



CLIFF DRIVE RESIDENCE ADU

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ARCHITECTURE + INTERIORS

29 West Calle Laureles
Santa Barbara, CA 93105
T: 805.687.1525

RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU

F.A.R. CALCULATOR

F.A.R. Calculator

Instructions: Enter the information in the white boxes below. This spreadsheet will calculate the proposed FAR (floor area ratio), the 100% max FAR (per the Zoning Ordinance for "Residential PUP"), and the 80% max FAR (per the Zoning Ordinance for "Residential FAR"). Additionally, it will determine whether a FAR Modification is required. "Guideline FAR" calculations are as outlined in the "Applicability" section of the Single Family Residence Design Guidelines, page 23-C.

The Net Lot Area does not include any Public Road Easements or Public Road Right-of-Way areas. The proposed TOTAL Net FAR Floor Area includes the net floor area of all stories of all buildings, but may or may not include basement/cellar floor areas. For further clarifications on these definitions please refer to SBMC §28.15.063 & 30.350. This form has not yet been updated for current Title 30 zone designations, see SBMC §30.08.010 for conversion.

ENTER Project Address:	3239 Cliff Drive
Is there a basement or cellar existing or proposed?	Yes
ENTER Proposed TOTAL Net FAR Floor Area (in sq. ft.):	5,548
ENTER Zone ONLY from drop-down list:	A-1
ENTER Net Lot Area (in sq. ft.):	60,751
Is the height of existing or proposed buildings 17 feet or greater?	Yes
Are existing or proposed buildings two stories or greater?	Yes
The FAR Requirements are:	GUIDELINE**

ENTER Average Slope of Lot:	33.00%
Does the height of existing or proposed buildings exceed 25 feet?	Yes
Is the site in the Hillside Design District?	Yes
Does the project include 500 or more cu. yds. of grading outside the main building footprint?	Yes
An FAR MOD is not required per SBMC §28.15 or §30.20.030	

FLOOR AREA RATIO (FAR):	0.091
Lot Size Range:	>= 20,000 sq. ft.
MAX FAR Calculation (in sq. ft.):	4,430 + (0.013 x lot size in sq. ft.)
100% MAX FAR:	0.086
100% MAX FAR (in sq. ft.):	5,220
85% of MAX FAR (in sq. ft.):	4,437
80% of MAX FAR (in sq. ft.):	4,176
The 5548 square foot proposed total is 107% of the MAX FAR.*	

* NOTE: Percentage total is rounded up.
** NOTE: If your project is located on a site with multiple or overlay zones, please contact Planning Staff to confirm whether the FAR limitations are "Required" or "Guideline".

Acreage Conversion Calculator	
ENTER Acreage to Convert to square footage:	1.00
Net Lot Area (in sq. ft.):	43560

RELATED PERMITS

Building Permit: Main Residence	BLD2022-02169
Demolition Permit:	BLD2021-01311
Coastal Development Permit:	CDP2021-00007
Planning Application:	PLN2020-00252 (MAIN RESIDENCE)
ADU Pin, Case:	PLN2023-00310
Main House Permit Revision 1:	24BDP-00903

SEPARATE PERMITS

- 1) Pool, Spa, and related equipment, including Solar Thermal system.
- 2) Fire Sprinklers
- 3) Photo Voltaic System - Permit Number: BLD2023-00148
- 4) Offsite Improvements

FLOOR AREA SUMMARY (NET)

PERMITTED MAIN RESIDENCE:	
FIRST FLOOR:	
MAIN RESIDENCE:	2,435 SQ.FT.
GARAGE:	728 SF SQ.FT.
SECOND FLOOR:	
MAIN RESIDENCE:	1,185 SQ.FT.
SUBTOTAL:	4,348 SQ.FT.
PROPOSED NEW ADU:	
FIRST FLOOR:	
MAIN RESIDENCE:	1,200 SQ.FT.
TOTAL (MAIN RESIDENCE + ADU):	5,548 SQ.FT.
MAX ALLOWABLE BUILDABLE FLOOR AREA:	5,220 SQ.FT.
*FOR GUIDELINE ONLY SEE F.A.R. CALCULATOR	

SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATIONS

CITY OF SANTA BARBARA BMP INSPECTION REQUIREMENTS

CONTRACTOR SHALL CALL FOR INSPECTION BY THE CITY BUILDING INSPECTOR OR CITY QSP 72 HOURS PRIOR TO THE NEEDED INSPECTION. THE CITY WILL THEN ROUTE THE REQUEST TO THE QSP INSPECTOR OR THIRD PARTY COMPANY. THE FOLLOWING LIST OF MANDATORY INSPECTIONS MUST BE COMPLETED FOR OCCUPANCY:

- DRYWELL (DETAIL 18, SHEET C-4.1)**
- INSPECTION OF DRAINAGE PLUMBING BEFORE BACKFILL
 - FINAL INSPECTION AFTER BACKFILL

- PERMEABLE PAVEMENT DRIVEWAY (DETAIL 1, SHEET C-4.1)**
- INSPECTION OF SUBGRADE
 - INSPECTION OF BASE ROCK LAYERS
 - FINAL INSPECTION AFTER CONSTRUCTION

CONTRACTOR SHALL CALL FOR INSPECTION BY THE SOILS ENGINEER, BRAUN & ASSOCIATES, 72 HOURS PRIOR TO THE NEEDED INSPECTION. THE FOLLOWING LIST OF MANDATORY INSPECTIONS MUST BE COMPLETED BEFORE AND DURING CONSTRUCTION:

- THE FINAL GRADING AND DRAINAGE PLANS SHALL BE OBSERVED AND APPROVED PRIOR TO THE START OF CONSTRUCTION.
- CONSTRUCTION INSPECTIONS AND TESTING, AS REQUIRED, DURING ALL GRADING AND EXCAVATING OPERATIONS BEGINNING WITH THE STRIPPING OF VEGETATION AT THE SITE, AT WHICH TIME A SITE MEETING OR PRE-JOB MEETING WOULD BE APPROPRIATE.

PROJECT SUMMARY

SITE ADDRESS	3239 CLIFF DRIVE SANTA BARBARA, CA 93109
ASSESSOR'S PARCEL NO.	047-082-022
LEGAL DESCRIPTION	SEE SURVEY (SHEET G101)
PROJECT DESCRIPTION	CONSTRUCT NEW 1,200 SQ.FT. ACCESSORY DWELLING UNIT (ADU) WITH ASSOCIATED FLAT WORK, SITE WALLS, STAIRS, RAISED WOOD DECKS AND 622 SQ.FT. ROOF TOP DECK, 475 SQ.FT. GREEN ROOF, AND 50 SQ.FT. OF ROOF TOP PLANTERS, REVISED LANDSCAPE, AND STORM WATER IMPROVEMENTS, AS PER ORIGINAL PERMIT (BLD2022-02169).

ZONE & OVERLAYS	A-1/S-D-3 / LAS POSITAS: CAMPANIL / HILLSIDE DESIGN DISTRICT
AVERAGE SLOPE	33% (PER CITY ESTIMATE)
HIGH FIRE ZONE:	NO
FLOOD PLAIN:	NO
STORM WATER COMPLIANCE:	TIER 3 (2020) COMPLIANCE THROUGH PERMEABLE SURFACES AND IMPERMEABLE RUNOFF DIRECTED TO 5' DIAMETER X 36' DEEP STORMWATER DRYWELL.

PARKING:
EXISTING (PERMITTED):
PROPOSED:
REQUIRED:

(2) COVERED SPACES INSIDE GARAGE (FOR MAIN RESIDENCE)
(1) UNCOVERED SPACE AT MOTORCOURT (FOR ADU)
(1) UNCOVERED SPACE AT MOTORCOURT (FOR ADU)

GRADING:
CUT QUANTITY:
FILL QUANTITY:
NET IMPORT QUANTITY:

175 CUBIC YARDS
0 CUBIC YARDS
0 CUBIC YARDS

OCCUPANCY:
BUILDING TYPE:
CONSTRUCTION TYPE:

R-3: RESIDENTIAL
SINGLE FAMILY RESIDENCE
TYPE VB; SPRINKLED

NUMBER OF STORIES:
LOT AREA (GROSS):
LOT AREA (NET):

1
63,350 SQ. FT.
60,751 SQ. FT.

MAIN STRUCTURE SETBACKS:
FRONT:
EAST SIDE:
WEST SIDE:
REAR:

35 FT.
15 FT. (15% LOT WIDTH)
15' FT. (15% LOT WIDTH)
75 YEAR - 50 FT. COASTAL BLUFF DEVELOPMENT BUFFER

ADU SETBACKS:
FRONT:
INTERIOR:

35 FT. (SAME AS MAIN RESIDENCE)
4 FT.

MAX ALLOWABLE BLDG. HT.:
PERMITTED MAX BLDG. HT.:
PROPOSED MAX BLDG. HT.:

30'-0"
23'-10" (MAIN RESIDENCE)
15'-0" (ADU)

SPRINKLERS:
GAS SERVICE:

YES
NONE PROPOSED

PROJECT DIRECTORY

OWNER
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CONTACT: MARK KIRKHART

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CONTACT: ADAM SIMMONS

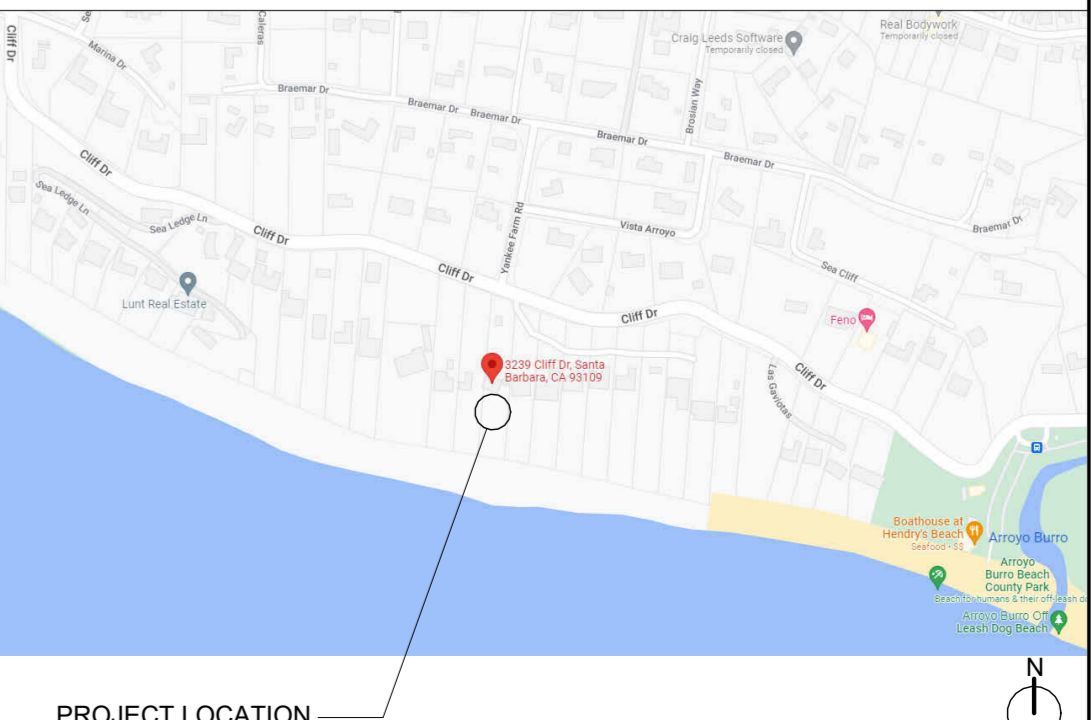
SURVEYOR:
PROPER LAND SURVEYING
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SANTA BARBARA, CA 93109
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VICINITY MAP



JOB NUMBER			
21108B1			
PIC	PA	PM	TEAM
MK	JA	TH	TJ

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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23

REVISIONS

NO.	DESCRIPTION	DATE

COVER AND PROJECT INFO

G000

SCALE: 12" = 1'-0"
DATE: 04/22/2024

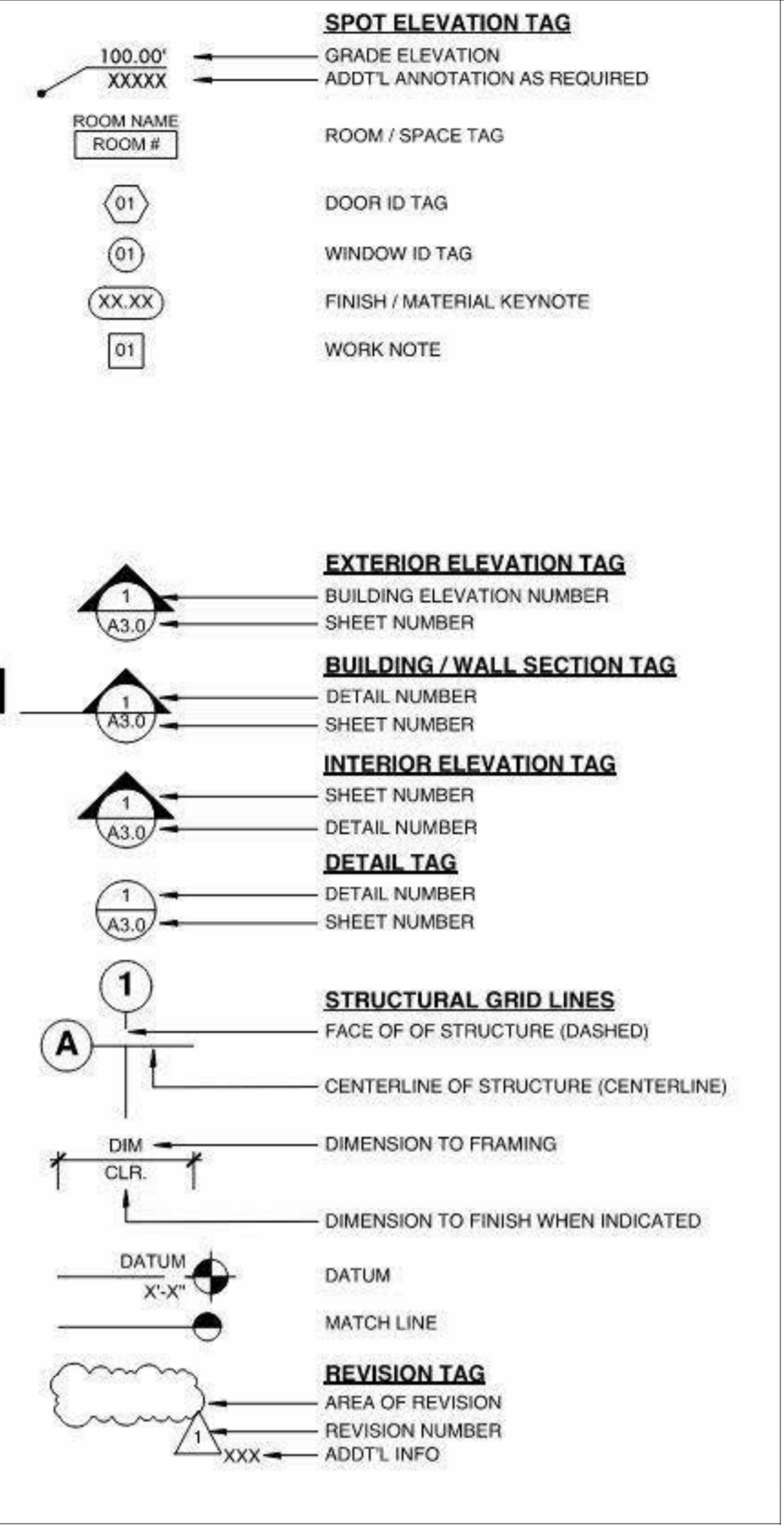
(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)

ABBREVIATIONS

The following abbreviations are applicable to the architectural sheets. See symbol and legend information on mechanical, plumbing, and electrical plans for abbreviations applicable to those drawings.

L	ANGLE	JAN.	JANITOR
ø	CENTERLINE	JST.	JOIST
ø	DIAMETER	JT.	JOINT
A.B.	ANCHOR BOLTS	K.D.	KILN DRIED
AC.	ASPHALT CONCRETE	KIT.	KITCHEN
ACOUS.	ACOUSTICAL	LAB.	LABORATORY
A.D.	AREA DRAIN	LAM.	LAMINATE
ADJ.	ADJUSTABLE	LAV.	LAVATORY
AGGR.	AGGREGATE	LB.	POUND
AL.	ALUMINUM	LDGR.	LEDGER
ALT.	ALTERNATE	L.F.	LINEAR FOOT
AND.	ANDICIZED	LH.	LEFT HAND
APRX.	APPROXIMATE	LIN.	LINEAR
ARCH.	ARCHITECTURAL	LKR.	LOCKER
ASB.	ASBESTOS	LL.	LIVE LOAD
ASPH.	ASPHALT	LOC.	LOCATION
ASSY.	ASSEMBLY	LT.	LIGHT
BD.	BOARD	LT.WT.	LIGHTWEIGHT
BETW.	BETWEEN	LTG.	LIGHTING
BEV.	BEVEL	MAX.	MAXIMUM
BITUM.	BITUMINOUS	MAS.	MASONRY
BLDG.	BUILDING	MATL.	MATERIAL
BLK.	BLOCK	M.B.	MACHINE BOLT
BLKG.	BLOCKING	M.C.	MEDICINE CABINET
BM.	BEAM	MECH.	MECHANICAL
B.N.	BOUNDARY NAILING	MED.	MEDIUM
B.O.	BOTTOM OF	MEMB.	MEMBRANE
BOT.	BOTTOM	MEZZ.	MEZZANINE
BRG.	BEARING	MFR.	MANUFACTURER
BSMT.	BASEMENT	MH.	MANHOLE
B.U.	BUILT-UP	MIN.	MINIMUM
CAB.	CABINET	MIR.	MIRROR
C.B.	CATCH BASIN	MISC.	MISCELLANEOUS
CEM.	CEMENT	MLWK.	MILLWORK
CER.	CERAMIC	MTD.	MOUNTED
C.F.	CUBIC FOOT	MTG.	MOUNTING
CHAM.	CHAMFER (ED)	MTL.	METAL
C.I.	CAST IRON	MTR.	MORTAR
C.I.P.	CAST-IN-PLACE	MUL.	MULLION
C.G.	CORNER GUARD	N.	NORTH
C.J.	CONSTRUCTION JOINT	(N)	NEW
CLG.	CEILING	N.A.	NOT APPLICABLE
CLKS.	CAULKING	N.I.C.	NOT IN CONTRACT
CLO.	CLOSET	NO.	NO. or #
CLR.	CLEAR	NOM.	NOMINAL
C.M.U.	CONCRETE MASONRY UNIT	N.O.S.	NOT TO SCALE
C.NTR.	COUNTER	O.	OVER
C.O.	CASED OPENING	O.A.	OVERALL
CO.	CLEANOUT	OBS.	OBSOLETE
COL.	COLUMN	O.C.	ON CENTER
CONC.	CONCRETE	OCC.	OCCUPANTS
CONN.	CONNECTION	O.D.	OUTSIDE DIAMETER
CONST.	CONSTRUCTION	OFF.	OFFICE
CONT.	CONTINUOUS	OPNG.	OPENING
CORR.	CORRIDOR	OPP.	OPPOSITE
CPT.	CARPET	OVHD.	OVERHEAD
CSK.	COUNTERSUNK	PAR.	PARRALLEL
CSMT.	CASEMENT	PARTN.	PARTITION
CT.	CERAMIC TILE	PCF.	POUNDS PER CUBIC FOOT
CTR.	CENTER	PERF.	PERFORATE
C.Y.	CUBIC YARD	PERP.	PERPENDICULAR
DBL.	DOUBLE	P.LAM.	PLASTIC LAMINATE
DEMO.	DEMOLITION	PLAS.	PLASTIC
DEP.	DEPARTMENT	PLBG.	PLUMBING
DEPT.	DEPARTMENT	PLF.	POUNDS PER LINEAL FOOT
D.F.	DRINKING FOUNTAIN	PLY.	PLYWOOD
D.H.	DOUBLE HUNG	PNL.	PANEL
DIA.	DIAMETER	PNT.	PAINT
DIAG.	DIAGONAL	PR.	PAIR
DIM.	DIMENSION	PRCST.	PREFCAST
DISP.	DISPENSER	PREFAB.	PREFABRICATE(D)
D.L.	DEAD LOAD	PREFIN.	PREFINISH(E)D
DN.	DOWN	PROP.	PROPERTY
DR.	DOOR	PSI.	POUNDS PER SQUARE INCH
DR.	DOOR	P.T.	PRESSURE TREATED
DWR.	DRAWER	PT.	POINT
DS.	DOWNSPOUT	P.T.D.	PAPER TOWEL DISPENSER
D.S.P.	DRY STANDPIPE	P.T.R.	PAPER TOWEL RECEPTACLE
DWG.	DRAWING	PVC.	POLYVINYLCHLORIDE
(E)	EXISTING	PVMT.	PAVEMENT
E.	EAST	Q.T.	QUARRY TILE
EA.	EACH	QTY.	QUANTITY
E.B.	EXPANSION BOLT	QUAL.	QUALITY
E.F.	EACH FACE	R.	RISER
E.J.	EXPANSION JOINT	RAD.	RADIUS
ELAST.	ELASTOMERIC	RBR.	RUBBER
ELECT.	ELECTRICAL	R.D.	ROOF DRAIN
ELEV.	ELEVATION	REC.	RECESSED
EMER.	EMERGENCY	REF.	REFERENCE
ENCL.	ENCLOSURE	REFR.	REFRIGERATOR
E.P.	ELECTRICAL PANELBOARD	REV.	REVISION
EQ.	EQUAL	REINF.	REINFORCED
EQUIP.	EQUIPMENT	REQD.	REQUIRED
EQUIV.	EQUIVALENT	RESIL.	RESILIENT
ESTM.	EASEMENT	RFG.	ROOFING
E.W.C.	ELECTRIC WATER COOLER	RGTR.	REGISTER
EXPO.	EXPOSED	R.H.	RIGHT HAND
EXP.	EXPANSION	RLG.	RAILING
EXT.	EXTERIOR	RM.	ROOM
F.A.	FIRE ALARM	RD.	ROUND
FAB.	FABRICATE(D)ION	R.O.	ROUGH OPENING
F.D.	FLOOR DRAIN	R.W.L.	RAIN WATER LEADER
FDN.	FOUNDATION	S.	SOUTH
F.E.	FIRE EXTINGUISHER	S.C.	SOLID CORE
F.E.C.	FIRE EXTINGUISHER CAB.	SCHED.	SCHEDULE
F.F.	FINISH FLOOR	SECT.	SECTION
FGL.	FIBERGLASS	SH.	SHelf
FH.	FIRE HYDRANT	SHR.	SHOWER
F.H.C.	FIRE HOSE CABINET	SHT.	SHEET
FIN. or F.	FINISH	SIM.	SIMILAR
FLR.	FLOOR	SPEC.	SPECIFICATION
FLASH.	FLASHING	SQ.	SQUARE
FLUOR.	FLUORESCENT	S.S.	STAINLESS STEEL
F.N.	FIELD NAILING	S.S.K.	SERVICE SINK
F.O.	FACE OF	STA.	STATION
F.O.C.	FACE OF CONCRETE	STAG.	STAGGER(ED)
F.O.F.	FACE OF FINISH	STD.	STANDARD
F.O.M.	FACE OF MASONRY	STL.	STEEL
F.O.S.	FACE OF STUDS	STR.	STORAGE
F.PRF.	FIREPROOF	STR.	STRUCTURAL
FT.	FOOT OR FEET	SUSP.	SUSPENDED
FTG.	FOOTING	SYM.	SYMMETRICAL
FURN.	FURNITURE	SYS.	SYSTEM
FURR.	FURRING	T.	TREAD
FUT.	FUTURE	T.B.	TOWEL BAR
FXTR.	FIXTURE	T.C.	TOP OF CURB
GA.	GAUGE	TEL.	TELEPHONE
GALV.	GALVANIZED	TEMP.	TEMPORARY
G.B.	GRAB BAR	TER.	TERRAZZO
GENL.	GENERAL	T.G.	TONGUE & GROOVE
G.I.	GALVANIZED IRON	THK.	THICK
GL.	GLASS	THRD.	THREAD(ED)
GLB.	GLUED LAMINATED BEAM	THRES.	THRESHOLD
GND.	GROUND	T.O.P.L.	TOP OF PLATE
GR.	GRADE	T.P.	TOP OF PAVEMENT
GT.	GROUT	T.P.P.	TOILET PAPER DISPENSER
GUT.	GUTTER	T.V.	TELEVISION
GVL.	GRAVEL	T.W.	TOP OF WALL
GYP.	GYP SUM	TYP.	TYPICAL
GYP.BD.	GYP SUM BOARD	UNF.	UNFINISHED
GYP.PLAS.	GYP SUM PLASTER	U.N.O.	UNLESS NOTED OTHERWISE
H.B.	HOSE BIBB	UR.	URINAL
H.C.	HANDICAP	UTIL.	UTILITY
HC.	HOLLOW CORE	V.C.T.	VINYL COMPOSITION TILE
HDR.	HEADER	VERT.	VERTICAL
HDWD.	HARDWOOD	VEST.	VESTIBULE
HDWR.	HARDWARE	VNR.	VENEER
HGR.	HANGER	W.	WEST
H.M.	HOLLOW METAL	W.	WITH
HORIZ.	HORIZONTAL	W.C.	WATER CLOSET
HP.LAM.	HIGH PRESSURE LAMINATE	W.	WOOD
HR.	HOUR	WD.	WINDOW
HGT.	HEIGHT	WF.	WIDE FLANGE
HTR.	HEATER	WGL.	WIRE GLASS
H.V.A.C.	HEATING/VENTILATING/ AIR CONDITIONING	WI.	WROUGHT IRON
HYD.	HYDRANT	WO.	WITHOUT
HYDR.	HYDRAULIC	WR.	WATERPROOFING
I.D.	INSIDE DIAMETER (DIM.)	WSC.	WAINSCOT
IN.	INCHES	WT.	WEIGHT
INCAN.	INCANDESCENT	WWF.	WELDED WIRE FABRIC
INCL.	INCLUDE(D)ING	-	-
INFO.	INFORMATION	-	-
INSP.	INSPECT(ING)ION	-	-
INSTL.	INSTALLATION	-	-
INSUL.	INSULATION	-	-
INT.	INTERIOR	-	-

DRAWING SYMBOLS



GENERAL NOTES

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The Construction Documents are provided to illustrate the design desired and imply the finest quality workmanship throughout. Any design or detail which appears to be inconsistent with the above should be immediately brought to the attention of the Architect by the Contractor.

The Contractor shall verify all construction documents, site dimensions and conditions and shall notify the Architect of any discrepancies or inconsistencies prior to starting work.

Applicable trades shall use a common datum to be designated by the Contractor for all critical measurements. Do not scale drawings.

Specific notes and details shall take precedence over general notes and details.

During construction the Contractor shall provide fire extinguishers as required by the Field Inspector.

Wherever existing work is damaged by any other construction operation, it shall be repaired or replaced with new material to match existing as approved by the Architect.

The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the Owner or its representative. The Contractor shall determine the exact location of all existing utilities before commencing work, and agrees to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all underground utilities.

The Contractor shall verify location and clearance of all inserts and embedded items with all applicable drawings before pouring concrete.

The Contractor shall provide all necessary backing and framing for wall mounted items.

Wood in contact with concrete shall be pressure treated. All wood shall be a minimum of 6" above finish grade.

Glass and glazing shall conform to code and with U.S. Consumer Product Safety Commission requirements. Glazed openings in doors, adjacent to doors and within 18" of the adjacent floor shall be tempered glass approved for impact hazard. Glazing in shower and tubs enclosures shall be tempered, laminated or approved plastic.

(2) layers of grade 'D' paper will be provided between all plywood sheat panels or solid blocking and exterior lath with plaster.

Fire dampers, smoke dampers and/or combination fire/smoke dampers shall be provided at fire rated walls and floor/ceilings as required per CBC 716.5

Fire stops shall be located at the following locations per the CBC 717 requirements:

- In concealed spaces of stud walls including furred spaces - at floor and ceiling levels and at 10 foot intervals along the length of the wall.
- At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
- In openings around vents, pipes, ducts chimneys, and similar openings which afford a passage for a fire at ceiling and floor levels, with noncombustible materials.
- In concealed spaces between stair stringers at the top and bottom of the run and between studs along and in line with the run of the stairs if the walls under the stairs are unfinished.

At exterior wall openings, flashing, counter flashing and expansion joint material shall be constructed in such a manner as to be weatherproof.

GENERAL NOTES

FLASHING GENERAL NOTES

HIGH FIRE NOTE:

When provided, valley flashings subject to CRC Section R337 are not to be less than 26 galvanized sheet gauge corrosion resistant metal installed over a minimum 30" wide underlayment consisting of one layer of minimum 72 pound mineral surfaced non-perforated cap sheet complying with ASTM D3909 installed over the combustible decking.

Abrase all concrete and clean as required to remove contaminants and achieve tenacious bond of waterproofing system. Sand blast all stainless steel that will be integrated into waterproofing.

Prime all concrete and metal surfaces with E-5320 2-component epoxy primer. Intercoat Primer: GacoFlex U-5677 is used if LM-60V has been uncoated for more than 3 days or if water has been allowed to contact the LM-60V surface.

Abrase and solvent wipe all cured material before recoat. Material must be fully adhered to all substrates and materials incorporated into waterproofing.

Remove and replace materials that are improperly applied or insufficiently adhered and can be removed without cohesive failure. Crack Reinforcement: GacoFlex 66B spun bonded polyester fabric tape.

Thinners for solvent wiping: GacoFlex T-5111 & GacoFlex T-5112. Apply reinforcing fabric in detail coat of wet LM-60 over metal to concrete joints as well as cracks followed by membrane applied in two (2) coats unless one coat coverage can be achieved that is pin-hole and blister free and is acceptable to the material manufacturer. Apply waterproofing materials and metal flashings in strict accordance with material manufacturer's published requirements and recommendations. Minimum cured membrane thickness is to be no less than 90 mils on horizontal and vertical surfaces. Membrane is to be protected from long term UV exposure.

Solvent wipe all cured membrane and Prime with E-5320 at all locations where metal is to be set in sealant and applied over cured LM-60 to assure acceptable adhesion.

FLASHING METALS

Contractor to verify all metal products are compatible with adjoining materials, properly clean and prepare all work surfaces, apply any necessary primers or bonders, follow all mfg directions.

FL-1 Standard encapsulated metal flashing: 24 GA. G.I. (GSM) (bondarized when fully encapsulated with waterproofing), for fabricated shapes, all joints to be riveted @ 2" o.c. and hot lead soldered per SMACNA requirements. Lap sheet metal joints min. of four (4) inches and fully bed sheet joints in urethane sealant. Secure with minimum of 4 ring or annular shank fasteners per joint. Fasten horizontal flange of metal with ring or annular shank fasteners at 3" o.c. placed in staggered pattern.

FL-2 24 GA. S.S. sill pans: all joints to be riveted @ 2" o.c. and hot lead soldered per SMACNA requirements. Pan flashings to have back and end dams & continuous flanges integrated into deck-to-wall flashing & weather-resistive barrier. Extend 4" min. up jams. Deck waterproofing to extend into and over pan flashing. Lap sheet metal joints min. of four (4) inches and fully bed sheet joints in urethane sealant. Secure with minimum of 4 ring or annular shank fasteners per joint. Fasten horizontal flange of metal with ring or annular shank fasteners at 3" o.c. placed in a staggered pattern. Sand blast the metal on all sides that will receive either sealant or waterproofing to a SSPC 10 or N.A.C.E. #2 - Near white metal blast finish or as required to achieve a minimum surface profile of 3 mils followed by cleaning of the metal and the application of the waterproofing material manufacturer's approved primer for stainless steel. Reinforcing fabric to be fully bedded in base coat at interface to substrate and at all metal joints.

FL-3 Exposed Metal Flashing: 24 GA. S.S., all joints to be riveted @ 2" o.c. and hot lead soldered per SMACNA requirements. Clean and prep the metal on all sides that will receive either sealant or waterproofing material. Use the mfg's approved primer. Lap sheet metal joints min. of four (4) inches and fully bed sheet joints in urethane sealant. Secure with minimum of 4 ring or annular shank fasteners per joint.

FL-4 Coated Roof Flashing: 24 GA. G.I. PVC clad. Lap sheet metal joints min. of four (4) inches and fully bed sheet joints in urethane sealant. Secure with minimum of 4 ring or annular shank fasteners per joint.

FL-5 Prefinished metal flashing roof accessories to be fabricated from the same stock as the metal roof.

DESIGNARC

ARCHITECTURE + INTERIORS
1515 Chapala Street
Santa Barbara, CA 93101
T. 805.687.1526

RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU

JOB NUMBER
21108B1

PIC	PA	PM	TEAM
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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23
ADU BLDG. SUBMITTAL #1	02/15/24

REVISIONS

NO.	DESCRIPTION	DATE

PROJECT INFO

G001

SCALE: 12" = 1'-0" DATE: 11/30/22

(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)

KEYNOTES CONTINUED ON G102



Vicinity Map: 3239 Cliff Drive
 First Public Road of the Coastal Zone (red line)

ATTACHMENT 3

DESIGN RASKOPF RESIDENCE 3239 CLIFF DRIVE ADU

ATTACHMENT 2

5. **PLEASE NOTE:** A copy of this resolution shall be reproduced on the first sheet of the drawings submitted with the application for a building permit. The location, size and design of the construction proposed in the application for the building permit shall not deviate from the location, size and design of construction approved in this modification.
6. **NOTICE OF APPROVAL TIME LIMITS:** The Staff Hearing Officer's action approving the Performance Standard Permit or Modifications shall expire two (2) years from the date of the approval, per SBMC §30.205.120, unless:
 - a. A building permit for the construction authorized by the approval is issued within twenty-four (24) months of the approval. (An extension may be granted by the Staff Hearing Officer if the construction authorized by the permit is being diligently pursued to completion.) or;
 - b. The approved use has been discontinued, abandoned or unused for a period of six months following the earlier of:
 - i. an Issuance of a Certificate of Occupancy for the use, or;
 - ii. one (1) year from granting the approval.

subject to the review and approval of the Public Works Department per SBMC §22.60. Where tree roots are the cause of the damage, the roots shall be pruned under the direction of a qualified arborist.

III. **NOTICE OF COASTAL DEVELOPMENT PERMIT TIME LIMITS:**

The Staff Hearing Officer action approving the Coastal Development Permit shall expire two (2) years from the date of final action upon the application, per Santa Barbara Municipal Code §28.44.230, unless:

1. A Building permit for the work authorized by the coastal development permit is issued prior to the expiration date of the approval.
2. The Community Development Director grants an extension of the coastal development permit approval. The Community Development Director may grant up to three (3) one-year extensions of the coastal development permit approval. Each extension may be granted upon the Director finding that: (i) the development continues to conform to the Local Coastal Program, (ii) the applicant has demonstrated due diligence in completing the development, and (iii) there are no changed circumstances that affect the consistency of the development with the General Plan or any other applicable ordinances, resolutions, or other laws.

This motion was announced on the 21st day of February, 2024 by the Staff Hearing Officer of the City of Santa Barbara.

I hereby certify that this Resolution correctly reflects the action taken by the City of Santa Barbara Staff Hearing Officer at its meeting of the above date.

Kathleen Guo February 26, 2024
 Kathleen Guo, Commission Secretary Date

PLEASE BE ADVISED:

1. The decision of the Staff Hearing Officer concerning an application for a Coastal Development Permit pursuant to Santa Barbara Municipal Code §28.28.44.110.C constitutes the final action of the City. In the Coastal Commission's appeal jurisdiction only, the decision of the Staff Hearing Officer made pursuant to Santa Barbara Municipal Code §28.28.44.110.C may be appealed to the Coastal Commission in accordance with SBMC §28.44.200.
2. If the scope of work exceeds the extent described in the COASTAL DEVELOPMENT PERMIT request or that which was represented to the Staff Hearing Officer at the public hearing, it may render the Staff Hearing Officer approval null and void.
3. If you have any existing zoning violations on the property, other than those included in the conditions above, they must be corrected within thirty (30) days of this action.
4. Subsequent to the outcome of any appeal action, your next administrative step should be to resubmit design review materials under your PLN case for approval and then a building permit.

RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU

JOB NUMBER
21108B1

PIC	PA	PM	TEAM
MK	TH	JA	TJ

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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
CDP APPROVAL	04/13/22
PERMIT ISSUANCE	01/25/23

REVISIONS

NO.	DESCRIPTION	DATE
-----	-------------	------

STAFF HEARING OFFICER RESOLUTION

G003

SCALE DATE: 04/22/2024

(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)



do any of the above is a violation of federal and state regulations. No trimming or removing brush or trees shall occur if nesting birds are found in the vegetation. All care should be taken not to disturb the nest(s). Removal or trimming may only occur after the young have fledged from the nest(s).

4. **Air Quality and Dust Control.** The following measures shall be shown on grading and building plans and shall be adhered to throughout grading, hauling, and construction activities:
 - a. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.
 - b. Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.
 - c. If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
 - d. Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
 - e. After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
 - f. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.
 - g. All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
 - h. Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449), the purpose of which is to reduce diesel particulate matter (PM) and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles. For more information, please refer to the CARB website at www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
 - i. All commercial diesel vehicles are subject to Title 13, § 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction

equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

- j. Diesel construction equipment meeting the California Air Resources Board (CARB) Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards should be used to the maximum extent feasible.
 - k. Diesel powered equipment should be replaced by electric equipment whenever feasible.
 - l. If feasible, diesel construction equipment shall be equipped with selective catalytic reduction systems, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California.
 - m. Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
 - n. All construction equipment shall be maintained in tune per the manufacturer's specifications.
 - o. The engine size of construction equipment shall be the minimum practical size.
 - p. The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time. Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.
5. **Unanticipated Archaeological Resources Contractor Notification.** Standard discovery measures shall be implemented per the City master Environmental Assessment throughout grading and construction: Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and the Owner shall retain an archaeologist from the most current City Qualified Archaeologists List. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, etc. If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño

Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

A final report on the results of the archaeological monitoring shall be submitted by the City-approved archaeologist to the Environmental Analyst within 180 days of completion of the monitoring and prior to any certificate of occupancy for the project.

- F. **Prior to Certificate of Occupancy.** Prior to issuance of the Certificate of Occupancy, the Owner of the Real Property shall complete the following:
 1. **Repair Damaged Public Improvements.** Repair any public improvements (curbs, gutters, sidewalks, roadways, etc.) or property damaged by construction subject to the review and approval of the Public Works Department per SBMC §22.60. Where tree roots are the cause of the damage, the roots shall be pruned under the direction of a qualified arborist.
 2. **Complete Public Improvements.** Public improvements, as shown in the public improvement plans or building plans, shall be completed.
- G. **General Conditions.**
 1. **Compliance with Requirements.** All requirements of the city of Santa Barbara and any other applicable requirements of any law or agency of the State and/or any government entity or District shall be met. This includes, but is not limited to, the Endangered Species Act of 1973 (ESA) and any amendments thereto (16 U.S.C. § 1531 et seq.), the 1979 Air Quality Attainment Plan, and the California Code of Regulations.
 2. **Approval Limitations.**
 - a. The conditions of this approval supersede all conflicting notations, specifications, dimensions, and the like which may be shown on submitted plans.
 - b. All buildings, roadways, parking areas and other features shall be located substantially as shown on the plans approved by the Planning Commission.
 - c. Any deviations from the project description, approved plans or conditions must be reviewed and approved by the City, in accordance with the Planning Commission Guidelines. Deviations may require changes to the permit and/or further environmental review. Deviations without the above-described approval will constitute a violation of permit approval.
 3. **Litigation Indemnification Agreement.** In the event the Planning Commission approval of the Project is appealed to the City Council, Applicant/Owner hereby agrees to defend the City, its officers, employees, agents, consultants and independent contractors ("City's Agents") from any third party legal challenge to the City Council's denial of the appeal and approval of the Project, including, but not limited to, challenges filed pursuant to the California Environmental Quality Act (collectively "Claims"). Applicant/Owner further agrees to indemnify and hold harmless the City and the City's Agents from any award of attorney fees or court costs made in connection with any Claim. Applicant/Owner shall execute a written agreement, in a form approved by the City Attorney, evidencing the foregoing commitments of defense and indemnification within thirty (30) days of being notified of a lawsuit regarding the Project. These commitments of

defense and indemnification are material conditions of the approval of the Project. If Applicant/Owner fails to execute the required defense and indemnification agreement within the time allotted, the Project approval shall become null and void absent subsequent acceptance of the agreement by the City, which acceptance shall be within the City's sole and absolute discretion. Nothing contained in this condition shall prevent the City or the City's Agents from independently defending any Claim. If the City or the City's Agents decide to independently defend a Claim, the City and the City's Agents shall bear their own attorney fees, expenses, and costs of that independent defense.

- III. Said approval is subject to the following time Limits:
 - A. **NOTICE OF COASTAL DEVELOPMENT PERMIT TIME LIMITS:**

The Planning Commission action approving the Coastal Development Permit shall expire two (2) years from the date of final action upon the application, per Santa Barbara Municipal Code §28.44.230, unless:

 1. A Building permit for the work authorized by the coastal development permit is issued prior to the expiration date of the approval.
 2. The Community Development Director grants an extension of the coastal development permit approval. The Community Development Director may grant up to three (3) one-year extensions of the coastal development permit approval. Each extension may be granted upon the Director finding that: (i) the development continues to conform to the Local Coastal Program, (ii) the applicant has demonstrated due diligence in completing the development, and (iii) there are no changed circumstances that affect the consistency of the development with the General Plan or any other applicable ordinances, resolutions, or other laws.

This motion was passed and adopted on the 19th day of May, 2022 by the Planning Commission of the City of Santa Barbara, by the following vote:
 AYES: 6 NOES: 0 ABSTAIN: 0 ABSENT: 1 (Bonderson)

I hereby certify that this Resolution correctly reflects the action taken by the City of Santa Barbara Planning Commission at its meeting of the above date.

Gillian Fennessy _____ 7/14/2022
 Gillian Fennessy, Commission Secretary Date

PLEASE BE ADVISED:

THIS ACTION OF THE PLANNING COMMISSION CAN BE APPEALED TO THE CITY COUNCIL WITHIN TEN (10) CALENDAR DAYS AFTER THE DATE THE ACTION WAS TAKEN BY THE PLANNING COMMISSION.

RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU

JOB NUMBER			
21108B1			
PIC	PA	PM	TEAM
MK	JA	TH	TJ

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MILESTONES / SUBMITTALS	
DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23
ADU BLDG. SUBMITTAL #1	02/15/24

△ REVISIONS		
NO.	DESCRIPTION	DATE

PLANNING COMMISSION RESOLUTION

G006

SCALE _____ DATE: 11/30/22

(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)



RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU



WEST ELEVATION



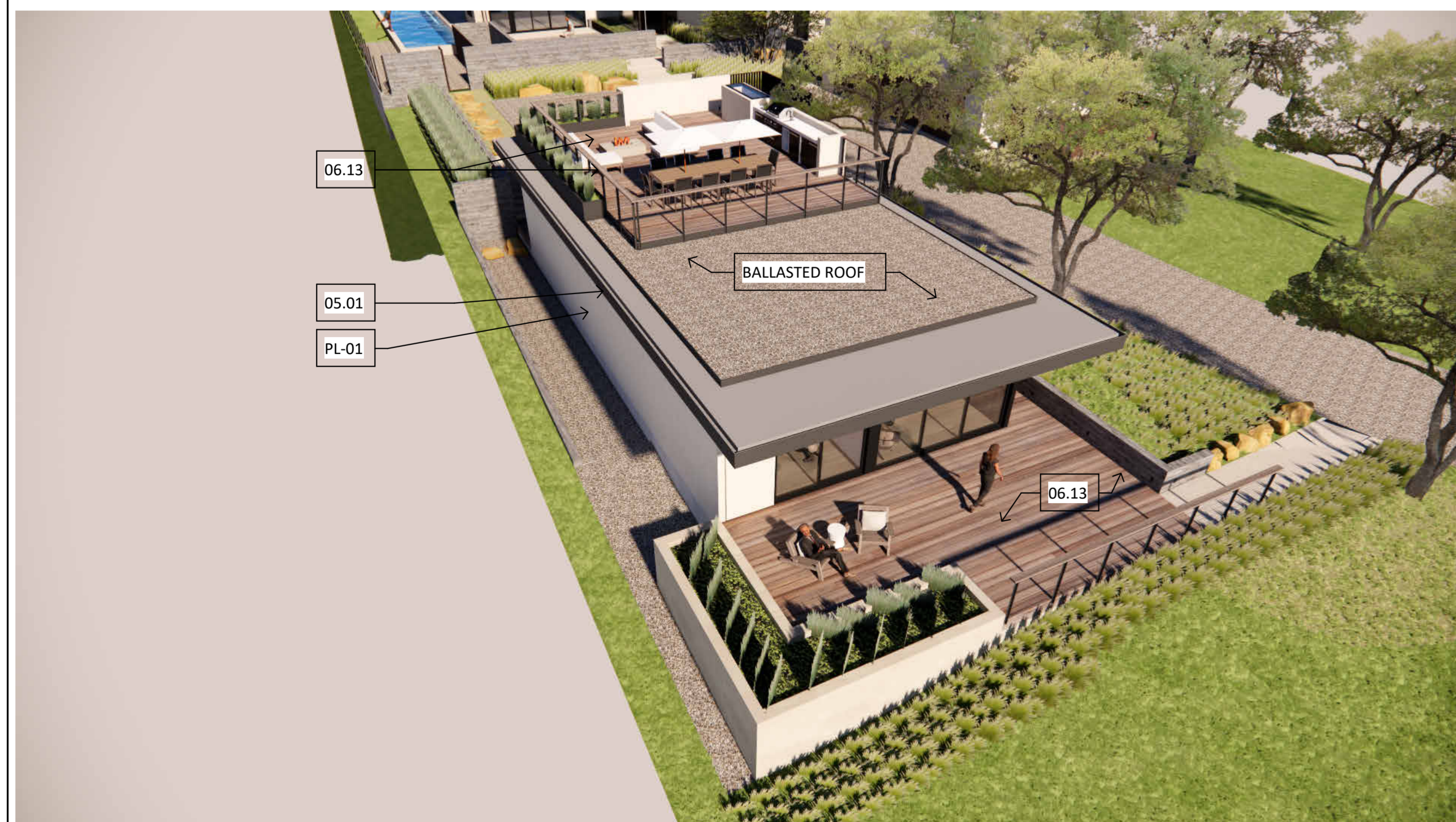
VIEW FROM DRIVEWAY



SOUTH PERSPECTIVE



SOUTH ELEVATION



AERIAL VIEW NORTH EAST



AERIAL VIEW SOUTH WEST

MATERIALS



METAL FASCIA [05.01]: PAINTED BENJAMIN MOORE 1603 "GRAPHITE"



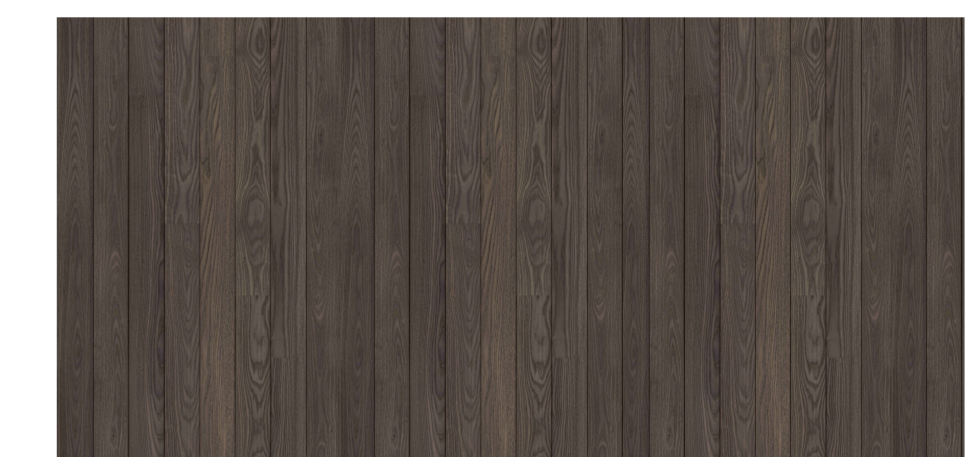
EXPOSED STEEL MEMBERS [S.01]: PAINTED - SHERWIN WILLIAMS 6258 "TRICORN BLACK" (MATCH FLEETWOOD CLASS 1 BLACK ANODIZED FINISH)



DOOR & WINDOW FRAMES: FLEETWOOD CLASS 1 BLACK ANODIZED FINISH



EXTERIOR WOOD SIDING AND SLATS [06.01]: RESAWN ALASKAN YELLOW CEDAR STAINED: CABOT "DARK SLATE" SEMI-OPAQUE



GATES AND FENCES [06.09]: RESAWN ALASKAN YELLOW CEDAR STAINED: CABOT "DARK SLATE" SEMI-OPAQUE



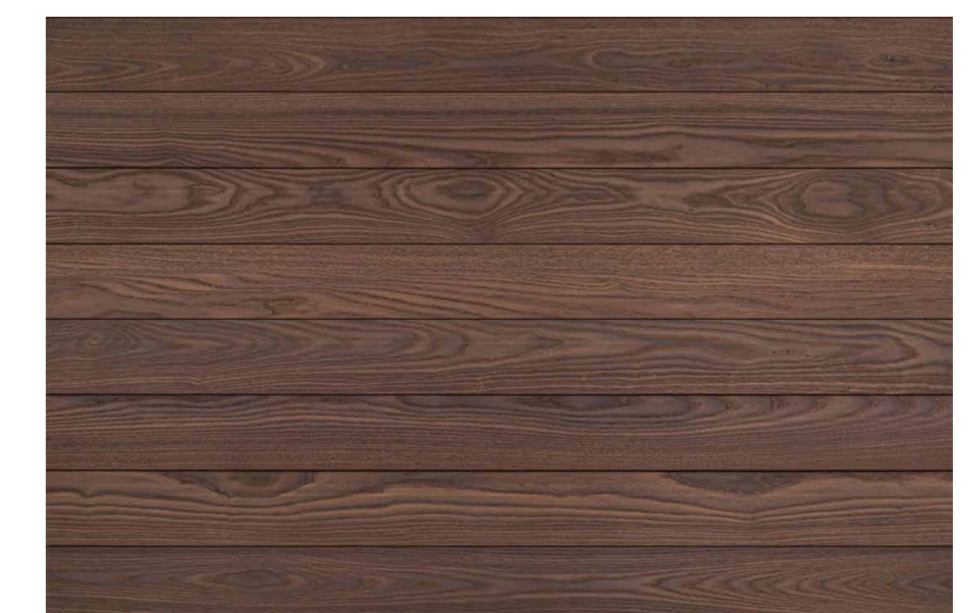
PLASTER WALLS [PL-01]: SMOOTH TROWELED CEMENT PLASTER, PAINTED (PL-1) DUNN EDWARDS DE6220 "POROUS STONE"



SITE WALLS [03.02]: BOARD FORMED CONCRETE WALLS 1x4 DOUGLAS FIR - WOOD TEXTURE ON TOP SURFACE



FLATWORK [03.01]: CONCRETE FLATWORK WITH COLOR ADMIXTURE AND TOPCAST TEXTURE COLOR: Davis "Mesa Buff" TOPCAST #03



WOOD DECK [06.13]: Thermory Deck "Bench Mark Ash"



WOOD SOFFIT [06.14]: ALASKAN YELLOW CEDAR - STAINED WEATHERED GRAY

JOB NUMBER
21108B1

PIC	PA	PM	TEAM
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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU/CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23

REVISIONS

NO.	DESCRIPTION	DATE

MATERIAL BOARD

G100.1

SCALE: 12" = 1'-0"
DATE: 04/10/2024

(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)



GENERAL INFORMATION

01	02	03	04	05	06	07	08	09	10	11	12
Project Name	Residential Building	Run Title	Title 24 Analysis	City	Santa Barbara	Standards Version	2022	Zip code	93109	Software Version	CHREC-Res 2022.3.0
Project Location	3238 Cliff Drive	Climate Zone	5	Front Orientation (deg/ Cardinal)	270	Building Type	Single Family	Project Scope	Newly Constructed	Number of Dwelling Units	1
ADU Addition Cond. Floor Area (ft ²)	0	ADU Existing Cond. Floor Area (ft ²)	n/a	ADU Total Cond. Floor Area (ft ²)	1300	ADU Bedroom Count	n/a	ADU Fuel Type	All electric	ADU Number of Bedrooms	2
ADU Total Cond. Floor Area (ft ²)	1300	ADU Bedroom Count	n/a	ADU Fuel Type	All electric	ADU Number of Bedrooms	2	ADU Number of Stories	0	ADU Fenestration Average U-Factor	0.3
ADU Fenestration Average U-Factor	0.3	ADU Glazing Percentage (%)	58.36%	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a
ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a
ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a	ADU Glazing Percentage (%)	n/a

COMPLIANCE RESULTS

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

ENERGY USE INTENSITY

Standard Design (kBtu/ft ² -yr)	Proposed Design (kBtu/ft ² -yr)	Compliance Margin (kBtu/ft ² -yr)	Margin Percentage	
Gross EUI ¹	15.23	14.93	0.3	1.97
Net EUI ²	5.65	5.35	0.3	5.11

Notes:
1. Gross EUI is Energy Use Total (including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kW)	Exception	Module Type	Array Type	Power Electronics	CFI	AdjuMth (deg)	Tilt	Array Angle (deg)	Tilt in (ft)	Inverter Eff (%)	Annual Solar Access (%)
2	NA	Standard (4-1.7%)	Fixed	none	true	150-270	n/a	n/a	<=7.12	96	98

REQUIRED SPECIAL FEATURES

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

- Ducts in crawl space
- Northern Energy Efficiency Alliance (NEEA) rated heat pump water heater, specific brand/model, or equivalent, must be installed

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CFIRs and CFIRs are required to be completed in the HERS Registry

- Indoor air quality ventilation
- Kitchen range hood
- Minimum Airflow
- Verified SEER/SEER2
- Fan Efficiency Watts/CFM
- Verified HSP
- Verified heat pump rated heating capacity
- Duct leakage testing

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Altitude	Height (ft)	Mult.	Area (ft ²)	U-Factor	U-Factor Source	SHGC	SHGC Source	Exterior Shading	
Window 9	Window	Right Wall	Right	180	1	18	0.28	NFRC	0.23	NFRC	0.18	NFRC	Bug Screen
Glass Door 4	Window	Right Wall	Right	180	1	111.7	0.3	NFRC	0.21	NFRC	0.18	NFRC	Bug Screen
Skylight 7	Skylight	Roof	Right	270	1	12.7	0.38	NFRC	0.25	NFRC	0.25	NFRC	

OPaque SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-Factor	Assembly Layers
R-21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R-21	None / None	0.064	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: Wood Siding/Weathering/Decking
R-38 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 24 in. O.C.	R-38	None / None	0.029	Roof Deck: Wood Siding/Weathering/Decking Cavity / Frame: R-38 / 2x10 Inside Finish: Gypsum Board
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 16 in. O.C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/Weathering/Decking Cavity / Frame: R-19 / 2x10

BUILDING ENVELOPE - HERS VERIFICATION

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

HVAC DISTRIBUTION - HERS VERIFICATION

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

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.44	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficiency (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.44

INDOOR AIR QUALITY (IAQ) HANS

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficiency (Watts/CFM)	IAQ Fan Type	Includes Heat/Recovery? (SRE/ASRE)	IAQ Recovery Effectiveness - SRE/ASRE	Includes Faulty Installation	HERS Verification	Status
Sfam IAQventHPT	57	0.35	Exhaust	No	n/a / n/a	No	Yes	

ENERGY DESIGN RATINGS

	Energy Design Ratings			Compliance Margins		
	Source Energy (EER)	Efficiency ¹ EDR (EER/MinEER)	Total ² EDR (EER/MinEER)	Source Energy (EER)	Efficiency ¹ EDR (EER/MinEER)	Total ² EDR (EER/MinEER)
Standard Design	29.8	33.8	25.5	0	0	0
Proposed Design	29.8	33.8	25.5	0	0	0

RESULT: PASS

¹Efficiency EDR includes improvements like a better building envelope and more efficient equipment.
²Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries.
* Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded.
• Standard Design PV Capacity: 2.00 kW
• PV System resized to 2.00 kW (a factor of 1.298) to achieve Standard Design PV PV scaling

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft ²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Residential Building	1200	1	2	1	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft ²)	Avg. Ceiling Height	Water Heating System 1	Status
First Floor	Conditioned	HVAC System1	1200	10	DHW Sys 1	New

OPaque SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	AdjuMth	Orientation	Gross Area (ft ²)	Window and Door Area (ft ²)	Tilt (deg)
Front Wall	First Floor	R-21 Wall	270	Front	430	248.6	90
Left Wall	First Floor	R-21 Wall	180	Left	250	233.7	90
Rear Wall	First Floor	R-21 Wall	90	Back	430	77.8	90
Right Wall	First Floor	R-21 Wall	180	Right	250	125.7	90
Raised Floor	First Floor	R-19 Floor Crawlspace	n/a	n/a	1200	n/a	n/a

OPaque SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	AdjuMth	Orientation	Area (ft ²)	Skylight Area (ft ²)	Roof Rise (x in 12)	Roof Reflectance	Roof Insulation	Cool Roof
Roof	First Floor	R-38 Roof No Attic	270	Front	1200	12.7	0	0.1	0.85	No

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (ft)
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	None	None	n/a	DHW Heater 1 (1)

WATER HEATERS - NEEA HEAT PUMP

01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Heat Air Source	Duct Outlet Air Source
DHW Heater 1	1	65	Rheem	PHDPHS17-103T1515 gal. JA13	Outside	First Floor	First Floor

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution	Restriction Control	Shower Drain Water Recovery
DHW Sys 1 - 1/2	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
HVAC System1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	HVAC Fan 1	Air Distribution System 1	Setback

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Mario Bertacco
Signature Date: 11/01/2023
Company: NREI Compliance LP
Address: PO Box 3777, Santa Barbara, CA 93103
Phone: 707-237-6957

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury under the laws of the State of California:

- I am a registered under Division 14 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Astha Arora
Company: BevyHouse LLC
Address: 1129 Maricopa Hwy, B124, Ojai, CA 93023
Phone: (805) 633-3111

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EER) (kBtu/ft ² -yr)	Standard Design TDV Energy (EER) (kBtu/ft ² -yr)	Proposed Design Source Energy (EER) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EER) (kBtu/ft ² -yr)	Compliance Margin (EER)	Compliance Margin (EER)
Space Heating	0.67	4.49	1.27	9.66	-0.66	-4.57
Space Cooling	0.49	18.03	0.38	17.69	0.11	0.34
IAQ Ventilation	0.37	3.95	0.37	3.95	0	0
Water Heating	1.64	17.8	1.19	13.59	0.45	4.21
Self Utilization/Resiliency Credit				0		0
Efficiency Compliance Total	3.17	44.27	3.21	44.29	-0.04	-0.02
Photovoltaics	-1.89	-52.94	-1.89	-52.73		
Battery			0	0		
Flexibility						
Indoor Lighting	0.81	8.12	0.81	8.12		
Appl. & Cooking	3.12	37.46	3.08	37.14		
Plug Loads	3.79	39.57	3.79	39.57		
Outdoor Lighting	0.2	1.81	0.2	1.81		
TOTAL COMPLIANCE	9.2					

REVISIONS		
NO.	DATE	DESCRIPTION

RESIDENTIAL MEASURES SUMMARY						RMS-1
Project Name Raskopf, Kristen ADU		Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition/Alteration	Date 11/1/2023			
Project Address 3239 Cliff Drive Santa Barbara		California Energy Climate Zone CA Climate Zone 06	Total Cond. Floor Area 1,200	Addition n/a	# of Units 1	

Construction Type	Cavity	Area (ft ²)	Special Features	Status
Floor	Wood Framed w/Crawl Space	R 19	1,200	New
Wall	Wood Framed	R 20	672	New
Roof	Wood Framed Rafter	R 38	1,187	New

Orientation	Area(ft ²)	U-Fac	SHGC	Overhang	Sidelins	Exterior Shades	Status
Front (W)	205.6	0.280	0.23	none	none	N/A	New
Front (W)	15.0	0.430	0.19	none	none	N/A	New
Front (W)	28.0	0.340	0.18	none	none	N/A	New
Left (N)	231.7	0.300	0.21	none	none	N/A	New
Rear (E)	59.6	0.280	0.23	none	none	N/A	New
Rear (E)	18.0	0.430	0.19	none	none	N/A	New
Right (S)	18.0	0.280	0.23	none	none	N/A	New
Right (S)	111.7	0.300	0.21	none	none	N/A	New
Skylight	12.7	0.380	0.25	none	none	N/A	New

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Electric Heat Pump	9.00 HSPF	Split Heat Pump	16.0 SEER	Setback	New

HVAC DISTRIBUTION					
Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ducted	Ducted	CrawlSpace	6.0	New

WATER HEATING					
Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Heat Pump	65	3.20	Standard	New

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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.

