA CLARA COUNTY ORDINANCES AND BAY AREA AIR QUALITY MANAGEMENT DISTRICT REGULATION 6, RULE 3.

14. AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE COUNTY OF SANTA CLARA TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM.

15. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF CALGREEN TABLES 4.504.1 OR 4.504.2 AS REPRODUCED ON SHEET CG-1. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED BELOW.

AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

16. ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS AS SHOWN IN TABLE 4.504.3 SHEET CG-1. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3, SHEET CG-1 SHALL APPLY.

17. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

18. VERIFICATION OF COMPLIANCE WITH NOTES 15, 16, AND 17 SHALL BE PROVIDED AT THE REQUEST OF THE COUNTY OF SANTA CLARA.

19. ALL CARPET AND CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350)

ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1, SHEET CG-1.

20. WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350)

21. HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN TABLE 4.504.5 SHEET CG-1.

22. VERIFICATION OF COMPLIANCE WITH NOTE 21 SHALL BE PROVIDED AT THE REQUEST OF THE COUNTY OF SANTA CLARA.

23. CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY CBC, CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY CRC CHAPTER 5, SHALL COMPLY WITH FOLLOWING REQUIREMENT:

A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING:

- A. A 4-INCH-THICK BASE OF 1/2 INCH OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED.
- B. A SLAB DESIGN SPECIFIED BY THE LICENSED DESIGN PROFESSIONAL.

24. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19 PERCENT MOISTURE CONTENT. INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS' DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE

25. EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:

Project Information