- § 110.6(a)1: **Air Leakage.** Manufacturing, 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 E2983, or AIAA/MNA/CSA 1011 S-2044/2011.
- § 110.6(a)5: **Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 110.11(a).
- § 110.6(b): **Field fabricated exterior doors and fenestration products** must use U-factors and solar heat gain coefficients (SHGC) values from Tables 110.6.A, 110.6.B, or J4.5 for exterior doors. They must be caulked and/or weather stripped.
- § 110.7: **Air Leakage.** All joints, penetrations, and openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
- § 110.7(a): **Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
- § 110.8(a): **Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
- § 110.8(b): **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(k) and be labeled per § 110.11 when the installation of a cool roof is specified on the CF-IR.
- § 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.
- § 110.8(k): **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 drywall ceiling.
- § 150.0(a): **Masonry walls** must meet Tables 150.1.A or 150.1.B.
- § 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.
- § 150.0(d): **Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
- § 150.0(e): **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 radiation; 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(g).
- § 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(i): **Fenestration Products.** Fenestration products, 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, Decorative Gas Appliances, and Gas Log:

- § 110.5(a): **Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
- § 150.0(a)1: **Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
- § 150.0(a)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 light-fitting damper or combustion-air control device.
- § 150.0(a)3: **Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.

Space Conditioning, Water Heating, and Plumbing System:

- § 110.0.4.110.3: **Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to be California Energy Commission.
- § 110.2(a): **HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2.A through Table 110.2.N.
- § 110.2(b): **Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone, in which the cut-on temperature for supplementary heating is higher than the cut-off temperature for supplementary heating, and the cut-off temperature for supplementary heating is higher than the cut-off temperature for supplementary heating.
- § 110.2(c): **Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
- § 110.3(a): **Insulation.** Unlined service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
- § 110.3(b): **Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
- § 110.3(c): **Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

*Exemptions may apply.

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.

- § 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 SHACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual - Using design conditions specified in § 150.0(h)2.
- § 150.0(h)3A: **Cleanances.** 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(i): **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): **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-combustible casing or sleeve.
- § 150.0(k): **Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space of at least 2.5 x 2.5 x 7.7 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(l): **Solar Water-Heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

- § 110.8(d): **Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.4 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): **CMC Compliance.** All air-distribution systems ducts and plenums must meet CMC §§ 601.0-603.0 and ANSI/SMNA-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 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 airtight sealing that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1/4". 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(n): **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 duct black rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
- § 150.0(m)1: **Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other materials specified for duct construction.
- § 150.0(m)2: **Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
- § 150.0(m)3: **Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
- § 150.0(m)4: **Protection of Insulation.** Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or paired with a water retardant and solar radiation resistant coating.
- § 150.0(m)5: **Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or a barrier between the inner core and outer vapor barrier.
- § 150.0(m)6: **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 leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
- § 150.0(m)7: **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 comply with § 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 filter.

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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 J48.
- § 150.0(k)1H: **Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the J48 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, cabinet 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 out dimmers used with LED light sources must comply with NEMA SSL 7A.
- § 150.0(k)2B: **Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.
- § 150.0(k)2C: **Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
- § 150.0(k)2D: **Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed in compliance with § 150.0(k).
- § 150.0(k)2E: **Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
- § 150.0(k)2F: **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)2G: **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)2H: **Dimmers.** Lighting in habitable spaces (e.g., living room, dining room, kitchen, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase out dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
- § 150.0(k)2I: **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.

Solar 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).
- § 110.10(b)1A: **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 6 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 60 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 180 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.
- § 110.10(b)2: **Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
- § 110.10(b)3A: **Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
- § 110.10(b)3B: **Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
- § 110.10(b)4: **Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
- § 110.10(c): **Interconnection Pathways.** The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
- § 110.10(d): **Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
- § 110.10(e)1: **Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
- § 110.10(e)2: **Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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2022 Single-Family Residential Mandatory Requirements Summary

- § 150.0(k): **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, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(k), at least four branch circuits must be identified and have their source color-coded 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 nightstand 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(l): **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 2' 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(m): **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 2' 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(n): **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."

*Exemptions may apply.

5/6/22

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Raskopf, Kristen ADU		Date 11/1/2023	
System Name HVAC System		Floor Area 1,200	
ENGINEERING CHECKS			
Number of Systems	1		
HEATING SYSTEM			
Heating System	24,000		
Output per System	24,000		
Total Output (Btu/h)	24,000		
Output (Btu/h/sqft)	20.0		
Cooling System			
Cooling System	24,000		
Output per System	24,000		
Total Output (Btu/h)	24,000		
Total Output (Tons)	2.0		
Total Output (Btu/h/sqft)	20.0		
Total Output (sqft/Ton)	60.0		
Air System			
CFM per System	0		
Airflow (cfm)	0		
Airflow (cfm/sqft)	0.00		
Airflow (cfm/Ton)	0.0		
Outside Air (%)	0.0%		
Total Outside Air (cfm/sqft)	0.00		
Note: values above given at ARI conditions			
TIME OF SYSTEM PEAK			
HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)		Aug 3 PM	
COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)			

5/6/22

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#125 Raskopf ADU

3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

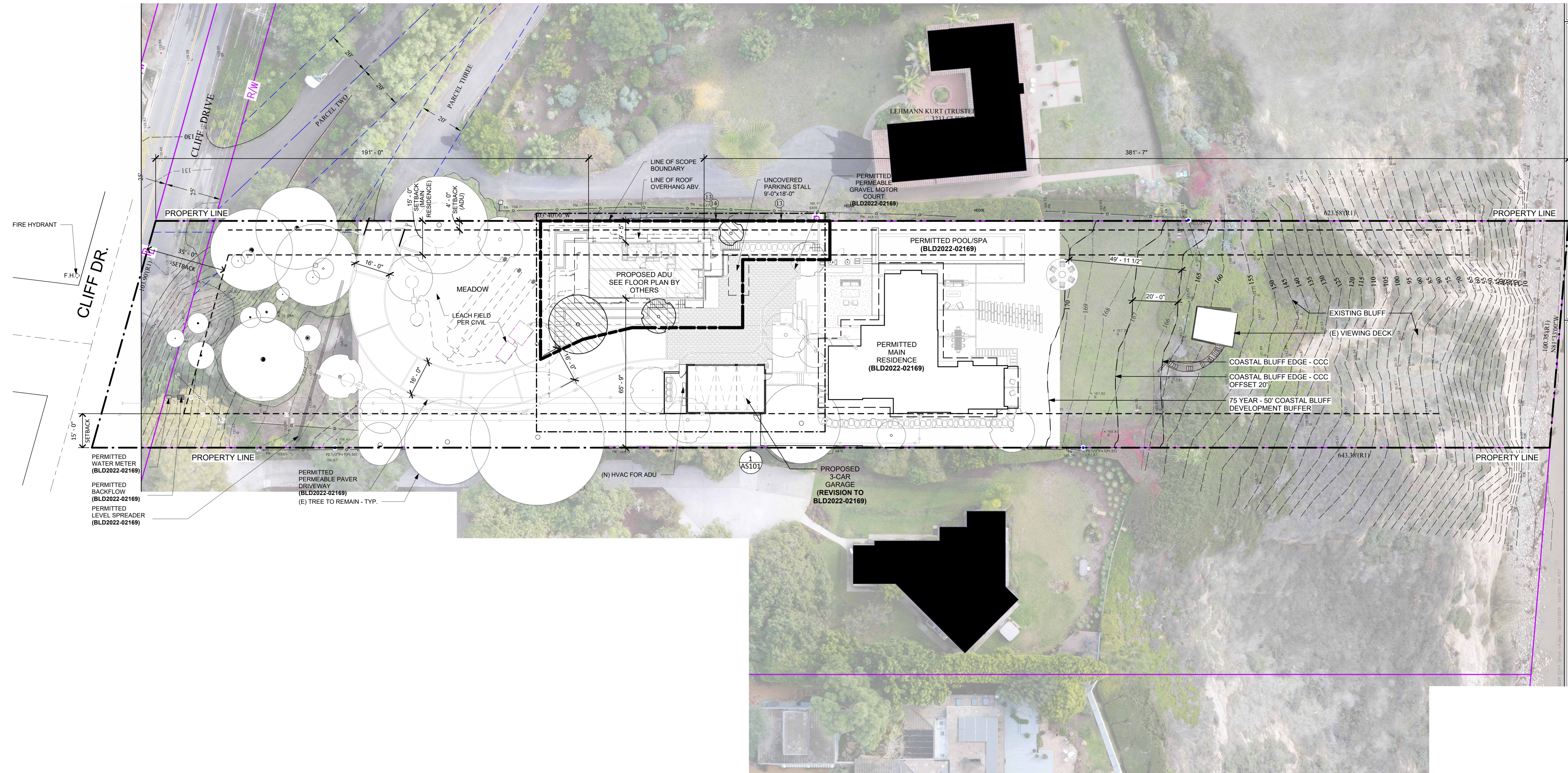
Title 24 Calcs

A0.03

RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU



OVERALL SITE PLAN
1" = 20'-0"

1

JOB NUMBER
21108B1

PIC	PA	PM	TEAM
MK	TH	JA	TJ

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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23
ADU BLDG. SUBMITTAL #1	02/15/24

REVISIONS

NO.	DESCRIPTION	DATE

SITE PLAN

AS100

SCALE: 1" = 20'-0" DATE: 11/17/2023

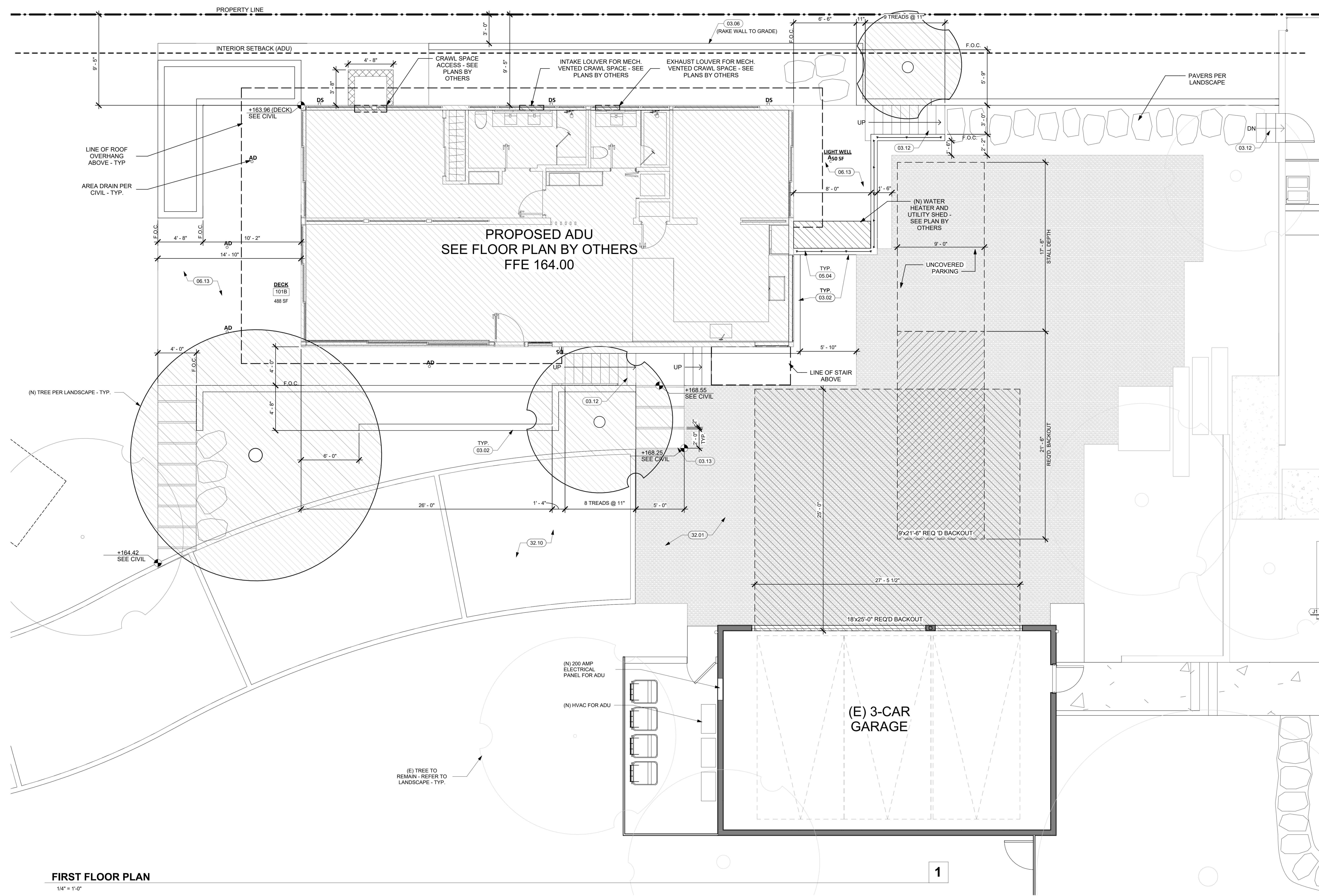
(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)



RASKOPF
RESIDENCE

3239 Cliff Dr., Santa
Barbara, CA 93109

3239 CLIFF DRIVE ADU



FIRST FLOOR PLAN

1/4" = 1'-0"

KEYNOTES

- 03.02 Board formed concrete wall. Use 1x4 Douglas fir, hand selected. No level at tops of walls and wood texture on top surface. BID ALTERNATE: PLASTIC FORMLINER IN LIEU OF DOUGLAS FIR. ARCHITECTURAL POLYMERS #507 OR SIM.
- 03.06 Concrete retaining wall with exposed board formed surface - See also Civil/Structural plans
- 03.12 New concrete flatwork steps with color admixture and Topcast texture COLOR: Davis "Mesa Bull" TOPCAST #03. Contractor shall provide 24" x 24" sample for approval. Provide "Santa Barbara Gold" Pea Gravel at joints of steps
- 03.13 New concrete flatwork with color admixture and Topcast texture COLOR: Davis "Mesa Bull" TOPCAST #03. Contractor shall provide 24" x 24" sample for approval. Provide "Santa Barbara Gold" Pea Gravel at joints of steps
- 05.04 Steel Guardrail - Stainless 316 with Black Oxide finish. Stainless cable rails with same finish per details
- 06.13 Thermory Deck "Benchmark Ash" of sleepers on concrete deck - refer to plans by others
- 32.01 Permeable Gravel - See Civil plans
- 32.10 Permeable Paver Driveway - See Civil Plans

JOB NUMBER
21108B1

PIC	PA	PM	TEAM
MK	TH	JA	TJ

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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23
ADU BLDG. SUBMITTAL #1	02/15/24

REVISIONS

NO.	DESCRIPTION	DATE

ENLARGED SITE PLAN

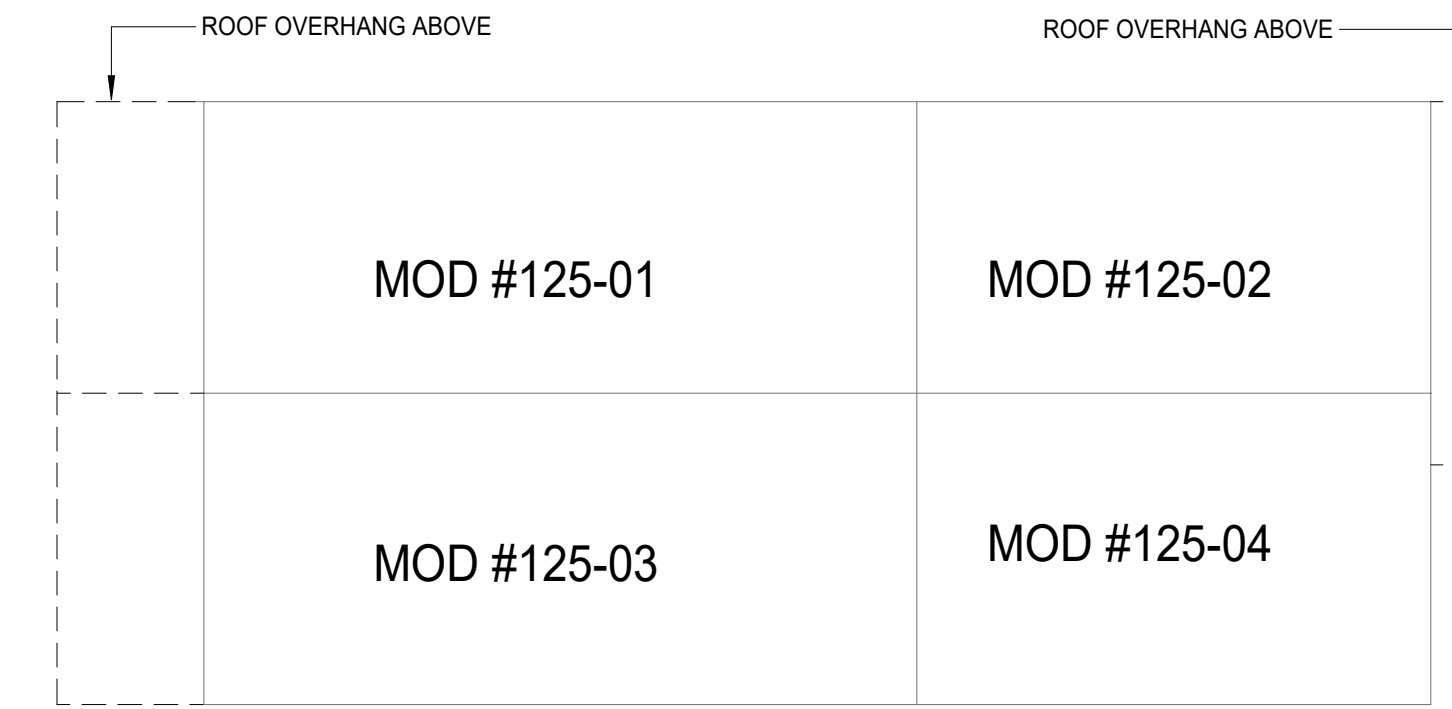
AS101

SCALE 1/4" = 1'-0" DATE: 11/17/2023

(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)



REVISIONS		
NO.	DATE	DESCRIPTION



MODULE KEY PLAN

Note:

All dimensions shown are to face of stem wall or centerline of embed plates, unless otherwise noted.

See Structural Drawings for more info.

All stem wall footings shall extend a minimum of 21" embedment into compacted fill per Project Geotechnical Consultant recommendations, see Soils Report for more info.

All foundation excavations must be observed and approved by the Project Geotechnical Engineer prior to placement of reinforcing steel.

Provide StagoCrawl Vapor Retarder, typical entire crawl space.

Provide ± 3" Concrete slab over vapor retarder.

Provide minimum 8" sleeve through exterior stem wall for sewer drainage. Verify location in field.

Provide sleeves through exterior stem wall for HVAC, plumbing, electrical, etc. Verify size/ location in field.

Crawl Space Ventilation Requirements:

Unvented Crawl Space allowed per California Residential Code 2022 Section R408.3:

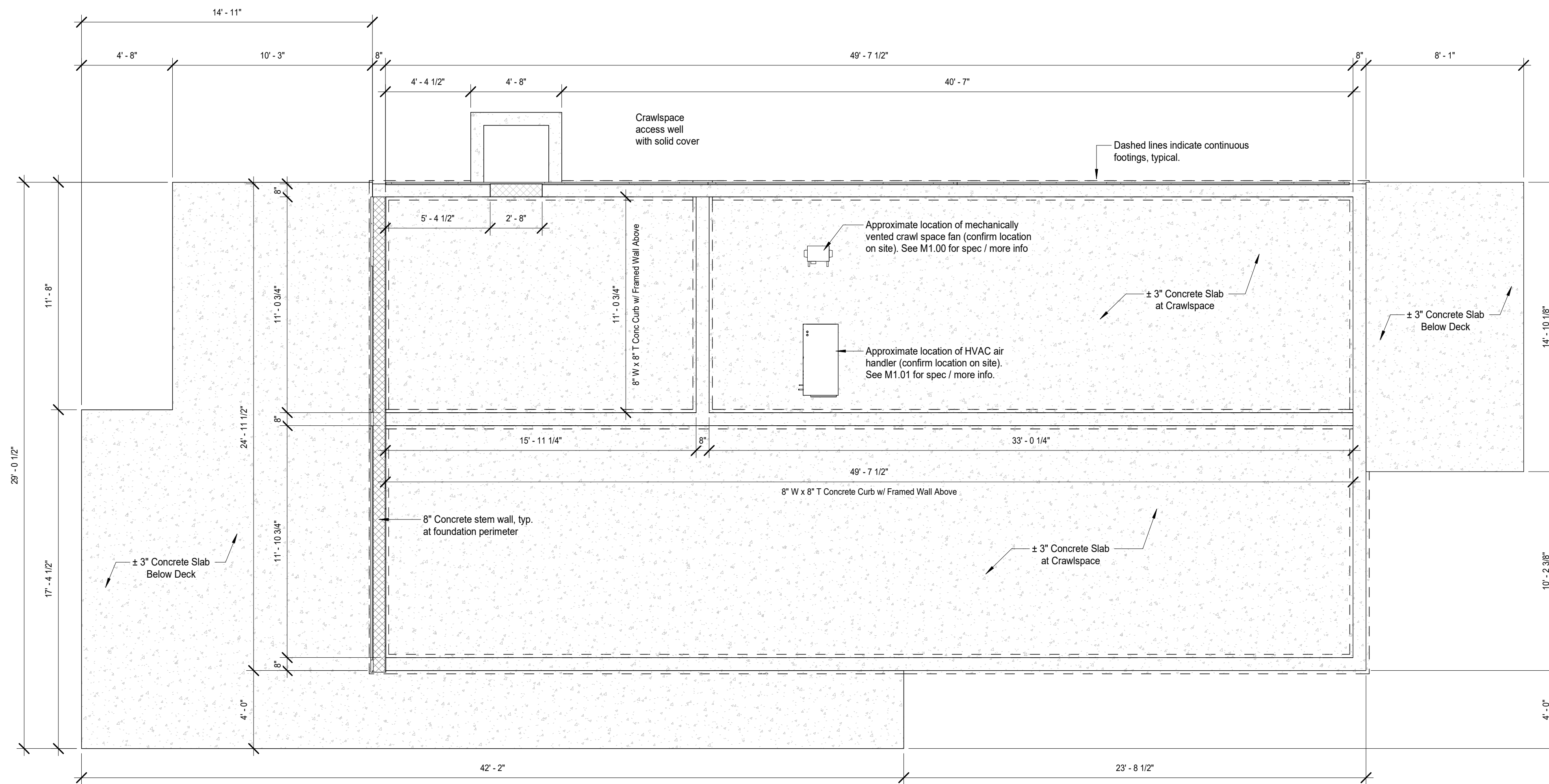
1. Exposed earth shall be covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches and shall be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches up the stem wall and shall be attached and sealed to the stem wall or insulation.

2.1 Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute for each 50 square feet of crawl space floor area, including an air pathway to the common area (such as a duct or transfer grille).

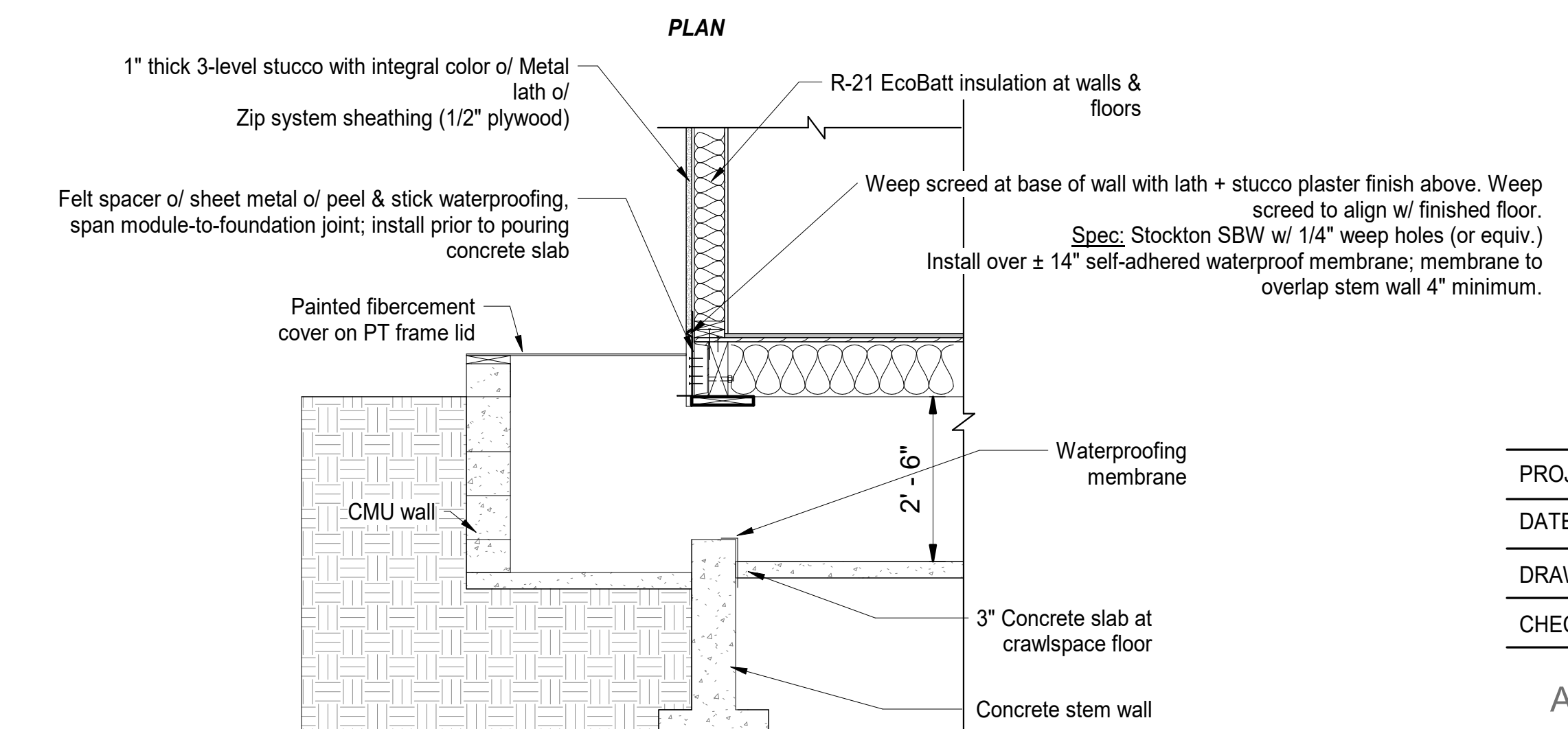
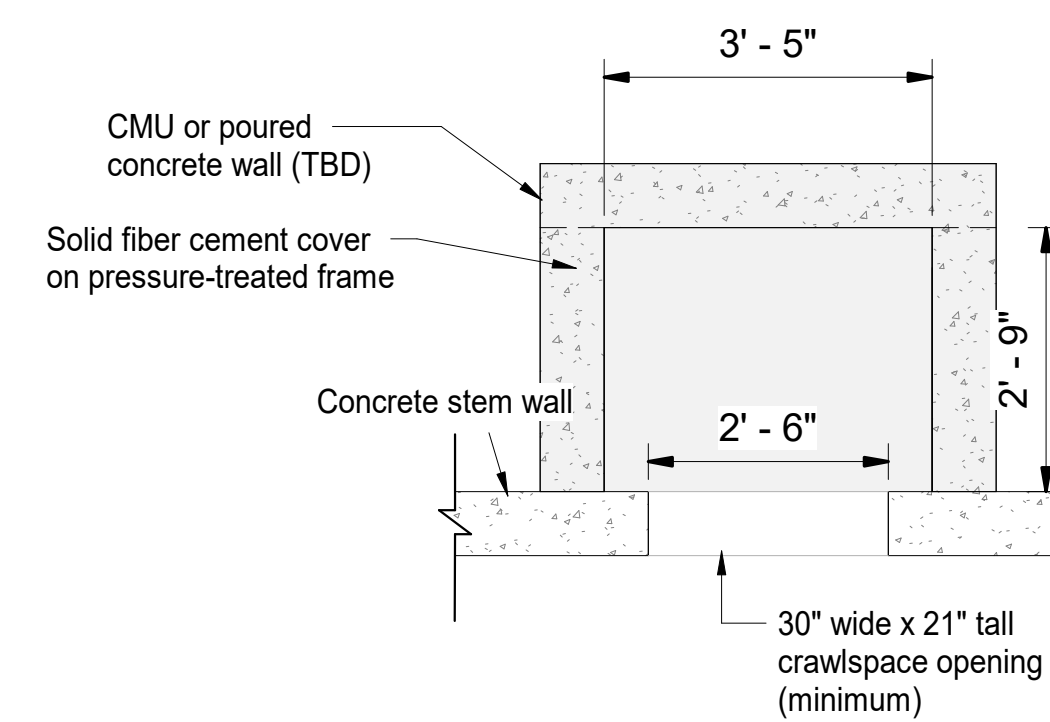
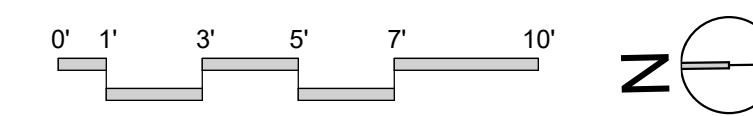
See M1.00 for more info on mechanically vented crawl space.

STEM WALL LEGEND

- 4" X 8" X 1/2" thick steel embed plate
 - 4" X 12" X 1/2" thick steel embed plate
 - 32" wide x 24" tall (minimum) crawl space access opening
- See Structural Drawings for more info



1 STEM WALL PLAN
1/4" = 1'-0"



2 Crawlspace access detail
1/2" = 1'-0"

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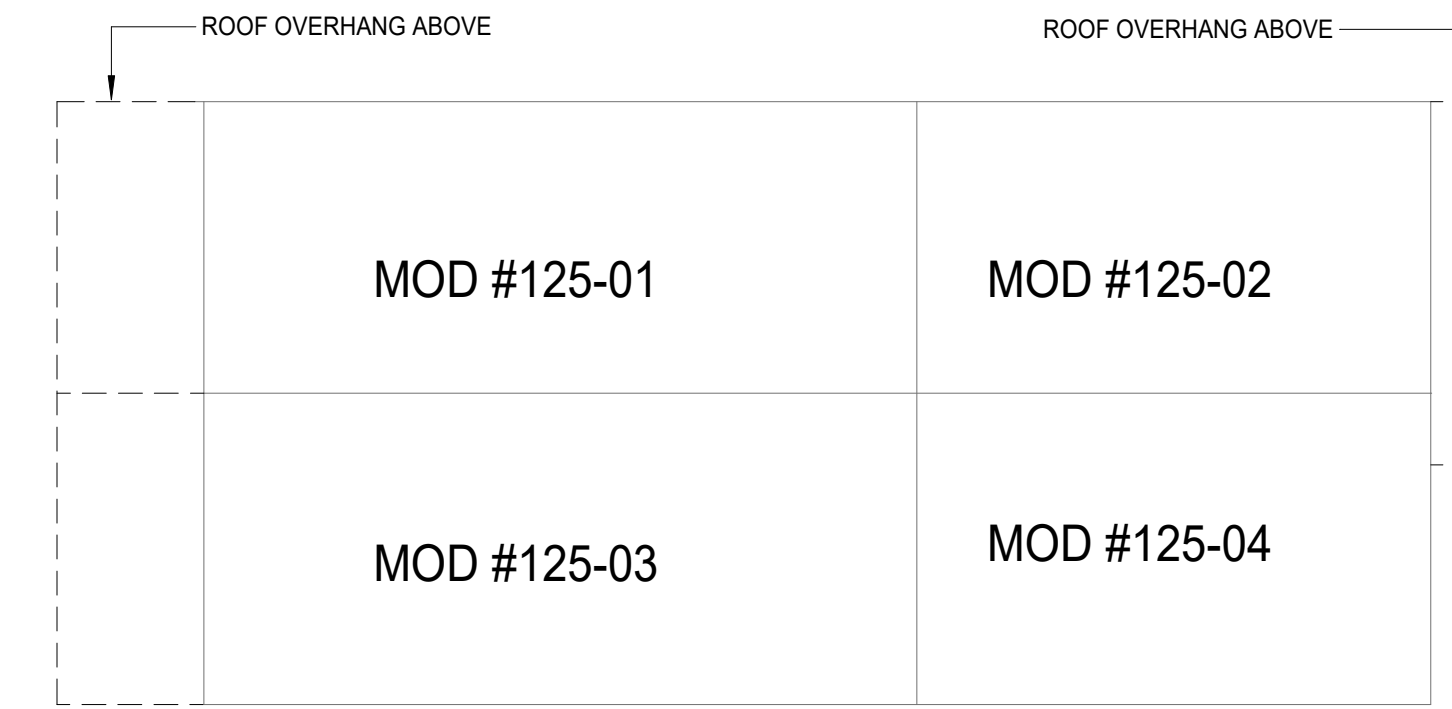
3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

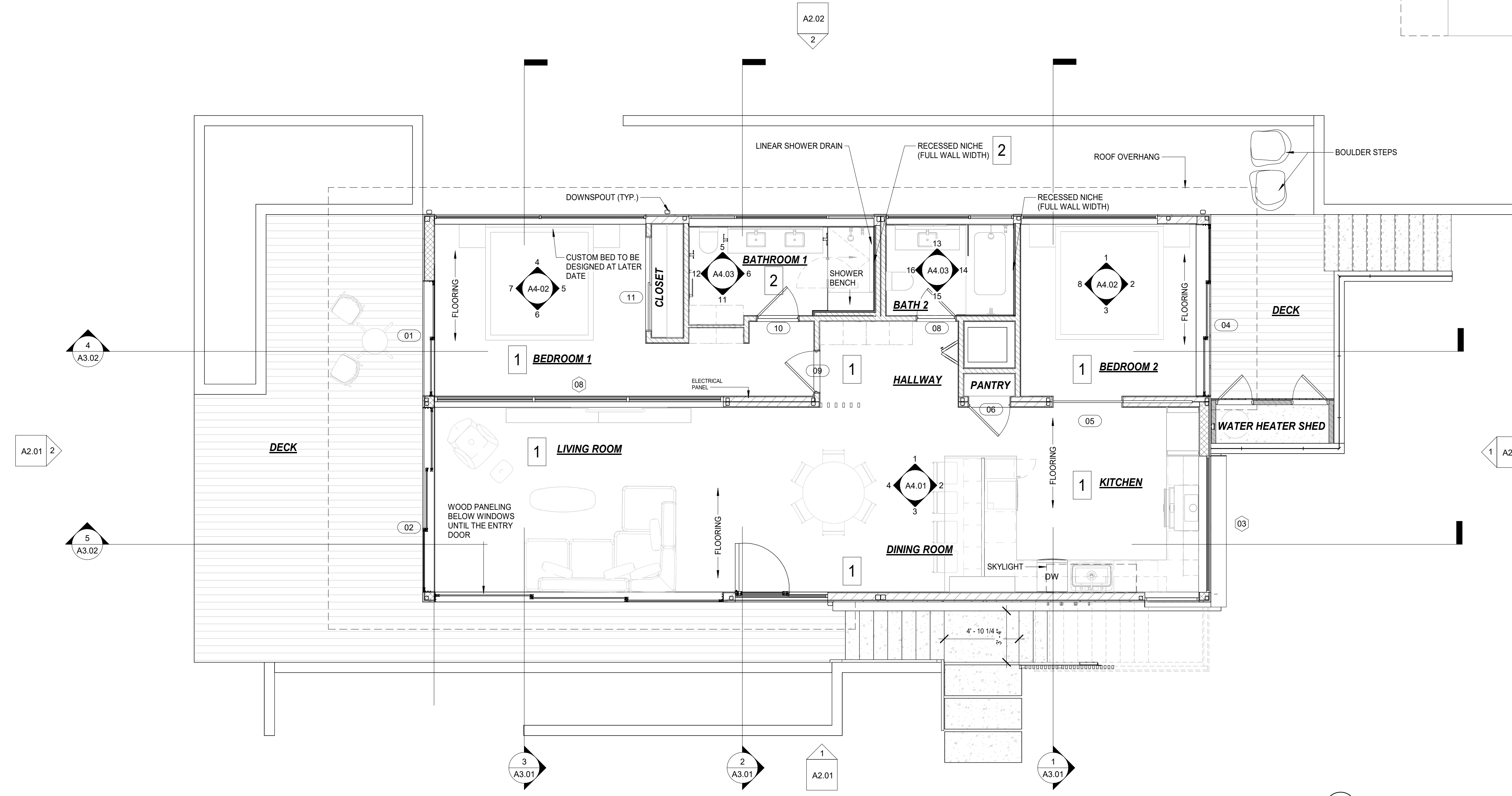
Architectural Stem Wall Plan

A1.01

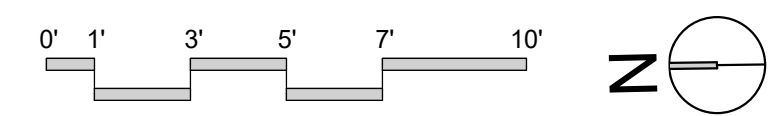
REVISIONS		
NO.	DATE	DESCRIPTION



MODULE KEY PLAN



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



DOOR / WINDOW SYMBOLS

See schedules on A6.01

- # DOOR
- # WINDOW

WALL TYPE LEGEND

- FACTORY-BUILT 2X6 WALL
- SITE-BUILT 2X6 WALL
- FACTORY-BUILT 2X4 WALL
- SITE-BUILT 2X4 WALL
- FACTORY-BUILT 2X8 WALL
- SITE-BUILT CONCRETE RETAINING WALL

FLOORING

- 1** PRODUCT: WOOD FLOORING- WHITE OAK ENGINEERED
MANUFACTURER: CARLISLE
SIZE: TBD (LIKELY 8" OR 9")
COLOR: URBAN- SWAYING HAMMOCK
GROUT:
QTY:
- 2** PRODUCT: PORCELAIN TILE FLOOR
MANUFACTURER: SPEC CERAMICS
SIZE: TBD
COLOR: WHITE FALDA (INSTALLED IN STACKED PATTERN)
GROUT:
QTY:

MISC SPECS

INTERIOR DOORS

- PRODUCT: WOOD
- MANUFACTURER: SHINNOKI
- DOOR STYLE: FROZEN WALNUT
- FINISH: FROZEN WALNUT
- QTY:

DROPPED CEILING

- MANUFACTURER: TBD
- FINISH: ALASKAN YELLOW CEDAR
- COLOR: STAIN TBD
- QTY:

UPPER CABINETS AT KITCHEN

- PRODUCT: LAMINATE CABINETRY
- MANUFACTURER: FENIX
- DOOR STYLE: FENIX- J0032 BIANCO KOS
- FINISH: FENIX- J0032 BIANCO KOS
- QTY:

LOWER CABINETS AT KITCHEN

- MANUFACTURER: SHINNOKI
- DOOR STYLE: FROZEN WALNUT
- FINISH: FROZEN WALNUT
- QTY:

TILE ON BATHROOM WALLS

- PRODUCT: PORCELAIN TILE
- MANUFACTURER: SPEC CERAMICS
- SIZE: 24" x 48", CUT TO DESIGN
- SEE ELEVATIONS
- COLOR: WHITE FALDA
- GROUT:
QTY:

COUNTERTOP & BACKSPLASH AT KITCHEN

- PRODUCT: CAESARSTONE
- MANUFACTURER: EMPIRA WHITE 5151, 3CM
- COLOR:
EDGE DETAIL:
BACKSPLASH:
QTY:

BATHROOM VANITIES

- PRODUCT: WOOD
- MANUFACTURER: SHINNOKI
- DOOR STYLE: FROZEN WALNUT
- FINISH: FROZEN WALNUT
- QTY:

COUNTERTOP AT BATHROOM

- PRODUCT: CAESARSTONE
- MANUFACTURER: 1141 PURE WHITE
- COLOR: 1141 PURE WHITE
- EDGE DETAIL:
BACKSPLASH:
QTY:

MEDICINE CABINET AT BATHROOM 1

- MANUFACTURER: ROBERN- M SERIES RESERVE
- DOOR STYLE: SINGLE DOOR CABINET- RECESSED
- QTY: 3
- NOTES: SLOW- CLOSE HINGES, MAGNETIC STORAGE, STORAGE TRAYS
- UPGRADES: SLIDING MAGNIFICATION MIRROR, WIRE ORGANIZER, INTERIOR LIGHTING
- USB CHARGING PORTS, ELECTRICAL OUTLETS, STORAGE BINS, NIGHT LIGHT AND AUTOMATIC DEFOGGER
- SIZE: 23- 1/4" x 39- 3/8" x 4"

MEDICINE CABINET AT BATHROOM 2

- MANUFACTURER: ROBERN- M SERIES RESERVE
- DOOR STYLE: 2 DOOR CABINET- RECESSED
- QTY: 1
- NOTES: SLOW- CLOSE HINGES, MAGNETIC STORAGE, STORAGE TRAYS
- UPGRADES: SLIDING MAGNIFICATION MIRROR, WIRE ORGANIZER, INTERIOR LIGHTING
- USB CHARGING PORTS, ELECTRICAL OUTLETS, STORAGE BINS, NIGHT LIGHT AND AUTOMATIC DEFOGGER
- SIZE: 29- 1/4" x 39- 3/8" x 4"

PAINTED WALLS

- MANUFACTURER: TBD
- FINISH:
QTY:

WOOD PANNELLING AT WALLS

- MANUFACTURER: TBD
- FINISH:
QTY:

BASEBOARD

- PRODUCT: TBD
- COLOR: TBD
- QTY:

ROLLER SHADE

- PRODUCT: LUTRON 'PALLADIUM'- WIRE FREE SHADE SYSTEM
- COLOR: BLACK ANODIZED BRACKETS, PALLADIUM BOTTOM RAIL, PALLADIUM WALL MOUNTED CONTROL- SHADES IN "BASKETWEAVE 90" BY LUTRON- COLOR AND OPENNESS % TBD
- QTY: BEDROOM 1 SLIDER DOOR, BEDROOM 2 SLIDER DOOR, BEDROOM 2 WINDOW

WOOD SOFFIT & SLATS

- PRODUCT: Alaskan Yellow Cedar
- COLOR: Stained to match Shinoki
- QTY: TBD

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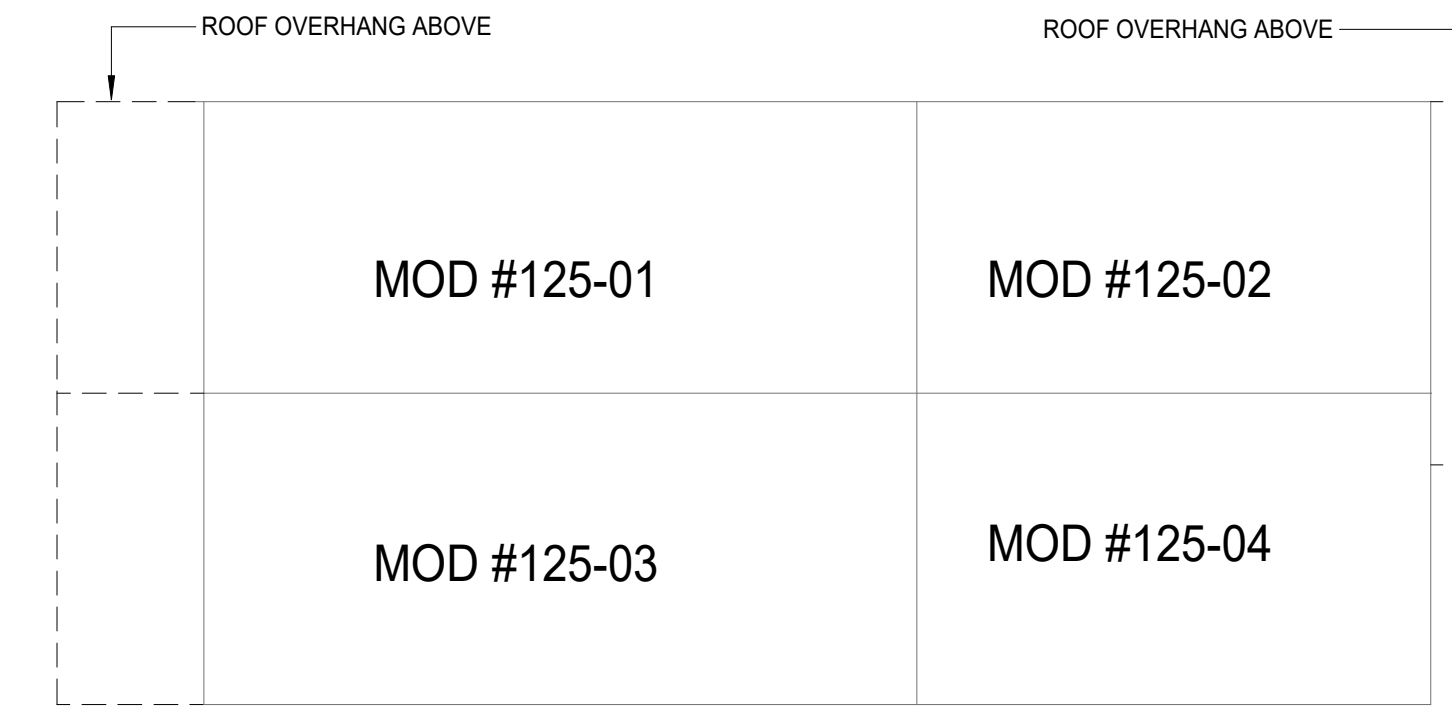
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Santa Barbara, CA 93109

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DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

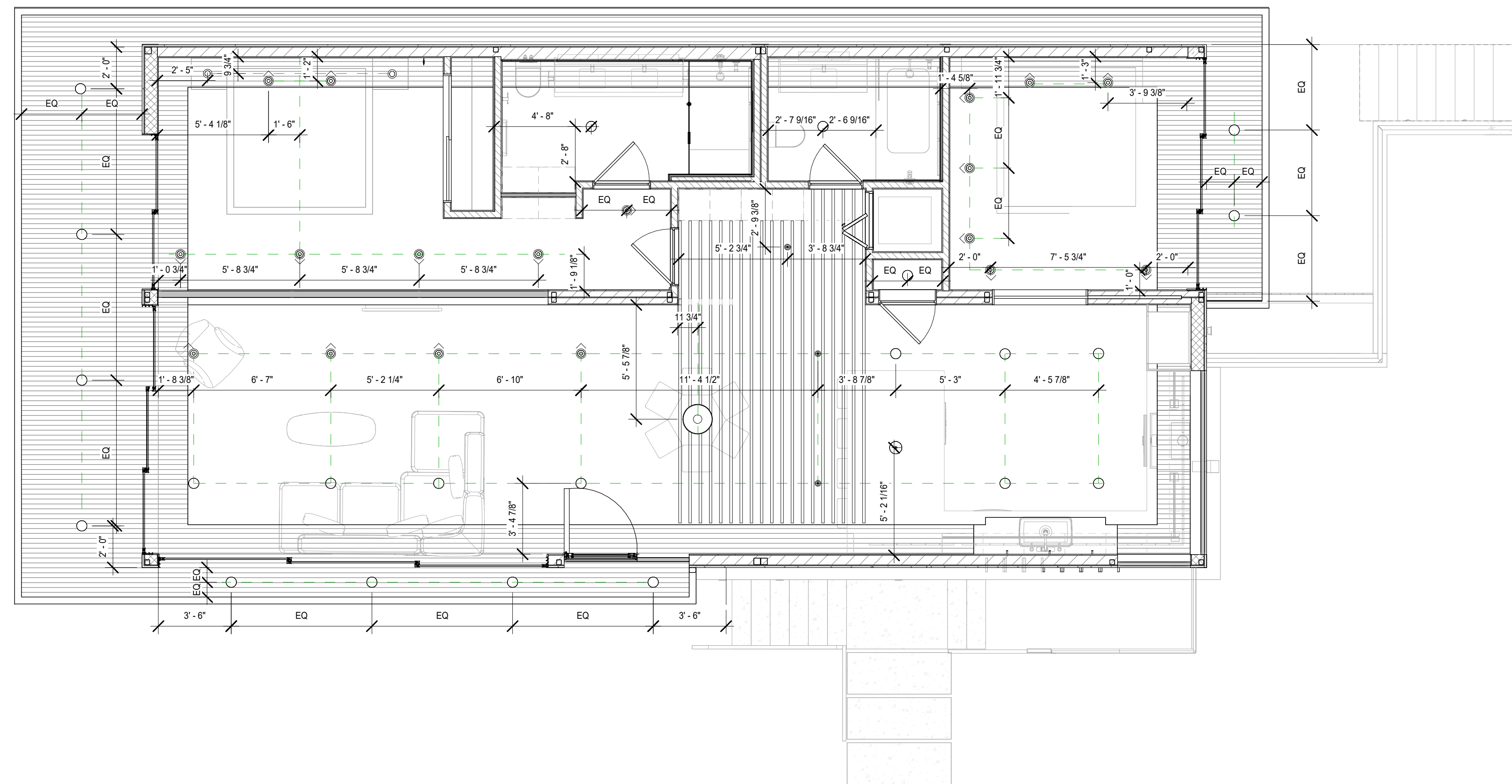
Floor Plan - Annotated

A1.03

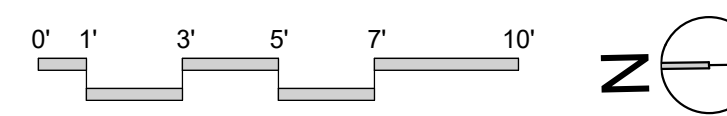
REVISIONS		
NO.	DATE	DESCRIPTION



MODULE KEY PLAN



1 REFLECTED CEILING PLAN
1/4" = 1'-0"



ELECTRICAL FIXTURES LEGEND					
NAME	SYMBOL	QTY	DESCRIPTION	SPEC / NOTES	LOCATION
L1	○	22	INTERIOR & EXTERIOR RECESSED LED DOWNLIGHT	CSL-A3-IC-R-ST-10-S-SHB-A3-27-90-R-ST-WT-NL-50, LED 2700K, 10W	EXTERIOR SOFFIT (10), LIVING (4), KITCHEN (5), BATH 1 (1), BATH 2 (1), PANTRY (1)
L2	●	18	RECESSED ADJUSTABLE LED DOWNLIGHT- SPOT OPTIC	CSL-A3-IC-R-ST-10-S-SHB-A3-27-90-R-ST-WT-NL-30, LED 2700K, 10W	LIVING (4), BED 1 (7), BED 2 (7)
L3	⊙	1	SUSPENDED DECORATIVE PENDANT	FLAT 5940 VIBIA 2700 K	DINING TABLE
L4	⊙	2	SUSPENDED DECORATIVE PENDANT	LIGHTOLOGY- SKYBELL PLUS S/I/L PENDANT BOV1025311	BEDROOM 1
L5	⊙	1	SUSPENDED DECORATIVE PENDANT	LUMENS- RA LINE LED LINEAR SUSPENSION 55"	KITCHEN ISLAND
L6	—	31 FT	LINEAR LED LIGHT- UNDER CABINET	CORE LIGHTING- LSM40HF-27-LENGTHS PER PLAN-24-ALU-SF, LED 2700K, 4W/FT	KITCHEN - UNDER CABINETS, ROOFTOP UNDER CABINETS
L7	—	39 FT	LINEAR LED LIGHT- TOEKICK AND MILLWORK	CORE LIGHTING- LSM25-27K-LENGTHS PER PLAN-24-ALU-SF, LED 2700K, 2.2W/FT	BATH 1 & BATH 2 VANITY TOEKICK, BATH 1 & BATH 2 O/COUNTER, KITCHEN UNDER SHELVES, ROOFTOP TOEKICK
L8	—	12 FT	SURFACE MOUNTED LINEAR LED GRAZER IN JOB BUILT SLOT	PURE EDGE- COWG-C-5W-BC1-120-27K6-WH-W, LED 2700K, 5W/FT	BATH 1 & BATH 2 SHOWER WALL
L9	—	18	IN-WALL STEPLIGHT	HK LIGHTING- ZXL-SL-FM-XX-12V-4W-27-6K, 4W, 12V, MLVELV, LED, 2700K	CONCRETE WALL AT NORTH (4), NEXT TO STAIRS (2), ROOFTOP (6)
L10	==	85 FT	LED PERIMETER WASH LIGHT	PURE LIGHT- VGN-CHLN-LENGTHS PER PLAN-VG-1RE-JBOX-ST2A-4PIN-24V-40-27K-LC-PFE-890	ROOFTOP UNDER HANDRAIL, ROOFTOP UNDER WALL CAP
L11	*	3	1" TEMPLESS RECESSED DOWNLIGHT	CSL-A1-IC-R-ST-10-S-SHB-A1-27-90-R-TL-TL-NL-50, LED 2700K, 10W	IN BETWEEN SLATS IN LIVING ROOM

ALL SPECIFIED ITEMS TO BE PROVIDED AS LISTED OR EQUIVALENT

MECHANICAL FIXTURES LEGEND			
SYMBOL	QTY	DESCRIPTION	SPEC / NOTES
⊕	TBD	THERMOSTAT	WALL-MOUNTED, WIFI COMPATIBLE THERMOSTAT TO BE PROVIDED BY HVAC INSTALLER
⊕	2	HUMIDISTAT	CONDENSATION SENSOR WALL SWITCH WITH MANUAL CONTROL, (PANASONIC FV-WCCS1-W) BATH FAN MUST BE SET TO HUMIDISTAT EXCEPT AT POWDER ROOM
■	2	FAN AT BATH	PANASONIC WhisperValue DC Ventilation Fan (FV-10V51) SET TO HUMIDISTAT, UL-LISTED FOR WET AREAS 4" OVAL DUCT, 80 CFM, 7.2W, 0.13A, 120V/ 60HZ ENERGY STAR CERTIFIED: YES 10.25" SQ MOUNTING OPENING, 13" SQ GRILLE
■	1	FAN AT CRAWLSPACE	PANASONIC WhisperLine Ventilation Fan (FV-10NLF1E) 4" DUCT, 120 CFM, 27.5W, 0.24A, 120V/ 60HZ ENERGY STAR CERTIFIED: YES FAN TO BE INSTALLED AT UNDERSIDE OF FLOOR IN CRAWLSPACE, SUSPENDED FROM 2X8 FLOOR JOISTS
■	1	CONDENSER UNIT	mitsubishi 18 BTU/M SERIES OUTDOOR CONDENSER, SL1Z-KA19AKZ, LOCATED AT GARAGE, 30 DBA AT PROPERTY LINE
■	1	DUCTED AIR HANDLER AT CRAWLSPACE	MITSUBISHI, 18K BTU, M SERIES MULTI POSITION AIR HANDLER, SVZ-KP18NA

ALL SPECIFIED ITEMS TO BE PROVIDED AS LISTED OR EQUIVALENT

NOTE:

ALL DIMENSIONS SHOWN ARE FACE OF FRAMING TO CENTERLINE OF FIXTURE, UNLESS OTHERWISE NOTED.

SEE ELECTRICAL PLAN E1.01 FOR MORE INFO (SWITCHING, OUTLETS, ETC.)

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Santa Barbara, CA 93109

PROJECT NO: #125

DATE: 4/22/2024 1 PM

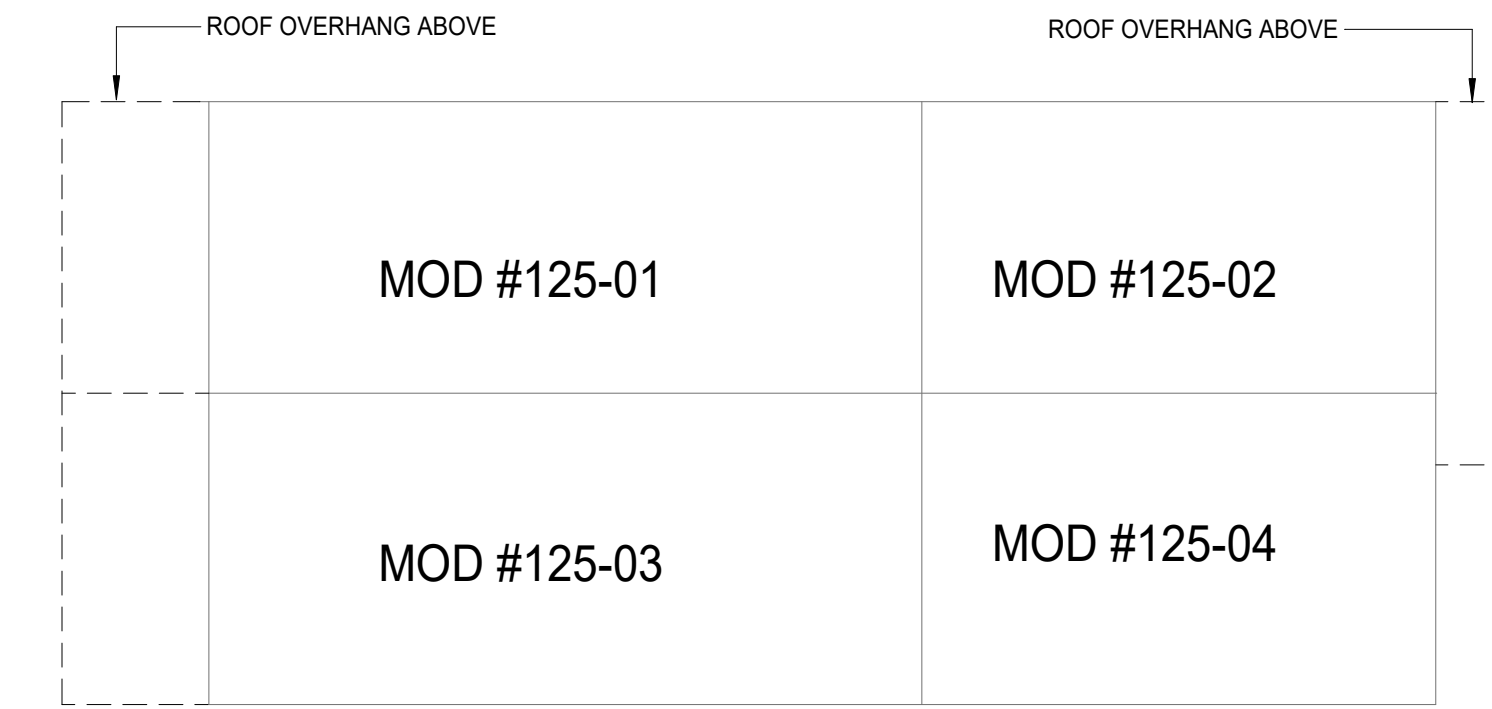
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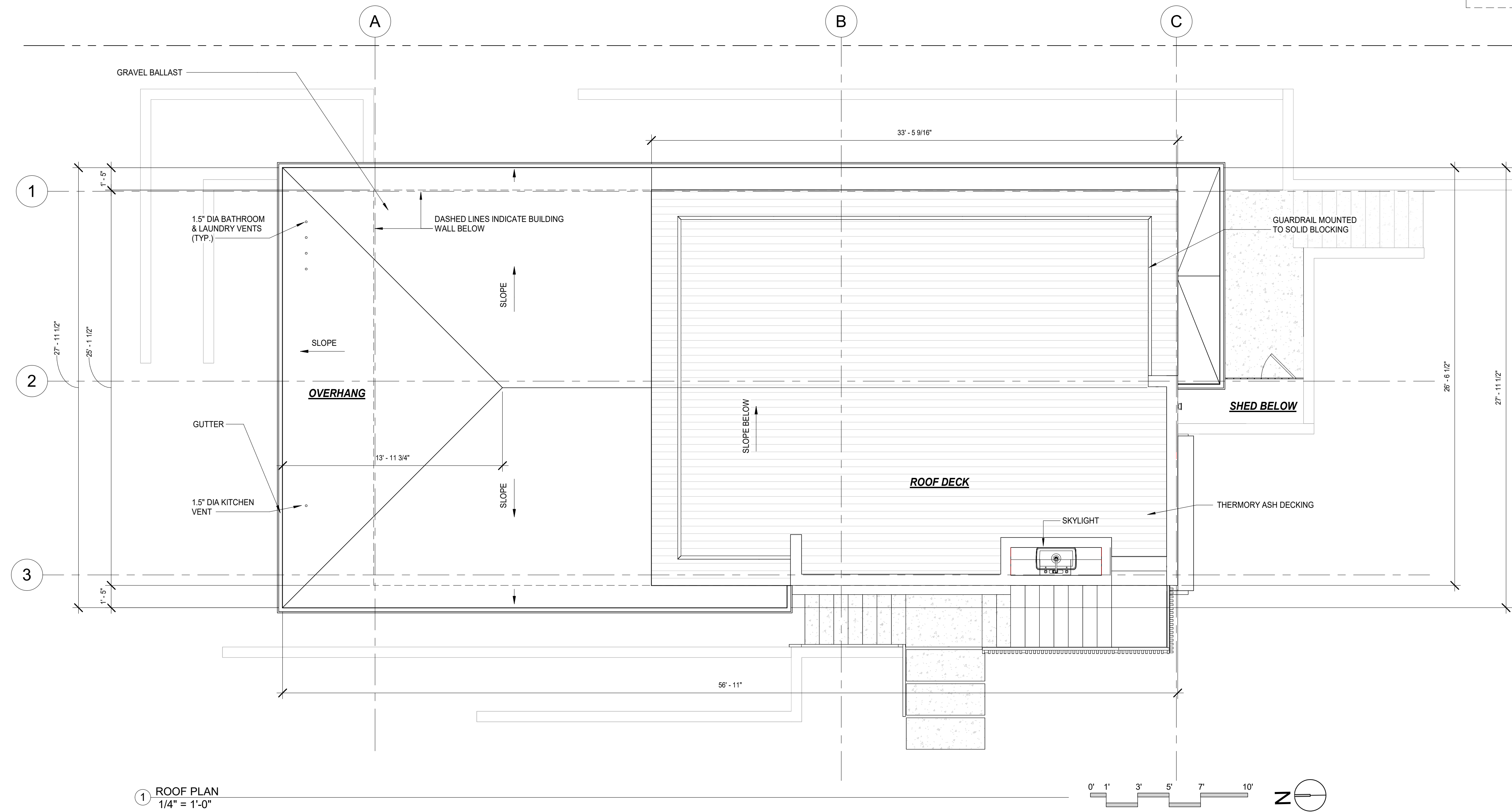
Reflected Ceiling Plan

A1.04

REVISIONS		
NO.	DATE	DESCRIPTION



MODULE KEY PLAN



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

WALL TYPE LEGEND

- FACTORY-BUILT 2X6 WALL
- SITE-BUILT 2X6 WALL
- FACTORY-BUILT 2X4 WALL
- SITE-BUILT 2X4 WALL
- FACTORY-BUILT 2X8 WALL
- SITE-BUILT CONCRETE RETAINING WALL

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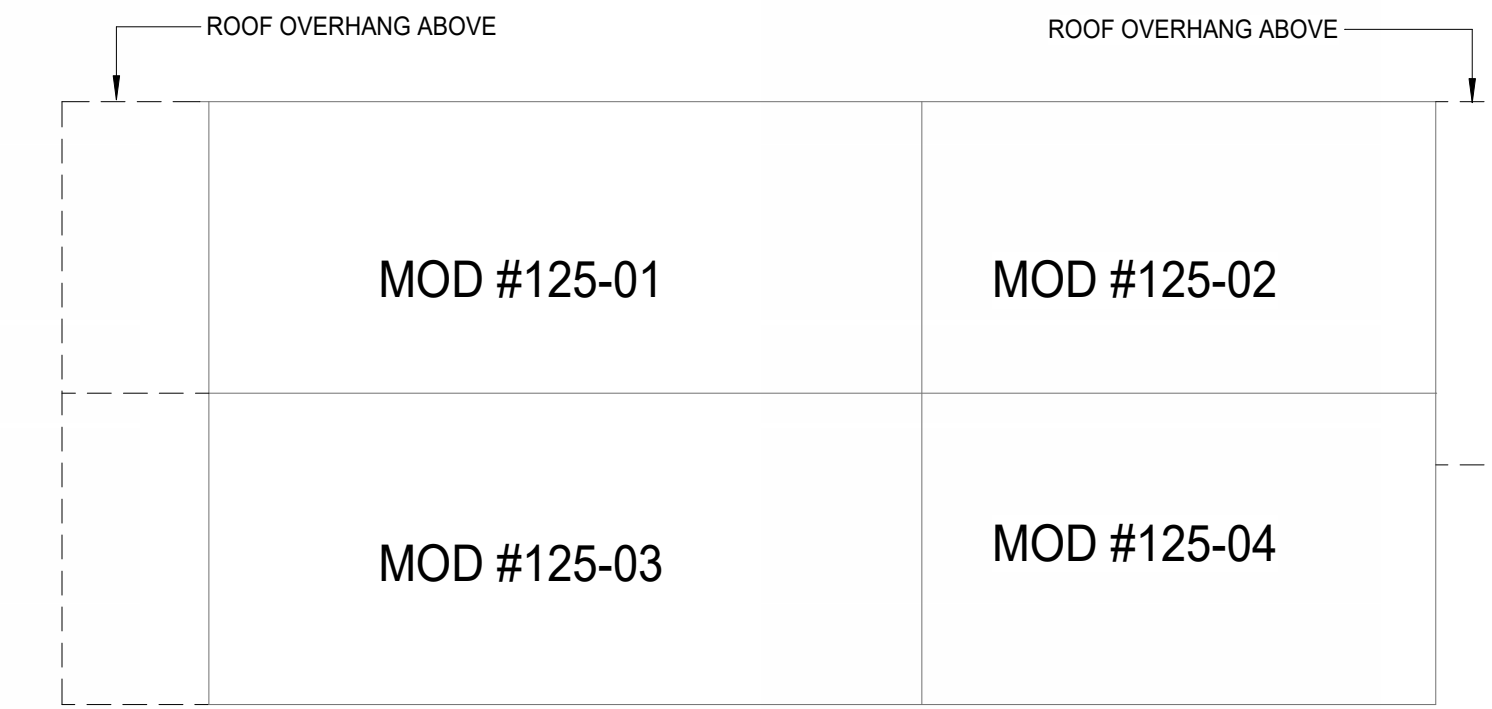
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Roof Plan

A1.05

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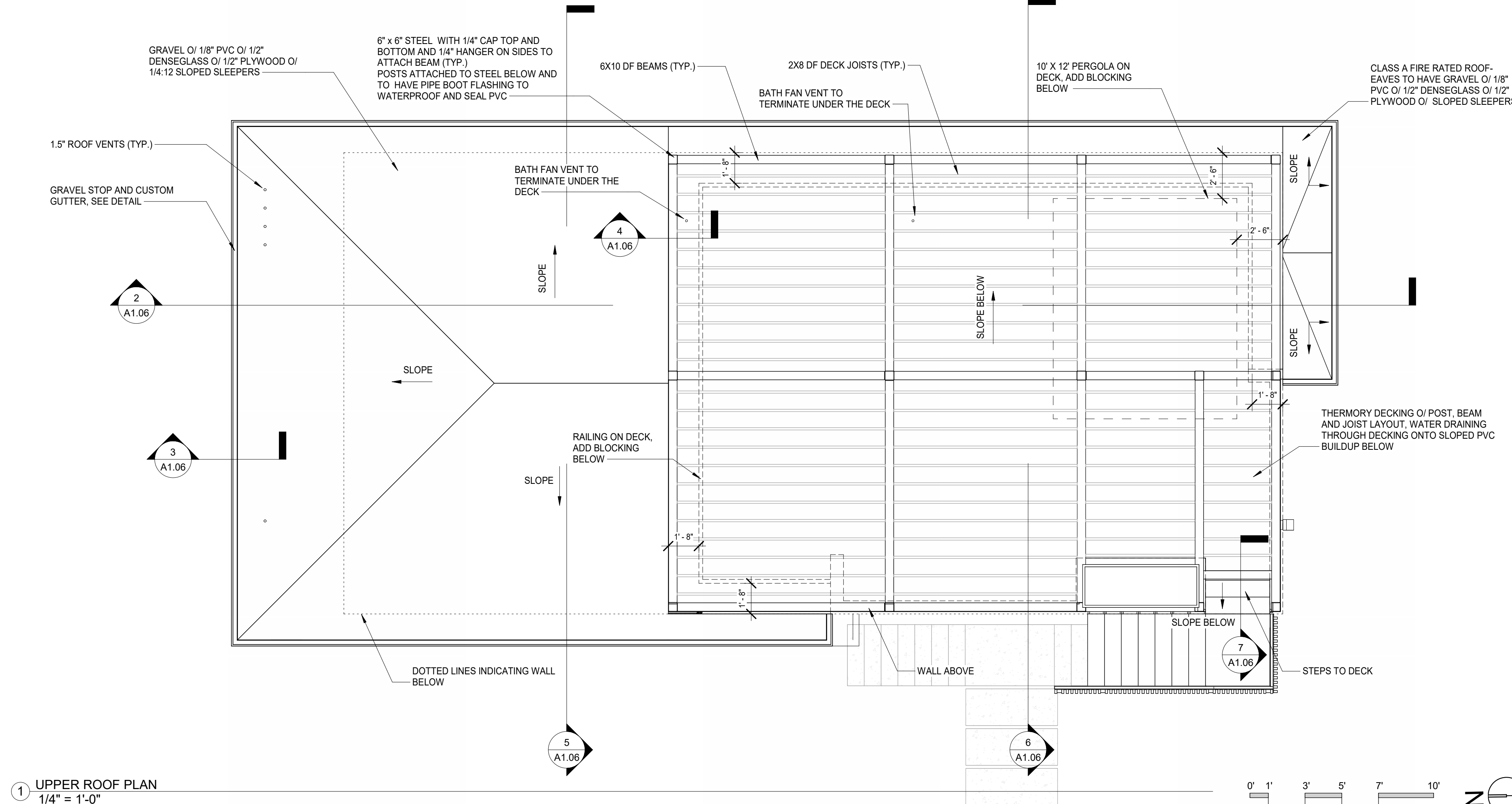
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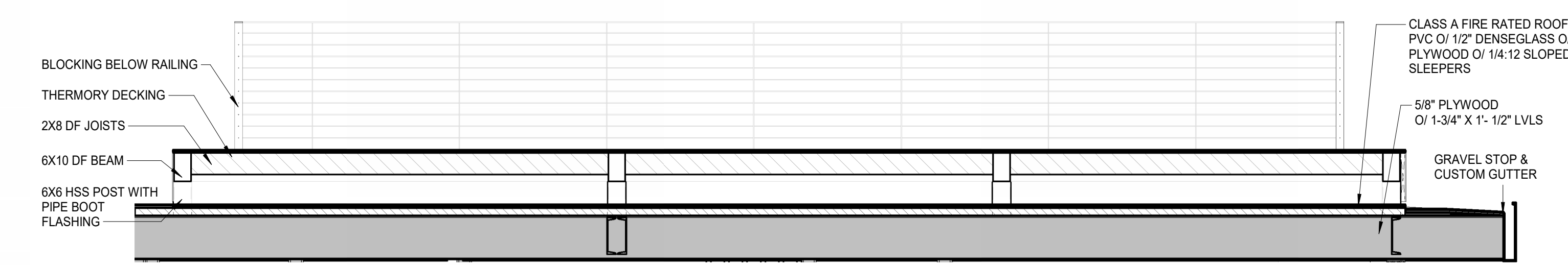
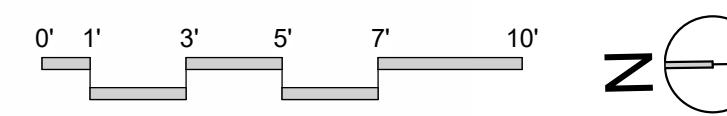
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WALL TYPE LEGEND

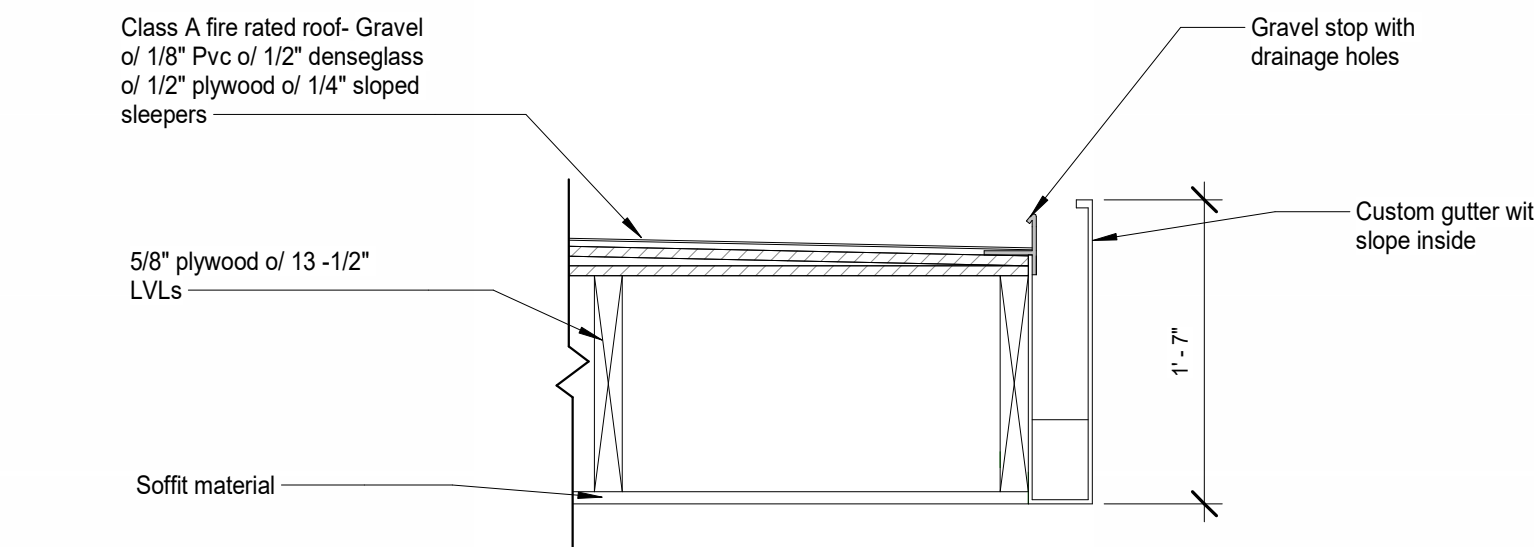
- FACTORY-BUILT 2X6 WALL
- SITE-BUILT 2X6 WALL
- FACTORY-BUILT 2X4 WALL
- SITE-BUILT 2X4 WALL
- FACTORY-BUILT 2X8 WALL
- SITE-BUILT CONCRETE RETAINING WALL



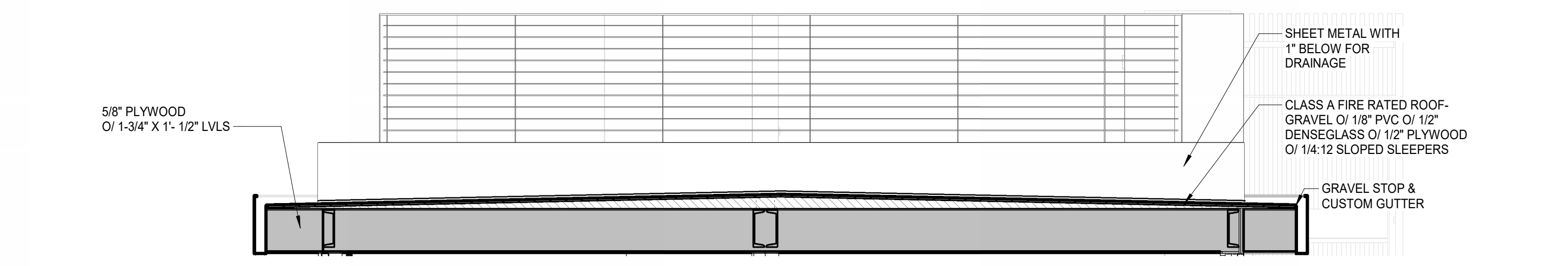
1 UPPER ROOF PLAN
1/4" = 1'-0"



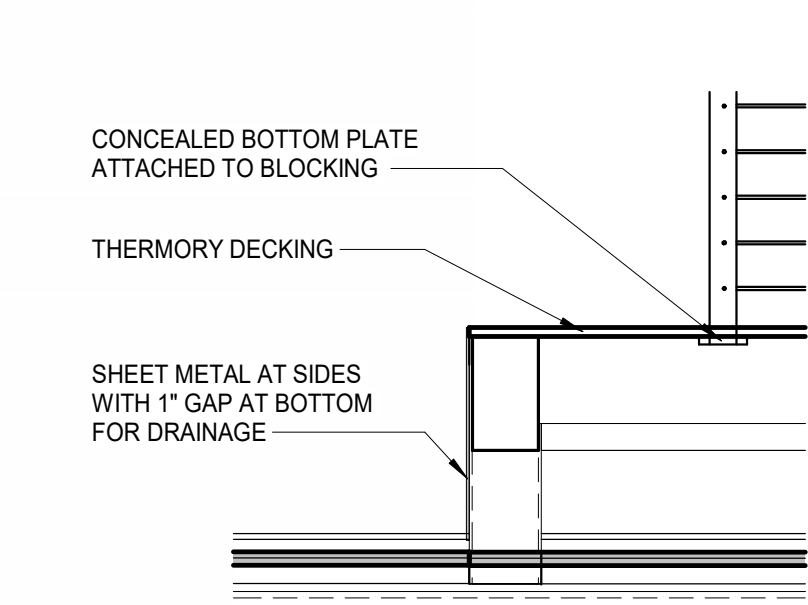
2 Roof section 1
3/8" = 1'-0"



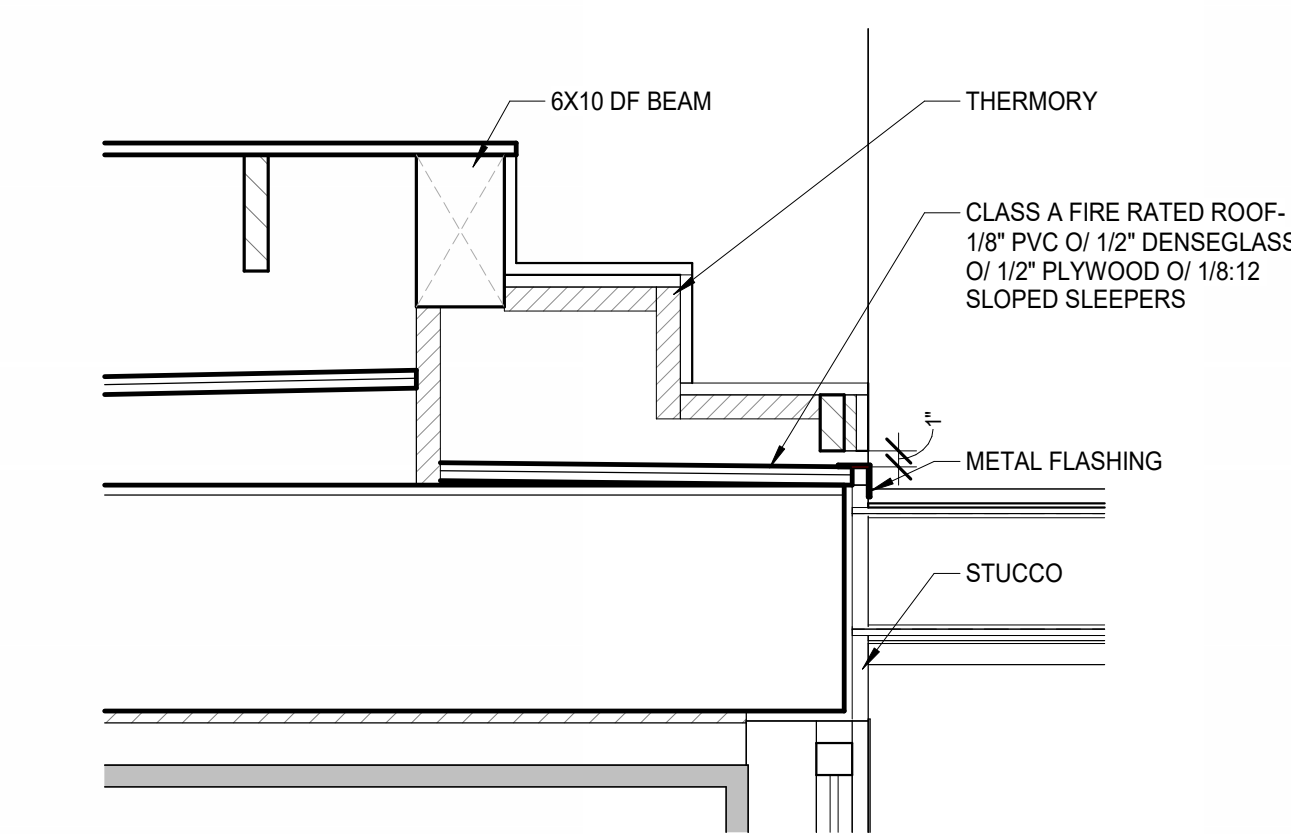
3 Gutter detail
1" = 1'-0"



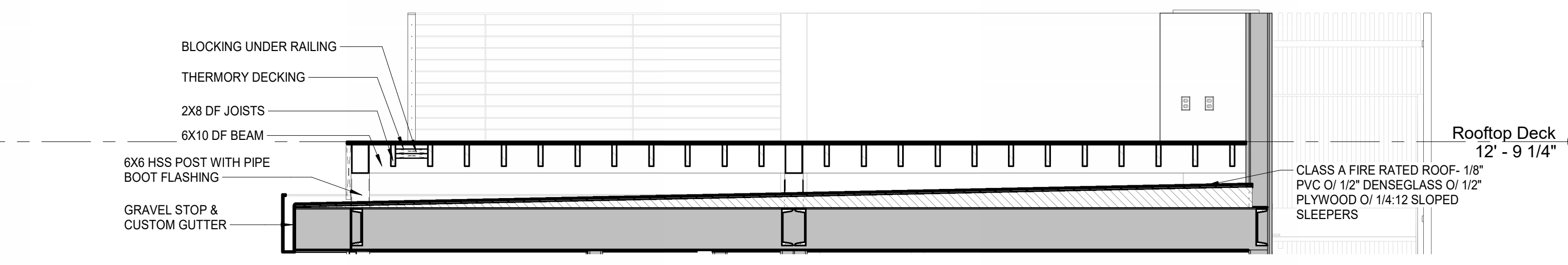
5 Roof section 2
3/8" = 1'-0"



4 Railing connection
3/4" = 1'-0"



7 Roof top steps
1" = 1'-0"



6 Roof section 3
3/8" = 1'-0"

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#125 Raskopf ADU

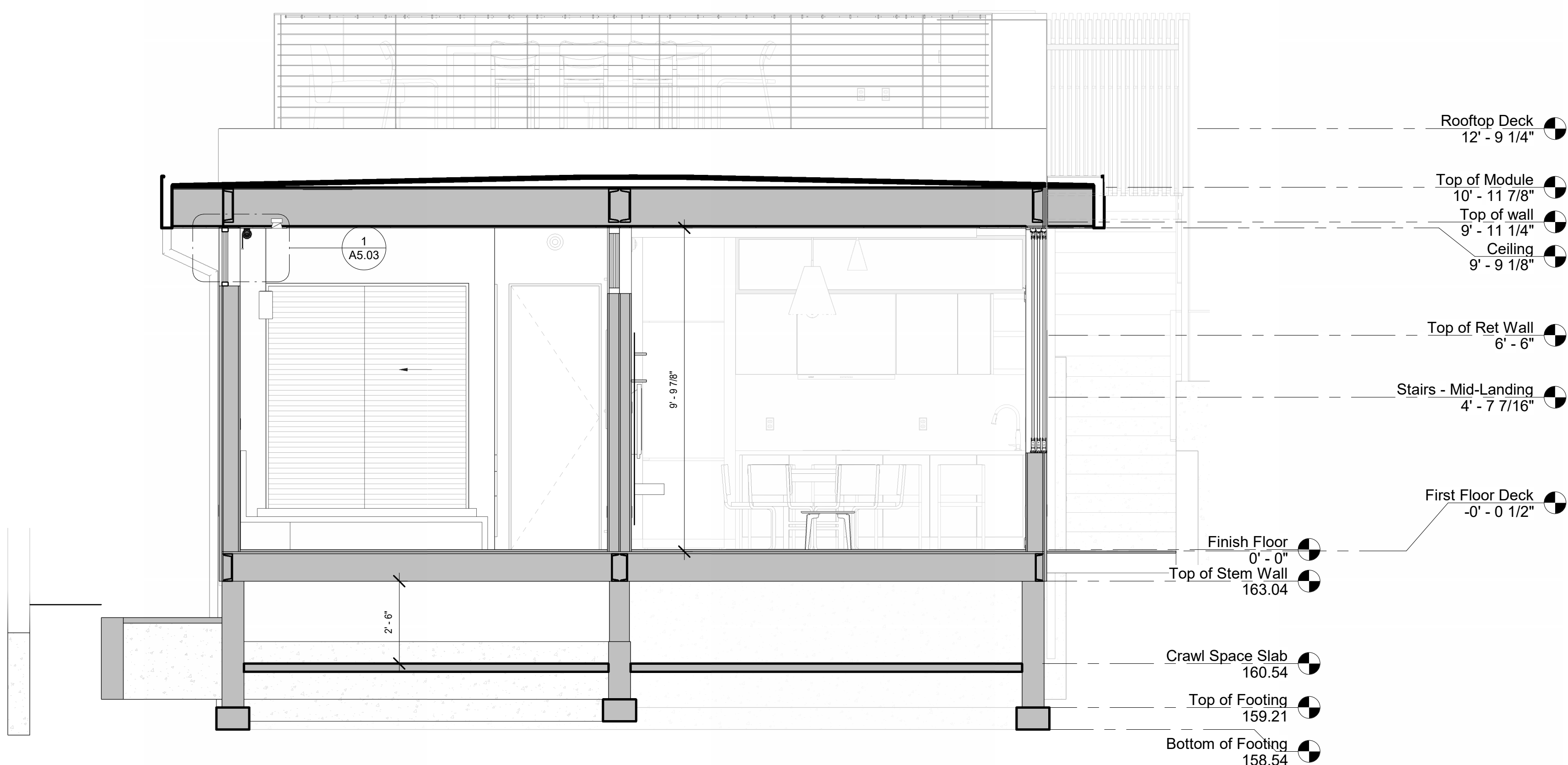
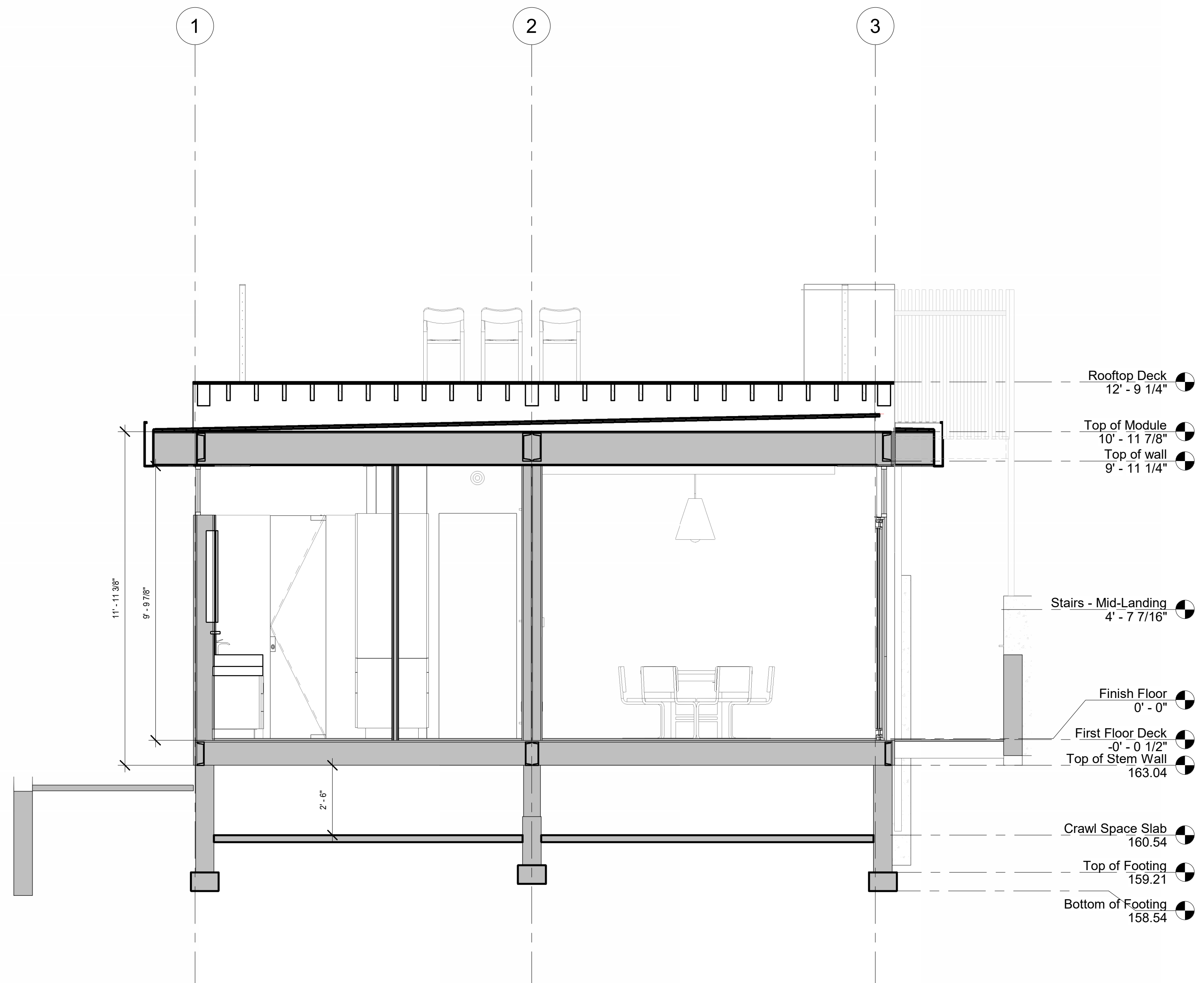
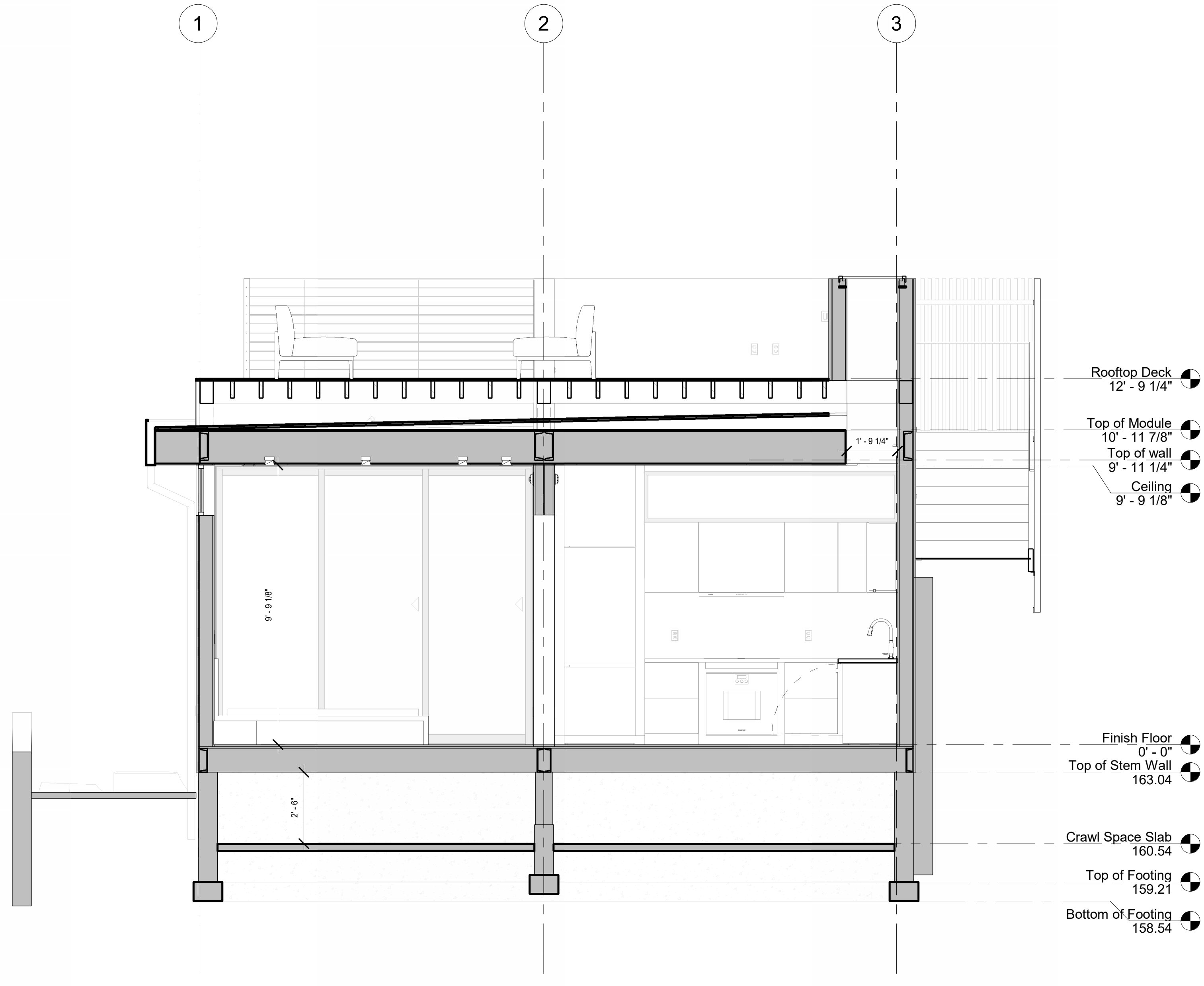
3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Roof Plan- Deck

A1.06

REVISIONS		
NO.	DATE	DESCRIPTION



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#125 Raskopf ADU

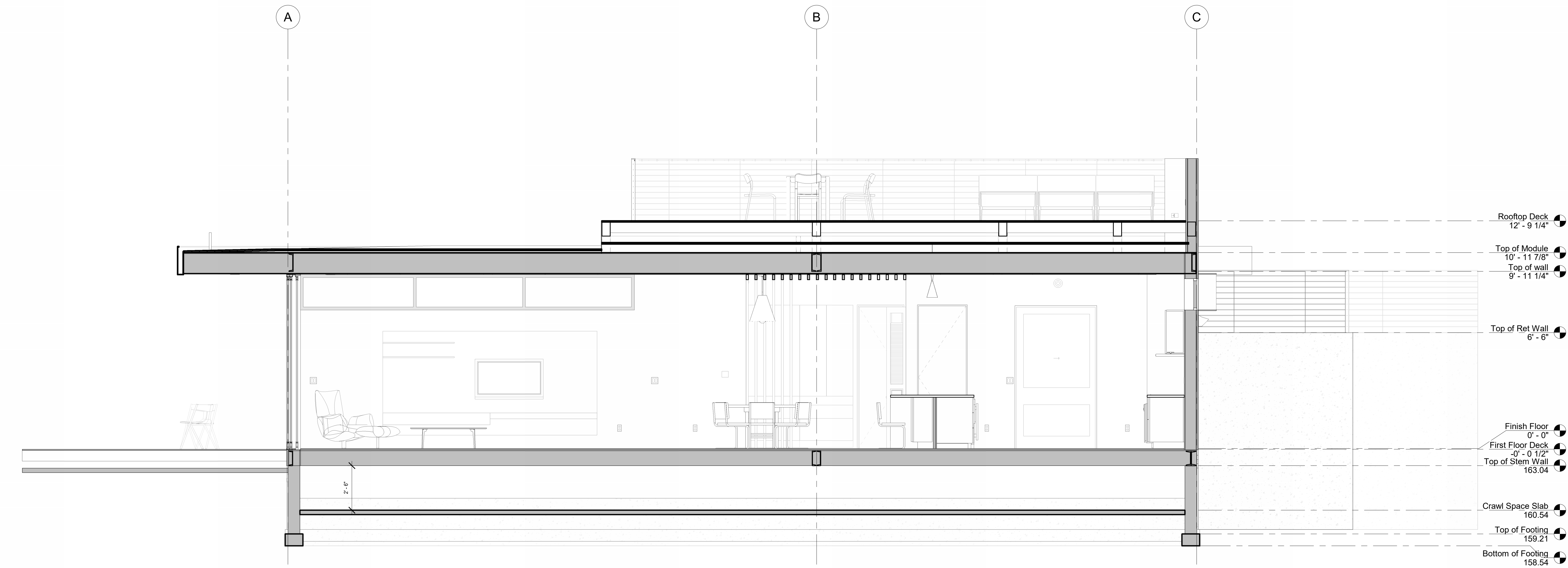
3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Sections

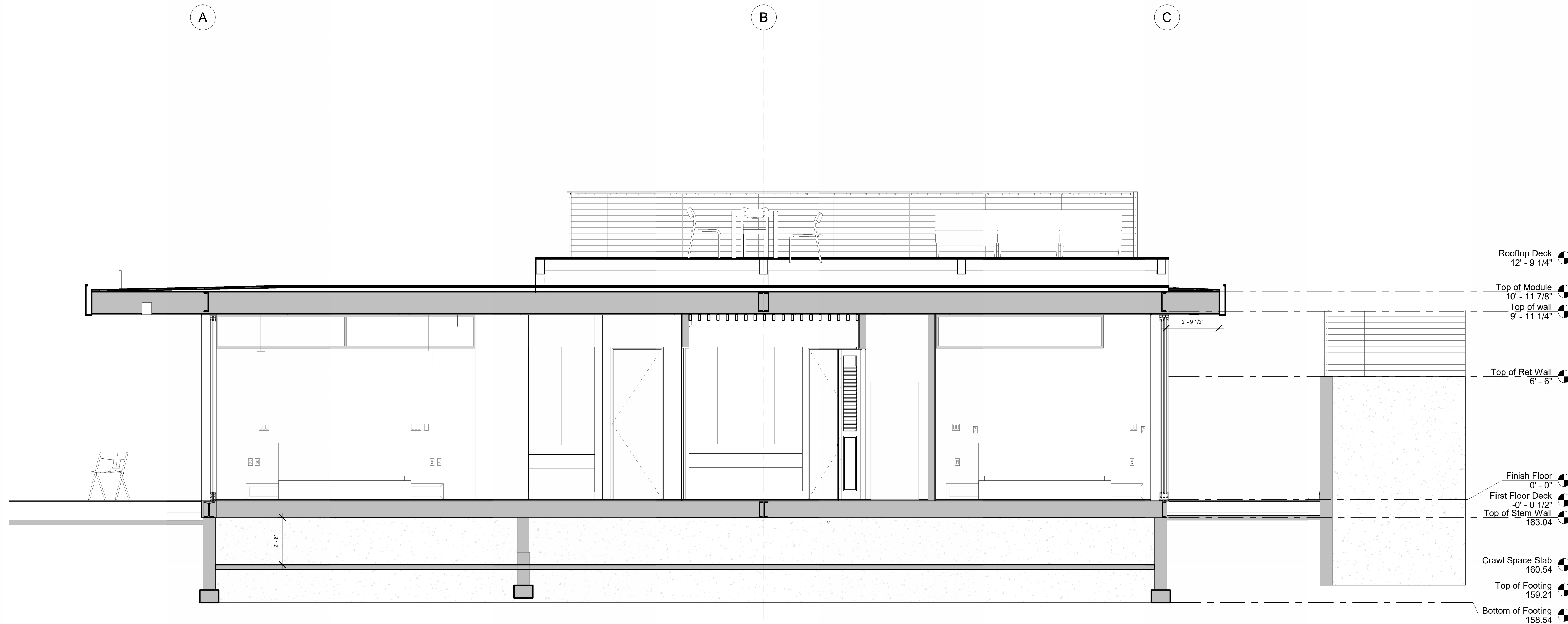
A3.01

REVISIONS		
NO.	DATE	DESCRIPTION



- Rooftop Deck 12' - 9 1/4"
- Top of Module 10' - 11 7/8"
- Top of wall 9' - 11 1/4"
- Top of Ret Wall 6' - 6"
- Finish Floor 0' - 0"
- First Floor Deck 0' - 0 1/2"
- Top of Stem Wall 163.04
- Crawl Space Slab 160.54
- Top of Footing 159.21
- Bottom of Footing 158.54

5 SECTION 5
3/8" = 1'-0"



- Rooftop Deck 12' - 9 1/4"
- Top of Module 10' - 11 7/8"
- Top of wall 9' - 11 1/4"
- Top of Ret Wall 6' - 6"
- Finish Floor 0' - 0"
- First Floor Deck 0' - 0 1/2"
- Top of Stem Wall 163.04
- Crawl Space Slab 160.54
- Top of Footing 159.21
- Bottom of Footing 158.54

4 SECTION 4
3/8" = 1'-0"

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#125 Raskopf ADU

3239 Cliff Dr
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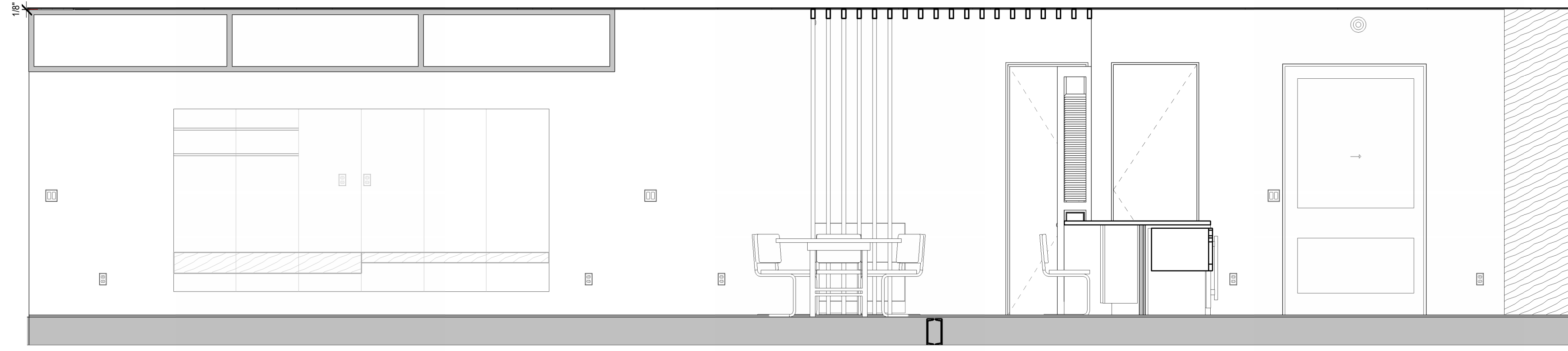
PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Sections

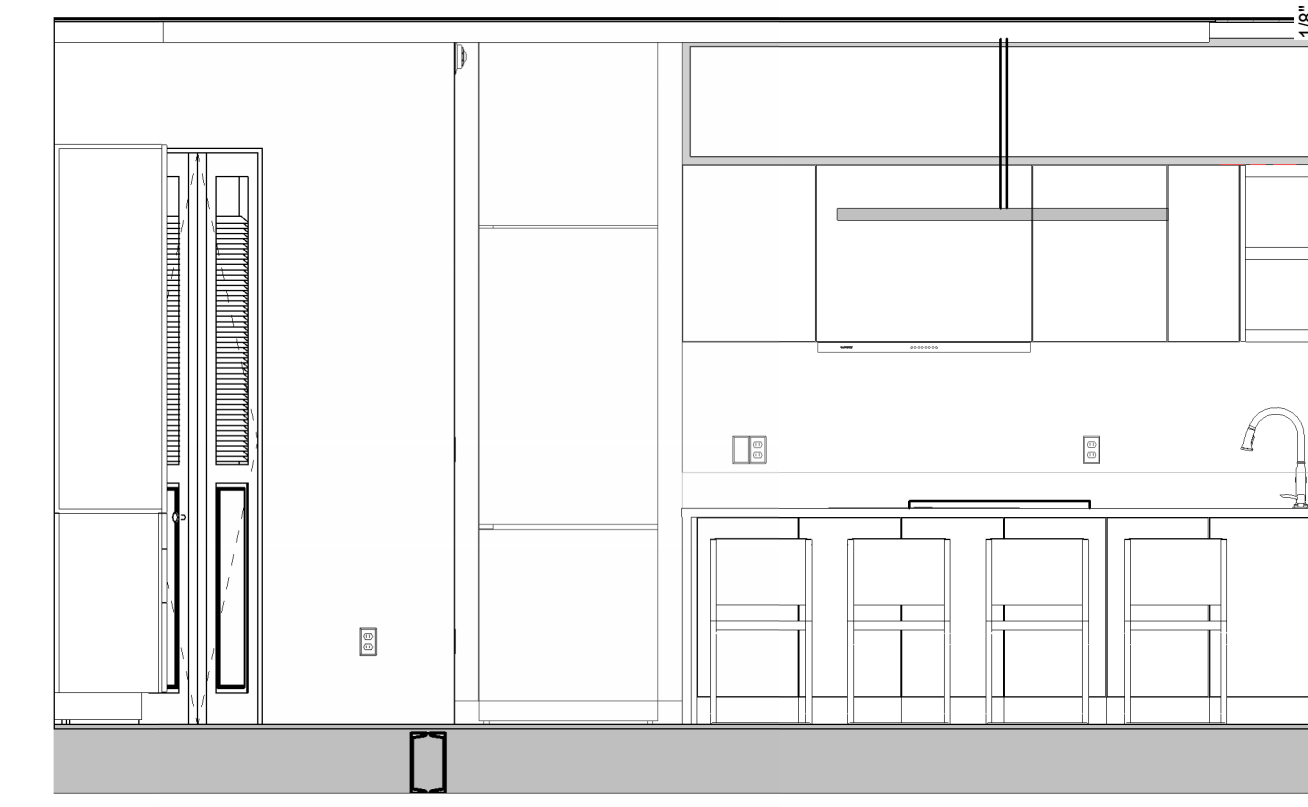
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REVISIONS

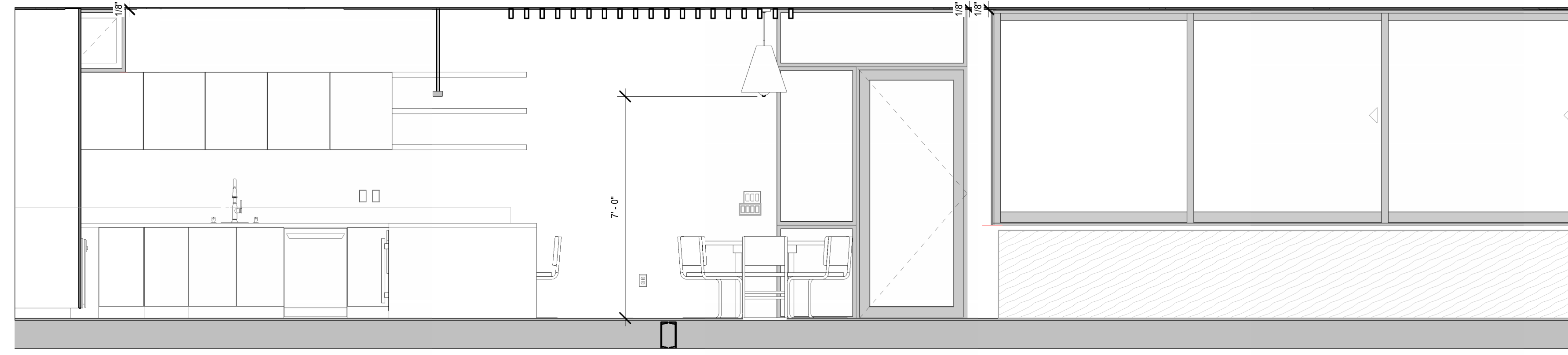
NO.	DATE	DESCRIPTION
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1 Living Room/Kitchen- Elevation 1
3/8" = 1'-0"



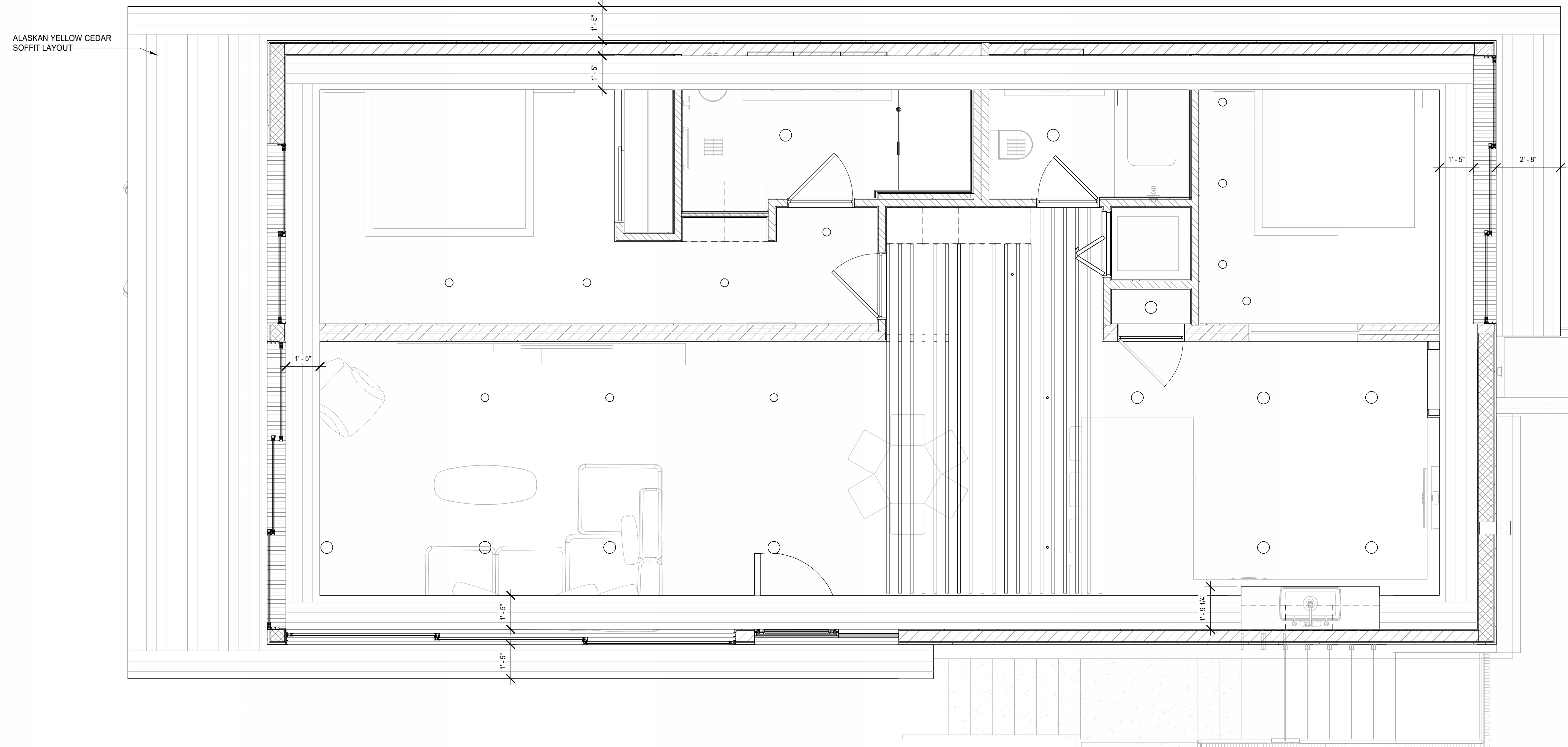
2 Living Room/Kitchen- Elevation 2
3/8" = 1'-0"



3 Living Room/Kitchen- Elevation 3
3/8" = 1'-0"



4 Living Room/Kitchen- Elevation 4
3/8" = 1'-0"



5 SOFFIT PLAN
3/8" = 1'-0"

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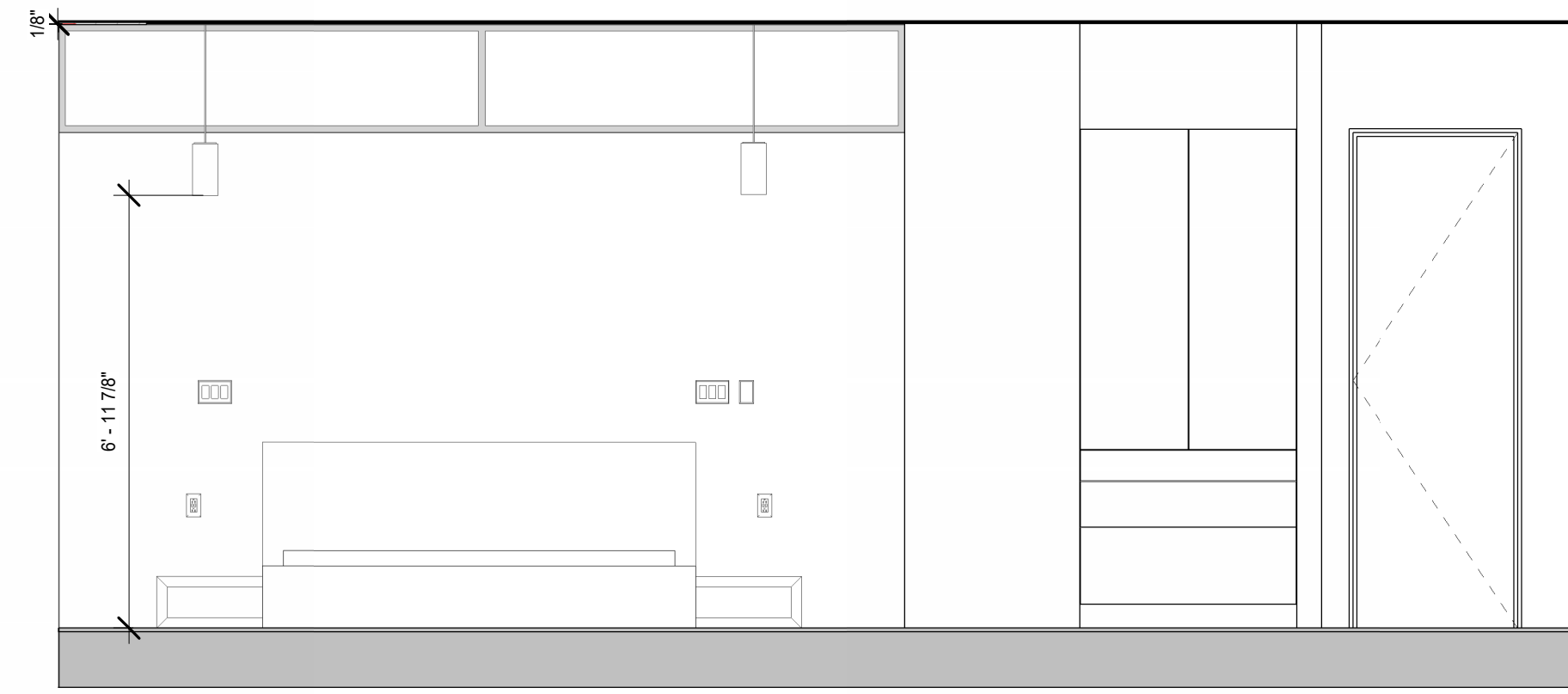
PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Interior Elevations

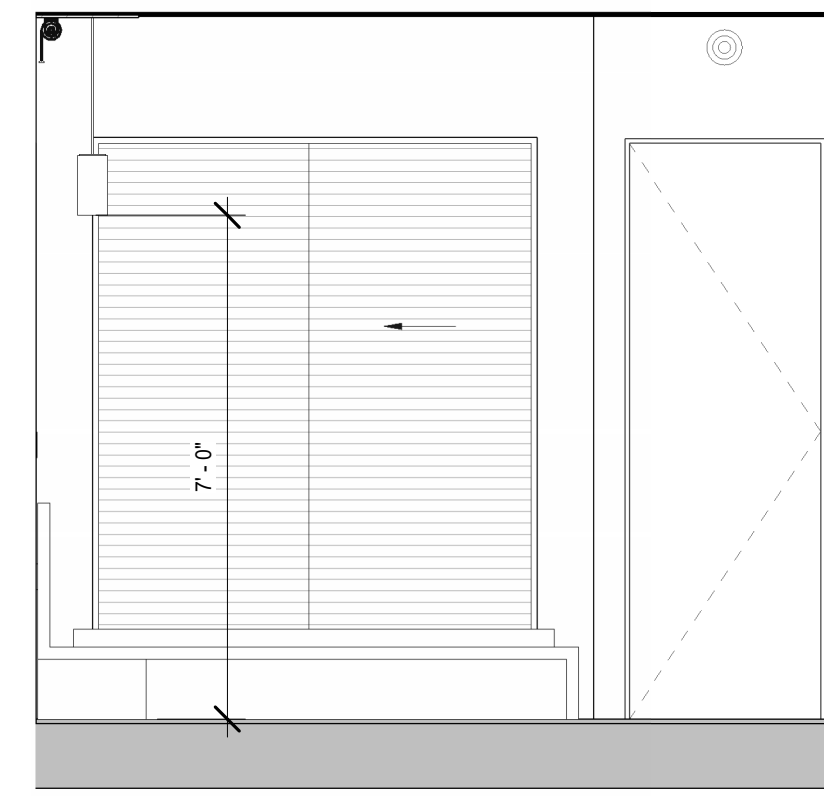
A4.01

REVISIONS

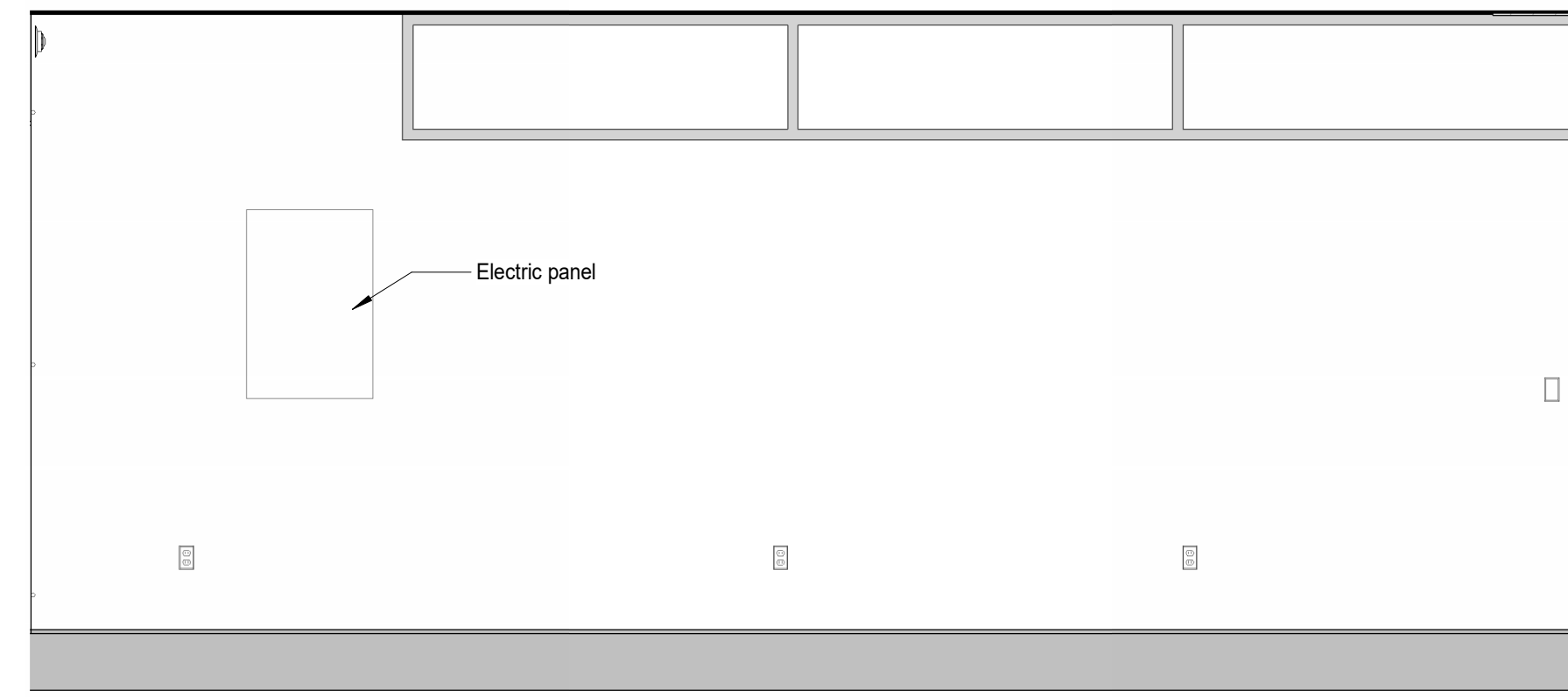
NO.	DATE	DESCRIPTION
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4 Bedroom 1- Elevation 1
3/8" = 1'-0"



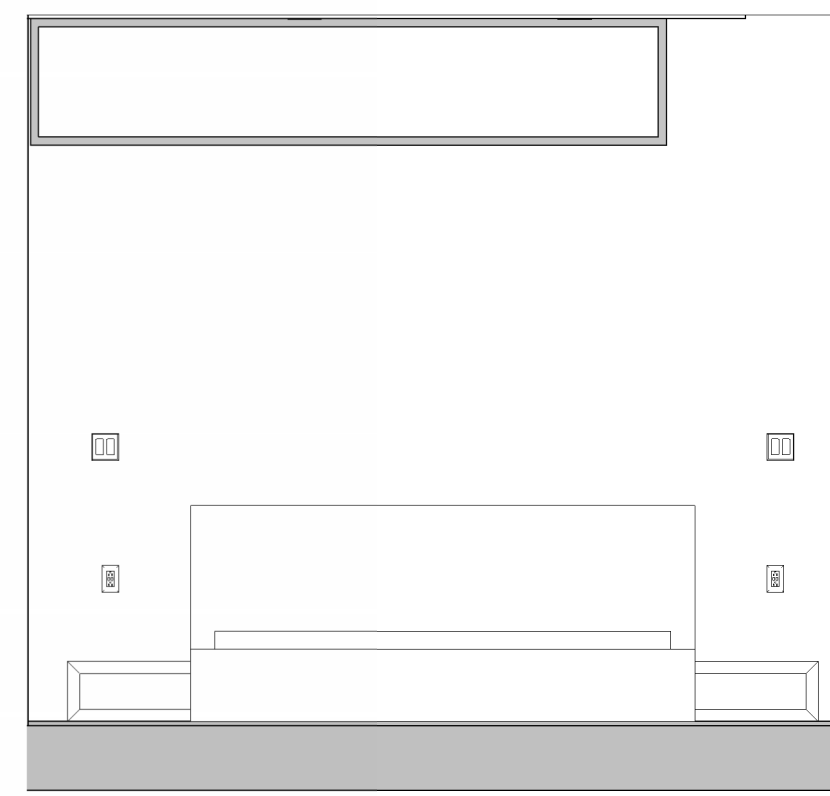
5 Bedroom 1-Elevation 2
3/8" = 1'-0"



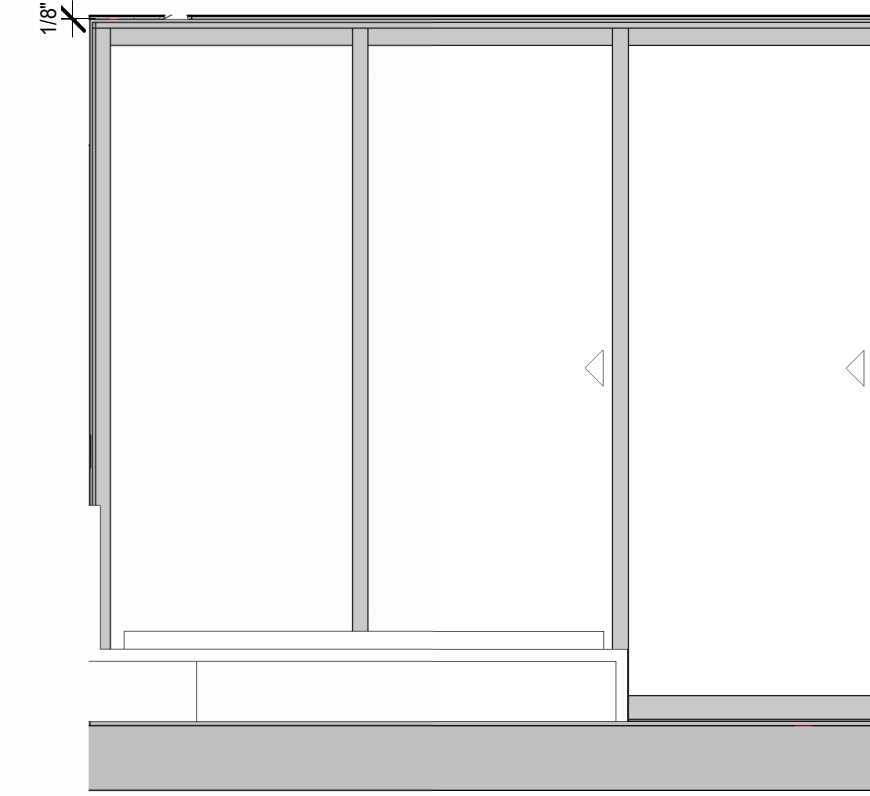
6 Bedroom 1-elevation 3
3/8" = 1'-0"



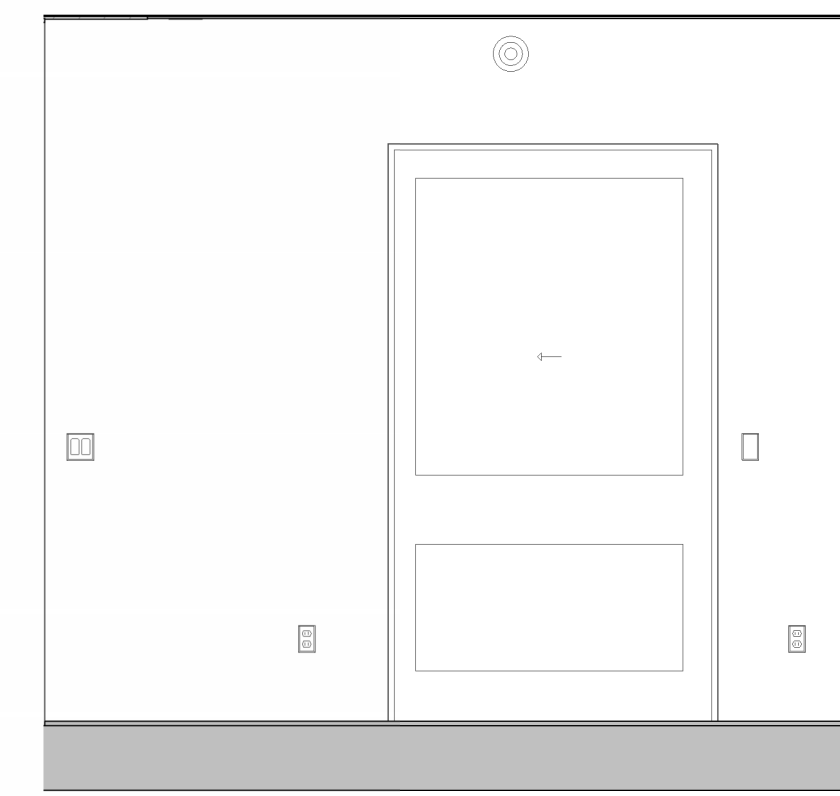
7 Bedroom 1-Elevation 4
3/8" = 1'-0"



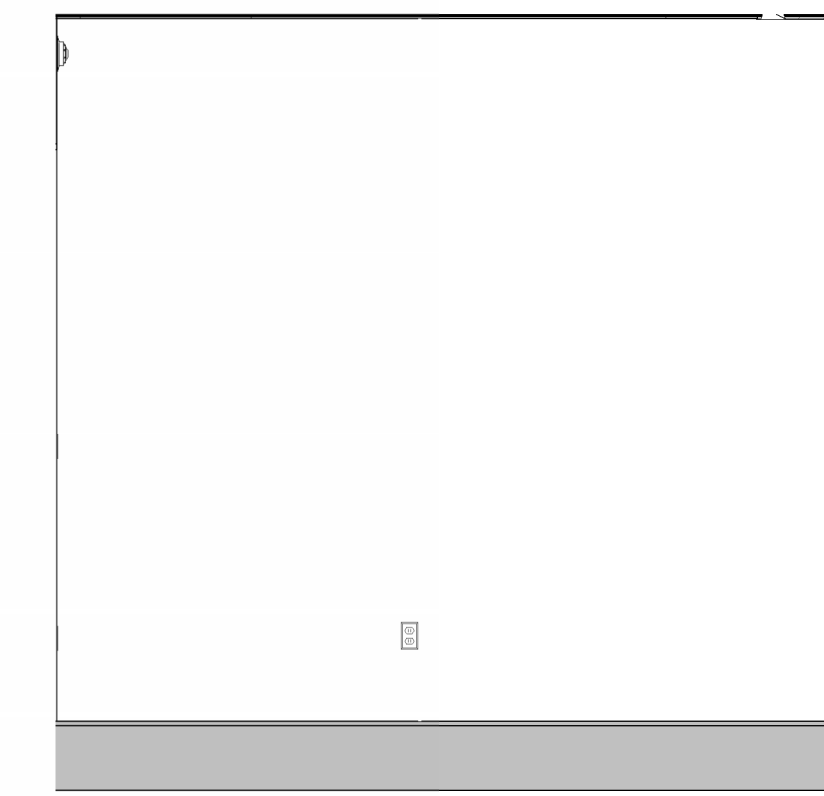
1 Bedroom 2- Elevation 1
3/8" = 1'-0"



2 Bedroom 2-Elevation 2
3/8" = 1'-0"



3 Bedroom 2- Elevation 3
3/8" = 1'-0"



8 Bedroom 2- Elevation 4
3/8" = 1'-0"

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#125 Raskopf ADU

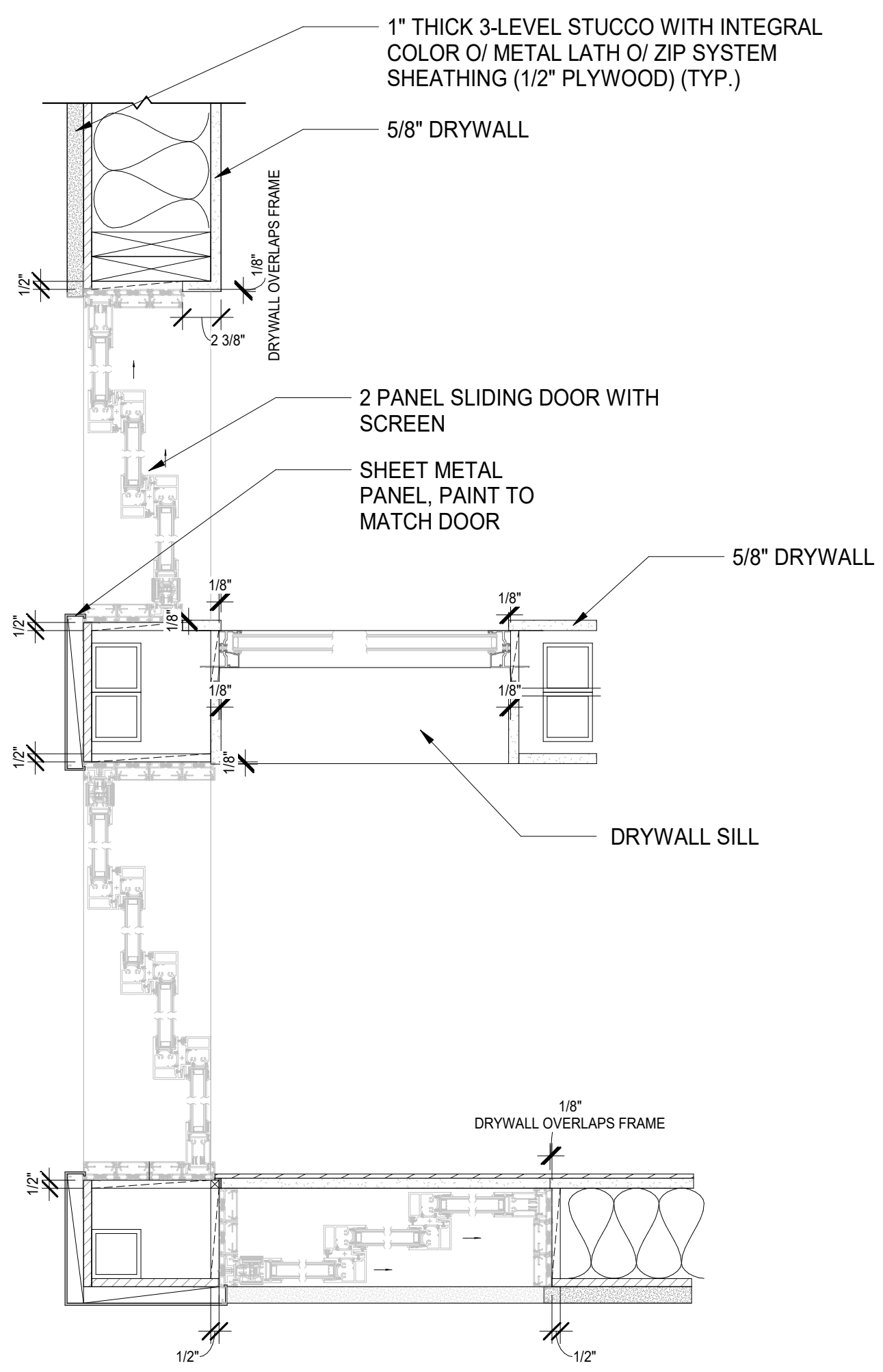
3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

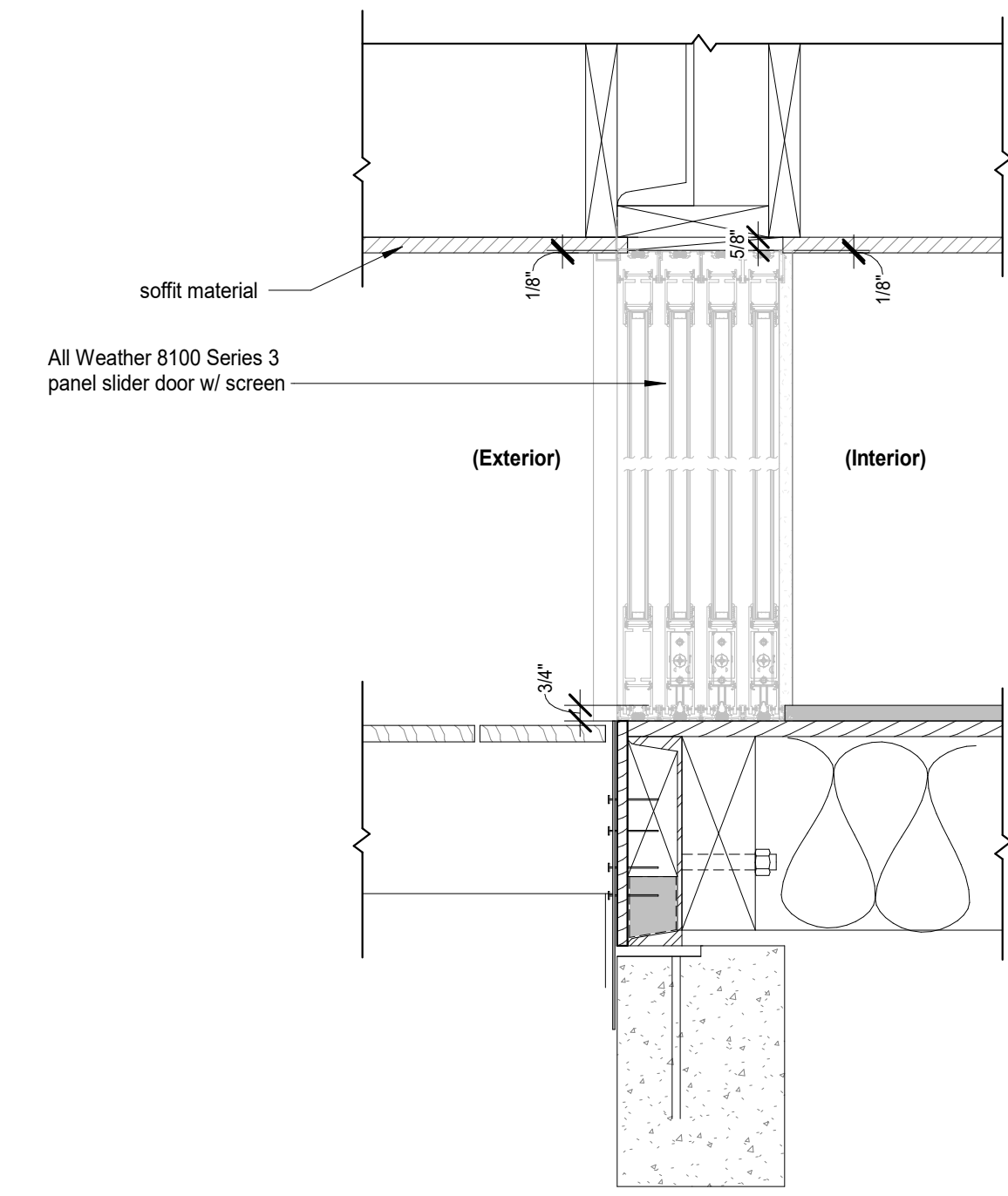
Interior Elevations

A4.02

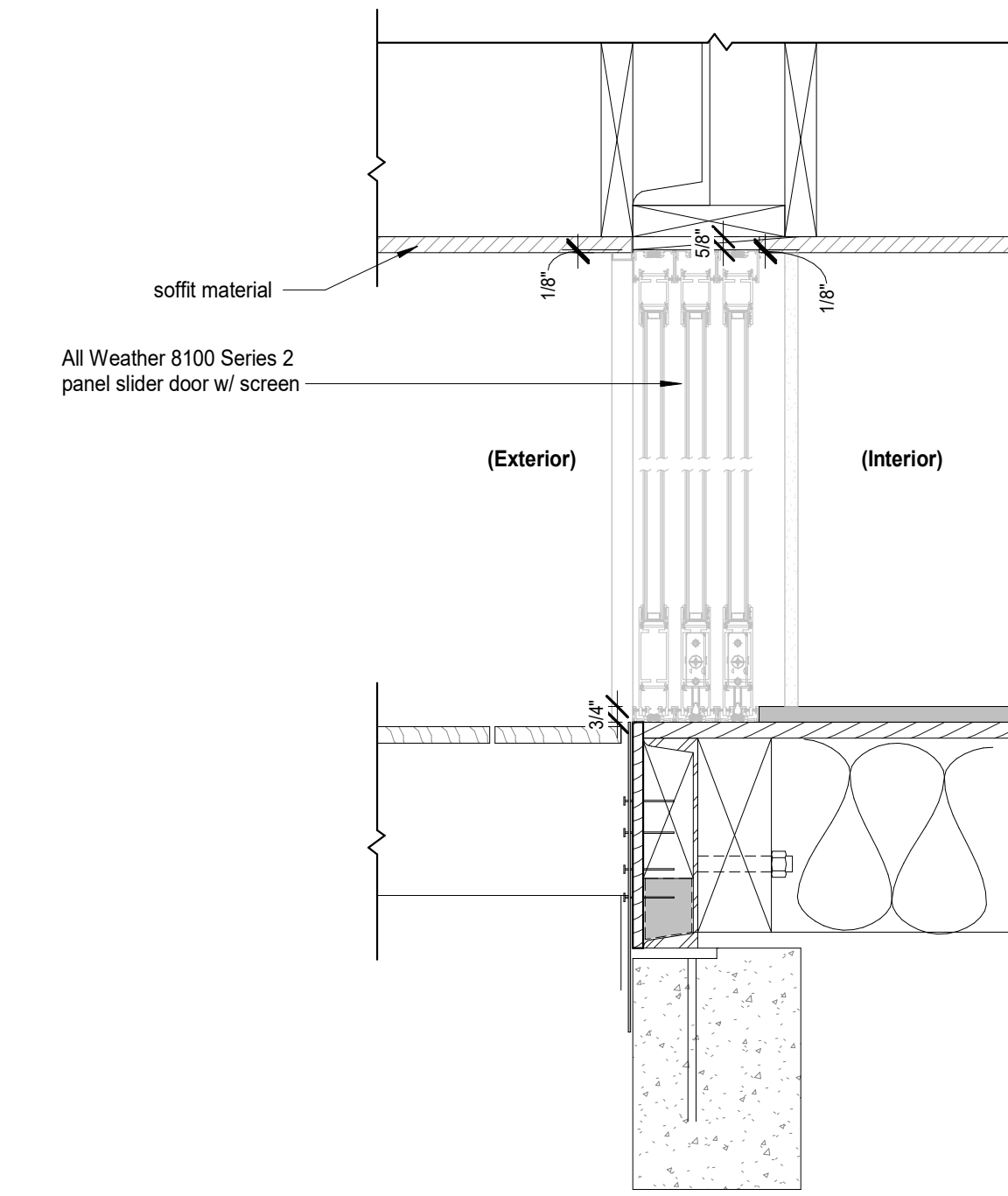
REVISIONS		
NO.	DATE	DESCRIPTION



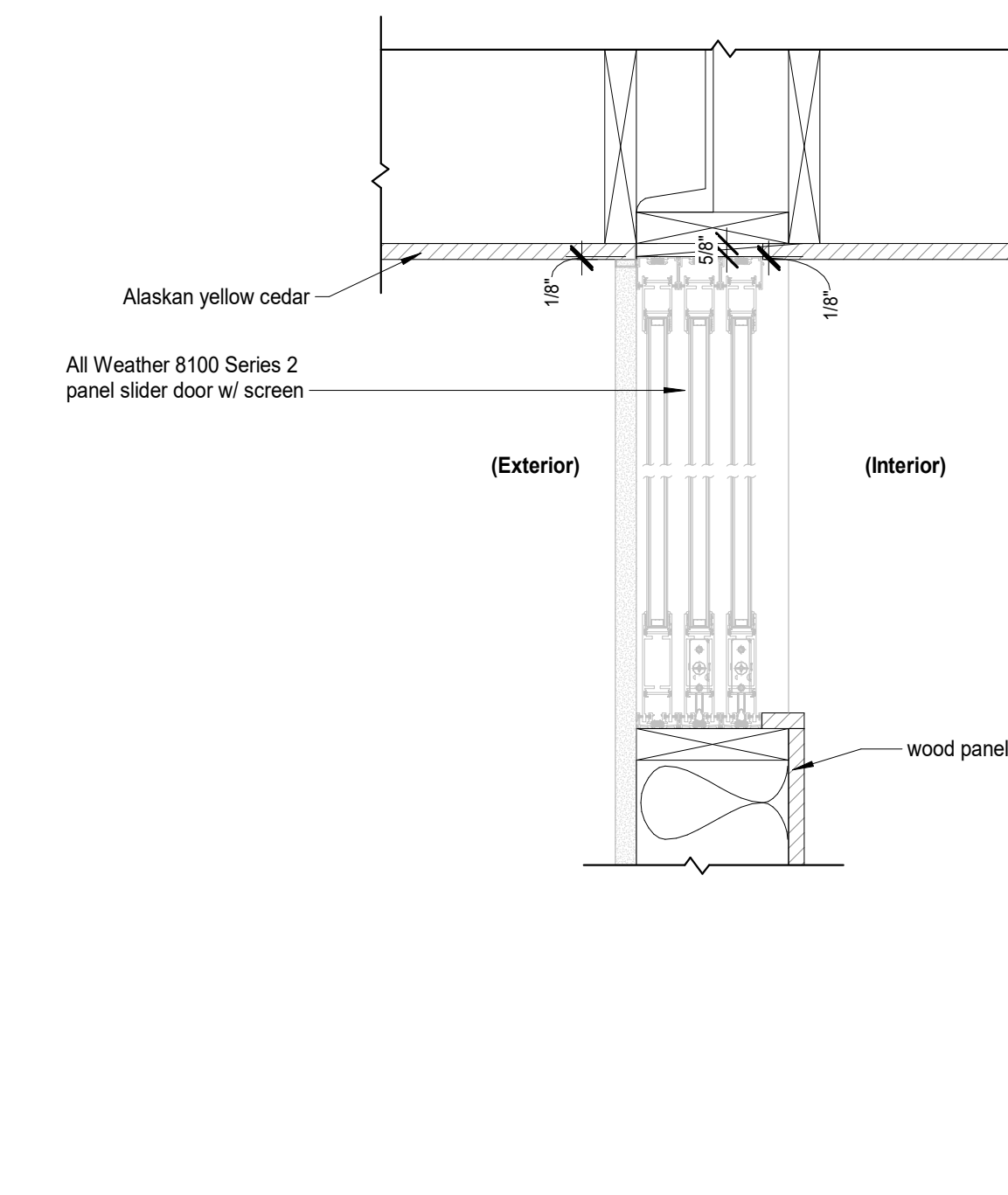
1 Sliding door connections- plan view
1 1/2" = 1'-0"



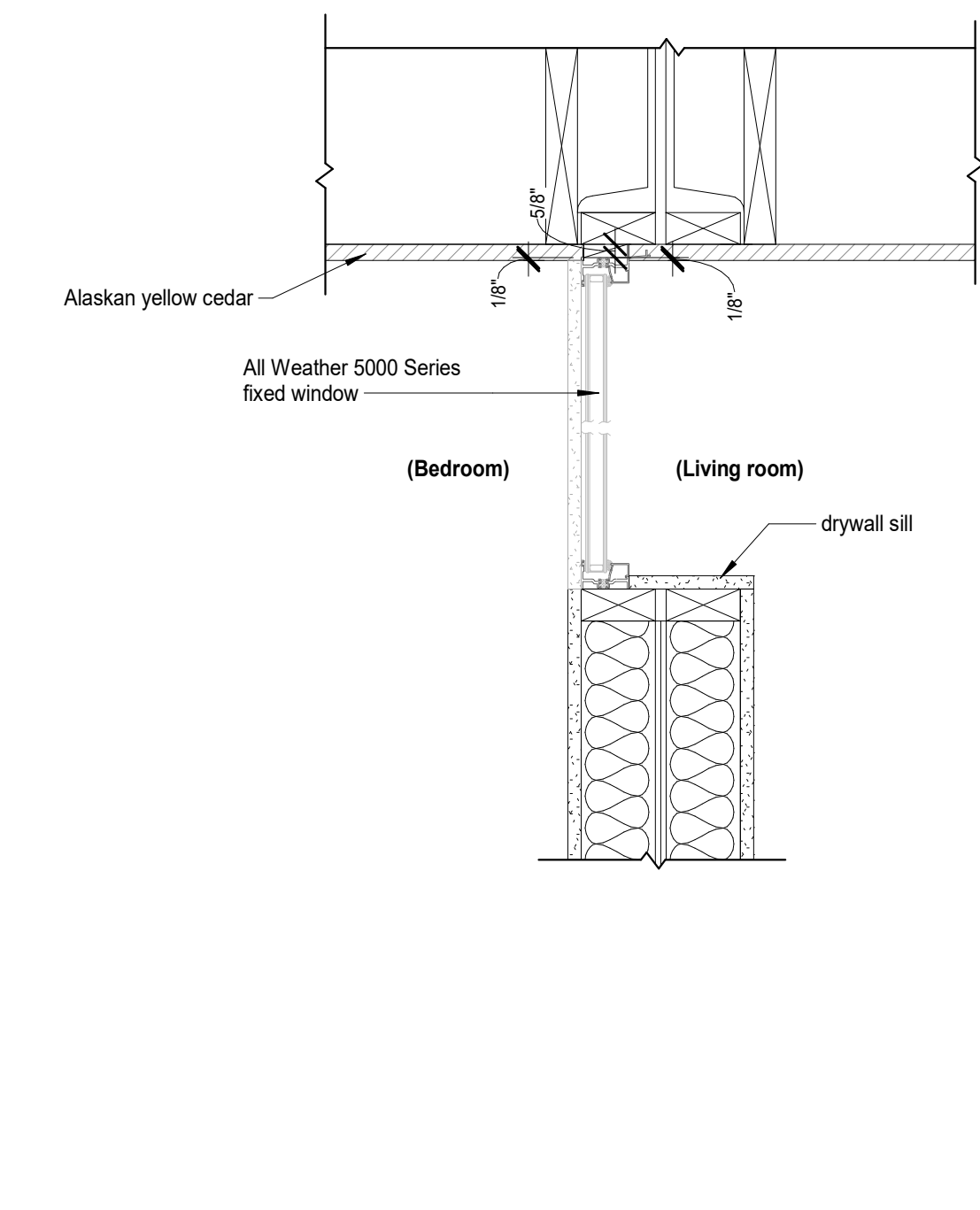
2 3 panel sliding door w/ screen- section view
1 1/2" = 1'-0"



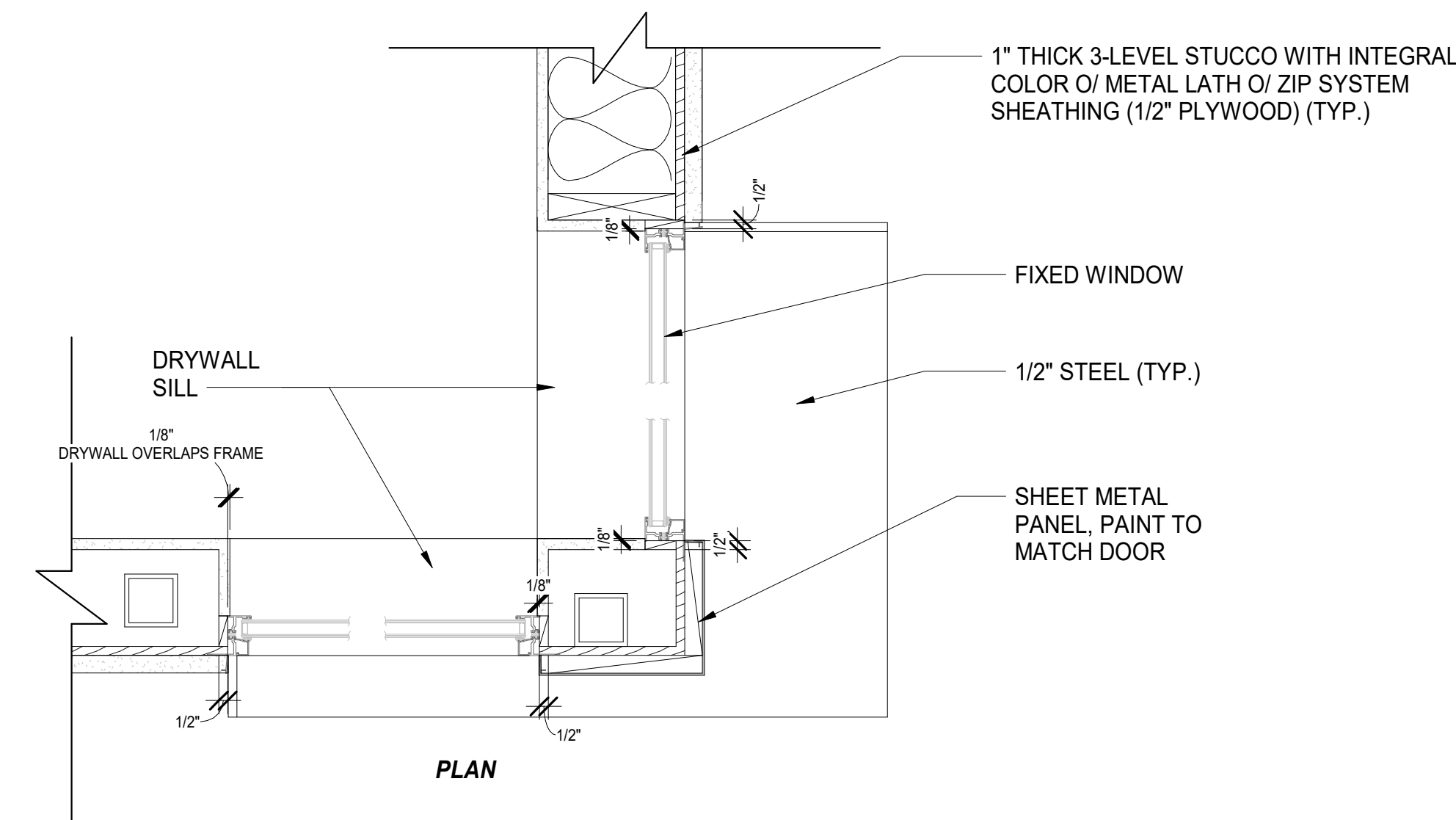
3 3 panel sliding door w/ screen- section view
1 1/2" = 1'-0"



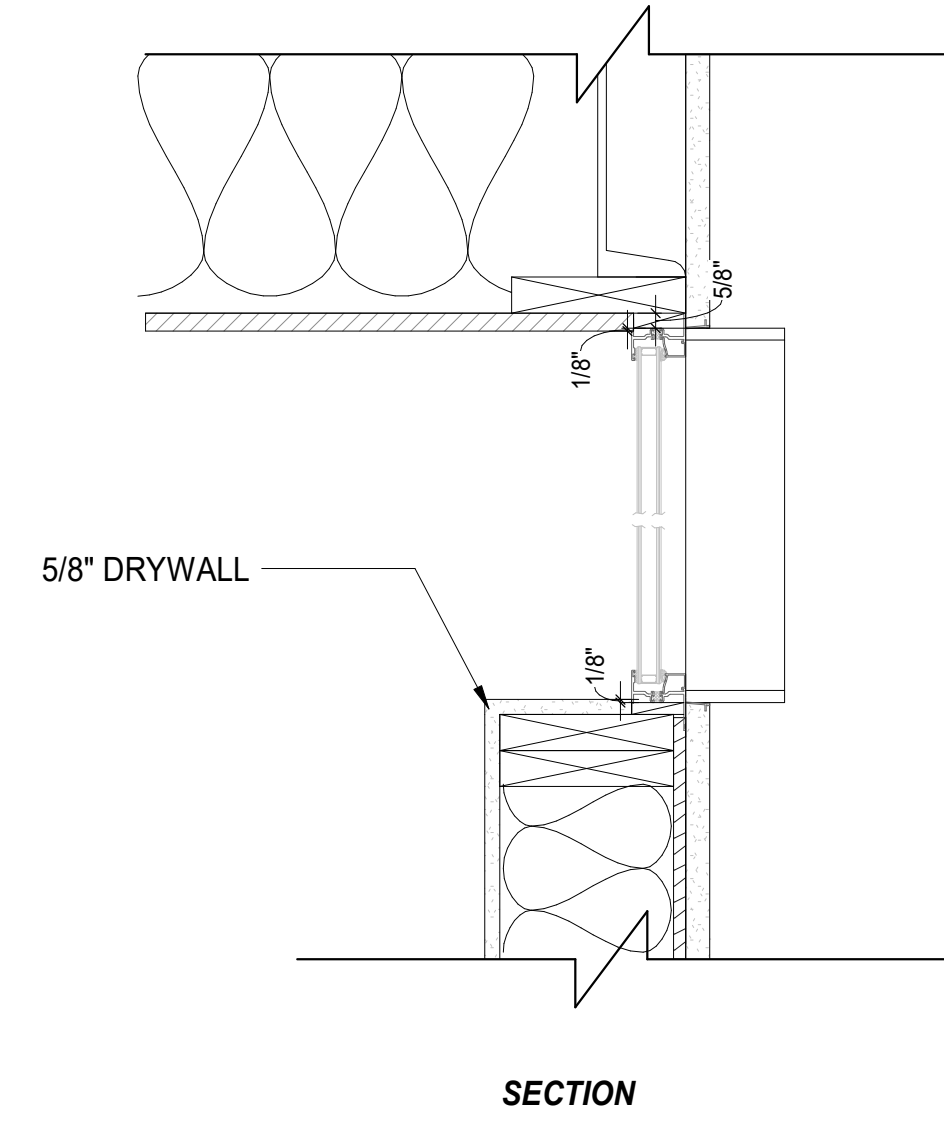
4 3 panel sliding door w/ screen- section view
1 1/2" = 1'-0"



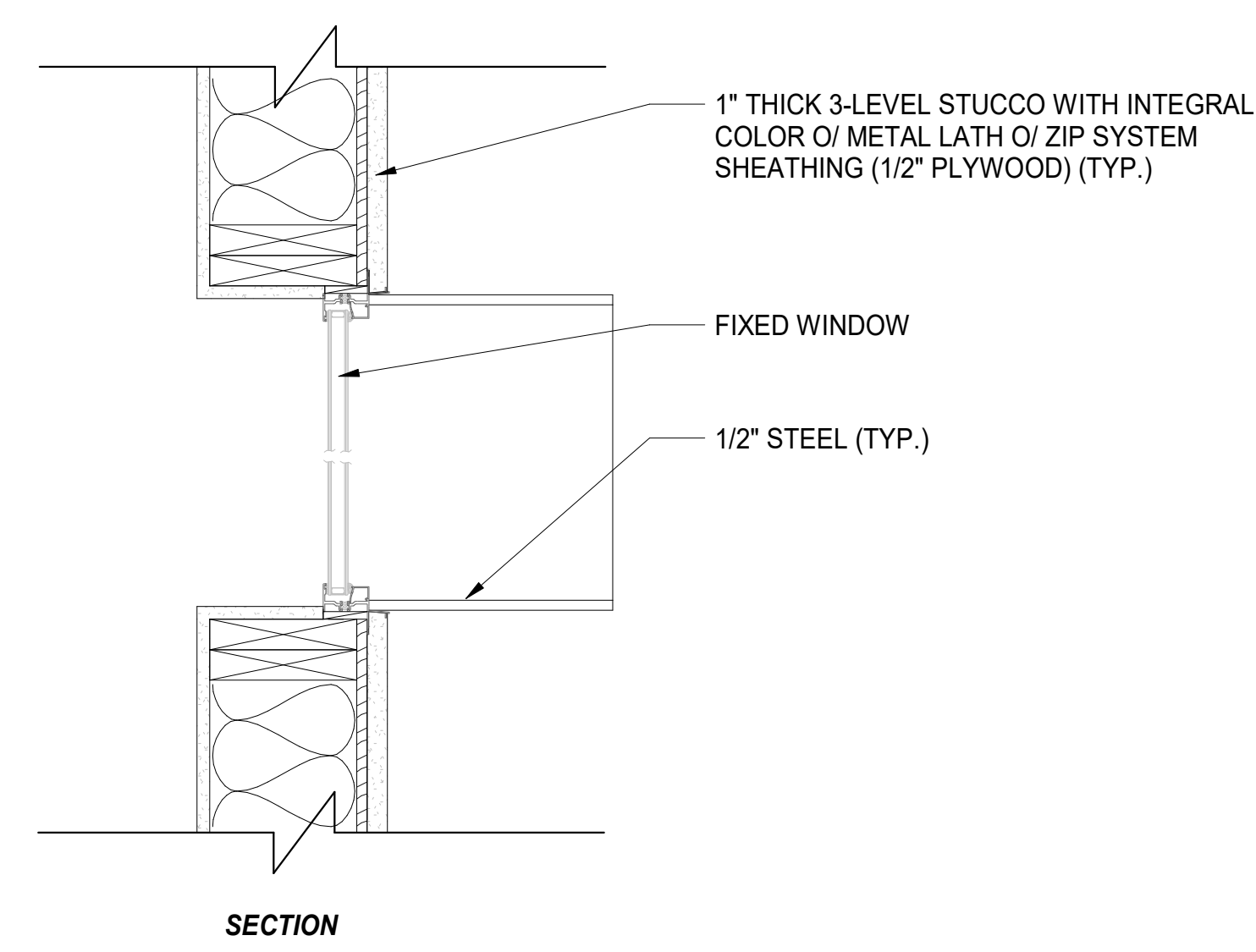
5 3 panel sliding door w/ screen- section view
1 1/2" = 1'-0"



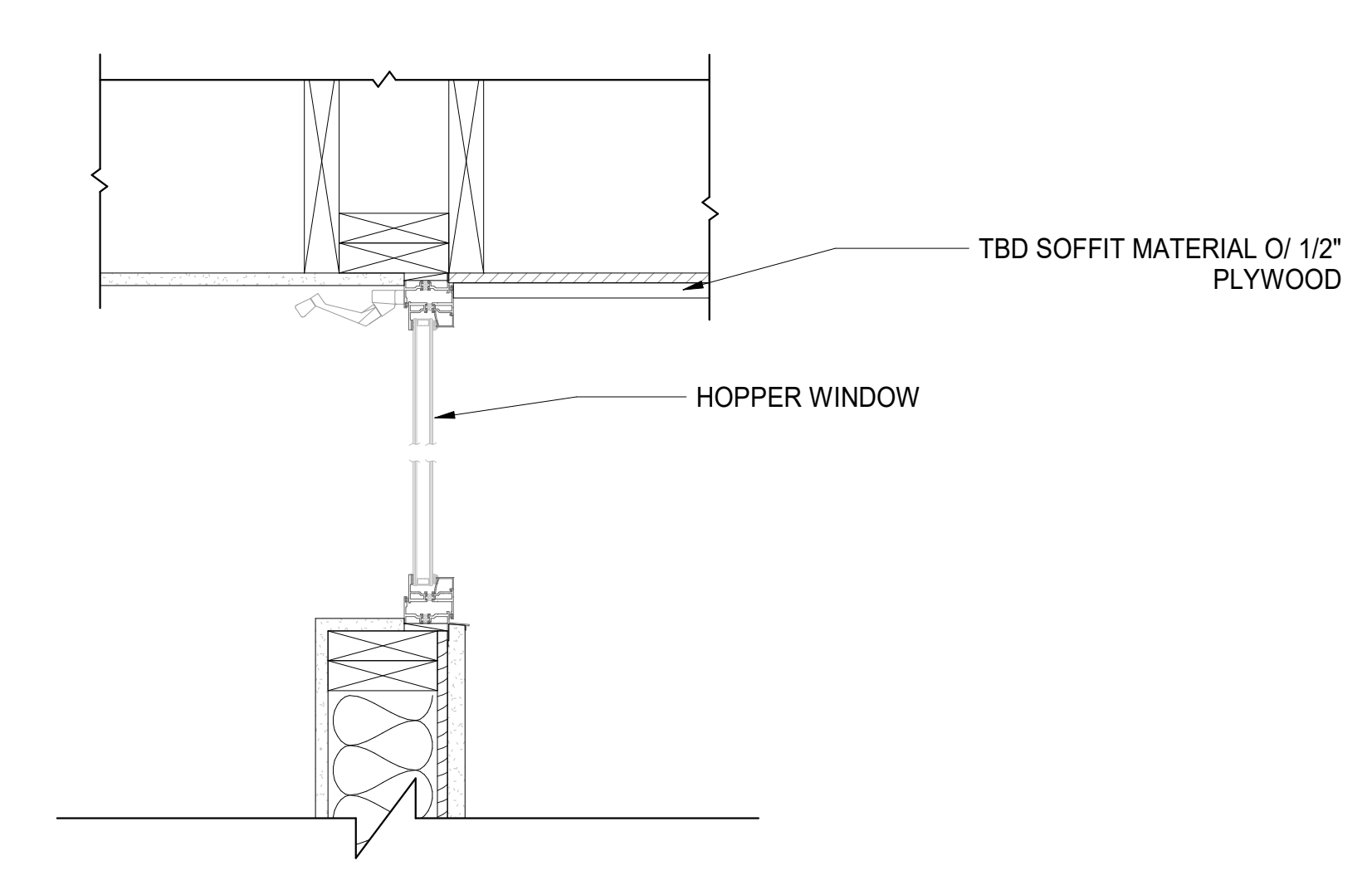
7 Fixed window- All weather
1 1/2" = 1'-0"



SECTION



SECTION

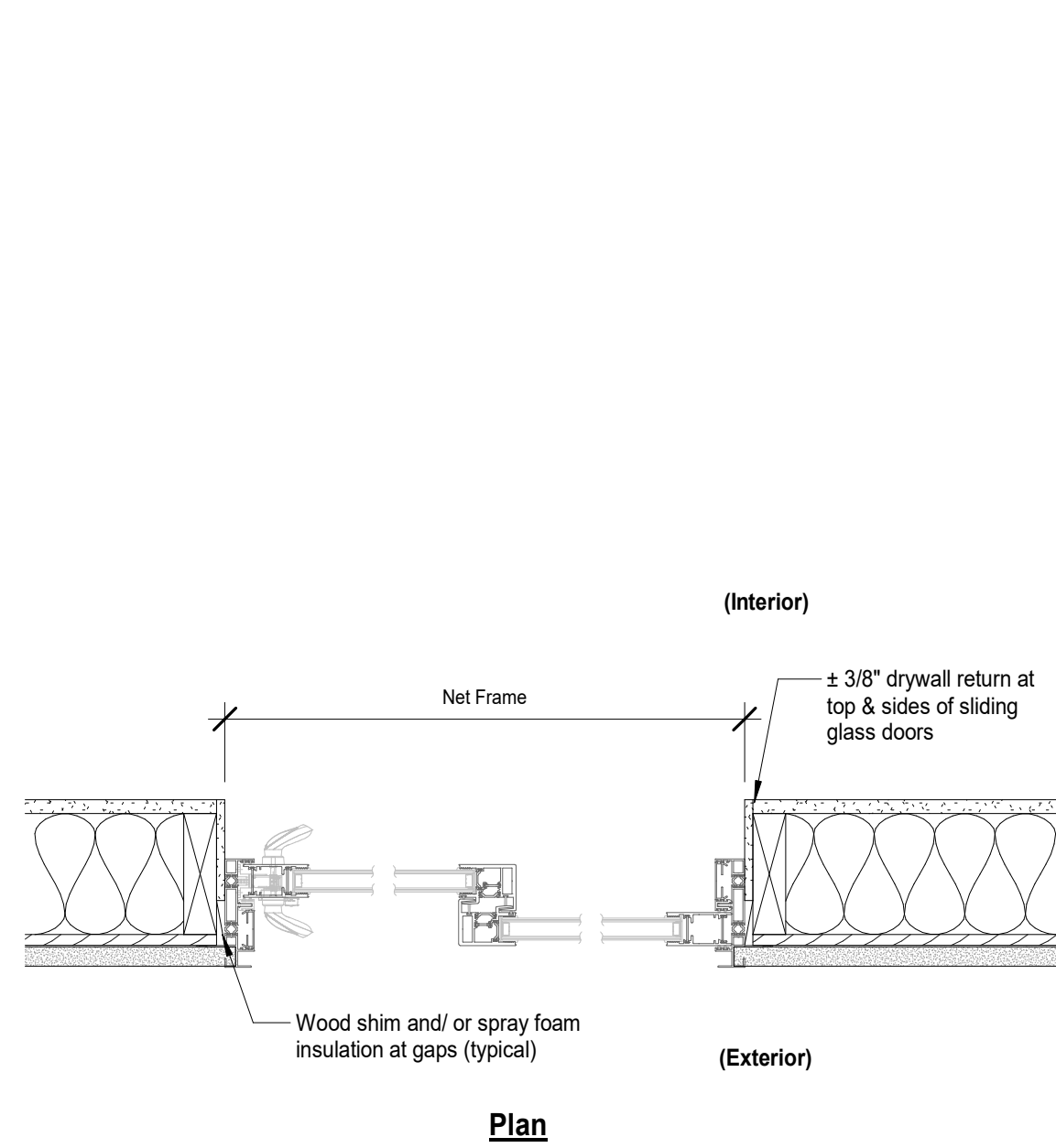


8 Hopper window- section view
1 1/2" = 1'-0"

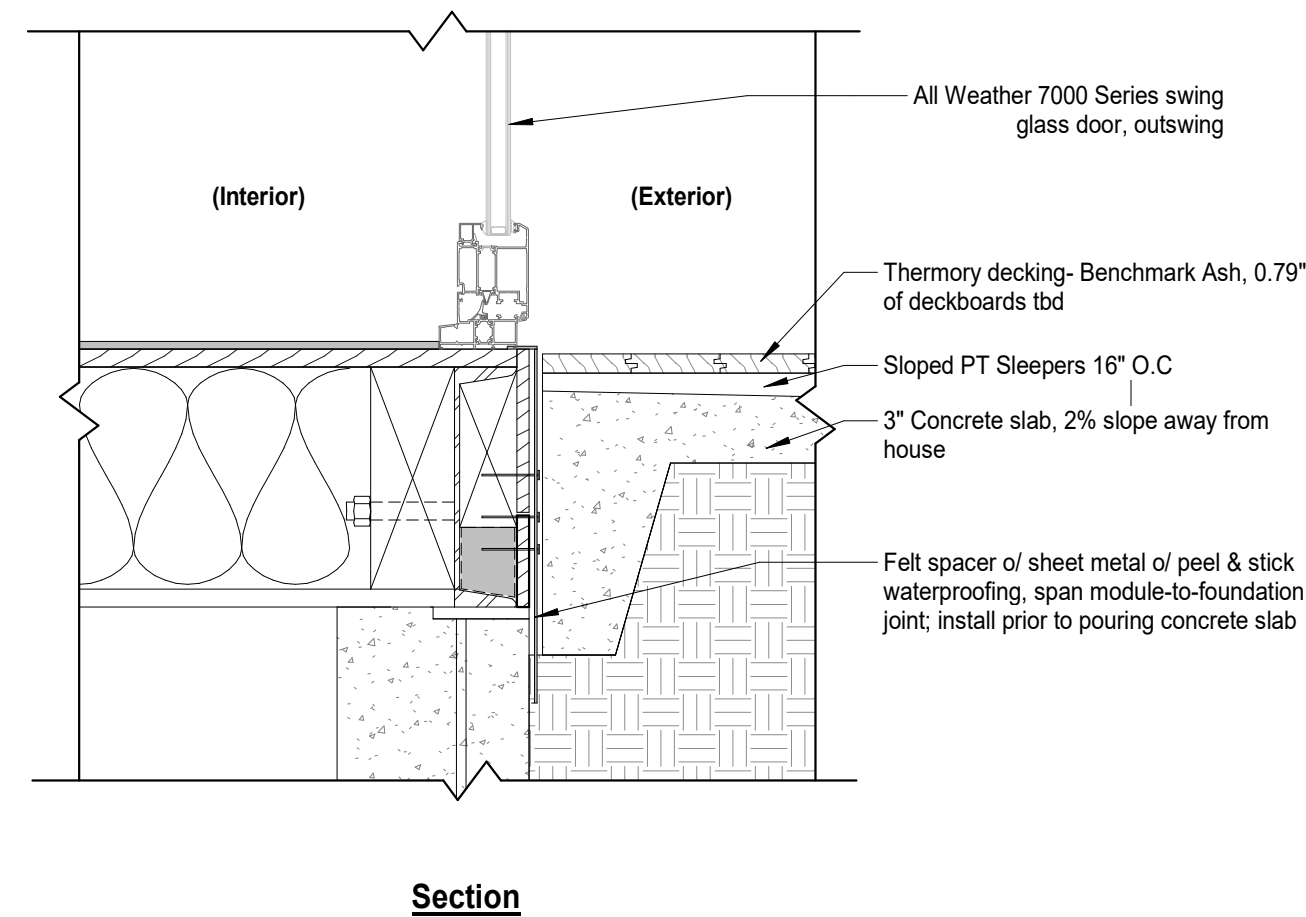
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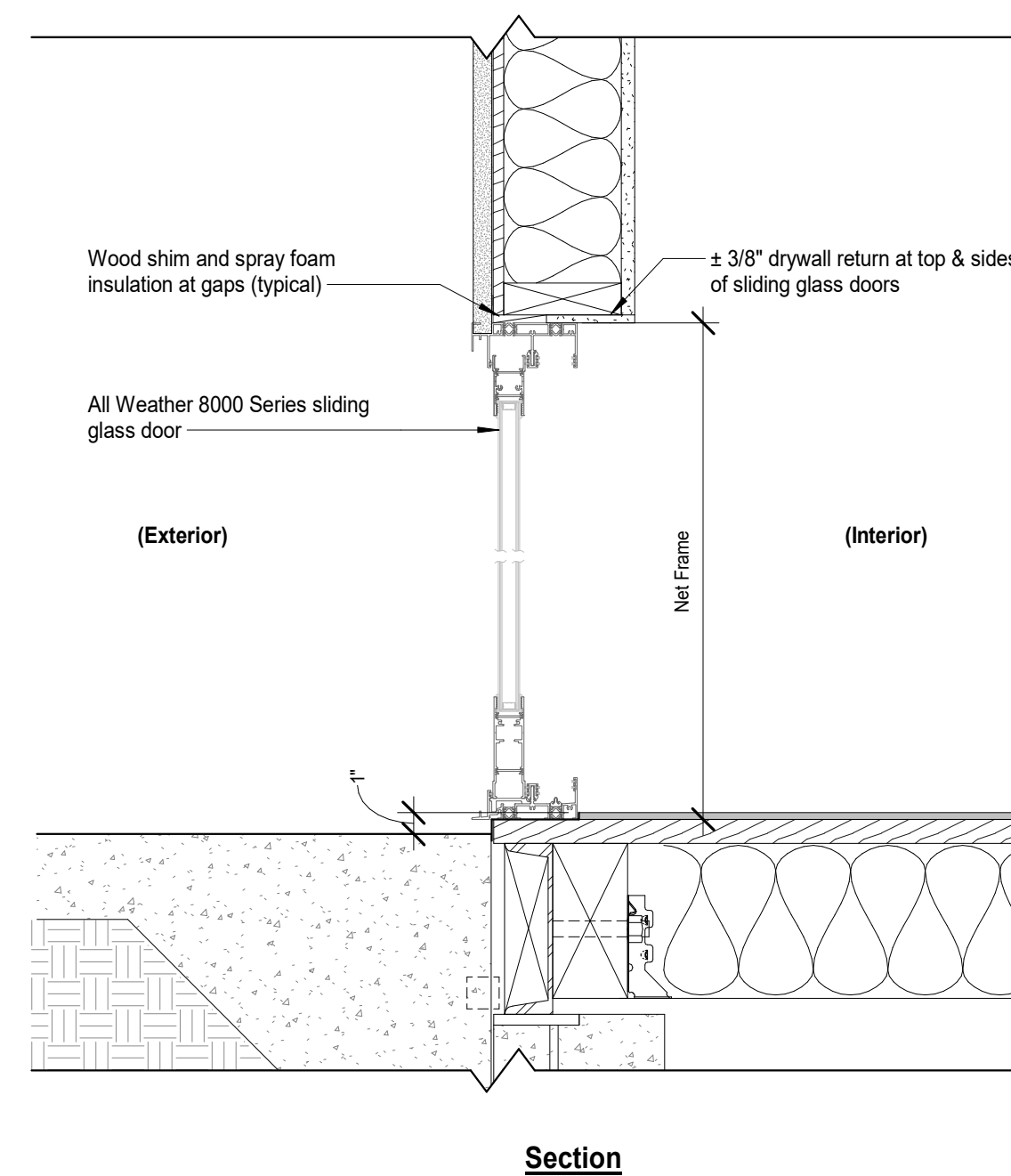
3239 Cliff Dr
Santa Barbara, CA 93109



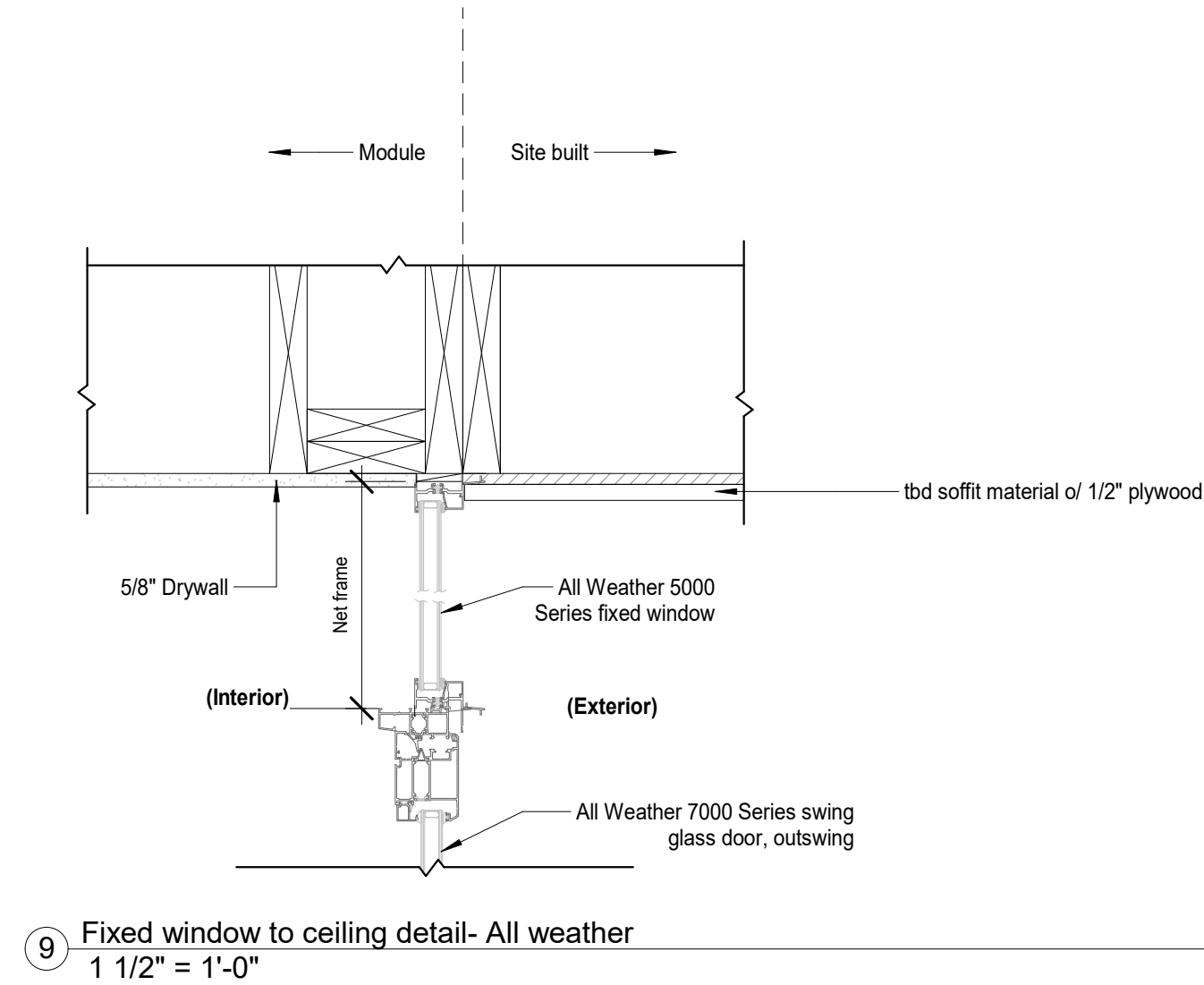
6 Swing door to floor detail- All weather
1 1/2" = 1'-0"



Section



Section



9 Fixed window to ceiling detail- All weather
1 1/2" = 1'-0"

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Details

A5.04

4/22/2024 1 PM C:\Users\Arora\OneDrive\Documents\Projects\125 Raskopf ADU\125 Raskopf ADU - 3239 Cliff Dr - Santa Barbara Design Arc\Drawings\Revit\125 Raskopf ADU.rvt

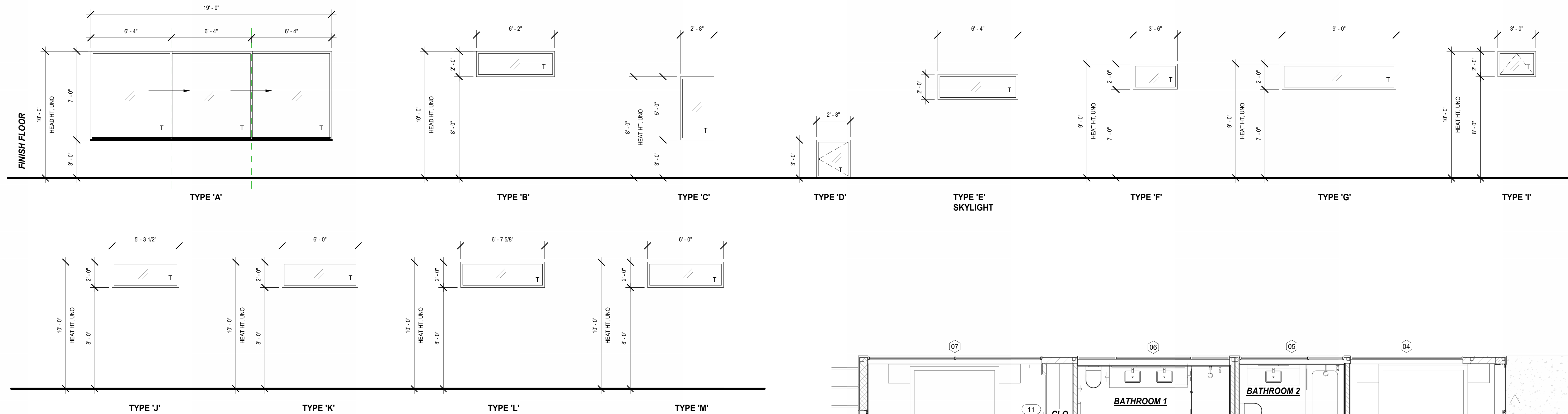
REVISIONS

NO.	DATE	DESCRIPTION
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WINDOW SCHEDULE															
NO.	TYPE	LOCATION	SILL HT	HEAD HT	NET FRAME WIDTH	NET FRAME HEIGHT	ROUGH OPENING WIDTH	ROUGH OPENING HEIGHT	INTERIOR SETBACK	MANUFACTURER / MODEL	FINISH	U-FACTOR	SHGC	VLT	NOTES
01	A	LIVING ROOM	2'-11 1/4"	9'-9 7/8"	18'-8 3/4"	6'-9 7/8"				ALL WEATHER-5000 SERIES, THREE PANEL SLIDER	DARK BRONZE ANODIZED				
02		KITCHEN	7'-10"	9'-9 7/8"	3'-6"	1'-11 7/8"									
03		KITCHEN	7'-10"	9'-9 7/8"	3'-6"	1'-11 7/8"									
04			6'-0 3/4"	9'-9 7/8"	6'-10"	1'-9 1/8"									
05			6'-0 3/4"	9'-9 7/8"	6'-2 7/8"	1'-9 1/8"									
06			6'-0 3/4"	9'-9 7/8"	12'-0"	1'-9 1/8"									
07		BEDROOM 1 / LIVING	6'-0 3/4"	9'-9 7/8"	13'-8 3/8"	1'-9 1/8"									
08	E	KITCHEN	7'-10"	9'-9 7/8"	18'-8 3/4"	1'-11 7/8"				FIXED SKYLIGHT- TBD	DARK BRONZE ANODIZED	0.3800 BTU/(h·ft²·°F)	0.25	0.58	INTERIOR
14					6'-3 1/8"	2'-3 1/8"									

DOOR & WINDOW NOTES

- ALL GLAZING (DOORS & WINDOWS) TO BE TEMPERED GLASS, TYP. THROUGHOUT. MULTI-PANE GLAZING W/ MINIMUM OF (1) TEMPERED PANE PER ISS7 8.2.1(1).
- PROJECT IS LOCATED WITHIN VERY HIGH FIRE HAZARD SEVERITY ZONE. EXTERIOR BUILDING MATERIALS, SYSTEMS AND/OR ASSEMBLIES SHALL MEET 2019 CBC CHAPTER 7A, INCLUDING ALL SUBSECTIONS AND STATE FIRE MARSHALL REGULATIONS.
- ALL ELEVATION DRAWINGS ARE FROM THE OUTSIDE LOOKING IN.
- EGRESS WINDOWS SIZED PER IRC R310.2:
 - A. MIN. CLEAR OPENING = 5.7 SF
 - B. MIN. CLEAR OPENING HEIGHT = 24"
 - C. MAX. CLEAR OPENING SILL HT = 44"

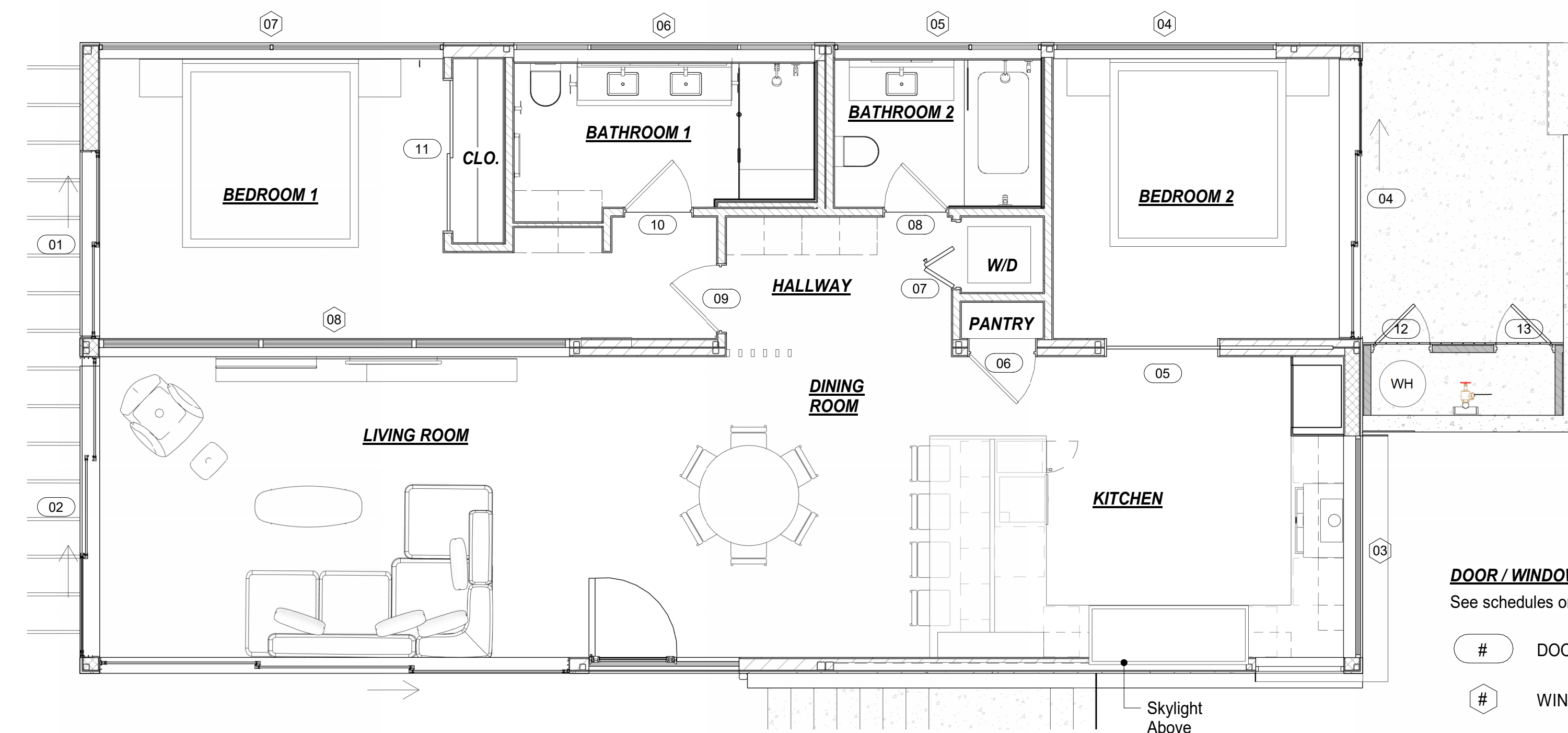


All dimensions (sill & head heights) are shown from subfloor (not finished floor) T = TEMPERED GLASS
E = EGRESS

2 Window types
1/4" = 1'-0"

DOOR SCHEDULE						
NO.	TYPE	LOCATION	WIDTH	HEIGHT	SPEC/FINISH	NOTES
01	A	BEDROOM #01 / EXTERIOR	2'-0"	6'-0 3/4"	ALL WEATHER - 8000 SERIES, 2 PANEL, SLIDING GLASS DOOR, DARK BRONZE ANODIZED	U-FACTOR: 0.47 / SHGC: 0.17 / VLT: 0.37
02	B	LIVING ROOM	12'-0"	9'-9 7/8"	ALL WEATHER - 8000 SERIES, 3 PANEL SLIDING GLASS DOOR, DARK BRONZE ANODIZED	U: 0.30 / SHGC: 0.21 / VLT: 0.47
03	C	ENTRY	6'-0"	9'-9 7/8"	ALL WEATHER - 7000 SERIES, SWING GLASS DOOR, DARK BRONZE ANODIZED	U: 0.34 / SHGC: 0.18 / VLT: 0.39
04	D	BEDROOM 2	11'-2"	9'-9 7/8"	ALL WEATHER - 8000 SERIES, 3 PANEL SLIDING GLASS DOOR, DARK BRONZE ANODIZED	U: 0.30 / SHGC: 0.21 / VLT: 0.47
05	E	BEDROOM 2	4'-6"	8'-0"	SHINNOKI - 1 3/4" THICK, SOLID-CORE POCKET DOOR, CATEGORY: WALNUT, COLOR TBD	
06	F	PANTRY	2'-8"	8'-0"	SHINNOKI - 1 3/4" THICK, SOLID-CORE SWING DOOR, CATEGORY: WALNUT, COLOR TBD	
07	G		2'-8"	8'-0"	SHINNOKI - 1 3/4" THICK, 2 PANEL SOLID-CORE BIFOLD DOOR, CATEGORY: WALNUT, COLOR TBD	
08	F	BATHROOM 2	2'-6"	8'-0"	SHINNOKI - 1 3/4" THICK, SOLID-CORE SWING DOOR, CATEGORY: WALNUT, COLOR TBD	
09	F	BEDROOM 1	2'-8"	8'-0"	SHINNOKI - 1 3/4" THICK, SOLID-CORE SWING DOOR, CATEGORY: WALNUT, COLOR TBD	
10	F	BATHROOM 1	2'-8"	8'-0"	SHINNOKI - 1 3/4" THICK, SOLID-CORE SWING DOOR, CATEGORY: WALNUT, COLOR TBD	
11	H	BEDROOM 1 CLOSET	6'-0"	8'-0"	SHINNOKI - 1 3/4" THICK, 2 PANEL SOLID-CORE SLIDING DOOR, CATEGORY: WALNUT, COLOR TBD	
12			2'-3 1/4"	5'-0"		
13			2'-3 1/4"	5'-0"		

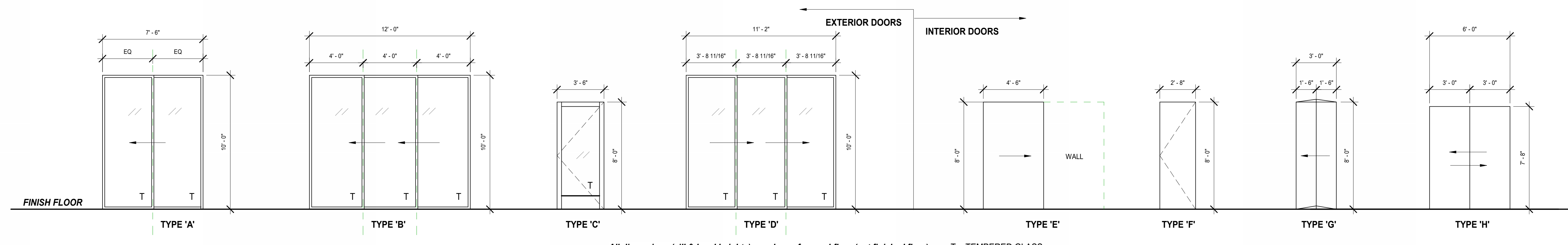
1 KEY PLAN
1/4" = 1'-0"



DOOR / WINDOW SYMBOLS

See schedules on A6.01

- # DOOR
- # WINDOW



All dimensions (sill & head heights) are shown from subfloor (not finished floor) T = TEMPERED GLASS
E = EGRESS

3 Door types
1/4" = 1'-0"

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#125 Raskopf ADU

3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO: #125

DATE: 4/22/2024 1 PM

DRAWN BY: A. Arora

CHECKED BY: B. Henson

Door & Window Schedule

A6.01

RASKOPF RESIDENCE

3239 CLIFF DRIVE

SANTA BARBARA, CA 93109

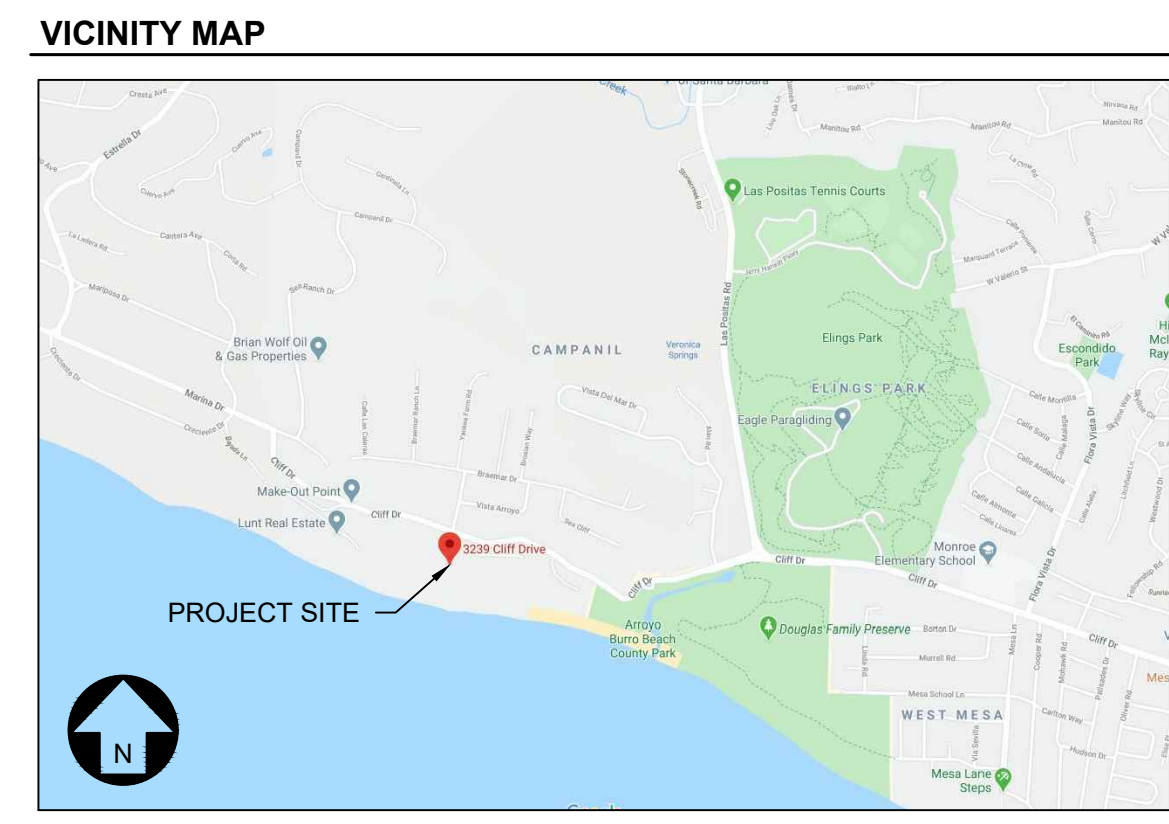
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Engineer of Record:

LEGEND

SD	STORM DRAINAGE
W	WATER SERVICE
G	GAS
S	SANITARY SEWER
E	POWER ELECTRICAL
---	DITCH / FLOWLINE
---	GRADING LIMIT
---	GRADE SLOPE
---	PROPERTY LINE
---	CENTERLINE
---	SAWCUT



SURVEY NOTES

EXISTING TOPOGRAPHIC AND BOUNDARY INFORMATION SHOWN HEREON PER SURVEY BY PROBER LAND SURVEYING DATED 12/11/2019

- BOUNDARY DATA: RECORD OF SURVEY BK 85, PG 28 (R1)
- HORIZONTAL DATUM: NAD83 - ZONE SPC CAD5, EPOCH 1991.35; UNITS USF, STA. SBCN 21, N.1975261.02, E.6032231.02 (147 RS 70-74)
- VERTICAL DATUM: NAVD83; INITIAL STA. SBCN 21 ELEV =171.57' (147 RS 70-74)
- PARCEL SIZE: 63,350 S.F. / 1.45 AC GROSS & 60,751 S.F. / 1.39 AC, NET CALC. (R1)
- EASEMENTS PLOTTED PER CHICAGO TITLE REPORT FWVE-8851900220-TD, DATE 10-23-2019
- ORTHO MOSAIC: IMAGE OVERLAY / PHANTOM 4 PRO DRONE + PIX4D MAPPER 12-11-2019
- RECORD BOUNDARY TIES: WESTERLY LINE PL 50 > Pt 51
- ROTATION TO GRID: -1° 34' 08"; S 5° 14' 08" W 1330.16' M.; S 3° 40' 00" W 330.30' (R1)

SURVEY MONUMENT PROTECTION:

PROTECT AND PRESERVE IN PLACE ALL SURVEY MONUMENTS AND BENCHMARKS. DO NOT DISTURB, MOVE, OR RELOCATE MONUMENTS OR BENCHMARKS WITHOUT THE PRIOR REVIEW AND APPROVAL BY THE AGENCY HAVING JURISDICTION OVER THE MONUMENT OR BENCHMARK. THE CONTRACTOR SHALL CONTRACT WITH A LICENSED SURVEYOR FOR MONUMENTS REQUIRING DISTURBANCE OR REMOVAL, AND THE SURVEYOR SHALL RESET THE MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE AUTHORITY HAVING JURISDICTION, PURSUANT TO ALL APPLICABLE BUSINESS AND PROFESSIONAL CODES.

UTILITY PURVEYORS

ELECTRICITY: SOUTHERN CALIFORNIA EDISON
 http://www.sce.com/ 1-800-655-4555

WATER/SEWER: CITY OF SANTA BARBARA WATER AND WASTEWATER
 P.O. BOX 1990
 SANTA BARBARA, CA 93102-1990
 (805) 564-5387

NATURAL GAS: SOUTHERN CALIFORNIA GAS COMPANY
 P.O. BOX C
 MONTEREY PARK, CA 91756
 (800)-427-2200

CABLE TV: COX COMMUNICATIONS
 3303 STATE STREET
 SANTA BARBARA, CA
 (805) 681-6600

TELEPHONE: FRONTIER COMMUNICATIONS
 805-964-8303

CITY OF SANTA BARBARA STORMWATER COMPLIANCE

TIER 3 (2020) COMPLIANCE THROUGH PERMEABLE SURFACES AND IMPERMEABLE RUNOFF DIRECTED TO 5' DIAMETER X 36" DEEP STORMWATER DRYWELL.

CITY OF SANTA BARBARA BMP INSPECTION REQUIREMENTS

CONTRACTOR SHALL CALL FOR INSPECTION BY THE CITY BUILDING INSPECTOR OR CITY QSP 72 HOURS PRIOR TO THE NEEDED INSPECTION. THE CITY WILL THEN ROUTE THE REQUEST TO THE QSP INSPECTOR OR THIRD PARTY COMPANY. THE FOLLOWING LIST OF MANDATORY INSPECTIONS MUST BE COMPLETED FOR OCCUPANCY:

- DRYWELL (DETAIL 18, SHEET C-4.1)
 - INSPECTION OF DRAINAGE PLUMBING BEFORE BACKFILL
 - FINAL INSPECTION AFTER BACKFILL
- PERMEABLE PAVER DRIVEWAY (DETAIL 1, SHEET C-4.1)
 - INSPECTION OF SUBGRADE
 - INSPECTION OF BASE ROCK LAYERS
 - FINAL INSPECTION AFTER CONSTRUCTION

CONTRACTOR SHALL CALL FOR INSPECTION BY THE SOILS ENGINEER, BRAUN & ASSOCIATES, 72 HOURS PRIOR TO THE NEEDED INSPECTION. THE FOLLOWING LIST OF MANDATORY INSPECTIONS MUST BE COMPLETED BEFORE AND DURING CONSTRUCTION:

- THE FINAL GRADING AND DRAINAGE PLANS SHALL BE OBSERVED AND APPROVED PRIOR TO THE START OF CONSTRUCTION.
- CONSTRUCTION INSPECTIONS AND TESTING, AS REQUIRED, DURING ALL GRADING AND EXCAVATING OPERATIONS BEGINNING WITH THE STRIPPING OF VEGETATION AT THE SITE, AT WHICH TIME A SITE MEETING OR PRE-JOB MEETING WOULD BE APPROPRIATE.

MAINTENANCE CERTIFICATION

THE FOLLOWING PROPOSED STORM WATER BMPs SHALL BE MAINTAINED AS DESCRIBED IN SANTA BARBARA MUNICIPAL CODE 22.87.030 IN ACCORDANCE WITH THEIR APPROVED SPECIFICATIONS:

STORMWATER DRYWELL
 PERMEABLE PAVER DRIVEWAY
 PERMEABLE GRAVEL MOTORCOURT

Kristen Raskopf
 OWNER SIGNATURE (KRISTEN RASKOPF) 1-06-2023
 DATE

STANDARD ABBREVIATIONS

AC	ASPHALTIC CONCRETE	IE	INVERT ELEVATION
BLDG	BUILDING	INV	INVERT
BCR	BEGIN CURB RETURN	LA	LANDSCAPE AREA
BVC	BEGIN VERTICAL CURVE	NG	NATURAL GRADE
BW	BOTTOM OF WALL	PA	PLANTER AREA
CB	CATCH BASIN	PCC	PORTLAND CEMENT CONCRETE
CL	CENTERLINE	PL	PROPERTY LINE
CMU	CONCRETE MASONRY UNIT	POC	POINT OF CONNECTION
CONC	CONCRETE	PS	PARKING STRIPE
DW	DRIVEWAY	PVC	POLYVINYL CHLORIDE
ECR	END CURB RETURN	RW	RIGHT OF WAY
EG	EXISTING GRADE	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SG	SUB-GRADE ELEVATION
EVC	END VERTICAL CURVE	SS	SANITARY SEWER
FF	FINISHED FLOOR	TC	TOP OF CURB, CONCRETE
FG	FINISHED GRADE	TF	TOP OF FOOTING
FH	FIRE HYDRANT	TG	TOP OF GRATE
FL	FLOW LINE	TW	TOP OF WALL
FS	FINISHED SURFACE	VC	VERTICAL CURVE
GB	GRADE BREAK		

PROJECT INFORMATION

CLIENT: DOWNTON SHABBY LLC, C/O LYNN SILVERMAN
 2444 WILSHIRE BLVD, SUITE 301
 SANTA MONICA, CA 90403

ARCHITECT: DESIGN ARC, INC.
 29 WEST CALLE LAURELES
 SANTA BARBARA, CA 93105

GEOTECHNICAL: BRAUN & ASSOCIATES, INC.
 P.O. BOX 2004
 BUELLTON, CA 93427

SURVEYOR: PROBER LAND SURVEYING
 645 FLORA VISTA DRIVE,
 SANTA BARBARA, CA 93109

APN: 047-082-022

SITE AREA: 1.45 AC
AREA DISTURBED: 0.76 AC

GRADING INFORMATION*

CUT QUANTITY: 670 CUBIC YARDS
 FILL QUANTITY: 460 CUBIC YARDS
 NET QUANTITY: 210 CUBIC YARDS EXPORT

*NOTE: THE ABOVE QUANTITIES ARE FOR PLANNING AND PERMITTING PURPOSES ONLY. SHRINKAGE, CONSOLIDATION AND SUBSIDENCE FACTORS, LOSSES DUE TO CLEARING AND DEMOLITION OPERATIONS; AND TRENCHING FOR UTILITIES AND FOUNDATIONS ARE NOT INCLUDED. ESTIMATED EARTHWORK QUANTITIES ARE BASED ON THE APPROXIMATE DIFFERENCE BETWEEN EXISTING GRADES AND PROPOSED FINISHED GRADES OR PAVEMENT SUBGRADES, AS INDICATED ON THE PLANS, AND SHOULD VARY ACCORDING TO THESE FACTORS AND LOSSES. THE CONTRACTOR SHALL PERFORM AN EARTHWORK ESTIMATE FOR THE PURPOSE OF PREPARING A LUMP SUM BID PRICE FOR EARTHWORK. THE BID PRICE SHALL INCLUDE COSTS FOR ANY NECESSARY IMPORT AND PLACEMENT OF EARTH MATERIALS OR THE EXPORT AND PROPER DISPOSAL OF EXCESS EARTH MATERIALS.

DIG ALERT

DIAL TOLL FREE
811 OR
 (1-800-227-2600)
 AT LEAST TWO DAYS
 BEFORE YOU DIG

UNDERGROUND SERVICE ALERT

PRIOR TO COMMENCING OF ANY EXCAVATION, DIGGING, POT HOLLING, ETC. CALL DIG ALERT FOR ASSIGNMENT OF AN INQUIRY ID NUMBER, BECAUSE NO EARTH WORK SHALL COMMENCE UNLESS THE CONTRACTOR HAS OBTAINED THIS AND EACH UTILITY OR OWNER OF SUBSURFACE FACILITIES HAS LOCATED AND MARKED THEIR SUBSURFACE FACILITIES IN THE AREA OF WORK.

SHEET INDEX

SHEET	SHEET TITLE
C-0.1	TITLE SHEET
C-0.2	NOTES SHEET
C-2.1	GRADING & DRAINAGE INDEX
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C-2.3	GRADING AND DRAINAGE PLAN
C-3.1	UTILITY PLAN
C-4.1	DETAIL SHEET
C-4.2	DETAIL SHEET
C-4.3	RETAINING WALL DETAIL SHEET
C-5.1	EROSION CONTROL PLAN

Revisions:

1	BLDG. DEPT. SUBMITTAL - 02/15/24
2	---
3	---
4	---
5	---
6	---
7	---

Project Engineer: DWW Ext: 122
 Project Manager: JWG
 Date: 1.12.2023 Scale: PER PLAN
 AV Job No: 20248 Sheet Size: 30" x 42"

TITLE SHEET

C-0.1

S:\M_Jacobson\03\proj\0248 - 3239 cliff drive (rev) - kaa202_working drawings\02_28kaf02_ONSITETITLE SHEET.dwg, C-0.2, Feb. 15, 2024 11:03am, Date

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF SANTA BARBARA AND THE CURRENT EDITION OF THE CALIFORNIA BUILDING CODE.
- IN THE EVENT OF A CONFLICT BETWEEN ANY REFERENCED STANDARD, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- STORMWATER POLLUTION PREVENTION REQUIREMENTS PER CITY OF SANTA BARBARA AND SWRCB.
- A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- BEFORE BEGINNING WORK, CONTRACTOR SHALL CONFIRM WITH AGENCIES HAVING JURISDICTION THAT ALL REQUIRED PERMITS AND LICENSES HAVE BEEN OBTAINED AND ALL REQUIRED NOTICES GIVEN.
- UNDERGROUND AND OVERHEAD CONSTRUCTION IN ADDITION TO WHAT IS SHOWN ON THESE PLANS MAY BE PART OF THIS PROJECT, INCLUDING ARCHITECTURAL AND LANDSCAPE ARCHITECTURAL IMPROVEMENTS. ADDITIONAL PERMITS MAY BE REQUIRED.
- A. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK AND INTERFACING IMPROVEMENTS WITH WORK BY OTHER CONTRACTORS AT THIS JOB SITE AND WITH IMPROVEMENTS REQUIRED BY PLANS BY OTHERS.
- B. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR BUILDING AND SITE LAYOUT DIMENSIONING.
- C. CONTRACTOR SHALL REFER TO ARCHITECTURAL AND LANDSCAPE ARCHITECTURAL PLANS AND SPECIFICATIONS FOR SITE DEVELOPMENT AND DIMENSIONING, INCLUDING THOSE FOR BUILDINGS, PATIOS, WALKWAYS, DRIVEWAYS, WALLS/FENCES, PLUMBING, ELECTRICAL, UTILITIES, LANDSCAPING, AND IRRIGATION.
- ALL SITE WORK AND TESTING SHALL BE DONE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE FOLLOWING ENGINEERING REPORT FOR THIS PROJECT:
A. PREPARED BY: BRAUN & ASSOCIATES, INC., FILE NUMBER: 3097, DATE: JUNE 23, 2020, REVISED: JANUARY 27, 2021.
B. THIS REPORT AND ANY ADDENDA SHALL BE INCORPORATED INTO THESE PLANS AND MADE A PART HEREOF AS IF SHELLED OUT IN THEIR ENTIRETY HEREON. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE APPLICABLE GEOTECHNICAL REPORTS. CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER TO OBTAIN OR REVIEW COPIES OF THESE REPORTS AND ADDENDA.
C. PRIOR TO BIDDING, CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER TO DETERMINE THE LOCATION AND DEPTH OF ALL TEST BORINGS AND EXPLORATORY PITS AND EXCAVATIONS. CONTRACTOR SHALL DETERMINE FROM THE GEOTECHNICAL ENGINEER WHAT REMEDIAL WORK IS RECOMMENDED TO MAKE THESE DISTURBED LOCATIONS SUITABLE FOR THE PROPOSED IMPROVEMENTS. CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS FOR THE RECOMMENDED REMEDIAL WORK AND SHALL ADJUST HIS OPERATIONS TO PROPERLY SEQUENCE THE WORK TO ACCOMMODATE REMEDIAL WORK WITH CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS, ORDINANCES, REGULATIONS, RULES, AND STANDARDS INCLUDING ALL REQUIREMENTS OF CAL-OSHA AND OSHA.
- ALL UNSUITABLE CONSTRUCTION MATERIALS AND RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE, TRANSPORTED TO A SUITABLE LOCATION, AND DISPOSED OF IN A PROPER AND LEGAL MANNER.
- ALL WORK INVOLVING EXCAVATION, INCLUDING THAT FOR WATER, SEWER, STORM DRAIN AND UTILITY COMPANES OR OTHER OWNERS OF SUBSURFACE FACILITIES WITHIN THE WORK SITE AND ADJACENT AREAS SHALL BE COMPLETED AND OBSERVED AND APPROVED BY THE AGENCY HAVING JURISDICTION AND THE STRUCTURAL BACKFILL OBSERVED AND TESTED FOR COMPACTION AND APPROVED BY THE GEOTECHNICAL ENGINEER BEFORE AGGREGATE BASE, PAVING AND OTHER PERMANENT SURFACE CONSTRUCTION MAY COMMENCE.
- BEFORE COMMENCING EXCAVATION, CONTRACTOR SHALL CONTACT PUBLIC WORKS AND UTILITY COMPANES OR OTHER OWNERS OF SUBSURFACE FACILITIES WITHIN THE WORK SITE AND SHALL VERIFY WHETHER OR NOT A REPRESENTATIVE WILL BE PRESENT BEFORE AND/OR DURING EXCAVATION, AND SHALL DETERMINE SITE SPECIFIC REQUIREMENTS FOR EXCAVATION.
- CONTRACTOR SHALL NOTIFY PUBLIC WORKS, BUILDING AND SAFETY, UTILITY COMPANIES, AND OTHER OWNERS OF SUBSURFACE FACILITIES WITHIN THE WORK SITE AND ADJACENT AREAS OF ANY CONSTRUCTION AND OF THE TIME AND LOCATION OF PRE-CONSTRUCTION CONFERENCE, AND SHALL DETERMINE FROM EACH PARTY THEIR SCOPE OF WORK TO BE OBSERVED AND BY WHOM, AND SCOPE OF TESTING. DURING THE COURSE OF WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR OBSERVATION AND TESTING AS STIPULATED PURSUANT TO ABOVE DETERMINATIONS. WORK NOT OBSERVED AND TESTED WILL BE SUBJECT TO REJECTION.
- CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN SHIELD SHEETING, SHORING, BRACING, AND/OR OTHER PROTECTION AS IS NECESSARY TO PREVENT COLLAPSE OF TEMPORARY EXCAVATIONS AND EMBANKMENTS AND TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS, TEMPORARY IMPROVEMENTS, AND PARTIALLY COMPLETED PORTIONS OF THE WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SUFFICIENCY OF SUCH SUPPORTS AND/OR OTHER PROTECTION PER ALL REQUIREMENTS OF CAL-OSHA AND OSHA.
- CONTRACTOR SHALL PROMPTLY NOTIFY ENGINEER OF RECORD AND AUTHORITY HAVING JURISDICTION BY TELEPHONE AND IN WRITING UPON DISCOVERY OF, AND BEFORE DISTURBING ANY PHYSICAL CONDITIONS DIFFERING FROM THOSE REPRESENTED BY APPROVED PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL MAINTAIN A COMPLETE AND ACCURATE RECORD OF ALL CHANGES OF CONSTRUCTION FROM THAT SHOWN ON THESE PLANS AND SPECIFICATIONS FOR THE PURPOSE OF PROVIDING A BASIS FOR CONSTRUCTION OF RECORD DRAWINGS. NO CHANGES SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF ENGINEER OF RECORD AND AUTHORITY HAVING JURISDICTION. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL DELIVER THIS RECORD OF ALL CONSTRUCTION CHANGES TO ENGINEER ALONG WITH A LETTER WHICH DECLARES THAT, OTHER THAN THESE NOTED CHANGES, THE PROJECT WAS CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
WARNING: ENGINEERING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THESE PLANS MUST BE APPROVED IN WRITING BY PREPARER.
- CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY FOR ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM ALL LIABILITY AND CLAIMS, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT AND ACCEPTS LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONALS.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING AND PEDESTRIAN TRAFFIC CONTROL AND SAFETY AND SHALL FURNISH, INSTALL, AND VEHICULAR SUCH FENCING, SIGNS, LIGHTS, TRENCH PLATES, BARRICADES, AND/OR OTHER PROTECTION AS IS NECESSARY FOR SAID CONTROL, AND SAFETY.
- CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR PROTECTION OF PUBLIC AND PRIVATE PROPERTY AT OR IN THE VICINITY OF THE JOB SITE AND FURTHER AGREES TO, AT CONTRACTOR'S EXPENSE, REPAIR OR REPLACE TO ORIGINAL CONDITION, ALL EXISTING IMPROVEMENTS WITHIN OR IN THE VICINITY OF THE JOB SITE WHICH ARE NOT DESIGNATED FOR REMOVAL AND WHICH ARE DAMAGED OR REMOVED AS A RESULT OF CONTRACTOR'S OPERATIONS.

GENERAL GRADING NOTES:

- GRADING SHALL BE IN CONFORMANCE WITH RECOMMENDATIONS MADE BY THE GEOTECHNICAL ENGINEER DURING OBSERVATION AND TESTING OF SITE DEMOLITION, PREPARATION, GRADING, AND DEVELOPMENT WORK. FOR ANY CONFLICT BETWEEN THESE PLANS AND THE RECOMMENDATIONS AND SPECIFICATIONS OF THE GEOTECHNICAL ENGINEER, THE MORE STRINGENT PROVISION SHALL GOVERN.
- AREAS TO BE GRADED SHALL BE CLEARED OF ALL VEGETATION (EXCEPT TREES INDICATED TO REMAIN), INCLUDING ROOTS AND ROOT STRUCTURES, OTHER ORGANIC MATERIAL, DEBRIS, NON-COMPLYING FILL AND OTHER MATERIAL UNSUITABLE FOR SUPPORT OF FILL AND/OR PROPOSED IMPROVEMENTS, AS RECOMMENDED BY AND UNDER THE OBSERVATION AND TESTING OF THE GEOTECHNICAL ENGINEER. CALL THE INSPECTOR FOR FURTHER INSPECTION.
- ALL UNSUITABLE SOIL, MATERIALS AND RUBBISH AND DEBRIS RESULTING FROM DEMOLITION AND GRADING OPERATIONS SHALL BE REMOVED FROM THE JOB SITE, TRANSPORTED TO A SUITABLE LOCATION AND DISPOSED OF IN A PROPER AND LEGAL MANNER.
- AREAS TO RECEIVE FILL MATERIAL AND AREAS TO RECEIVE BUILDINGS, EXTERIOR SLABS, WALKWAYS, WALLS, PAVEMENT AND OTHER STRUCTURAL IMPROVEMENTS SHALL BE PREPARED AS RECOMMENDED BY AND UNDER THE OBSERVATION AND TESTING OF THE GEOTECHNICAL ENGINEER. RECOMMENDATIONS FOR OVER EXCAVATION, ADDITIONAL SCARIFICATION, BACKFILL AND RECOMPACTION ARE CONTAINED IN THE PROJECT GEOTECHNICAL REPORT REFERENCED IN THE GENERAL NOTES ON THESE PLANS.
- PRIOR TO PLACEMENT OF FILL AND BACKFILL MATERIAL, THE PREPARED AREA SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR. THE GEOTECHNICAL ENGINEER SHALL ALSO OBSERVE THE AREAS TO BE FILLED. ALLOW A MINIMUM 48-HOUR NOTICE. FILL AND BACKFILL PLACED ON THE PREPARED AREA WITHOUT THE REQUIRED OBSERVATION SHALL BE REMOVED.
- ALL FILL MATERIAL, WHETHER EXCAVATED ON-SITE OR IMPORTED FROM OFF-SITE, SHALL BE TESTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. IMPORTED FILL MATERIAL SHALL BE EQUAL TO OR BETTER IN QUALITY THAN THE ON-SITE SOILS AND SHALL CONFORM TO THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL TEST AND APPROVE THE SOIL PROPOSED FOR IMPORT FOR STRUCTURAL FILL PRIOR TO IMPORTATION TO THE SITE. THE LANDSCAPE ARCHITECT AND THE GEOTECHNICAL ENGINEER SHALL TEST AND APPROVE THE SOIL PROPOSED FOR IMPORT FOR LANDSCAPE AREA SURFACE MATERIAL PRIOR TO IMPORTATION TO THE SITE.
- CONTRACTOR SHALL REFER TO THE FOLLOWING AS APPLICABLE:
- ARCHITECTS PLANS FOR ADDITIONAL GRADING REQUIREMENTS IN BUILDING AREAS.
- LANDSCAPE ARCHITECT'S PLANS FOR TREE PRESERVATION REQUIREMENTS AND FOR SUBGRADE ALLOWANCES IN LANDSCAPE AREAS.
- PUBLIC IMPROVEMENT PLANS FOR INTERFACING WITH PUBLIC GRADING, PAVING, STORM DRAINAGE AND UTILITY IMPROVEMENTS.
- WHERE PLANTER AREAS ARE SHOWN ON THE PLANS ADJACENT TO BUILDINGS AND ARE CONTAINED BY WALLS / FLATWORK LESS THAN 8" BELOW BOTTOM OF SILL PLATE OR WHERE ADJACENT FINISH GRADE OUTSIDE A BUILDING IS SHOWN TO BE LESS THAN 8" BELOW BOTTOM OF SILL PLATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT BUILDING PLANS CALL FOR APPROPRIATE DAMPROOF OR WATERPROOF CONSTRUCTION AND IS CONSTRUCTED IN ACCORDANCE WITH ALL BUILDING APPLICABLE CODE REQUIREMENTS.
- PLAN ELEVATIONS SHOWN ON SOIL AND LANDSCAPE AREAS ARE FINISH GRADE (FINISH SURFACE) ELEVATIONS INTENDED TO ESTABLISH SURFACE DRAINAGE CONTROL FOR THESE AREAS. DURING GRADING OPERATIONS, THICKNESSES (SUBGRADE ALLOWANCES) SPECIFIED BY LANDSCAPE ARCHITECT FOR TURF, WOODS, MULCH, ETC. SHALL BE SUBTRACTED FROM THESE ELEVATIONS TO ESTABLISH FINISH SURFACE ELEVATIONS.
- BEFORE PLACEMENT OF AGGREGATE BASE OR SUBBASE MATERIAL IN PAVEMENT AREAS, THE SUBGRADE SOIL SHALL BE REVIEWED AND TESTED BY THE GEOTECHNICAL ENGINEER. DURING PAVING OPERATIONS, STRUCTURAL SECTION COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER.
- QUALITY REVIEW AND REPORTING REQUIREMENTS.
A. GRADING AND IMPROVEMENTS FOUND NOT IN CONFORMANCE WITH APPROVED PLANS AND DESIGN INTENT SHALL BE CORRECTED BY CONTRACTOR AT CONTRACTOR'S EXPENSE. ADDITIONAL INSTALLATION, AGGREGATE SHALL BE GRADED PER TABLE BELOW.
SIEVE SIZING PERCENTAGE PASSING
1-1/2 INCH 100
1 INCH 90-100
3/4 INCH 75-100
NO. 4 25-100
NO. 8 0-5
B. BASE COURSE SHALL BE NO. 2 CRUSHED STONE. COARSE AGGREGATE SHALL BE SOUND ANGULAR CRUSHED STONE OR CRUSHED GRAVEL. FINE AGGREGATE SHALL BE SHARP EDGED NATURAL SAND OR SAND PREPARED FROM STONE OR GRAVEL. AGGREGATE SHALL BE WASHED BEFORE INSTALLATION. AGGREGATE SHALL BE GRADED PER TABLE BELOW.
SIEVE SIZING PERCENTAGE PASSING
3 INCH 100
2 1/2 INCH 100
2 INCH 75-100
1 1/2 INCH 35-70
3/4 INCH 0-5
C. SUBSURFACE STRUCTURAL GEOPREDS SHALL BE PUNCHED POLYPROPYLENE, MANUFACTURED FOR SUBSURFACE STRUCTURAL APPLICATIONS, WITH LOAD TENSILE CAPACITY GREATER THAN 90 PERCENT, COMPLYING WITH ASTM D6637-10/AND ASTM D7737-11 AND THE FOLLOWING, MEASURED PER TEST METHODS REFERENCED:
A. RADIAL STIFFNESS: 1500 LB/FT. ASTM D6637-10.
B. TENSILE STRENGTH: 100 LB/INCH. ASTM D7737-11.
C. THE PRELIMINARY ESTIMATED STRUCTURAL SECTION IS AS SHOWN ON THE PLAN DETAILS AND CONSTRUCTION NOTES. ACTUAL THICKNESS OF BASE COURSES SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER COMPLETION OF ROUGH GRADING BASED ON "R" VALUE TESTS OF COMPLETED SUBGRADE MATERIAL AND THE TRAFFIC INDEXES (TI'S) SHOWN ON THE PLAN DETAILS. SUBJECT TO APPROVAL BY THE ENGINEER, PREPARATION OF AREAS TO RECEIVE REPAIR AND APPURTENANCE CONCRETE IMPROVEMENTS, INCLUDING REMOVAL AND RECOMPACTION OF EXISTING SOIL AND PLACEMENT OF FILL SOIL, SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. DURING PAVING OPERATIONS, STRUCTURAL SECTION COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER.

TRENCHING AND BACKFILL NOTES:

- ALL TRENCHING, BEDDING AND BACKFILL MATERIAL AND CONSTRUCTION, SHALL BE IN ACCORDANCE WITH THESE PLANS INCLUDING THE PIPE TRENCH DETAIL.
- TRENCH OR STRUCTURE EXCAVATION SUBGRADE SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF BEDDING MATERIAL OR FORMS. WET OR MOIST SOIL ENCOUNTERED IN THE BOTTOM OF THE EXCAVATION AND DEEMED BY THE GEOTECHNICAL ENGINEER CAPABLE OF SUPPORTING THE PIPE OR STRUCTURE BEING CONSTRUCTED, SHALL BE REMOVED TO THE DEPTH RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND THE EXCAVATION BACKFILLED TO THE BOTTOM OF THE PIPE OR STRUCTURE GRADE WITH SUITABLE MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- WATER ENCOUNTERED IN TRENCH OR STRUCTURE EXCAVATION SHALL BE REMOVED BY THE CONTRACTOR TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER TO PREVENT DRY CONDITIONS DURING CONSTRUCTION OF PIPE OR STRUCTURE.
- BEDDING AND BACKFILL MATERIAL AND COMPACTED DENSITY, SHALL BE TESTED FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.
- ALL EXISTING AND PROPOSED VALVE AND UTILITY BOXES AND MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO FINISH GRADE.
A. ELEVATION: 14 INCH
B. SURFACE GAP BELOW TO FOOT LONG STRAIGHT EDGE NOT TO EXCEED 3/8 INCH
C. CONTRACTOR SHALL BE REQUIRED TO RETURN TO THE SITE AND CORRECT DIFFERENTIAL SETTLEMENT WITHIN 6 MONTHS OF FINAL INSPECTION AND APPROVAL OF PAVERS.
- CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT(S), THE PROJECT WORK AREA AND VICINITY, AND SHALL FAMILIARIZE HIMSELF WITH THE WORK AREA CONDITIONS. CONTRACTOR SHALL CONDUCT TESTS AND CONCLUSIONS AS TO HOW EXISTING SURFACE AND SUB-SURFACE CONDITIONS WILL AFFECT OR BE AFFECTED BY HIS CONSTRUCTION OPERATIONS, INCLUDING THE NATURE OF MATERIALS TO BE EXCAVATED, THE DEGREE OF DIFFICULTY ASSOCIATED WITH MAKING AND MAINTAINING THE REQUIRED EXCAVATIONS, AND THE DEGREE OF DIFFICULTY WHICH MAY ARISE FROM SUBSURFACE CONDITIONS INCLUDING GROUNDWATER, AND SHALL ACCEPT FULL RESPONSIBILITY THEREOF.
A. ELEVATION: 14 INCH
B. SURFACE GAP BELOW TO FOOT LONG STRAIGHT EDGE NOT TO EXCEED 3/8 INCH
C. CONTRACTOR SHALL BE REQUIRED TO RETURN TO THE SITE AND CORRECT DIFFERENTIAL SETTLEMENT WITHIN 6 MONTHS OF FINAL INSPECTION AND APPROVAL OF PAVERS.
- IF IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THE INTEGRITY OF EXISTING PAVEMENT ALONG AND BEHIND THE TRENCH SAWCUT LINE DURING CONSTRUCTION, IF THIS PAVEMENT IS BROKEN-OFF OR OTHERWISE DAMAGED BEFORE NEW PAVEMENT IS PLACED, CONTRACTOR SHALL SAWCUT A NEW CONFORM LINE PARALLEL WITH FULL LENGTH OF, AND SUFFICIENT DISTANCE (1-FOOT MINIMUM) BEHIND ORIGINAL SAWCUT SO AS TO REMOVE DAMAGED PAVEMENT AND/OR IRREGULARITY ALONG THE CONFORM LINE.

SEWER NOTES:

- ALL PUBLIC SEWER MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS AND WITH THE PROJECT SPECIFIC AND STANDARD REQUIREMENTS AND STANDARD DRAWINGS OF THE GOVERNING AGENCY.
- ALL PRIVATE SEWER MATERIALS AND CONSTRUCTION, INCLUDING BUILDING SEWERS, SHALL COMPLY WITH THE UNIFORM PLUMBING CODE, CURRENT EDITION, AND WITH THE GOVERNING AGENCY CODE.
- ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF CRITERIA FOR SEPARATION OF WATER MAINS AND SANITARY SEWERS.
- PVC SDR 35 PIPE SHALL CONFORM TO ASTM D 3034 FOR GASKET OR SOLVENT-WELDED PIPE WITH A MINIMUM PIPE STIFFNESS OF 46 TESTED PER ASTM D2412. GASKET JOINTS SHALL CONFORM TO ASTM F 477. SOLVENT-WELD JOINTS SHALL CONFORM TO ASTM D2872.
- HDPE SDR 17 PIPE SHALL CONFORM TO ASTM D 3035 FOR GASKET OR HEAT FUSION-WELDED PIPE. GASKET JOINTS SHALL CONFORM TO ASTM F 477. HEAT FUSION-WELD JOINTS SHALL CONFORM TO ASTM D2820.
- GRAVITY SEWER CONSTRUCTION SHALL BEGIN AT THE LOWEST POINT OF DISCHARGE AND PROCEED UPSTREAM.
- CONTRACTOR SHALL MAINTAIN RECORDS OF THE EXACT LOCATIONS AND DEPTHS OF ALL SEWER MANHOLES, CLEANOUTS, MAIN STUBS, AND LATERALS FOR THE PURPOSE OF PROVIDING A BASIS FOR CONSTRUCTION-RECORD DRAWINGS. SAID RECORD SHALL BE DELIVERED TO THE DEVELOPER'S ENGINEER PRIOR TO ACCEPTANCE OF THE WORK BY THE GOVERNING AGENCY.
- SEWER MAIN MANHOLE AND CLEAN-OUT RIMS SHALL BE ADJUSTED TO FINISH GRADE IN PAVED AREAS.

WATER NOTES:

- ALL PUBLIC WATER LINE MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS AND WITH THE PROJECT SPECIFIC AND STANDARD REQUIREMENTS AND STANDARD DRAWINGS OF THE GOVERNING AGENCY.
- ALL PRIVATE WATER LINE MATERIALS AND CONSTRUCTION, INCLUDING SERVICE LATERALS, SHALL COMPLY WITH THE UNIFORM PLUMBING CODE, CURRENT EDITION, AND WITH THE GOVERNING AGENCY CODE.
- ALL WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF CRITERIA FOR SEPARATION OF WATER MAINS AND SANITARY SEWERS.
- PVC SCH 40 PIPE SHALL CONFORM TO ASTM D 1785 FOR GASKET OR SOLVENT-WELD GASKET JOINTS SHALL CONFORM TO ASTM F 477. SOLVENT-WELD JOINTS SHALL CONFORM TO ASTM D2872.
- CONTRACTOR SHALL MAINTAIN RECORDS OF THE EXACT LOCATIONS OF ALL WATER VALVES, METERS, MAIN STUBS, AND LATERALS FOR THE PURPOSE OF PROVIDING A BASIS FOR CONSTRUCTION-RECORD DRAWINGS. SAID RECORD SHALL BE DELIVERED TO THE DEVELOPER'S ENGINEER PRIOR TO ACCEPTANCE OF THE WORK BY THE GOVERNING AGENCY.
- ALL WATER METER BOXES AND VALVE BOX RIMS SHALL BE ADJUSTED TO FINISH GRADE IN PAVED AREAS.
- PRIOR TO ALLOWING WATER MIXING FROM THE MUNICIPAL SOURCE NEW AND REFINISHED PUBLIC WATER MAINS SHALL BE DISINFECTED TO THE STANDARD PROVIDED IN THE AMERICAN WATER WORKS ASSOCIATION STANDARD C651-14 FOR DISINFECTING WATER MAINS.

DEMOLITION NOTES:

- THE EXISTENCE AND APPROXIMATE LOCATIONS OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY THE AVAILABLE RECORDS PROVIDED. THE CIVIL ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES, NOR FOR UTILITY OR STRUCTURE LOCATIONS WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO WORK OR POT-HOLE TO DETERMINE THE EXACT LOCATIONS OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OR PROTECTION OF ALL EXISTING UTILITY LINES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION OF THE SITE AND SHALL REMOVE AND DISPOSE OF ALL STRUCTURES ABOVE AND OR BELOW GROUND UNLESS NOTED OTHERWISE. ANY HAZARDOUS MATERIALS ENCOUNTERED SHALL BE HANDLED AND REMOVED AS REQUIRED BY LOCAL AND/OR STATE LAWS NO COST TO THE OWNER.
- THE CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DAMAGE TO EXISTING HARDSCAPE IMPROVEMENTS, UTILITY FACILITIES, AND LANDSCAPE FEATURES THAT ARE NOT AFFECTED BY THESE PLANS.
- ALL JOINT LINES SHALL BE SAWCUT ON A NEAT, STRAIGHT LINE PARALLEL WITH THE JOINT. THE CUT EDGE SHALL BE PROTECTED FROM CRUSHING, AND ALL BROKEN EDGES SHALL BE RE-CUT PRIOR TO JOINING.
- ALL EXISTING OBJECTIONABLE MATERIALS THAT CONFLICT WITH PROPOSED IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, BUILDING FOUNDATIONS, UTILITIES, APPURTENANCES, TREES, SIGNS, STRUCTURES, ETC. SHALL BE REMOVED AND DISPOSED BY THE CONTRACTOR AT NO COST TO THE OWNER, UNLESS NOTED OTHERWISE HEREIN, OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STREETS FROM DAMAGES CAUSED BY HIS OPERATIONS, ANY CURBS DAMAGED DURING HIS OPERATIONS SHALL BE SAWCUT AND REPLACED AT NO COST TO THE OWNER. ANY EXISTING PAVING IDENTIFIED AS POTENTIALLY NEEDING TO BE REPLACED SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL PERFORM AND BE RESPONSIBLE FOR ALL CLEARING AND GRUBBING OPERATIONS AS NECESSARY TO COMPLETE THE WORK, INCLUDING TRANSPORTATION AND DISPOSAL OF ALL REMOVED MATERIALS, AND ALL ASSOCIATED COSTS.

PERMEABLE PAVER NOTES:

- PERMEABLE PAVER SECTION SHALL CONSIST OF INTERLOCKING CONCRETE PAVERS, NO. 8 AGGREGATE, 57 BEDDING COURSE, NO. 2 CRUSHED STONE BASE, AND SUBSURFACE STRUCTURAL GEOPRID.
- INTERLOCKING CONCRETE PAVERS SHALL BE 3 1/8 INCH THICK FOR SURFACES SUBJECT TO VEHICLE TRAFFIC AND 2 3/8 INCH THICK FOR SURFACES SUBJECT TO PEDESTRIAN LOADING ONLY AND HAVE AN AVERAGE COMPRESSIVE STRENGTH OF 8000 PSI WITH NO INDIVIDUAL UNIT UNDER 7200 PSI PER SQUARE INCH. PAVERS SHALL HAVE A FRESH-THAW RESISTANCE OF 28 FREZE-THAW CYCLES WITH NO GREATER LOSS THAN 225 GM2 OF PAVER SURFACE AREA OR NO GREATER LOSS THAN 500 GM2 OF PATTERN SURFACE AREA AFTER 48 FREEZE-THAW CYCLES PER ASTM C 1645. BRAND, COLOR AND PATTERN SHALL BE IDENTIFIED AND APPROVED BY THE ENGINEER.
- JOINT FILL MATERIAL AND BEDDING SHALL BE NO. 6 AGGREGATE. COARSE AGGREGATE SHALL BE ELEVATIONS INTENDED TO ESTABLISH SURFACE DRAINAGE CONTROL FOR THESE AREAS. DURING GRADING OPERATIONS, THICKNESSES (SUBGRADE ALLOWANCES) SPECIFIED BY LANDSCAPE ARCHITECT FOR TURF, WOODS, MULCH, ETC. SHALL BE SUBTRACTED FROM THESE ELEVATIONS TO ESTABLISH FINISH SURFACE ELEVATIONS.
- BEFORE PLACEMENT OF AGGREGATE BASE OR SUBBASE MATERIAL IN PAVEMENT AREAS, THE SUBGRADE SOIL SHALL BE REVIEWED AND TESTED BY THE GEOTECHNICAL ENGINEER. DURING PAVING OPERATIONS, STRUCTURAL SECTION COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER.
- QUALITY REVIEW AND REPORTING REQUIREMENTS.
A. GRADING AND IMPROVEMENTS FOUND NOT IN CONFORMANCE WITH APPROVED PLANS AND DESIGN INTENT SHALL BE CORRECTED BY CONTRACTOR AT CONTRACTOR'S EXPENSE. ADDITIONAL INSTALLATION, AGGREGATE SHALL BE GRADED PER TABLE BELOW.
SIEVE SIZING PERCENTAGE PASSING
1-1/2 INCH 100
1 INCH 90-100
3/4 INCH 75-100
NO. 4 25-100
NO. 8 0-5
B. BASE COURSE SHALL BE NO. 2 CRUSHED STONE. COARSE AGGREGATE SHALL BE SOUND ANGULAR CRUSHED STONE OR CRUSHED GRAVEL. FINE AGGREGATE SHALL BE SHARP EDGED NATURAL SAND OR SAND PREPARED FROM STONE OR GRAVEL. AGGREGATE SHALL BE WASHED BEFORE INSTALLATION. AGGREGATE SHALL BE GRADED PER TABLE BELOW.
SIEVE SIZING PERCENTAGE PASSING
3 INCH 100
2 1/2 INCH 100
2 INCH 75-100
1 1/2 INCH 35-70
3/4 INCH 0-5
C. SUBSURFACE STRUCTURAL GEOPREDS SHALL BE PUNCHED POLYPROPYLENE, MANUFACTURED FOR SUBSURFACE STRUCTURAL APPLICATIONS, WITH LOAD TENSILE CAPACITY GREATER THAN 90 PERCENT, COMPLYING WITH ASTM D6637-10/AND ASTM D7737-11 AND THE FOLLOWING, MEASURED PER TEST METHODS REFERENCED:
A. RADIAL STIFFNESS: 1500 LB/FT. ASTM D6637-10.
B. TENSILE STRENGTH: 100 LB/INCH. ASTM D7737-11.
C. THE PRELIMINARY ESTIMATED STRUCTURAL SECTION IS AS SHOWN ON THE PLAN DETAILS AND CONSTRUCTION NOTES. ACTUAL THICKNESS OF BASE COURSES SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER COMPLETION OF ROUGH GRADING BASED ON "R" VALUE TESTS OF COMPLETED SUBGRADE MATERIAL AND THE TRAFFIC INDEXES (TI'S) SHOWN ON THE PLAN DETAILS. SUBJECT TO APPROVAL BY THE ENGINEER, PREPARATION OF AREAS TO RECEIVE REPAIR AND APPURTENANCE CONCRETE IMPROVEMENTS, INCLUDING REMOVAL AND RECOMPACTION OF EXISTING SOIL AND PLACEMENT OF FILL SOIL, SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. DURING PAVING OPERATIONS, STRUCTURAL SECTION COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER.

ASPHALT PAVEMENT NOTES:

- UNLESS MODIFIED OR OTHERWISE SPECIFIED BY THE CONSTRUCTION NOTES THAT FOLLOW HEREON INCLUDING THOSE UNDER SEPARATE HEADINGS, PRIVATE ROADWAY MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPW), CURRENT EDITION PER LOCATION.
- ASPHALT CONCRETE SHALL BE IN CONFORMANCE WITH SECTION 203-6. OF THE STANDARD SPECIFICATIONS AND SHALL BE IN CONFORMANCE WITH THE CONSTRUCTION NOTES AND DETAILS PRESENTED OR REFERENCED IN THE SIGNED AND SEALED CONSTRUCTION CONTACT DOCUMENTS. IMPROVEMENTS CONSTRUCTED BASED ON ELECTRONIC INFORMATION AND IN CONFLICT WITH THE DRAWING DIMENSIONS AND INFORMATION INCLUDED ON THE CONSTRUCTION CONTACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.
PROJECT ELEMENTS SUCH AS MANHOLES, CATCH BASINS, UTILITY VALVES, VALVE ASSEMBLIES, STAIRS, RAMPS, WALLS, ETC. ARE SHOWN SCHEMATICALLY IN THE ELECTRONIC INFORMATION AND CONSTRUCTION CONTACT DOCUMENTS. CONTRACTOR SHALL CONTACT OVER ELECTRONIC INFORMATION. USER IS RESPONSIBLE FOR CONFIRMING LOCATION OF PROPOSED IMPROVEMENTS BASED ON ELECTRONIC INFORMATION AND IN CONFLICT WITH THE DRAWING DIMENSIONS AND INFORMATION INCLUDED ON THE CONSTRUCTION CONTACT DOCUMENTS. INCONSISTENCIES BETWEEN THE ELECTRONIC INFORMATION AND THE CONSTRUCTION CONTACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.
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- FINISH COURSE: C2-PG-64-10
BASE COURSE: B-PG-64-10
OVERLAY: C2-PG-64-10
LEVELING COURSE AND SKIN PATCHING: D2-PG-64-10
PAVING ASPHALT SHALL BE GRADED PERFORM IN CONFORMANCE WITH SECTION 203-1 OF THE STANDARD SPECIFICATIONS. NO RECYCLED ASPHALT SHALL BE INCORPORATED INTO THE A.C. MIX.
BEFORE PAVING, A PAINT BINDER (TACK COAT) OF ASPHALTIC EMULSION SHALL BE APPLIED TO ALL EXISTING VERTICAL SURFACES AGAINST WHICH PAVING IS TO BE PLACED AND BETWEEN PAVEMENT COURSES CONSTRUCTED MORE THAN 24 HOURS APART.
4. TIED ASPHALT USED IN THE MANUFACTURE, PLACEMENT OR MAINTENANCE OF ASPHALT CONCRETE PAVEMENT SHALL CONFORM WITH THE AIR POLLUTION CONTROL DISTRICT RULE 320. CONTRACTOR SHALL MAINTAIN RECORDS AVAILABLE FOR INSPECTION FOR A PERIOD OF 2 YEARS WHICH IDENTIFY THE TYPES AND AMOUNTS OF ASPHALTS USED.
5. BASE MATERIAL SHALL BE CRUSHED AGGREGATE BASE IN CONFORMANCE WITH 200-2 OF THE STANDARD SPECIFICATIONS.
6. THE PRELIMINARY ESTIMATED ASPHALT PAVEMENT STRUCTURAL SECTION IS AS SHOWN ON THE PLAN DETAILS AND CONSTRUCTION NOTES. ACTUAL THICKNESS OF PAVEMENT SURFACING AND BASE COURSES SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER COMPLETION OF ROUGH GRADING BASED ON "R" VALUE TESTS OF COMPLETED SUBGRADE MATERIAL AND THE TRAFFIC INDEXES (TI'S) SHOWN ON THE PLAN DETAILS. SUBJECT TO APPROVAL BY THE ENGINEER, PREPARATION OF AREAS TO RECEIVE REPAIR AND APPURTENANCE CONCRETE IMPROVEMENTS, INCLUDING REMOVAL AND RECOMPACTION OF EXISTING SOIL AND PLACEMENT OF FILL SOIL, SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. DURING PAVING OPERATIONS, STRUCTURAL SECTION COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER.
7. CONSTRUCTION OF FILL, SUBGRADE AND BASE COURSES AS WELL AS ALL TRENCH BEDDING AND BACKFILL SHALL BE OBSERVED AND TESTED FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS BY THE GEOTECHNICAL ENGINEER.
8. ALL EXISTING AND PROPOSED VALVE AND UTILITY BOXES AND MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO FINISH GRADE.
A. ELEVATION: 14 INCH
B. SURFACE GAP BELOW TO FOOT LONG STRAIGHT EDGE NOT TO EXCEED 3/8 INCH
C. CONTRACTOR SHALL BE REQUIRED TO RETURN TO THE SITE AND CORRECT DIFFERENTIAL SETTLEMENT WITHIN 6 MONTHS OF FINAL INSPECTION AND APPROVAL OF PAVERS.
- CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT(S), THE PROJECT WORK AREA AND VICINITY, AND SHALL FAMILIARIZE HIMSELF WITH THE WORK AREA CONDITIONS. CONTRACTOR SHALL CONDUCT TESTS AND CONCLUSIONS AS TO HOW EXISTING SURFACE AND SUB-SURFACE CONDITIONS WILL AFFECT OR BE AFFECTED BY HIS CONSTRUCTION OPERATIONS, INCLUDING THE NATURE OF MATERIALS TO BE EXCAVATED, THE DEGREE OF DIFFICULTY ASSOCIATED WITH MAKING AND MAINTAINING THE REQUIRED EXCAVATIONS, AND THE DEGREE OF DIFFICULTY WHICH MAY ARISE FROM SUBSURFACE CONDITIONS INCLUDING GROUNDWATER, AND SHALL ACCEPT FULL RESPONSIBILITY THEREOF.
A. ELEVATION: 14 INCH
B. SURFACE GAP BELOW TO FOOT LONG STRAIGHT EDGE NOT TO EXCEED 3/8 INCH
C. CONTRACTOR SHALL BE REQUIRED TO RETURN TO THE SITE AND CORRECT DIFFERENTIAL SETTLEMENT WITHIN 6 MONTHS OF FINAL INSPECTION AND APPROVAL OF PAVERS.
- IF IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THE INTEGRITY OF EXISTING PAVEMENT ALONG AND BEHIND THE TRENCH SAWCUT LINE DURING CONSTRUCTION, IF THIS PAVEMENT IS BROKEN-OFF OR OTHERWISE DAMAGED BEFORE NEW PAVEMENT IS PLACED, CONTRACTOR SHALL SAWCUT A NEW CONFORM LINE PARALLEL WITH FULL LENGTH OF, AND SUFFICIENT DISTANCE (1-FOOT MINIMUM) BEHIND ORIGINAL SAWCUT SO AS TO REMOVE DAMAGED PAVEMENT AND/OR IRREGULARITY ALONG THE CONFORM LINE.

APPURTENANCE CONCRETE NOTES:

- UNLESS MODIFIED OR OTHERWISE SPECIFIED BY THE CONSTRUCTION NOTES THAT FOLLOW HEREON INCLUDING THOSE UNDER SEPARATE HEADINGS CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPW), CURRENT EDITION PER LOCATION.
- COMPACTION OF FILL, SUBGRADE AND BASE COURSES AS WELL AS ALL TRENCH BEDDING AND BACKFILL SHALL BE OBSERVED AND TESTED FOR COMPLIANCE WITH APPLICABLE REQUIREMENTS BY THE GEOTECHNICAL ENGINEER.
- CONCRETE FOR DRAINAGE STRUCTURES SHALL BE CLASS 56A-3250.
- WHERE FLOWLINE GRADIENT IS LESS THAN 1.0%, FORM ELEVATIONS SHALL BE CONFIRMED BY LICENSED LAND SURVEYOR PRIOR TO POURING CONCRETE.
- REINFORCING STEEL SHALL BE GRADE 60 BULLET STEEL, CONFORMING TO ASTM A 615. STEEL BENDING PROCESS SHALL CONFORM TO THE REQUIREMENTS OF MANUAL OF STANDARD PRACTICE OF THE CONCRETE REINFORCING STEEL INSTITUTE. BENDING OR STRAIGHTENING SHALL BE ACCOMPLISHED SO THAT THE STEEL WILL NOT BE DAMAGED. KINKED BARS SHALL NOT BE USED.
- JOINTS IN DRAINAGE STRUCTURES
A. TRANSVERSE WEAREDED FLANGE CRACK CONTROL JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 10-FOOT. DIRECTLY ABOVE DRAIN PIPES THAT OUTLET THROUGH CURB AND AT ADDITIONAL LOCATIONS AS MAY BE CALLED FOR ON THE PLANS. JOINTS SHALL BE CONSTRUCTED PER SUBSECTION 303-4.3 PARAGRAPH B OF THE SSPWC AS MODIFIED BY THE PLAN DETAILS AND THESE NOTES. REINFORCEMENT SHALL BE CONTINUOUS THROUGH JOINTS. JOINT LOCATIONS SHALL BE ADJUSTED AS NECESSARY TO ALIGN WITH THOSE ALREADY CONSTRUCTED IN EXISTING ADJACENT (CONTIGUOUS) FEATURES. ALONG CURVES, JOINTS SHALL BE RADIAL.
B. ALL EXISTING AND PROPOSED VALVE AND UTILITY BOXES AND MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO FINISH GRADE.
C. AFTER CONSTRUCTION OF CONCRETE DRAINAGE STRUCTURES, A FLOOD TEST SHALL BE CONDUCTED TO REVIEW SURFACE DRAINAGE, AS FOLLOWS:
A. WATER SHALL BE SUPPLIED AND DISCHARGED IN SUFFICIENT QUANTITY TO COMPLETELY WET AND COVER ALL PAVEMENT AND CONCRETE OUTLET AREAS. THE OUTFLOW LIMITS OF RESIDUAL, STANDINGPONDED WATER SHALL THEN BE MARKED.
B. PAVEMENT SHALL BE REMOVED AND REPLACED, AT NO ADDITIONAL COST TO THE OWNER, AS NECESSARY TO PROVIDE POSITIVE SURFACE DRAINAGE AND TO PREVENT PONDING OF WATER ON PAVEMENT SURFACES AND IN GUTTERS.
C. ADDITIONAL FLOOD TESTING SHALL BE CONDUCTED TO CONFIRM SUCCESS OF CORRECTIVE MEASURES.
D. WHERE SAWCUT LINE IS CONSTRUCTED ALONG CONFORM LINE WITH EXISTING A.C. PAVEMENT, IT IS CONTRACTOR'S RESPONSIBILITY TO PROTECT THE INTEGRITY OF THE PAVEMENT ALONG AND BEHIND THE SAWCUT LINE DURING CONSTRUCTION. IF THIS PAVEMENT IS BROKEN-OFF OR OTHERWISE DAMAGED BEFORE NEW PAVEMENT IS PLACED, CONTRACTOR SHALL SAWCUT A NEW CONFORM LINE PARALLEL WITH FULL LENGTH OF, AND SUFFICIENT DISTANCE BEHIND ORIGINAL SAWCUT SO AS TO REMOVE DAMAGED PAVEMENT AND/OR IRREGULARITY ALONG THE CONFORM LINE.

USE OF PLANS:

THIS DRAWING IS PROVIDED IN AN ELECTRONIC FORMAT AS A COURTESY. IF REQUESTED BY THE USER, THE DELIVERY OF THE ELECTRONIC FILE DOES NOT CONSTITUTE THE DELIVERY OF OUR PROFESSIONAL WORK PRODUCT. THE SIGNED HARD COPY PREPARED FOR THE PROJECT CONSTITUTES OUR PROFESSIONAL WORK PRODUCT AND THE WORK PRODUCT DELIVERED FOR THE CORRECT DESIGN INFORMATION. THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE REFERRED TO THE PROJECT SCOPE AND AS SHOWN AND DESCRIBED HEREON AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REUSED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THE SAME OR DIFFERENT LOCATION, OR TO INDEMNIFY AND HOLD HARMLESS ASHLEY & VANCE FOR ALL COSTS AND DAMAGES IF USED.

USE OF ELECTRONIC INFORMATION:

ELECTRONIC INFORMATION MAY BE PROVIDED BY THE ENGINEER FOR CONVENIENCE UNDER NO CIRCUMSTANCES SHALL DELIVERY OF ELECTRONIC FILES FOR USE BY OTHERS BE DEEMED A SALE BY THE ENGINEER AND THE ENGINEER MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT SHALL THE ENGINEER BE LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES AS A RESULT OF THE USE OR REUSE OF THE ELECTRONIC FILES BY OTHERS.

ELECTRONIC INFORMATION IS INTENDED TO PROVIDE INFORMATION SUPPLEMENTAL AND SUBORDINATE TO THE CONSTRUCTION CONTRACT DOCUMENTS. LAYOUT AND CONSTRUCTION OF PROJECT ELEMENTS SHALL BE BASED ON DIMENSIONS AND INFORMATION INCLUDED ON THE SIGNED AND SEALED CONSTRUCTION CONTACT DOCUMENTS. CONTRACTOR SHALL CONTACT OVER ELECTRONIC INFORMATION. USER IS RESPONSIBLE FOR CONFIRMING LOCATION OF PROPOSED IMPROVEMENTS BASED ON ELECTRONIC INFORMATION AND IN CONFLICT WITH THE DRAWING DIMENSIONS AND INFORMATION INCLUDED ON THE CONSTRUCTION CONTACT DOCUMENTS. INCONSISTENCIES BETWEEN THE ELECTRONIC INFORMATION AND THE CONSTRUCTION CONTACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.

PROJECT ELEMENTS SUCH AS MANHOLES, CATCH BASINS, UTILITY VALVES, VALVE ASSEMBLIES, STAIRS, RAMPS, WALLS, ETC. ARE SHOWN SCHEMATICALLY IN THE ELECTRONIC INFORMATION AND CONSTRUCTION CONTACT DOCUMENTS. CONTRACTOR SHALL CONTACT OVER ELECTRONIC INFORMATION. USER IS RESPONSIBLE FOR CONFIRMING LOCATION OF PROPOSED IMPROVEMENTS BASED ON ELECTRONIC INFORMATION AND IN CONFLICT WITH THE DRAWING DIMENSIONS AND INFORMATION INCLUDED ON THE CONSTRUCTION CONTACT DOCUMENTS. INCONSISTENCIES BETWEEN THE ELECTRONIC INFORMATION AND THE CONSTRUCTION CONTACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.

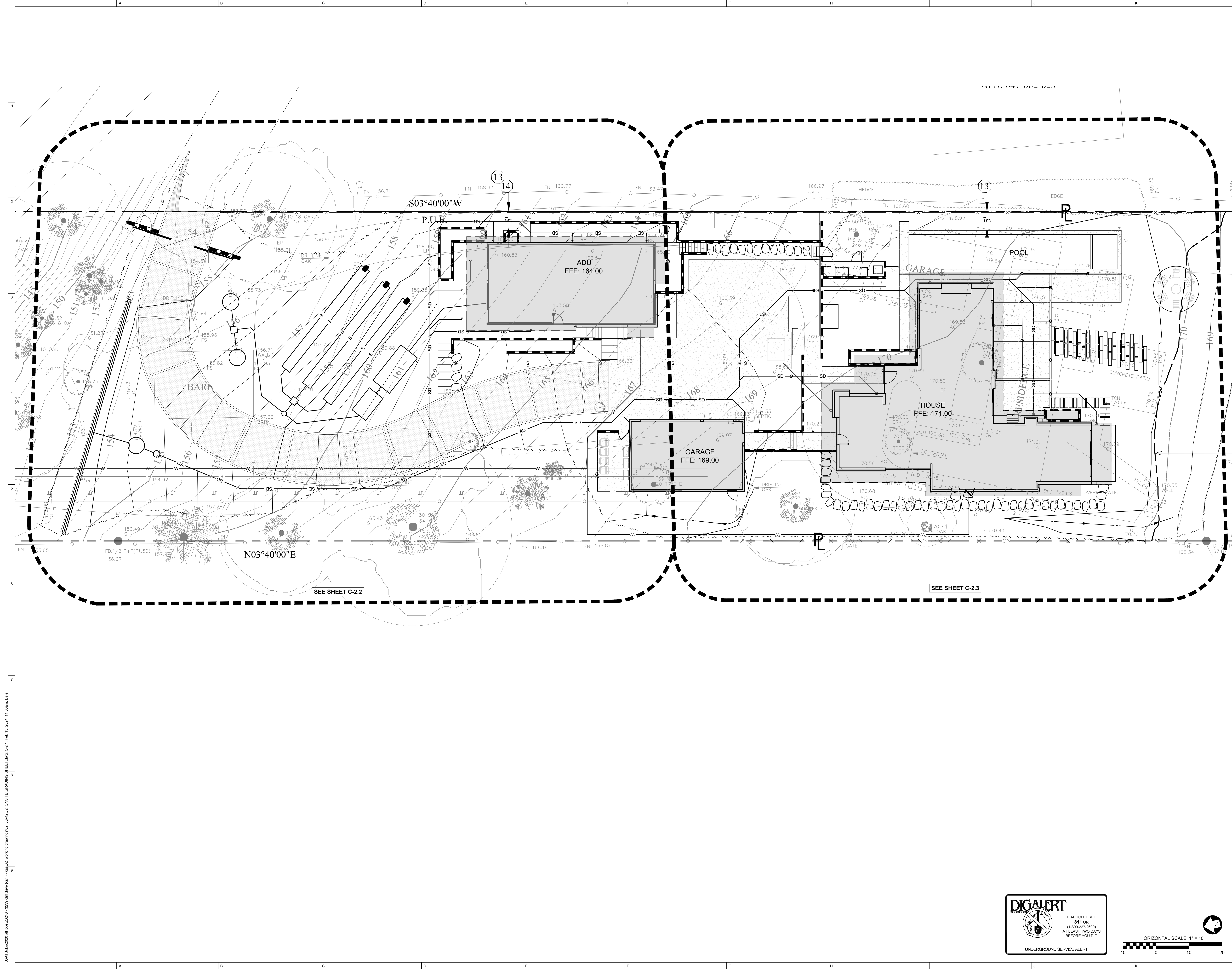
DIGITAL DRAWINGS ARE TYPICALLY A COMPILATION OF DRAWINGS FROM A NUMBER OF SOURCES AND, AS SUCH, THERE IS INFORMATION IN THE ELECTRONIC FILE ISSUED BY THE ENGINEER THAT WAS NOT DEVELOPED BY THE ENGINEER AND IS NOT AUTHORIZED BY THE ENGINEER FOR USE BY OTHERS. ELECTRONIC INFORMATION IS PROVIDED AS A COURTESY AND IS NOT A CONTRACT DOCUMENT. IMPROVEMENTS DESIGNED BY THE ENGINEER AND WHICH ARE SPECIFICALLY DESIGNATED BY CONSTRUCTION NOTES AND/OR DETAILS ON THE SIGNED AND SEALED CONTRACT DOCUMENTS.

IF DIGITAL FILES ARE OBTAINED WITH THE INTENT TO USE THEM FOR PROJECT STAKING, THEY SHALL ONLY BE USED FOR QUALITY CHECKING AND SHALL NOT BE USED FOR CONSTRUCTION CALLS FOR CALIFORNIA. DIGITAL INFORMATION SHALL ONLY BE USED FOR STAKING HORIZONTAL LOCATION OF PROPOSED IMPROVEMENTS AFTER IT HAS BEEN CONFIRMED WITH THE SIGNED AND SEALED CONSTRUCTION CONTACT DOCUMENTS.

THE DIGITAL DRAWINGS ARE NOT INTENDED TO BE USED DIRECTLY FOR CONTROL OF CONTRACTOR'S GRADING OPERATIONS WITHOUT STAKING BY ENGINEER OR LAND SURVEYOR. THE INTERSECTION OF PROPOSED CUT AND FILL SLOPES WITH EXISTING GRADE SHALL BE SHOWN WHERE SHOWN ON DRAWINGS AND SHALL BE CONFIRMED BY FIELD STAKING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT SLOPES IN CONFORMANCE WITH THE SPECIFIED AND DETAILED REQUIREMENTS CONTAINED IN THE CONTRACT DOCUMENTS.

ASPHALT PAVEMENT NOTES:

- UNLESS MODIFIED OR OTHERWISE SPECIFIED BY THE CONSTRUCTION NOTES THAT FOLLOW HEREON INCLUDING THOSE UNDER SEPARATE HEADINGS, PRIVATE ROADWAY MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPW), CURRENT EDITION PER LOCATION.
- ASPHALT CONCRETE SHALL BE IN CONFORMANCE WITH SECTION 203-6. OF THE STANDARD SPECIFICATIONS AND SHALL BE IN CONFORMANCE WITH THE CONSTRUCTION NOTES AND DETAILS PRESENTED OR REFERENCED IN THE SIGNED AND SEALED CONSTRUCTION CONTACT DOCUMENTS. IMPROVEMENTS CONSTRUCTED BASED ON ELECTRONIC INFORMATION AND IN CONFLICT WITH THE DRAWING DIMENSIONS AND INFORMATION INCLUDED ON THE CONSTRUCTION CONTACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.
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4. TIED ASPHALT USED IN THE MANUFACTURE, PLACEMENT OR MAINTENANCE OF ASPHALT CONCRETE PAVEMENT SHALL CONFORM WITH THE AIR POLLUTION CONTROL DISTRICT RULE 320. CONTRACTOR SHALL MAINTAIN RECORDS AVAILABLE FOR INSPECTION FOR A PERIOD OF 2 YEARS WHICH IDENTIFY THE TYPES AND AMOUNTS OF ASPHALTS USED.
5. BASE MATERIAL SHALL BE CRUSHED AGGREGATE BASE IN CONFORMANCE WITH 200-2 OF THE STANDARD SPECIFICATIONS.
6. THE PRELIMINARY ESTIMATED ASPHALT PAVEMENT STRUCTURAL SECTION IS AS SHOWN ON THE PLAN DETAILS AND CONSTRUCTION NOTES. ACTUAL THICKNESS OF PAVEMENT SURFACING AND BASE COURSES SHALL BE DETERMINED BY THE GEOTECHN



The use of these plans and specifications shall be restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Reproduction or publication by any method, in whole or in part, is prohibited. Title to these plans and specifications remain with Ashley & Vance Engineering, Inc. without prejudice. Visual contact with these plans and specifications shall constitute prima facie evidence of the acceptance of these restrictions.



Engineer of Record:

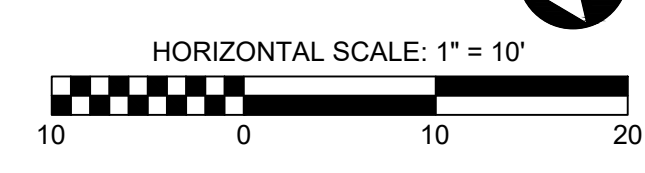
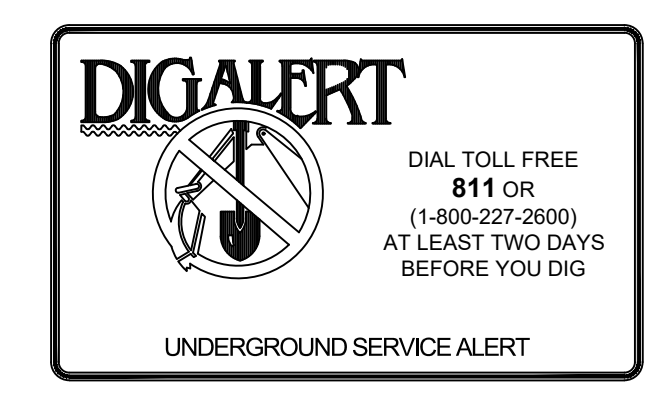
RASKOPF RESIDENCE
 3239 CLIFF DRIVE
 SANTA BARBARA, CA 93109

Revisions:

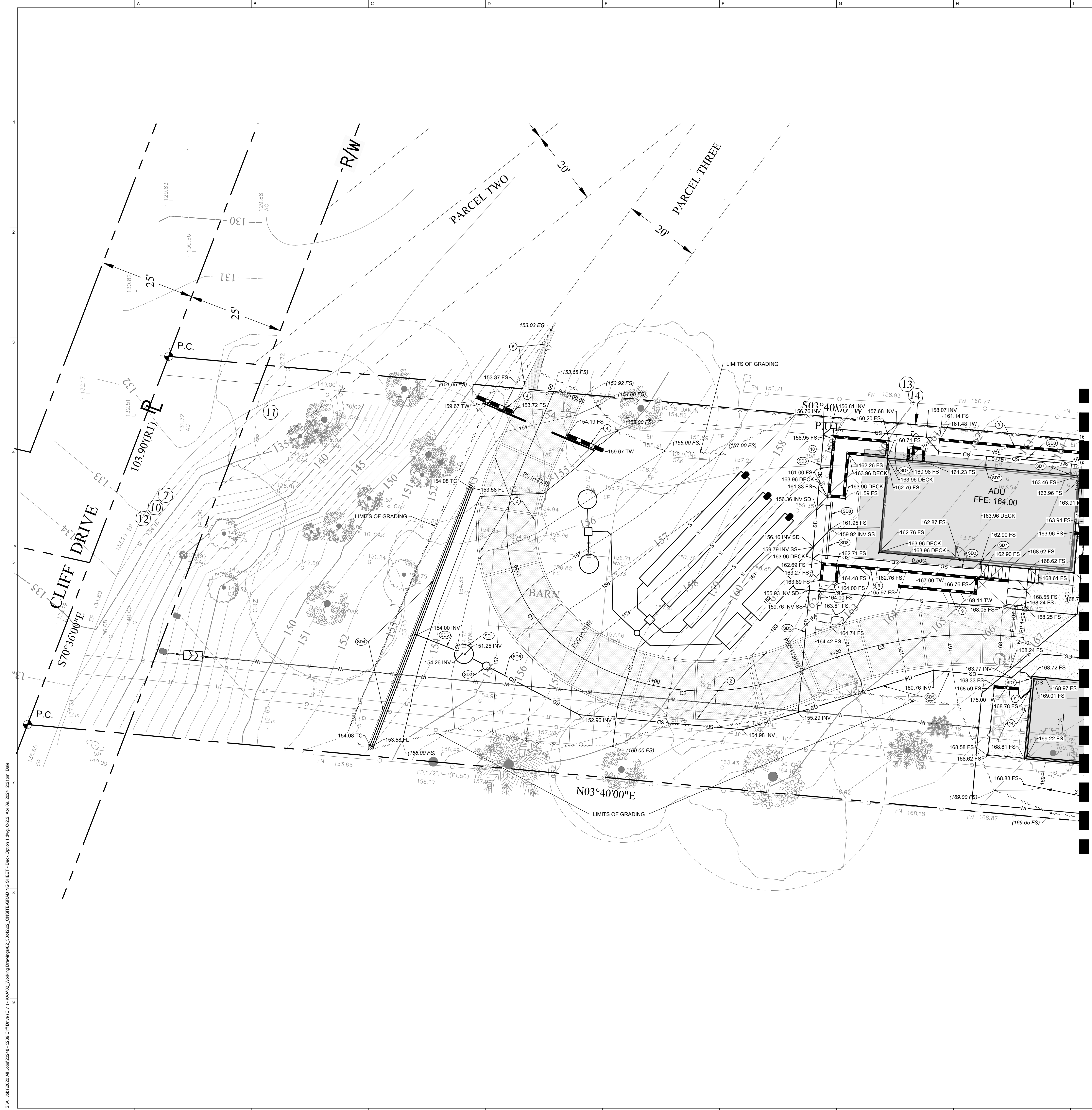
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Project Engineer: DWW Ext: 122
 Project Manager: JVG
 Date: 1.12.2023 Scale: PER PLAN
 AV Job No: 20248 Sheet Size: 30" x 42"

GRADING & DRAINAGE INDEX
C-2.1



S:\M_Java\2020 all jobs\20248 - 3239 cliff drive (civil) - kaa02_working drawings\02_20k\02_02_ONSITE GRADING SHEET_Avg_C-2.1_Feb 16, 2024 11:03am Date



- EXCEPTIONS AND EXCLUSIONS (EASEMENTS):
- ⑦ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
 Granted to: The County of Santa Barbara
 Purpose: Public road
 Recording Date: September 16, 1902
 Recording No.: Book 84, Page 195 of Deeds
 Affects: That portion of Parcel One lying within Cliff Drive
 - ⑩ Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document:
 Reserved by: First National Trust and Savings Bank of Santa Barbara
 Purpose: Road and public utilities
 Recording Date: October 3, 1947
 Recording No.: Instrument No. 13320 in Book 746, Page 320 of Official Records
 Affects: Northerly 25 feet of Parcel One, being Southerly 1/2 of Cliff Drive
 - ⑪ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
 Granted to: First National Trust and Savings Bank of Santa Barbara
 Purpose: Road, public utilities and incidental purposes
 Recording Date: November 12, 1947
 Recording No.: Instrument No. 15161 in Book 756, Page 295 of Official Records
 Affects: Northeasterly portion of Parcel One
 - ⑫ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
 Granted to: Southern California Edison Company
 Purpose: Public utilities and incidental purposes
 Recording Date: June 23, 1955
 Recording No.: Instrument No. 11139 in Book 1321, Page 237 of Official Records
 Affects: The Easterly 6 feet of the Northerly 350 feet of Parcel One
 - ⑬ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
 Granted to: Southern California Edison Company
 Purpose: Public utilities and incidental purposes
 Recording Date: June 27, 1955
 Recording No.: Instrument No. 11280 in Book 1321, Page 502 of Official Records
 Affects: The Easterly 5 feet of the Northerly 260 feet of Parcel One
 - ⑭ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
 Granted to: General Telephone Company of California
 Purpose: Public utilities and incidental purposes
 Recording Date: June 27, 1955
 Recording No.: Instrument No. 11280 in Book 1321, Page 502 of Official Records
 Affects: The Easterly 5 feet of the Northerly 260 feet of Parcel One

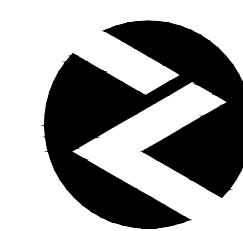
CURVE DATA:

C1	C2	C3
D=80°29'22"	D=56°50'49"	D=29°25'69"
R=38.00'	R=64.00'	R=112.00'
L=53.25'	L=63.21'	L=57.19'

- SITE CONSTRUCTION NOTES:**
- ① CONSTRUCT NDS EZ-ROLL PERMEABLE GRAVEL DRIVEWAY SECTION WITH LEVEL SUBGRADE PER DETAIL 13 ON SHEET C-4.1 & DETAIL ON SHEET C-4.2.
 - ② CONSTRUCT PERMEABLE PAVER DRIVEWAY SECTION PER DETAIL 1, SHEET C-4.1.
 - ③ CONSTRUCT PERMEABLE PAVER WALKWAY SECTION PER DETAIL 16, SHEET C-4.1.
 - ④ CONSTRUCT NDS EZ-ROLL PERMEABLE GRAVEL WALKWAY SECTION PER DETAIL 15 ON SHEET C-4.1 & DETAIL ON SHEET C-4.2.
 - ⑤ CONSTRUCT ASPHALT DRIVEWAY SECTION PER DETAIL 10, SHEET C-4.1.
 - ⑥ CONSTRUCT CONCRETE SITE WALL W/ 4" X 6" W SCUPPERS TO PROVIDE FOR DRAINAGE, PER DETAIL 1, SHEET C-4.3.
 - ⑦ CONSTRUCT CONCRETE STEPS, PER ARCHITECTURAL PLANS.
 - ⑧ CONSTRUCT 4" X 6" W SCUPPER IN WALL FOR AT GRADE DRAINAGE.
 - ⑨ CONSTRUCT RETAINING WALL PER DETAIL 3 ON SHEET C-4.3.
 - ⑩ CONSTRUCT PLANTER BOX PER DETAIL 4 ON SHEET C-4.3.
 - ⑪ CONSTRUCT CONCRETE PATIO WITH SLOT DRAINS PER ARCHITECTURAL PLANS.
 - ⑫ INSTALL PERMEABLE STEPPING STONES PER ARCHITECTURAL PLANS A102 & A103.
 - ⑬ CONSTRUCT RAISED SILL PER DETAIL 2, SHEET C-4.1.
 - ⑭ CONSTRUCT WALKWAY PER DETAIL 20, SHEET C-4.1.

- STORM DRAIN CONSTRUCTION NOTES:**
- SD1 INSTALL STORMWATER DRYWELL PER DETAIL 18 ON SHEET C-4.1.
 - SD2 INSTALL STORMWATER PRE-TREATMENT SUMP PER DETAIL 19, SHEET C-4.1.
 - SD3 INSTALL 4-INCH CLASS 100 PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS AND DETAIL 9, SHEET C-4.1.
 - SD4 INSTALL LEVEL SPREADER (6-INCH CLASS 100 PVC PERFORATED PIPE, LENGTH = 72 FEET MIN.) PER DETAIL 7, SHEET C-4.1.
 - SD5 INSTALL 6-INCH CLASS 100 PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS AND DETAIL 9, SHEET C-4.1.
 - SD6 INSTALL STORM DRAIN CLEANOUT PER DETAIL 5, SHEET C-4.1.
 - SD7 INSTALL ROOF DRAIN CONNECTION PER DETAIL 14, SHEET C-4.1.
 - SD8 INSTALL 4" TRENCH DRAIN INLET PER DETAIL 16, SHEET C-4.1.

Plan Prepared By:



Ashley & Vance
ENGINEERING, INC.
210 East Palo Alto Street
Santa Barbara, CA 93101
(805) 962-9966
www.ashleyvance.com

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Engineer of Record:



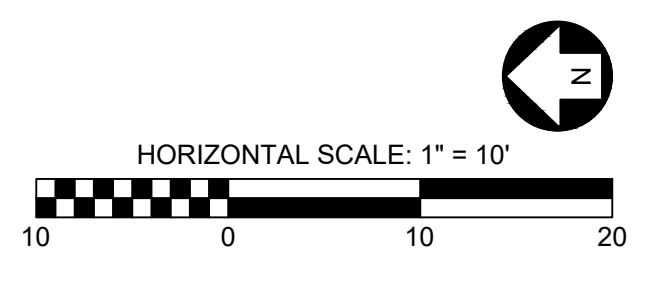
J. G. DWYER
No. 65791
CIVIL
STATE OF CALIFORNIA

RASKOPF RESIDENCE + ADU
3239 CLIFF DRIVE
SANTA BARBARA, CA 93109

Revisions:

△	BLDG. DEPT. SUBMITTAL - 02/15/24
△	---
△	---
△	---
△	---
△	---

Project Engineer: DWW Ext: 122
 Project Manager: JGG
 Date: 1.12.2023 Scale: PER PLAN
 AV Job No: 20248 Sheet Size: 30" x 42"




DIALERT
DIAL TOLL FREE
811 OR
(1-800-327-3600)
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT

GRADING SHEET
C-2.2

S:\M_Jacobi\2024_3239 Cliff Drive (Civil) - RASKOPF_Residence_Draining_Sheet - Desk_Orient_1.dwg, C-2.2, Apr 09, 2024, 2:21pm, Dale

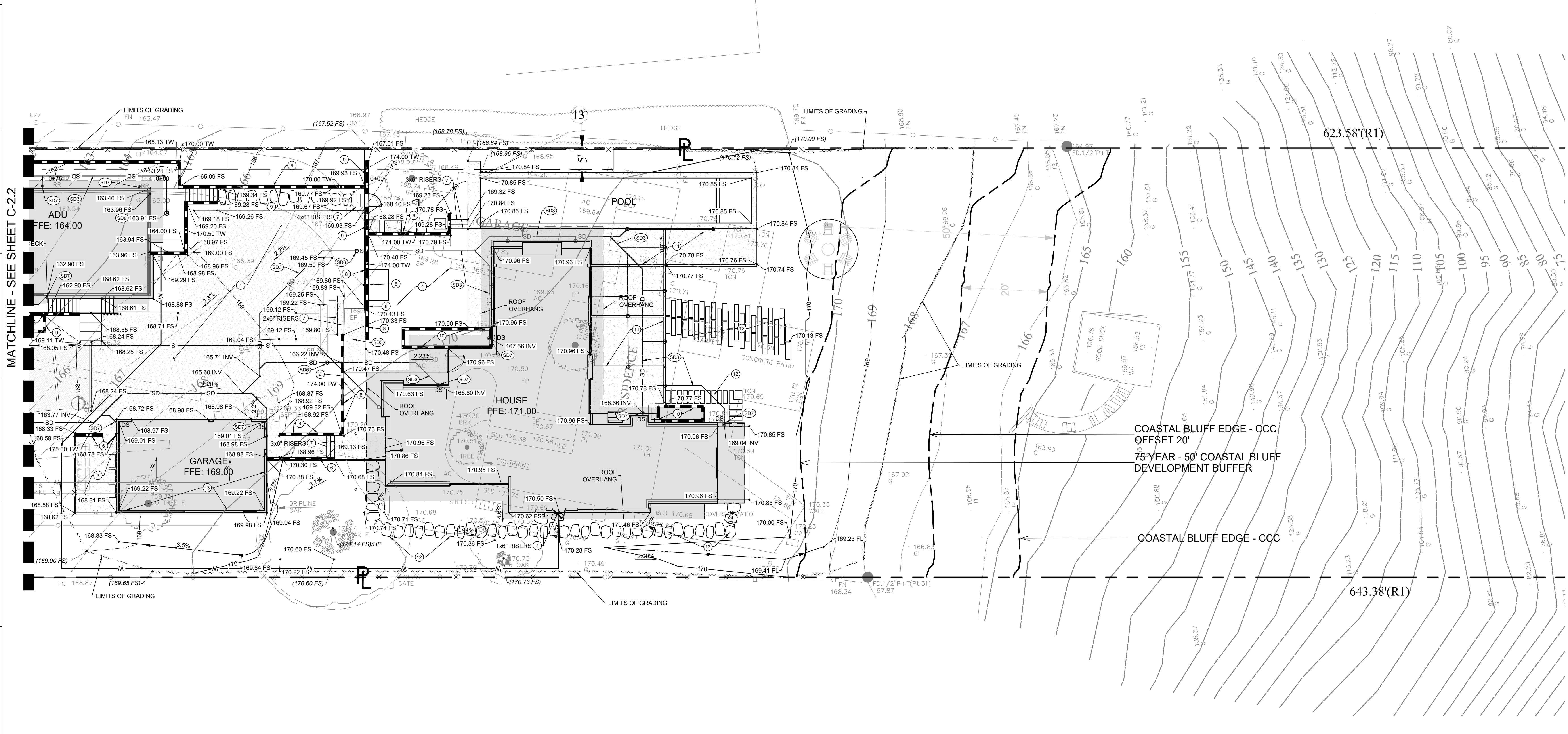
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RASKOPF RESIDENCE + ADU
3239 CLIFF DRIVE
SANTA BARBARA, CA 93109

AFN: U4 / -U02-U23



MATCHLINE - SEE SHEET C-2.2

- EXCEPTIONS AND EXCLUSIONS (EASEMENTS):**
- ⑦ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
Granted to: The County of Santa Barbara
Purpose: Public road
Recording Date: September 16, 1902
Recording No.: Book 84, Page 195 of Deeds
Affects: That portion of Parcel One lying within Cliff Drive
 - ⑩ Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document:
Reserved by: First National Trust and Savings Bank of Santa Barbara
Purpose: Road and public utilities
Recording Date: October 3, 1947
Recording No.: Instrument No. 13320 in Book 746, Page 320 of Official Records
Affects: Northerly 25 feet of Parcel One, being Southerly 1/2 of Cliff Drive
 - ⑪ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
Granted to: First National Trust and Savings Bank of Santa Barbara
Purpose: Road, public utilities and incidental purposes
Recording Date: November 12, 1947
Recording No.: Instrument No. 15161 in Book 756, Page 295 of Official Records
Affects: Northeastern portion of Parcel One
 - ⑫ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
Granted to: Southern California Edison Company
Purpose: Public utilities and incidental purposes
Recording Date: June 17, 1949
Recording No.: Instrument No. 7456 in Book 859, Page 144 of Official Records
Affects: A 1 foot wide strip of land over a Northerly portion of Parcel One
 - ⑬ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
Granted to: Southern California Edison Company
Purpose: Public utilities and incidental purposes
Recording Date: June 23, 1955
Recording No.: Instrument No. 11139 in Book 1321, Page 237 of Official Records
Affects: The Easterly 6 feet of the Northerly 350 feet of Parcel One
 - ⑭ Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
Granted to: General Telephone Company of California
Purpose: Public utilities and incidental purposes
Recording Date: June 27, 1955
Recording No.: Instrument No. 11280 in Book 1321, Page 502 of Official Records
Affects: The Easterly 5 feet of the Northerly 260 feet of Parcel One

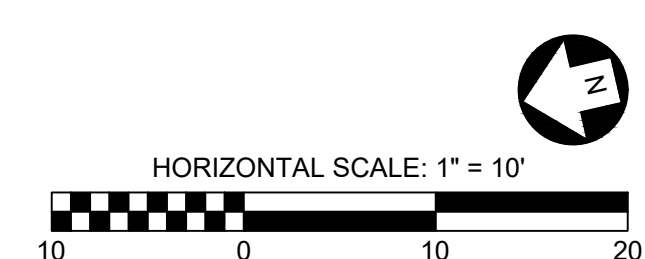
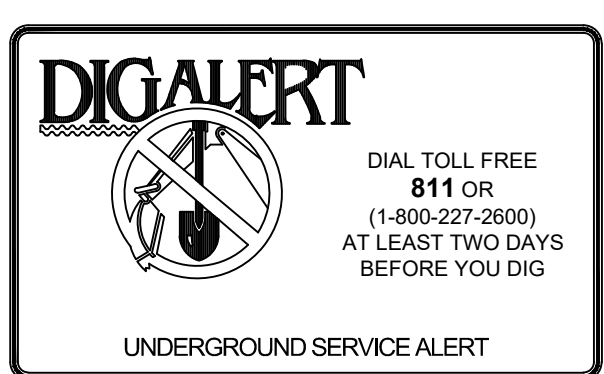
- SITE CONSTRUCTION NOTES:**
- ① CONSTRUCT NDS EZ-ROLL PERMEABLE GRAVEL DRIVEWAY SECTION WITH LEVEL SUBGRADE PER DETAIL 13 ON SHEET C-4.1 & DETAIL ON SHEET C-4.2.
 - ② CONSTRUCT PERMEABLE PAVER DRIVEWAY SECTION PER DETAIL 1, SHEET C-4.1.
 - ③ CONSTRUCT PERMEABLE PAVER WALKWAY SECTION PER DETAIL 16, SHEET C-4.1.
 - ④ CONSTRUCT NDS EZ-ROLL PERMEABLE GRAVEL WALKWAY SECTION PER DETAIL 15 ON SHEET C-4.1 & DETAIL ON SHEET C-4.2.
 - ⑤ CONSTRUCT ASPHALT DRIVEWAY SECTION PER DETAIL 10, SHEET C-4.1.
 - ⑥ CONSTRUCT CONCRETE SITE WALL W/ 4" X 6" SCUPPERS TO PROVIDE FOR DRAINAGE, PER DETAIL 1, SHEET C-4.3.
 - ⑦ CONSTRUCT CONCRETE STEPS, PER ARCHITECTURAL PLANS.
 - ⑧ CONSTRUCT 4" X 6" SCUPPER IN WALL FOR AT GRADE DRAINAGE.
 - ⑨ CONSTRUCT RETAINING WALL PER DETAIL 3 ON SHEET C-4.3.
 - ⑩ CONSTRUCT PLANTER BOX PER DETAIL 4 ON SHEET C-4.3.
 - ⑪ CONSTRUCT CONCRETE PATIO WITH SLOT DRAINS PER ARCHITECTURAL PLANS.
 - ⑫ INSTALL PERMEABLE STEPPING STONES PER ARCHITECTURAL PLANS A102 & A103.
 - ⑬ CONSTRUCT RAISED SILL PER DETAIL 2, SHEET C-4.1.
 - ⑭ CONSTRUCT WALKWAY PER DETAIL 20, SHEET C-4.1.

- STORM DRAIN CONSTRUCTION NOTES:**
- ① INSTALL STORMWATER DRYWELL PER DETAIL 18 ON SHEET C-4.1.
 - ② INSTALL STORMWATER PRE-TREATMENT SUMP PER DETAIL 19, SHEET C-4.1.
 - ③ INSTALL 4-INCH CLASS 100 PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS AND DETAIL 9, SHEET C-4.1.
 - ④ INSTALL LEVEL SPREADER (6-INCH CLASS 100 PVC PERFORATED PIPE, LENGTH = 72 FEET MIN.) PER DETAIL 7, SHEET C-4.1.
 - ⑤ INSTALL 6-INCH CLASS 100 PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS AND DETAIL 9, SHEET C-4.1.
 - ⑥ INSTALL STORM DRAIN CLEANOUT PER DETAIL 5, SHEET C-4.1.
 - ⑦ INSTALL ROOF DRAIN CONNECTION PER DETAIL 14, SHEET C-4.1.
 - ⑧ INSTALL 4" TRENCH DRAIN INLET PER DETAIL 16, SHEET C-4.1.

Revisions:

△	BLDG. DEPT. SUBMITTAL - 02/15/24
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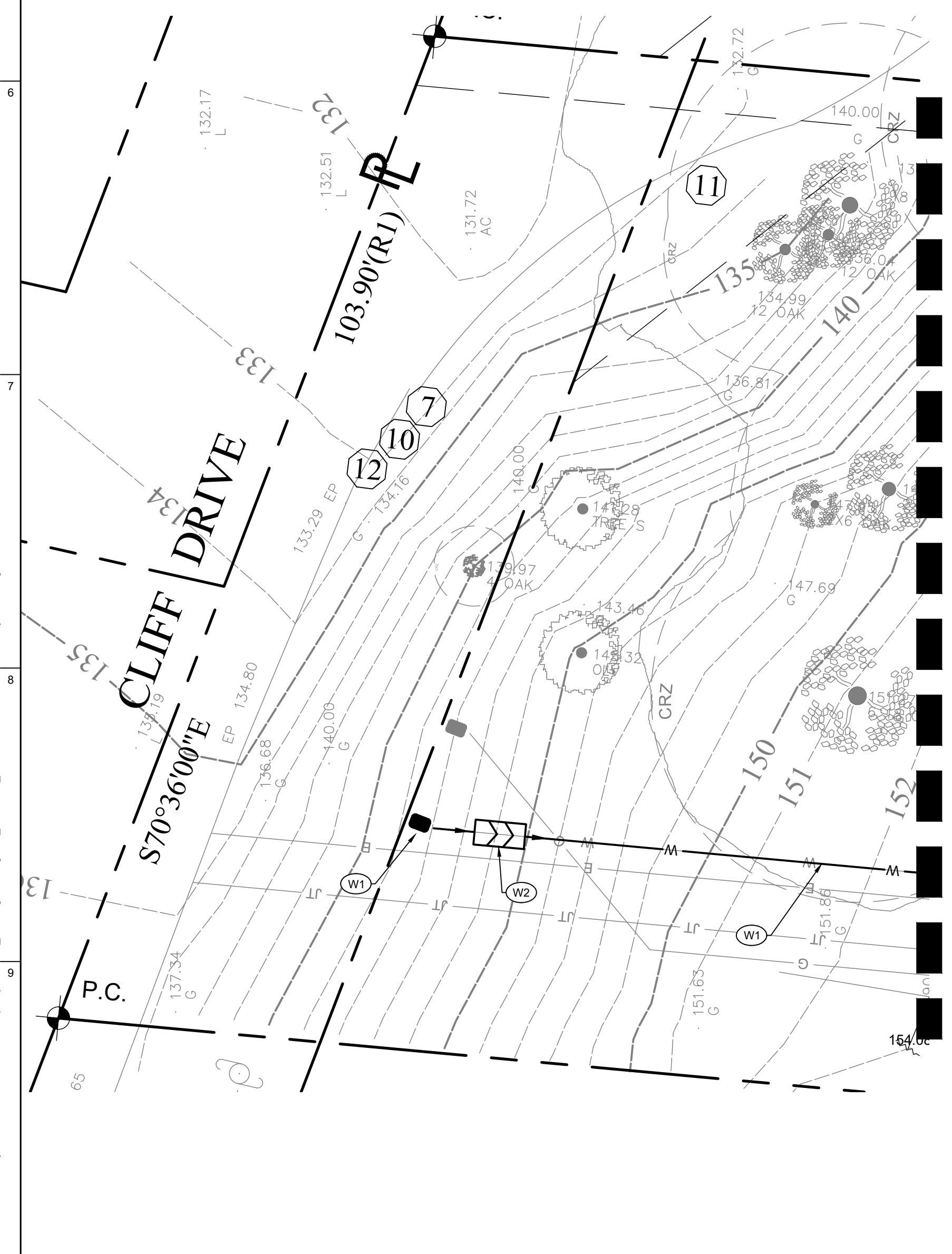
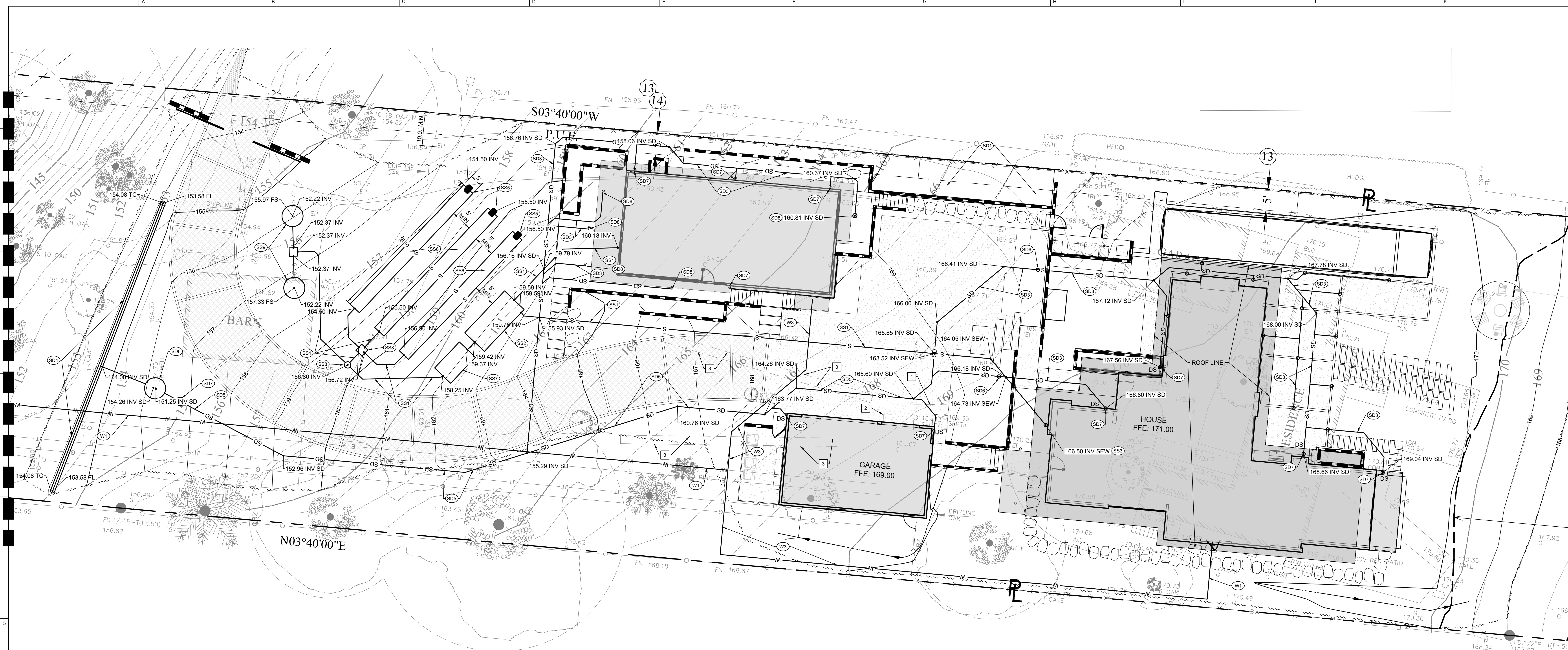
Project Engineer: DWW Ext: 122
Project Manager: JUG
Date: 1.12.2023 Scale: PER PLAN
AV Job No: 20248 Sheet Size: 30" x 42"



GRADING SHEET
C-2.3

MATCHLINE - SEE BELOW

S:\11_Jan2020\all jobs\20248 - 3239 cliff drive (util) - kaa02_working drawing\02_26\02_02_ONSITE\UTILITY SHEET - Drywell.dwg, C-3.1, Feb 16, 2024 11:04am, Date



MATCHLINE - SEE ABOVE

GENERAL NOTES:

- ALL EXISTING UTILITIES SHOWN ARE BASED ON THE BEST KNOWLEDGE AVAILABLE. CONTRACTOR TO POT-HOLE ALL POINTS OF CONNECTION AND VERIFY ALL CLEARANCES. MATERIAL DEPTH AND LOCATION SHALL BE IDENTIFIED BY CONTRACTOR. IF THERE ARE ANY DIFFERENCES FROM PLAN WITH ANY OF THESE ITEMS, ENGINEER OF WORK SHALL BE NOTIFIED IMMEDIATELY.
- DOMESTIC WATER SHALL BE AT LEAST ONE FOOT ABOVE SANITARY SEWER LINES WHERE THESE LINES MUST CROSS.
- SEE PLUMBING PLANS FOR DOMESTIC WATER CONSTRUCTION NOTES.

WATER CONSTRUCTION NOTES:

- (W1) EXISTING 1-INCH WATER LATERAL WITH 1-INCH METER FOR RESIDENTIAL SERVICE.
- (W2) INSTALL 1" REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY PER CITY OF SANTA BARBARA STANDARD DETAIL W-12.0 & W-12.1.
- (W3) INSTALL 1" SCH. 40 PVC DOMESTIC WATER SERVICE LINE TO ADU PER TRENCHING DETAIL 22, SHEET C-4.1.

SANITARY SEWER CONSTRUCTION NOTES:

- (SS1) INSTALL 4" SDR35 PVC SANITARY SEWER LATERAL AT 2% MINIMUM SLOPE PER DETAIL 3 ON SHEET C-04.1.
- (SS2) INSTALL 2,000 GALLON NON-Traffic RATED MIDSTATE CONCRETE SEPTIC TANK PER MANUFACTURERS SPECIFICATIONS.
- (SS3) INSTALL SEWER CLEANOUT PER DETAIL 4 ON SHEET C-04.1.
- (SS4) SEWER POINT OF CONNECTION AT BUILDING. SEE PLUMBING PLANS.
- (SS5) INSTALL LEACH LINE INSPECTION PORT PER DETAIL 7 ON SHEET C-4.1.
- (SS6) CONSTRUCT LEACH LINES PER DETAIL 6 ON SHEET C-4.1.
- (SS7) INSTALL ADVANTEX AX25-RT ADVANCED TREATMENT SYSTEM PER MANUFACTURERS SPECIFICATIONS.
- (SS8) INSTALL DISTRIBUTION BOX PER MANUFACTURERS SPECIFICATIONS.
- (SS9) CONSTRUCT 5' DIAMETER X 36" DEEP SEEPAGE PIT PER DETAIL 17 ON SHEET C-4.1.
- (SS10) INSTALL DIVERTER VALVE PER MANUFACTURERS SPECIFICATIONS.

STORM DRAIN CONSTRUCTION NOTES:

- (SD1) INSTALL STORMWATER DRYWELL PER DETAIL 18 ON SHEET C-4.1.
- (SD2) INSTALL STORMWATER PRE-TREATMENT SUMP PER DETAIL 19, SHEET C-4.1.
- (SD3) INSTALL 4-INCH CLASS 100 PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS AND DETAIL 9, SHEET C-4.1.
- (SD4) INSTALL LEVEL SPREADER (6-INCH CLASS 100 PVC PERFORATED PIPE, LENGTH = 72 FEET MIN.) PER DETAIL 7, SHEET C-4.1.
- (SD5) INSTALL 6-INCH CLASS 100 PVC STORM DRAIN LINE PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS AND DETAIL 9, SHEET C-4.1.
- (SD6) INSTALL STORM DRAIN CLEANOUT PER DETAIL 5, SHEET C-4.1.
- (SD7) INSTALL ROOF DRAIN CONNECTION PER DETAIL 14, SHEET C-4.1.
- (SD8) INSTALL DRAINAGE INLET PER DETAIL 21, SHEET C-4.1.

DEMOLITION NOTES

- 1 EXISTING SEPTIC TANK TO BE REMOVED
- 2 EXISTING DISTRIBUTION BOX TO BE REMOVED
- 3 EXISTING LEACH LINE TO BE REMOVED

Ashley & Vance
ENGINEERING, INC.
CIVIL • STRUCTURAL

210 East Palo Alto Street
Santa Barbara, CA 93101
Phone: (805) 962-9966
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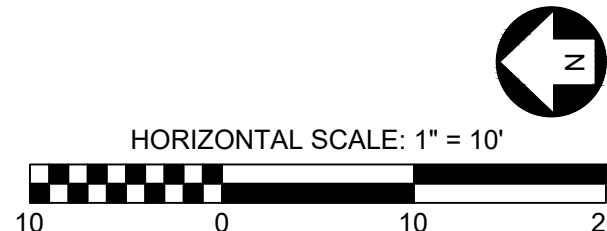
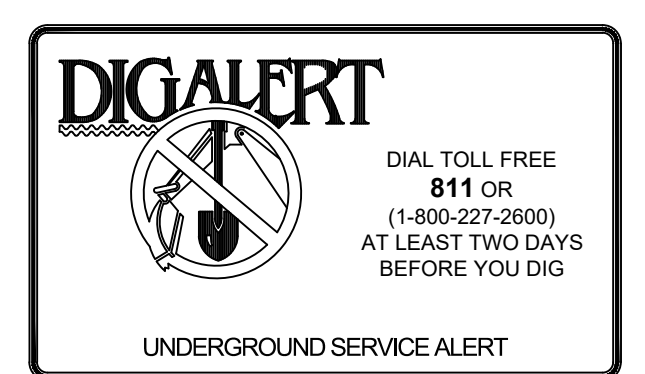
Engineer of Record:

RASKOPF RESIDENCE
3239 CLIFF DRIVE
SANTA BARBARA, CA 93109

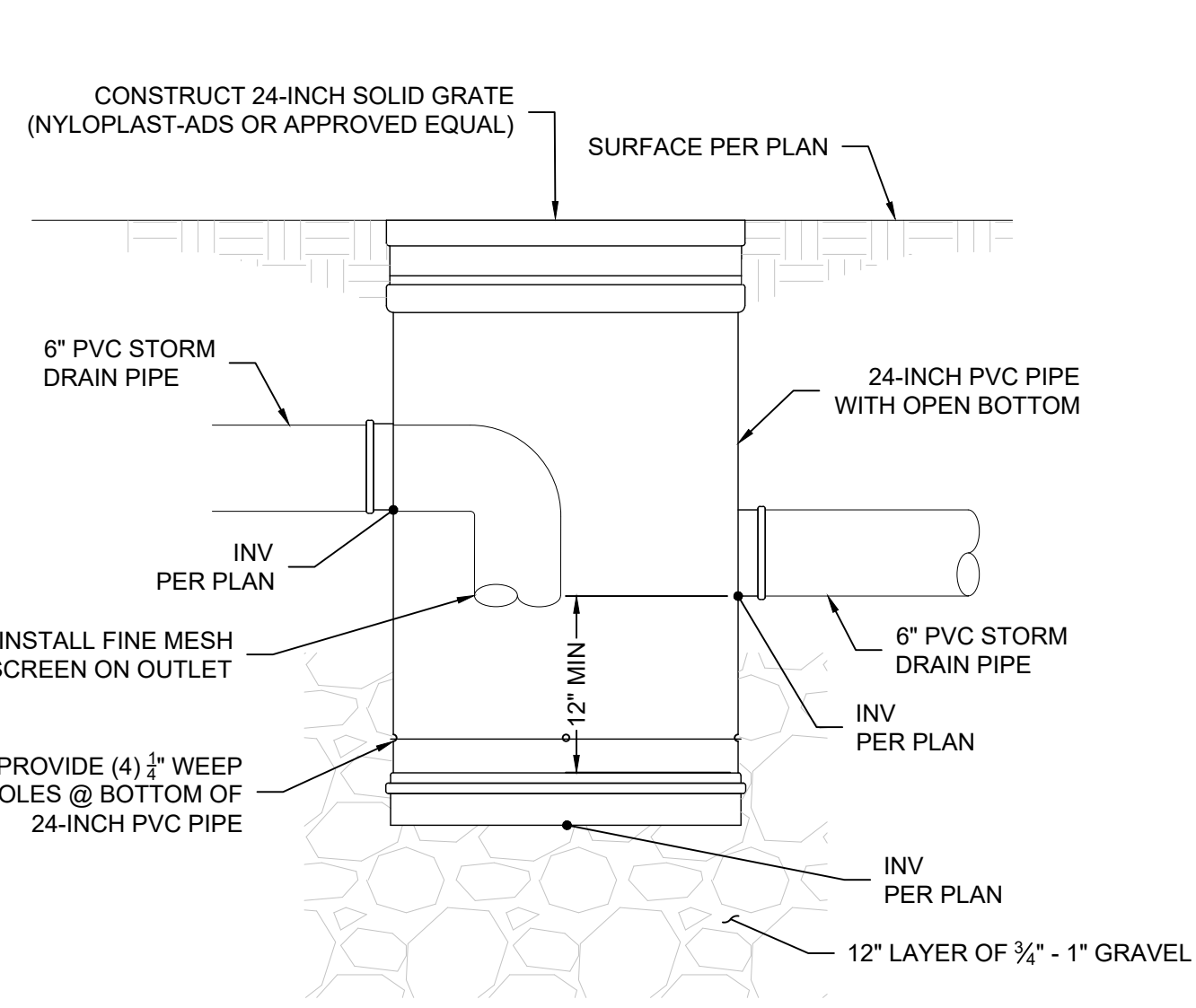
Revisions:

1	BLDG. DEPT. SUBMITTAL - 02/15/24
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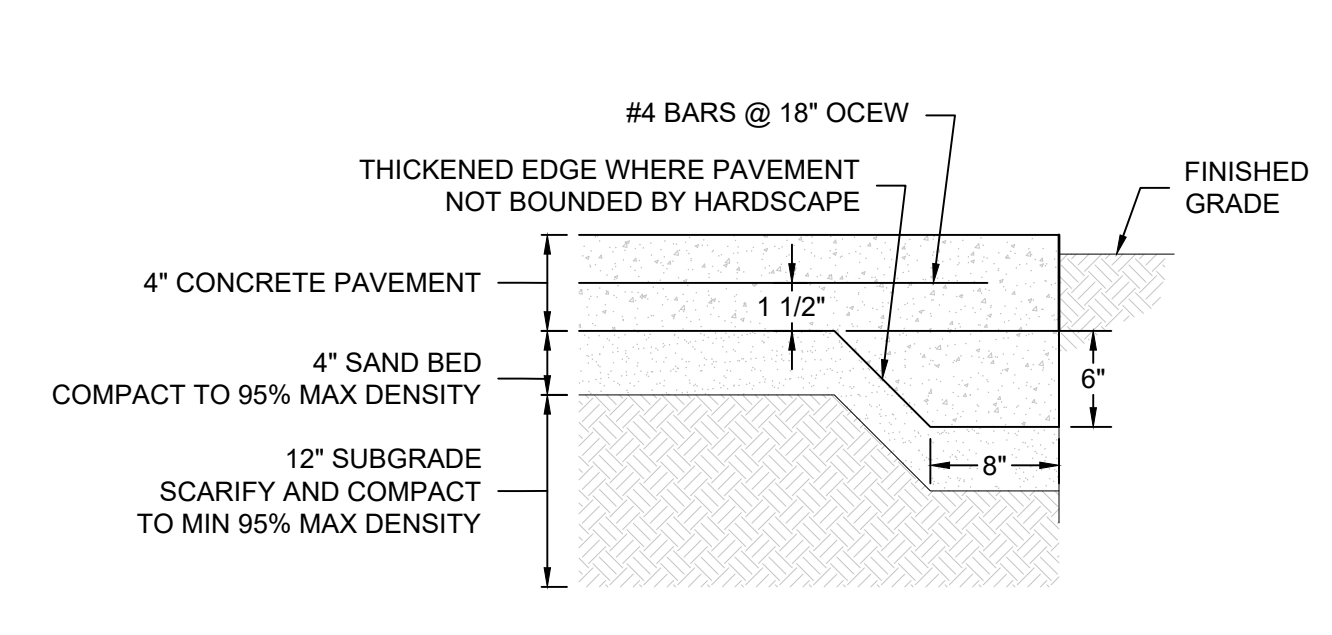
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Project Manager: JJJ
Date: 1.12.2023 Scale: PER PLAN
AV Job No: 20248 Sheet Size: 30" x 42"



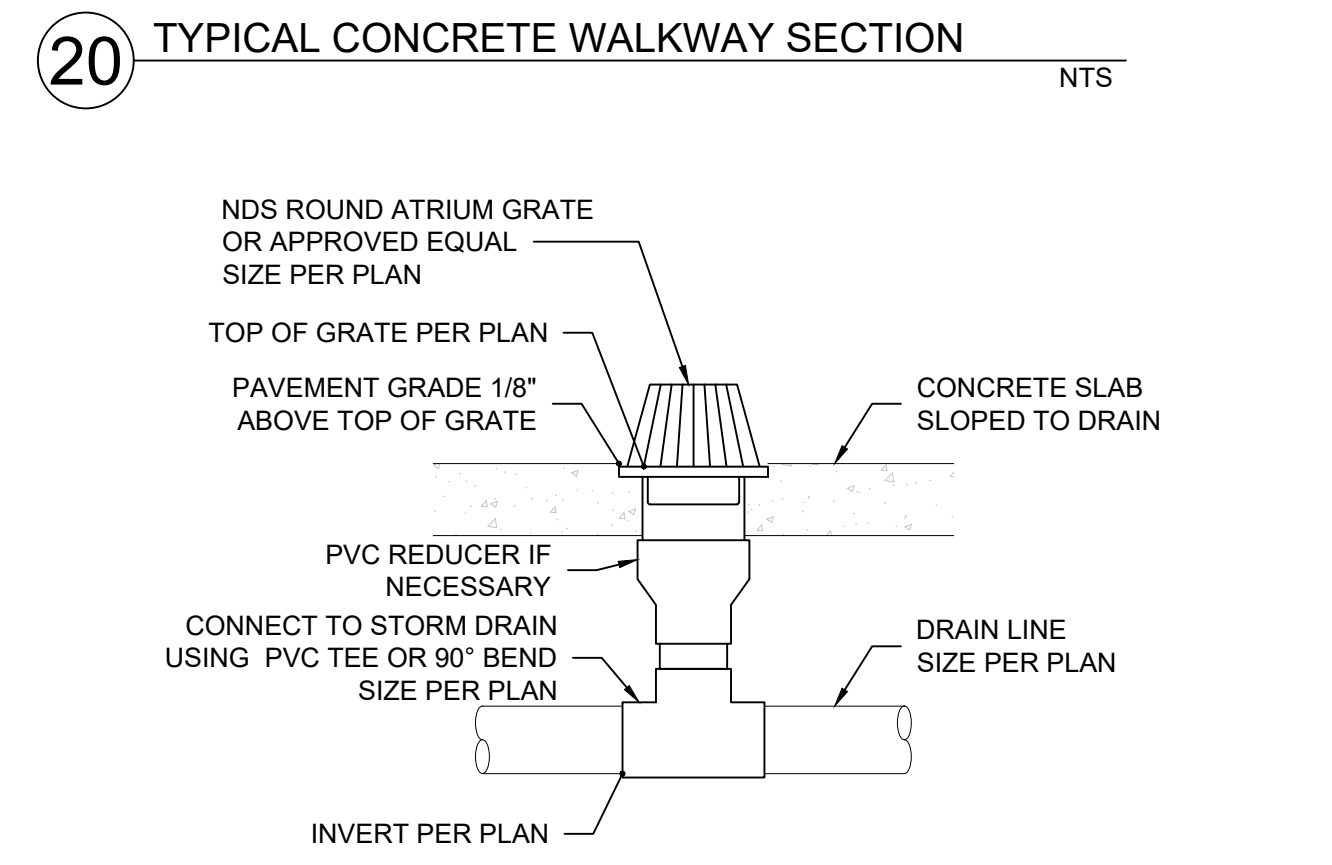
UTILITY PLAN
C-3.1



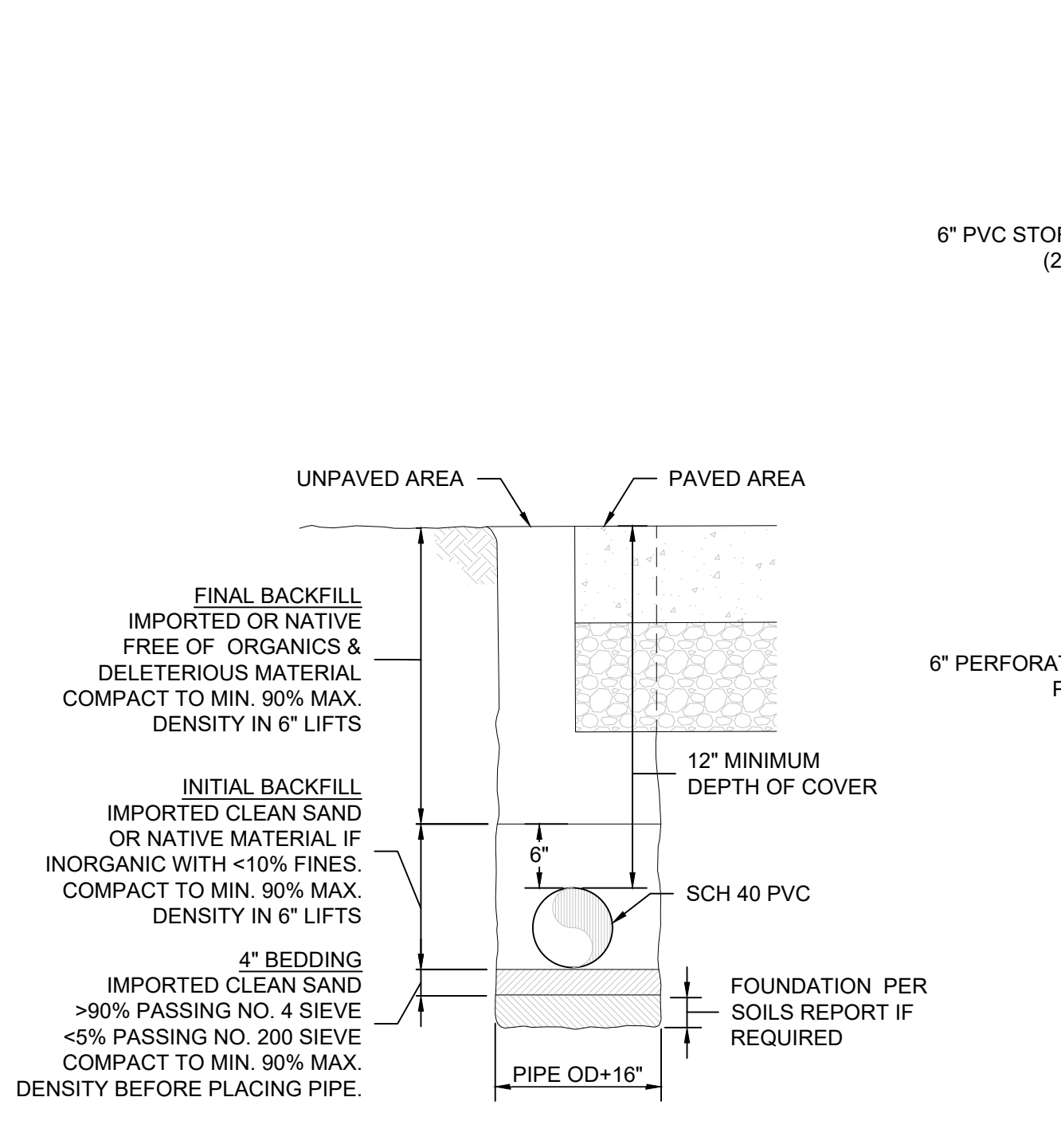
19 PRE-TREATMENT SUMP NTS



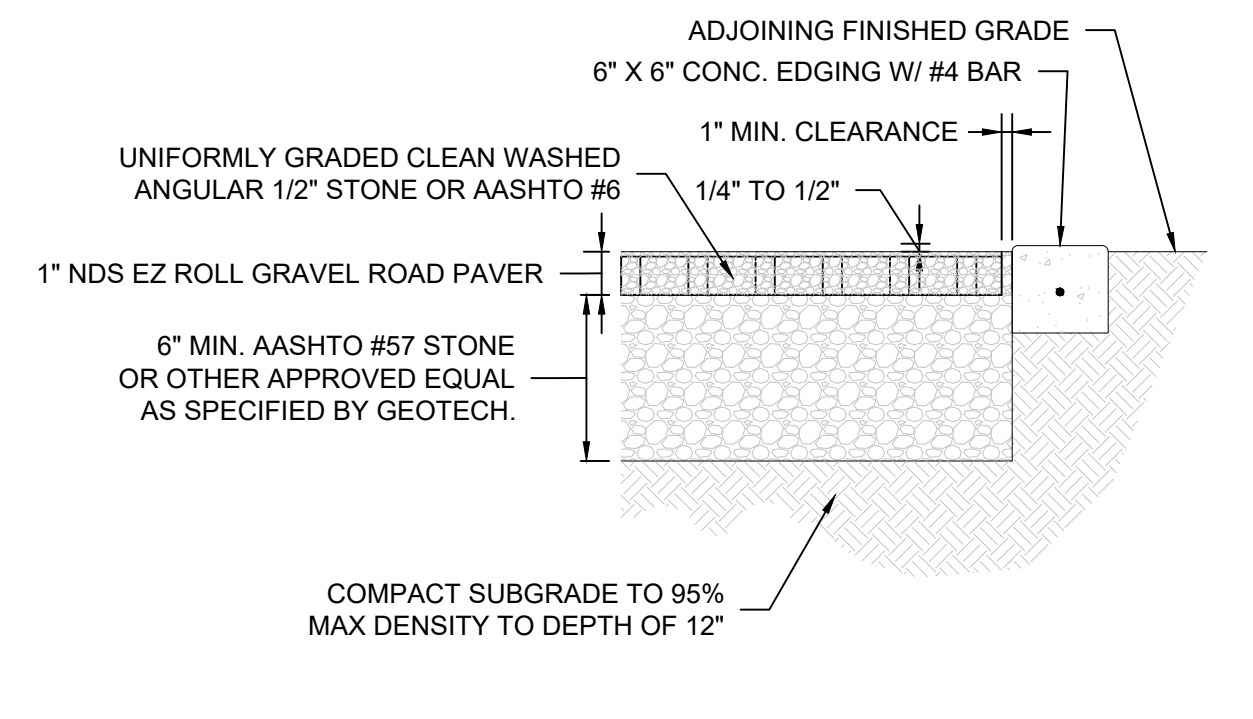
20 TYPICAL CONCRETE WALKWAY SECTION NTS



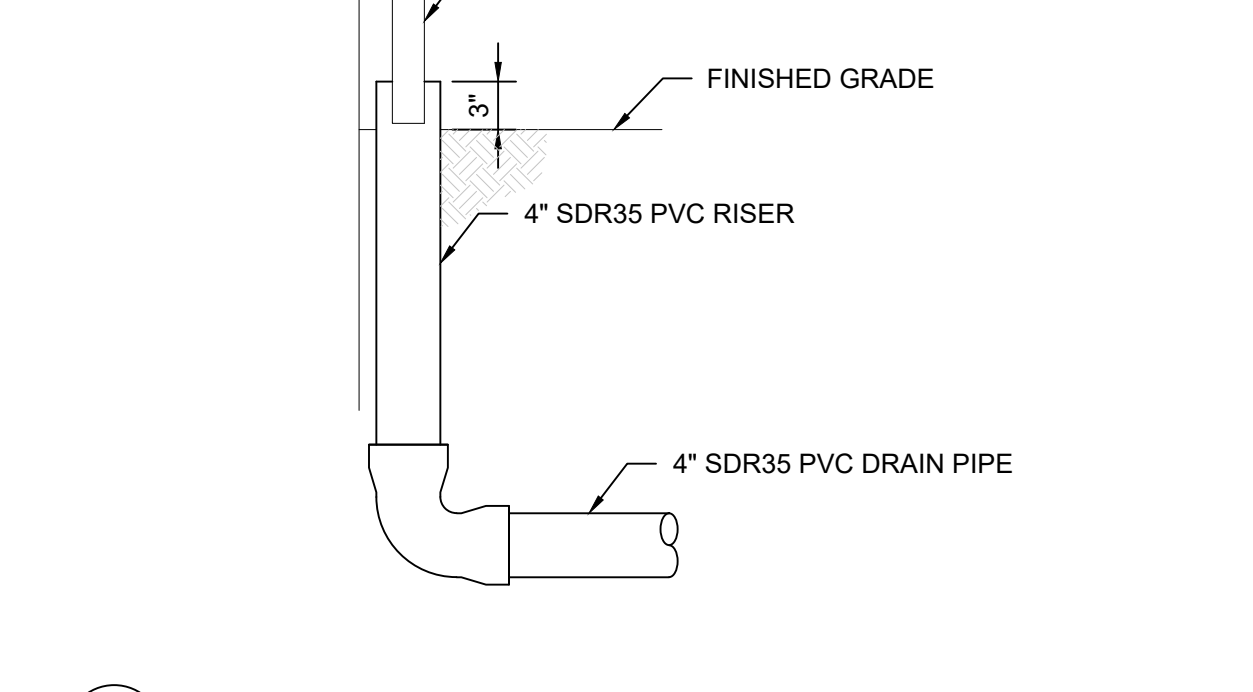
21 PEDESTRIAN ATRIUM INLET DETAIL NTS



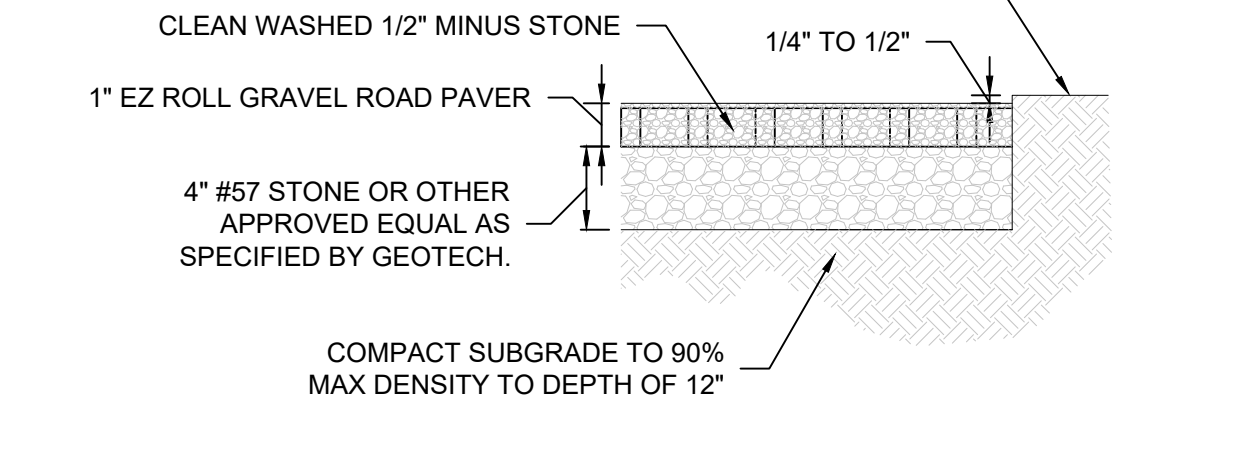
22 WATER LATERAL TRENCH SECTION NTS



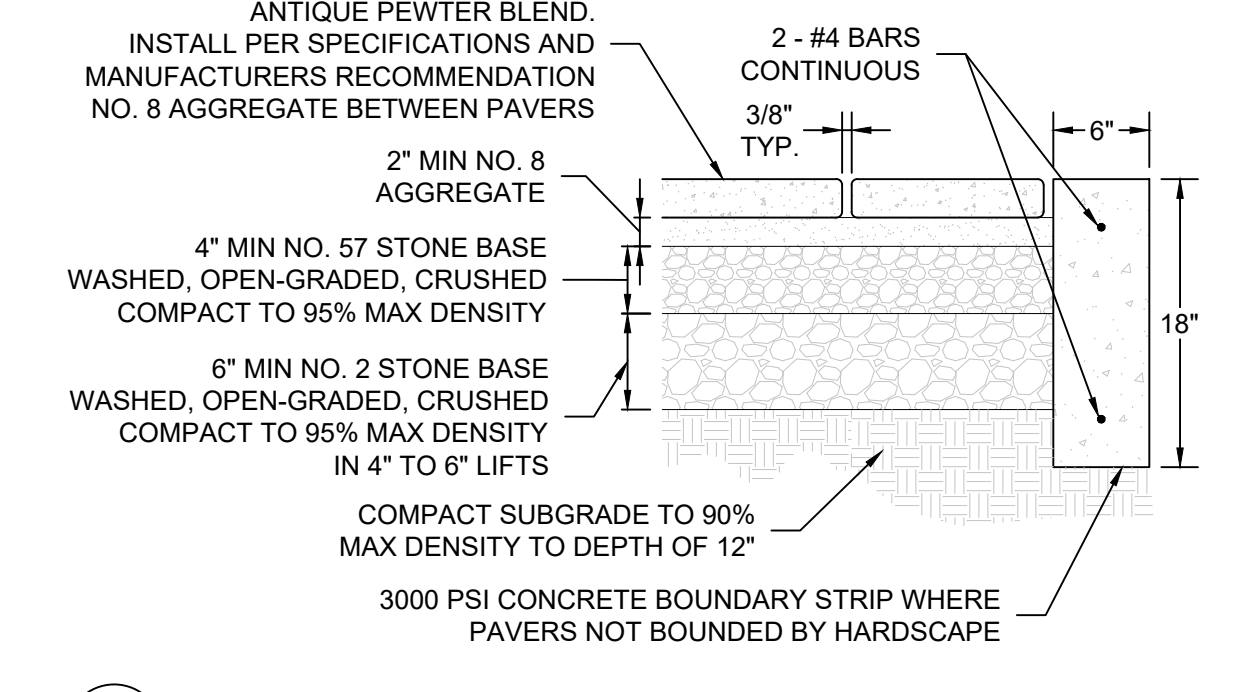
13 GRAVEL PAVE DRIVEWAY NTS



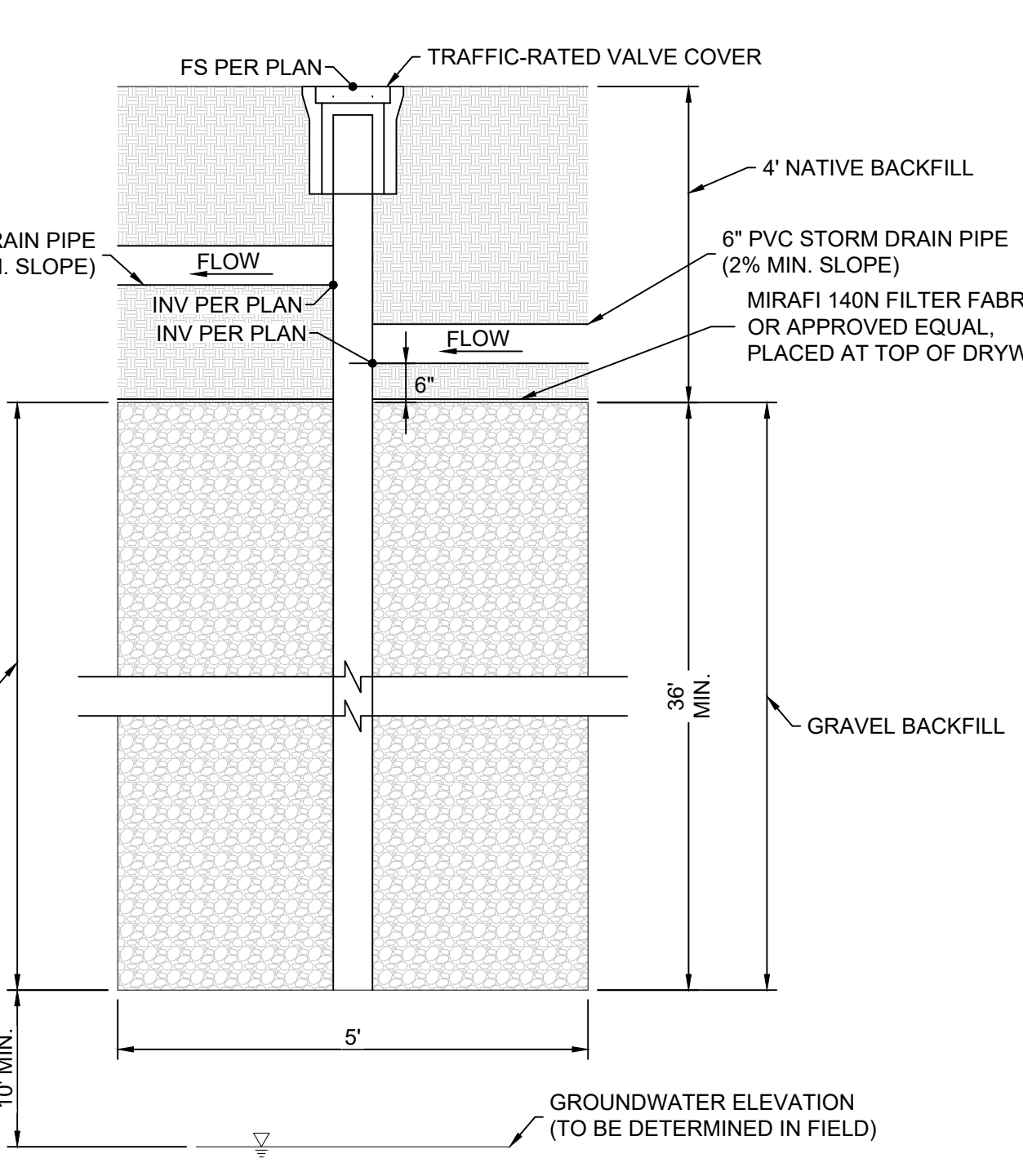
14 DOWNSPOUT CONNECTION DETAIL NTS



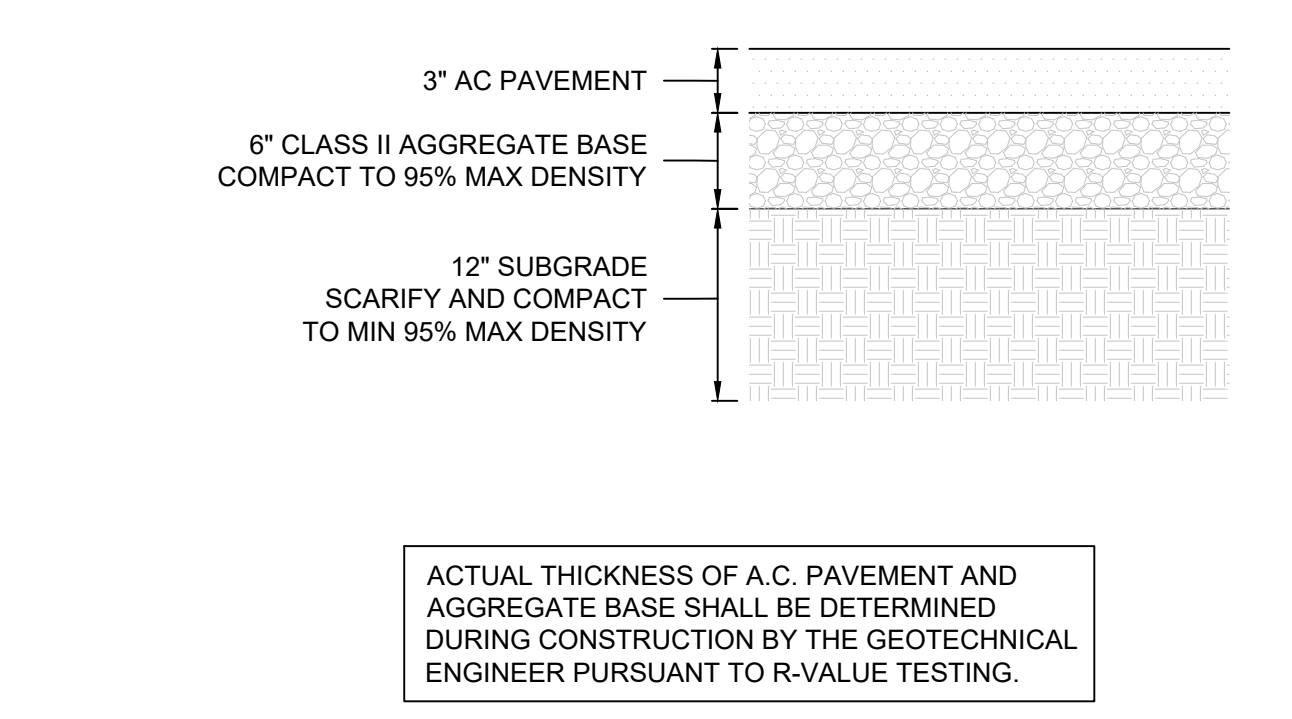
15 GRAVEL PAVE WALKWAY SECTION NTS



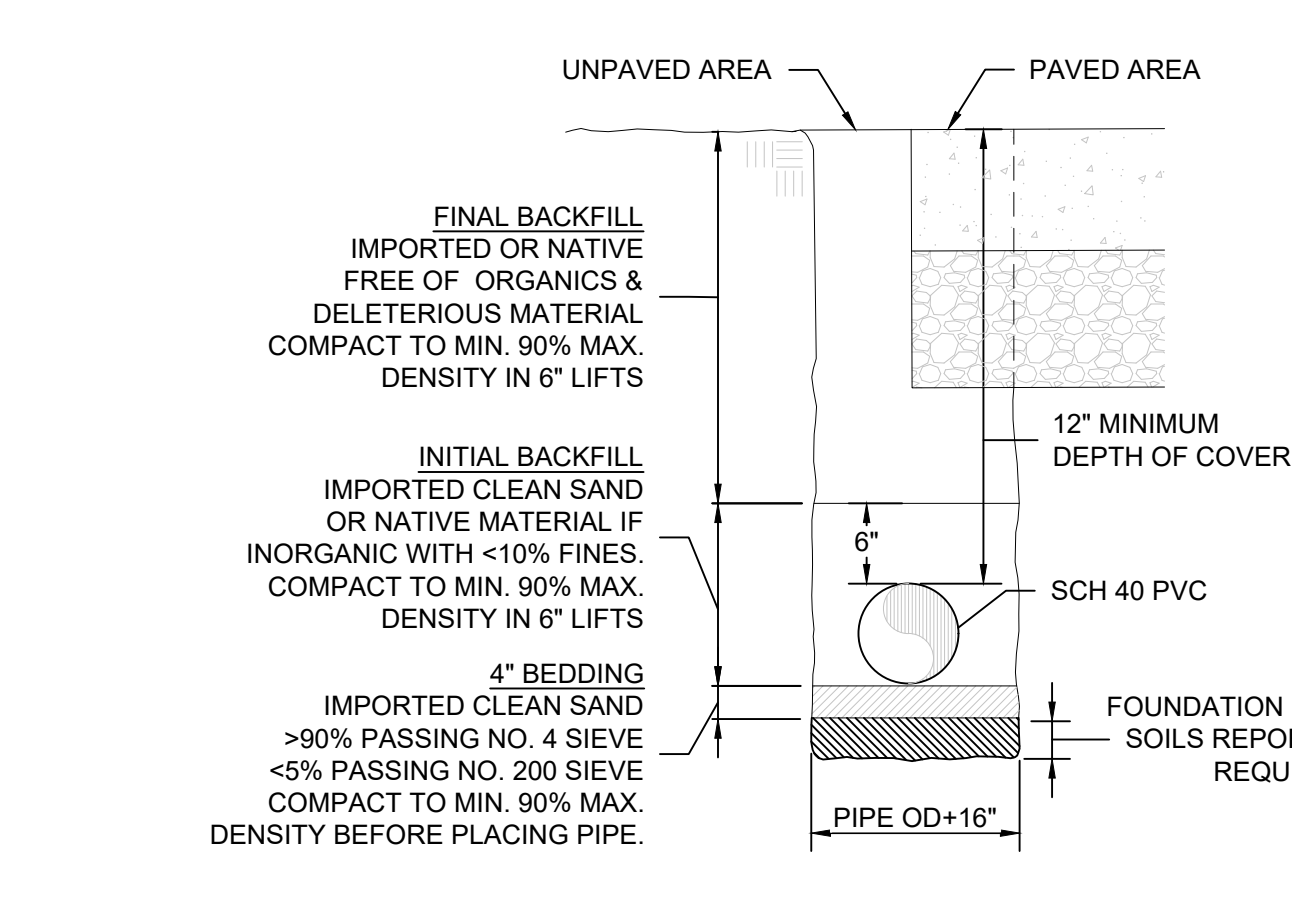
16 PERMEABLE PAVER WALKWAY SECTION NTS



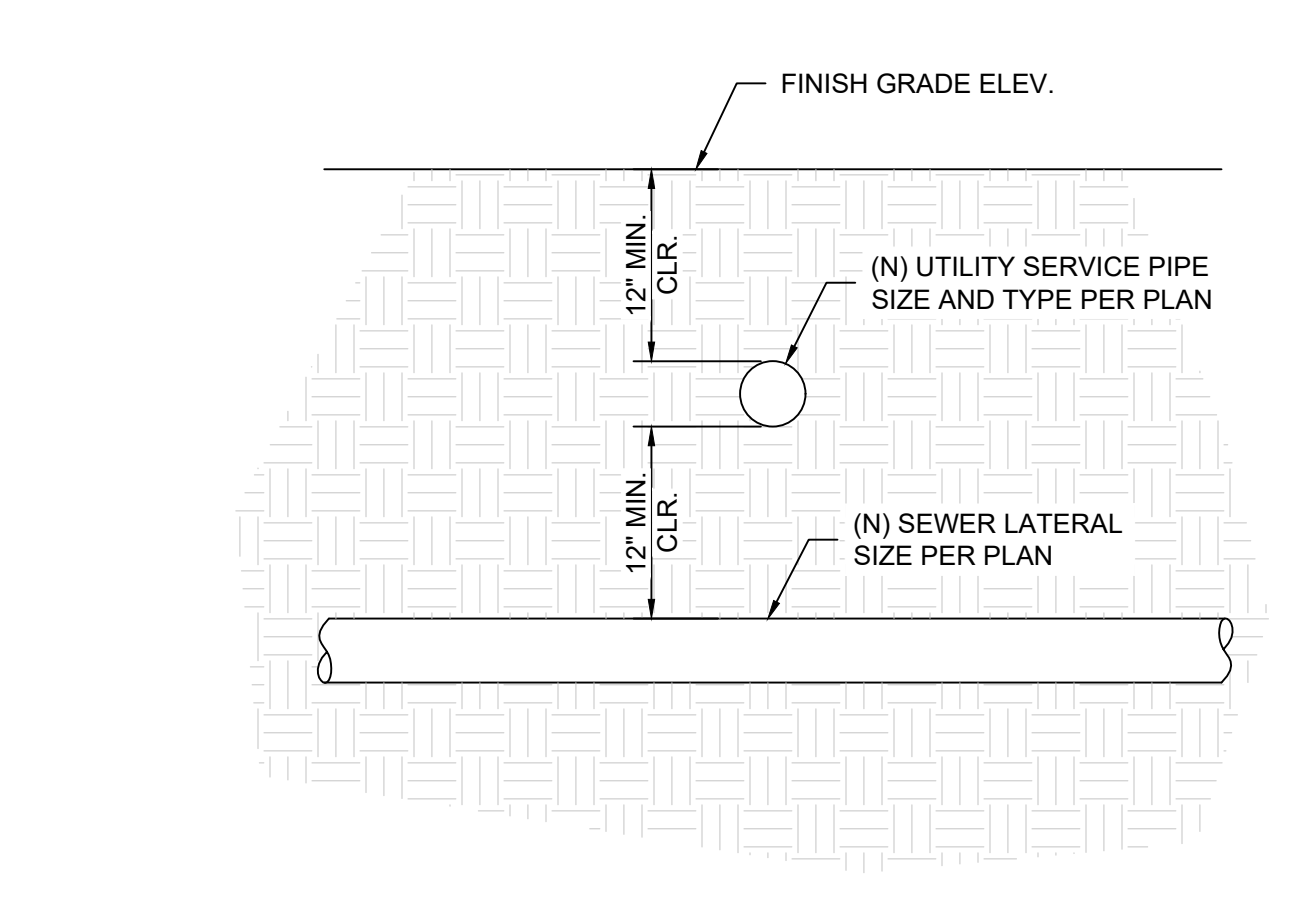
18 STORMWATER DRYWELL DETAIL NTS



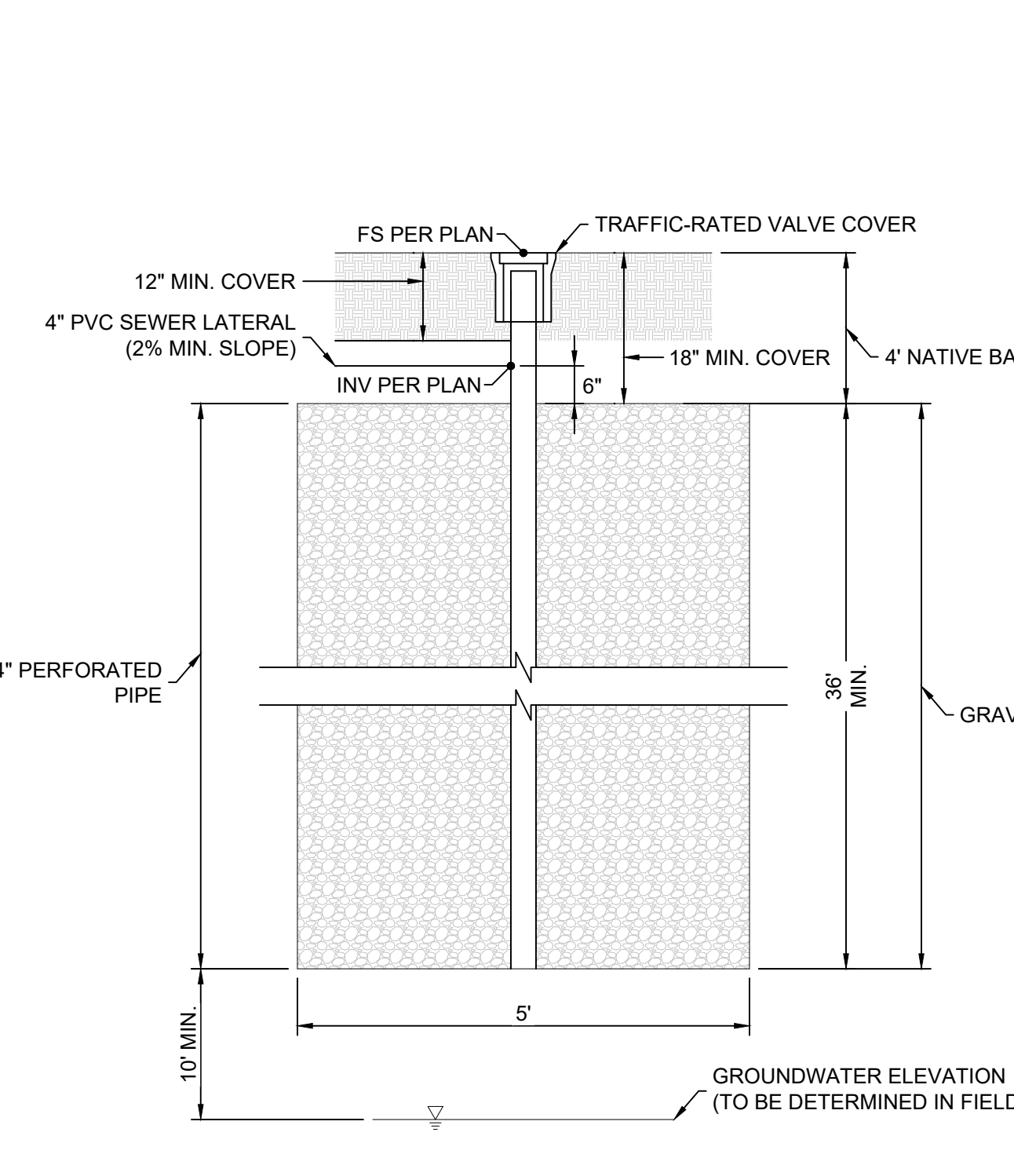
10 TYPICAL ASPHALT DRIVEWAY SECTION NTS



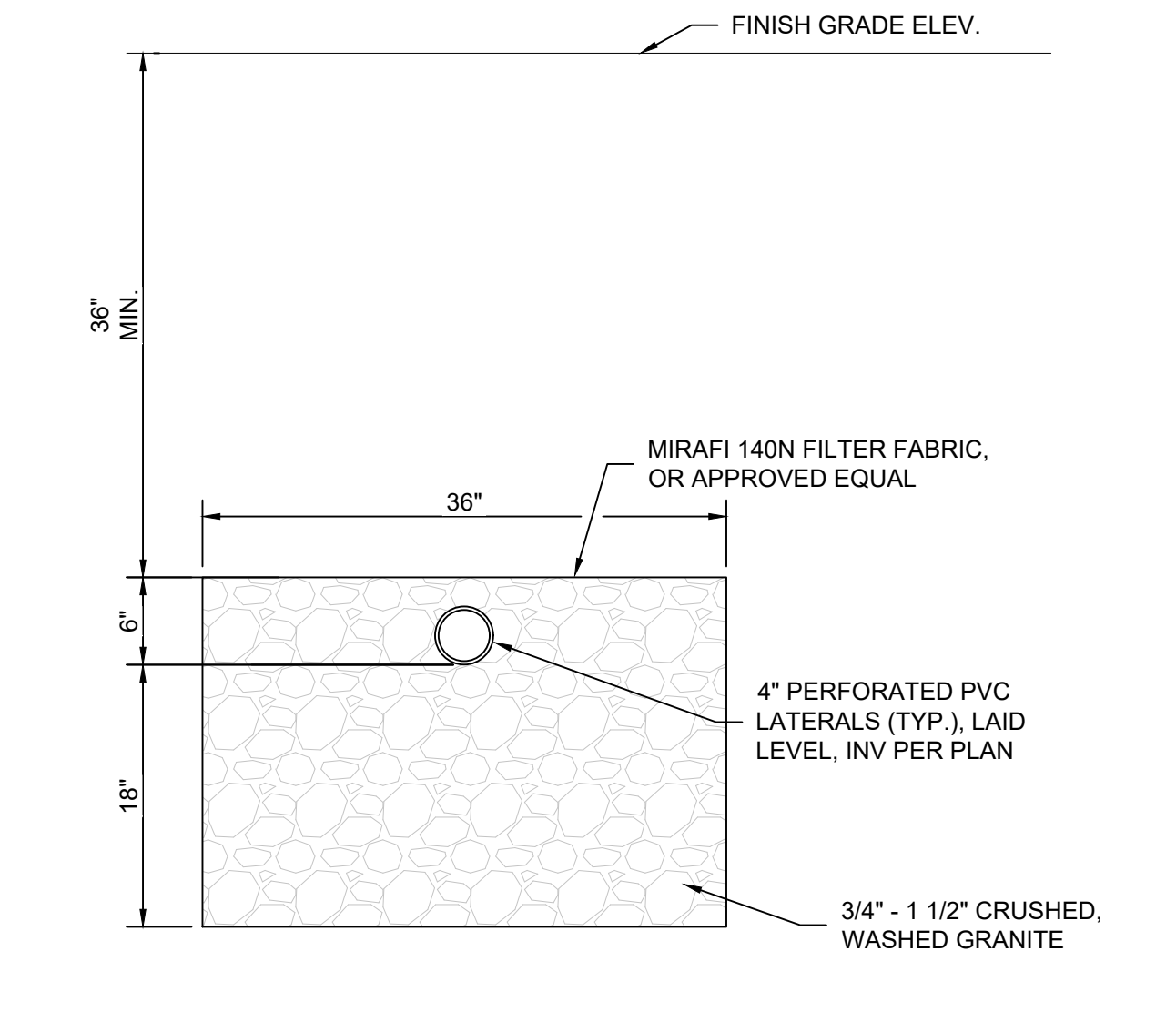
11 WATER LATERAL TRENCH SECTION NTS



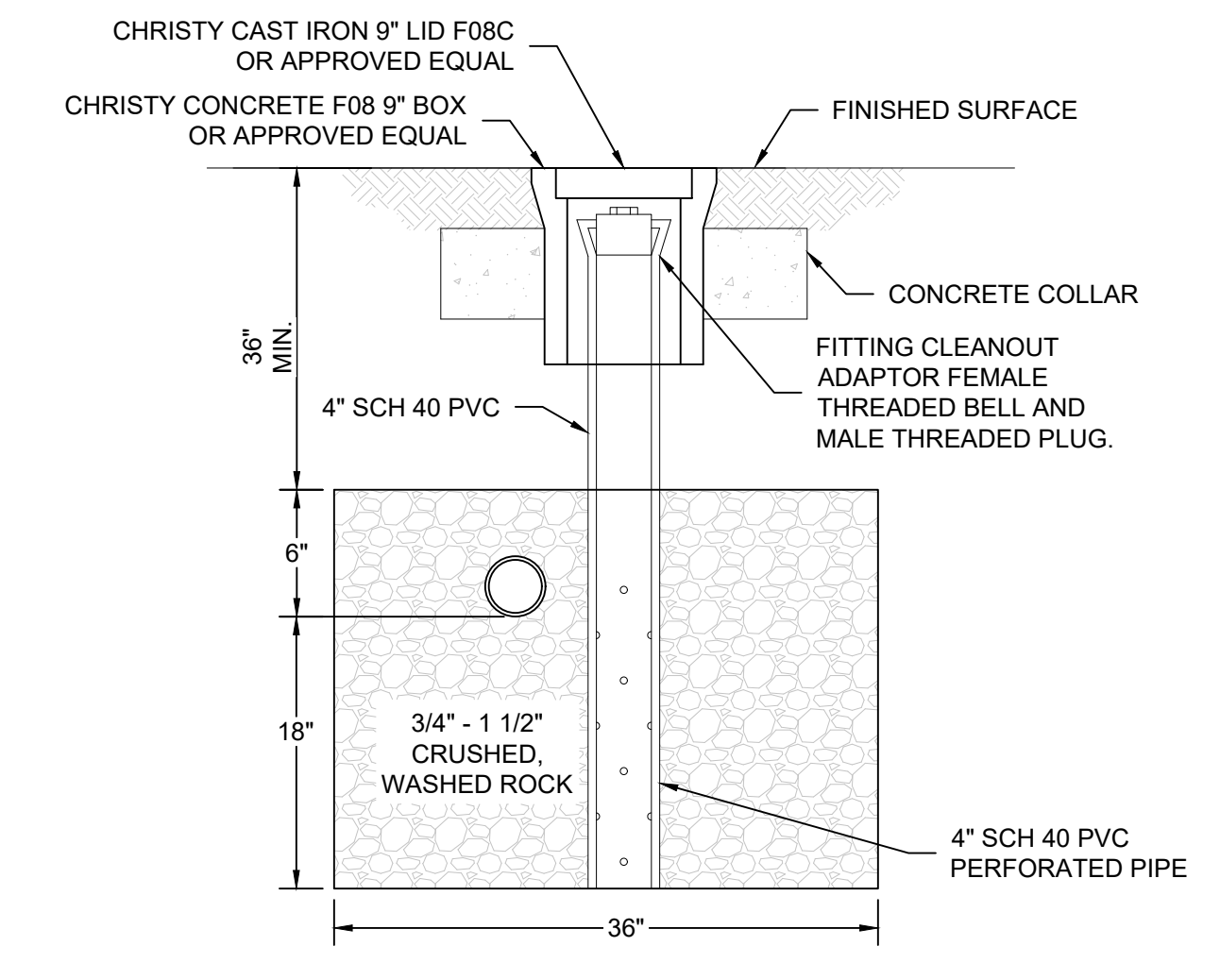
12 TYPICAL UTILITY CROSSING SECTION NTS



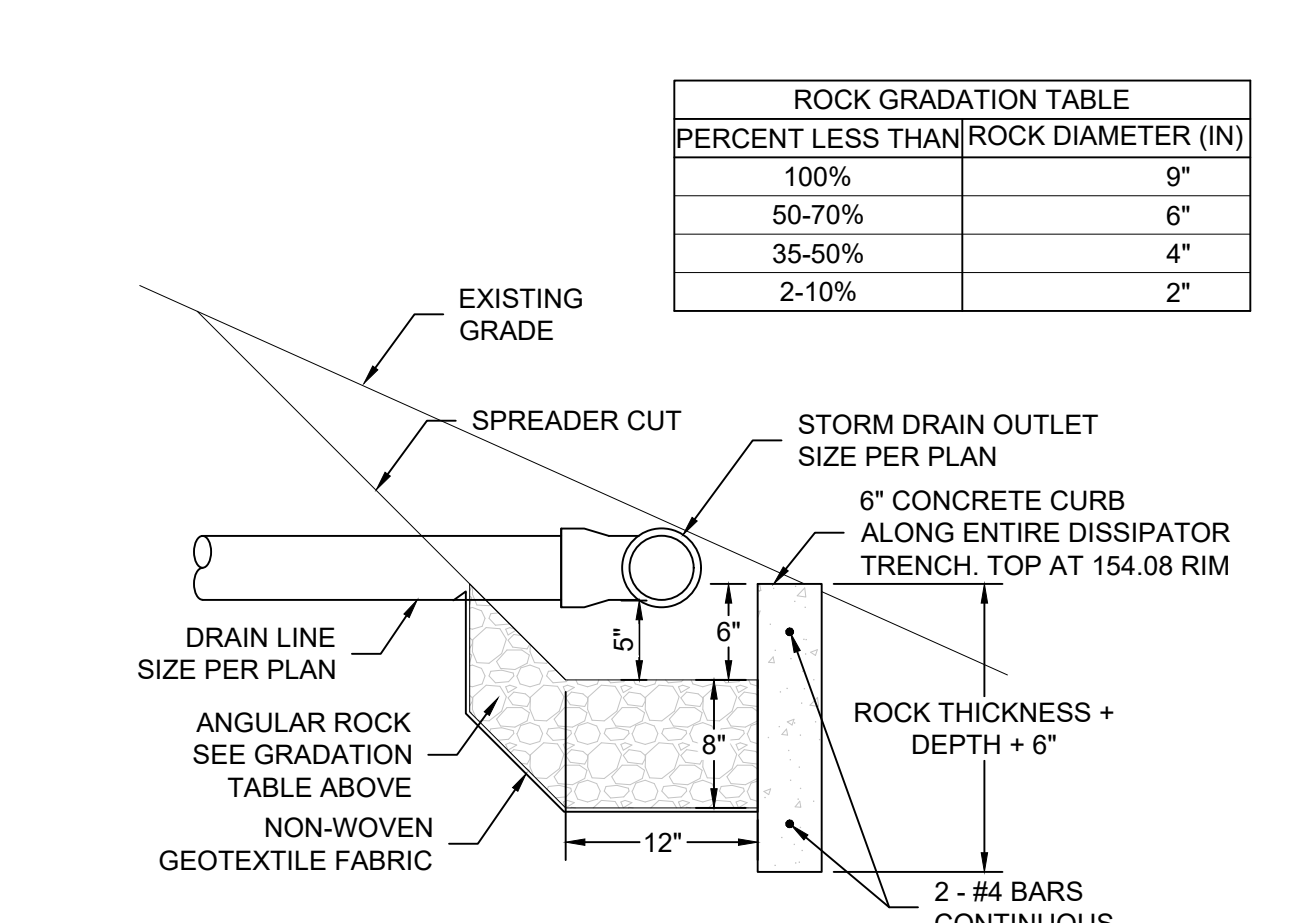
17 SEWER SEEPAGE PIT DETAIL NTS



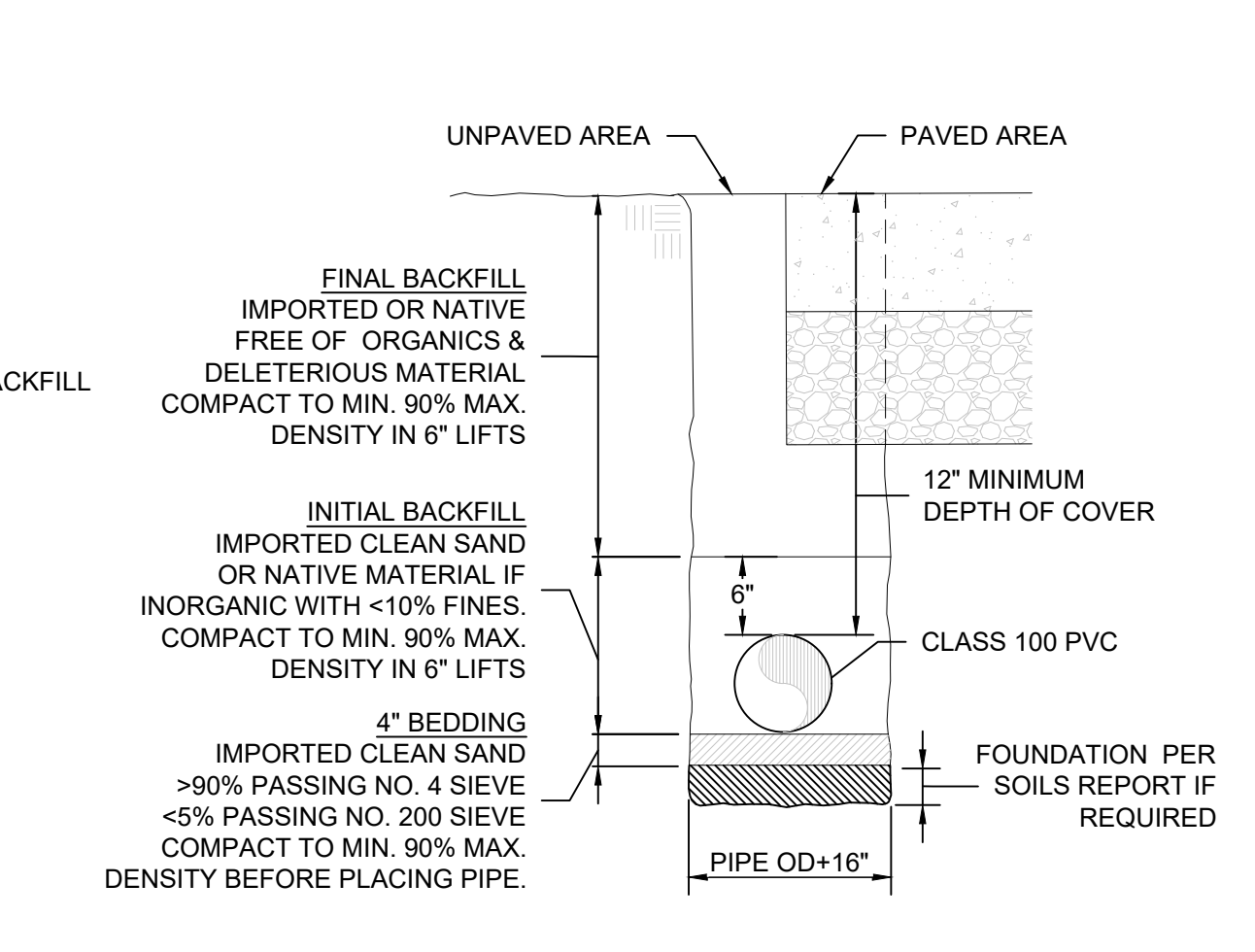
6 LEACH LINE TRENCH DETAIL NTS



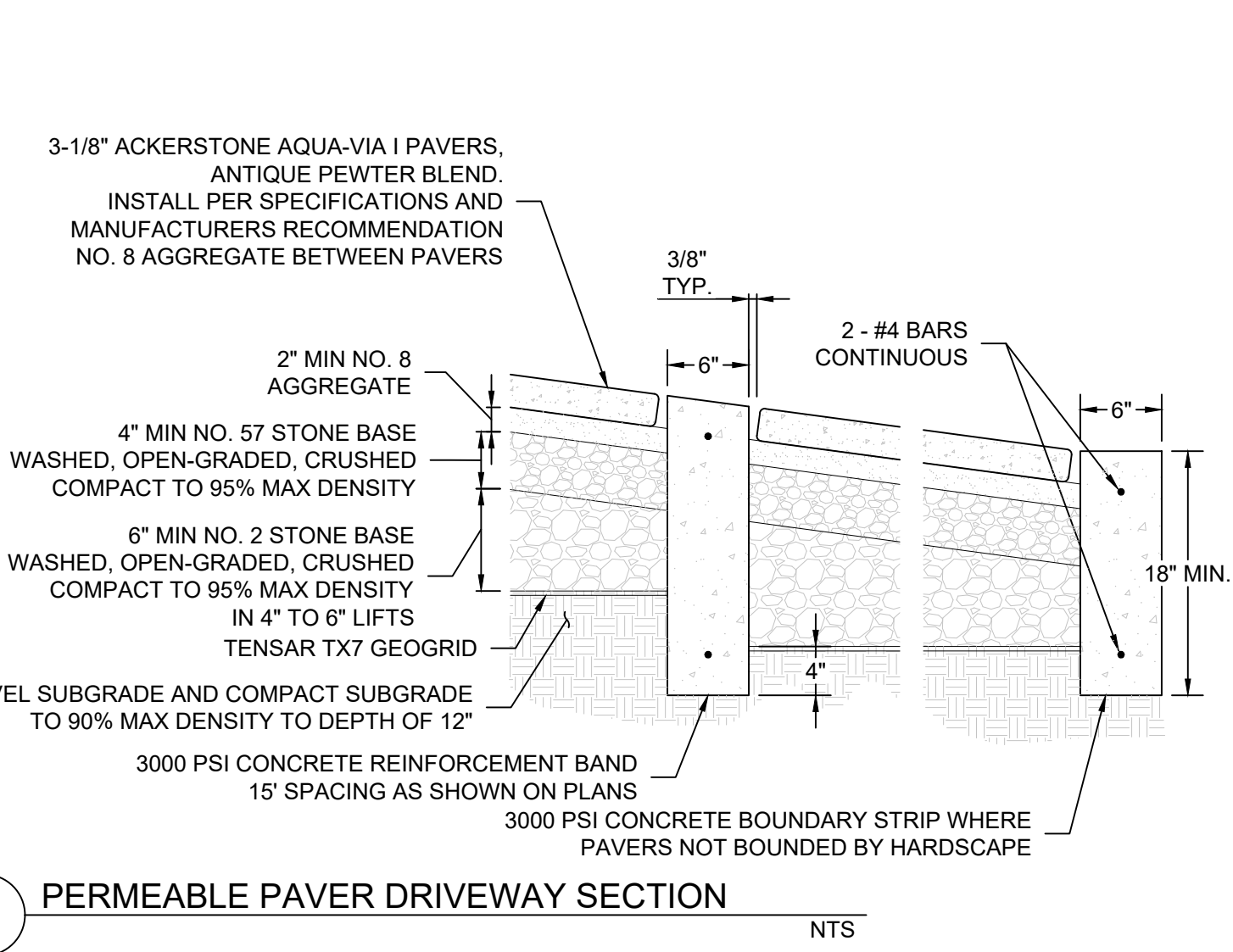
7 LEACH LINE INSPECTION PORT DETAIL NTS



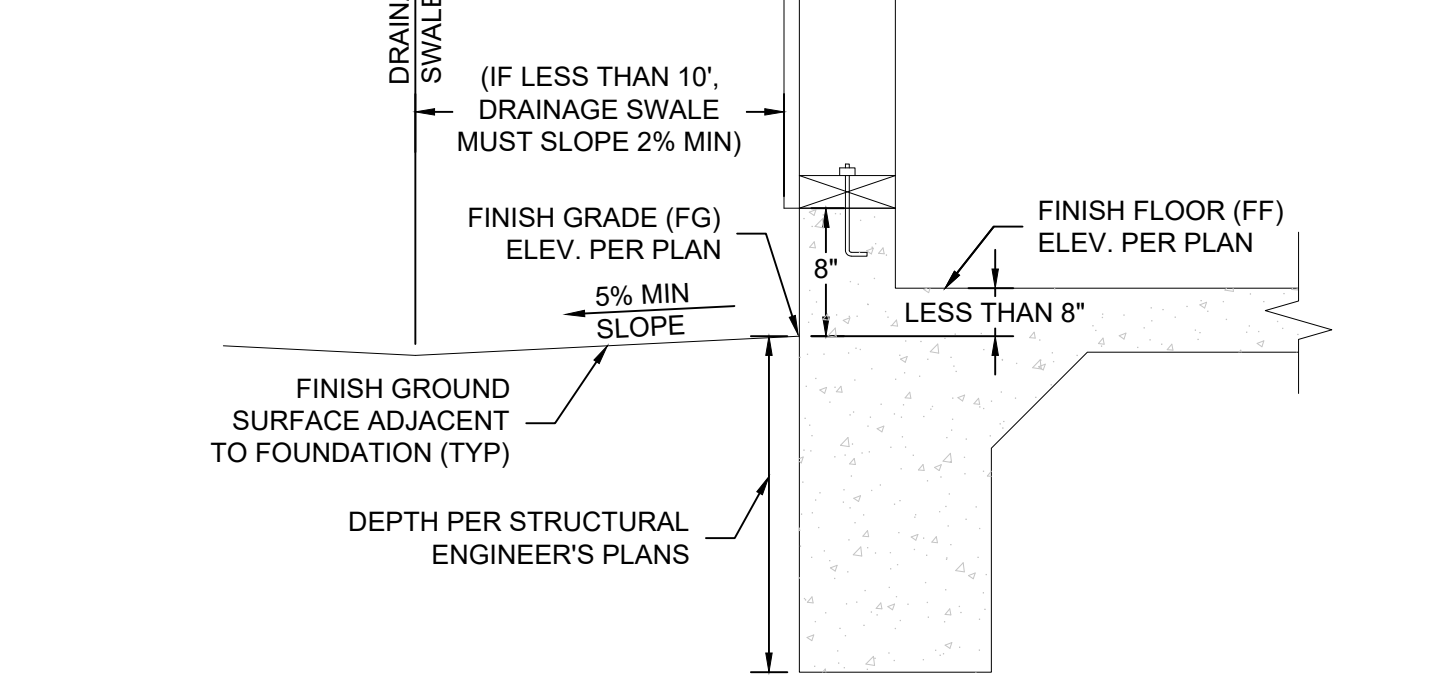
8 LEVEL SPREADER OUTLET DETAIL NTS



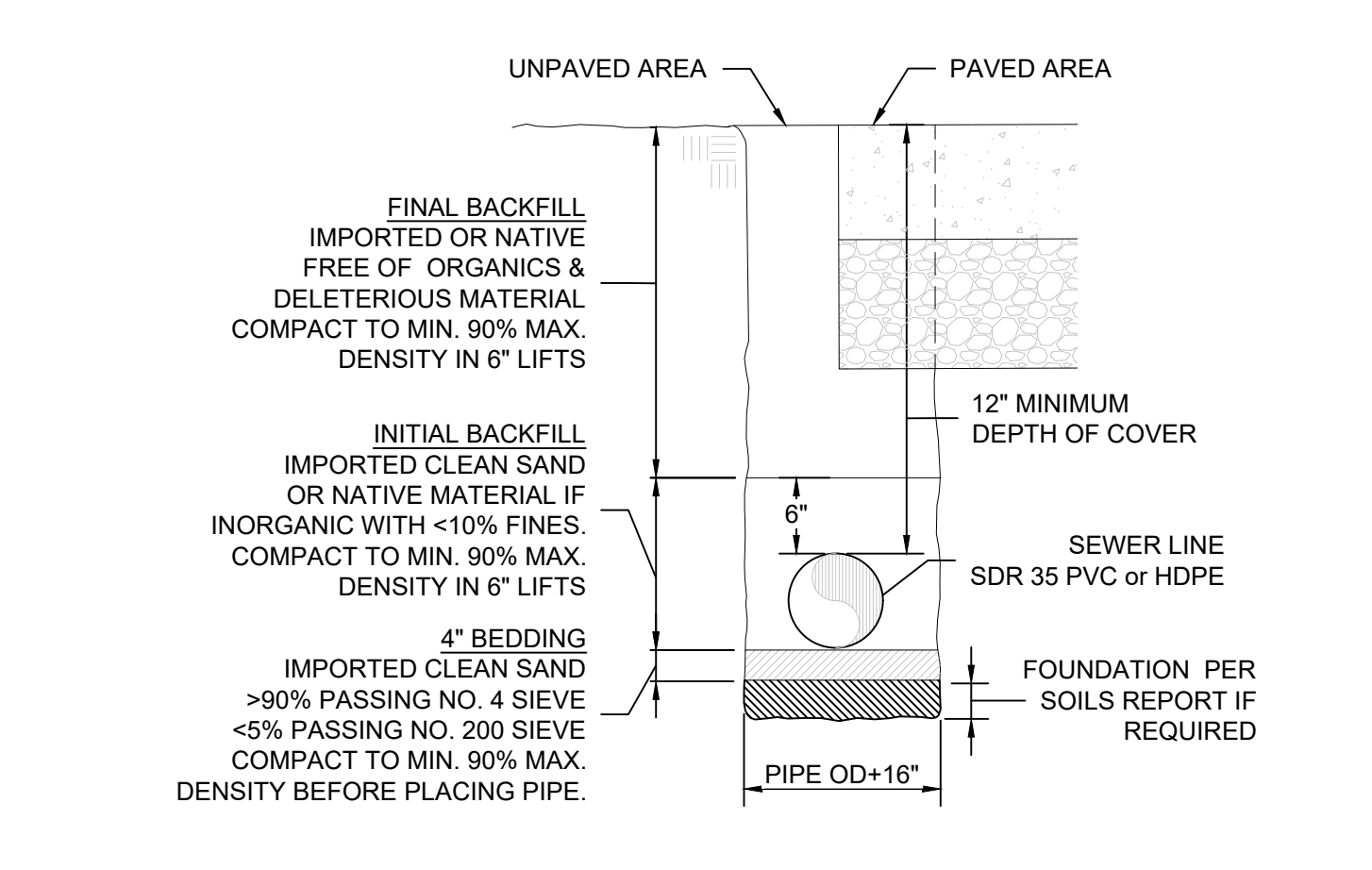
9 STORM DRAIN TRENCH DETAIL NTS



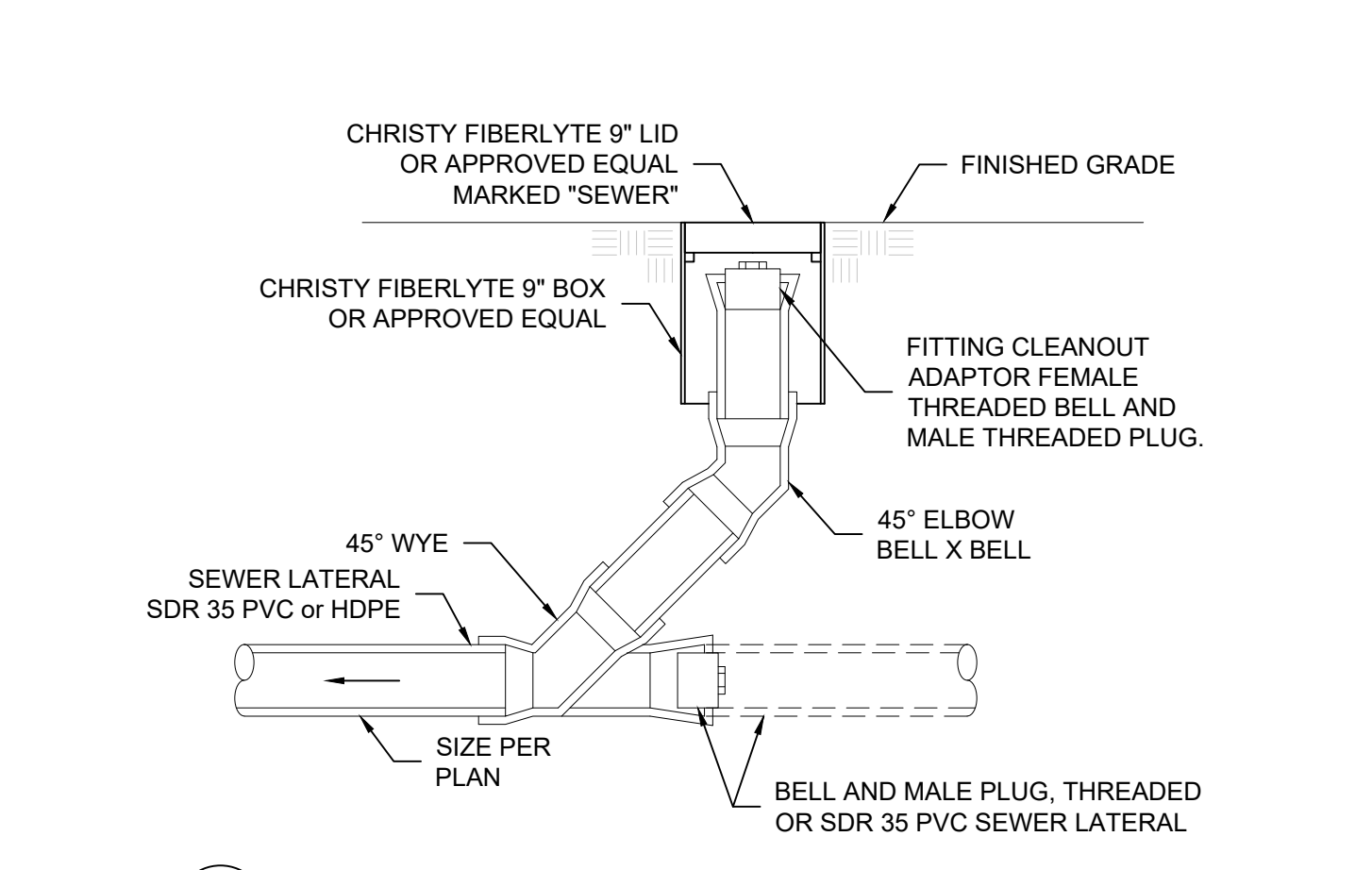
1 PERMEABLE PAVER DRIVEWAY SECTION NTS



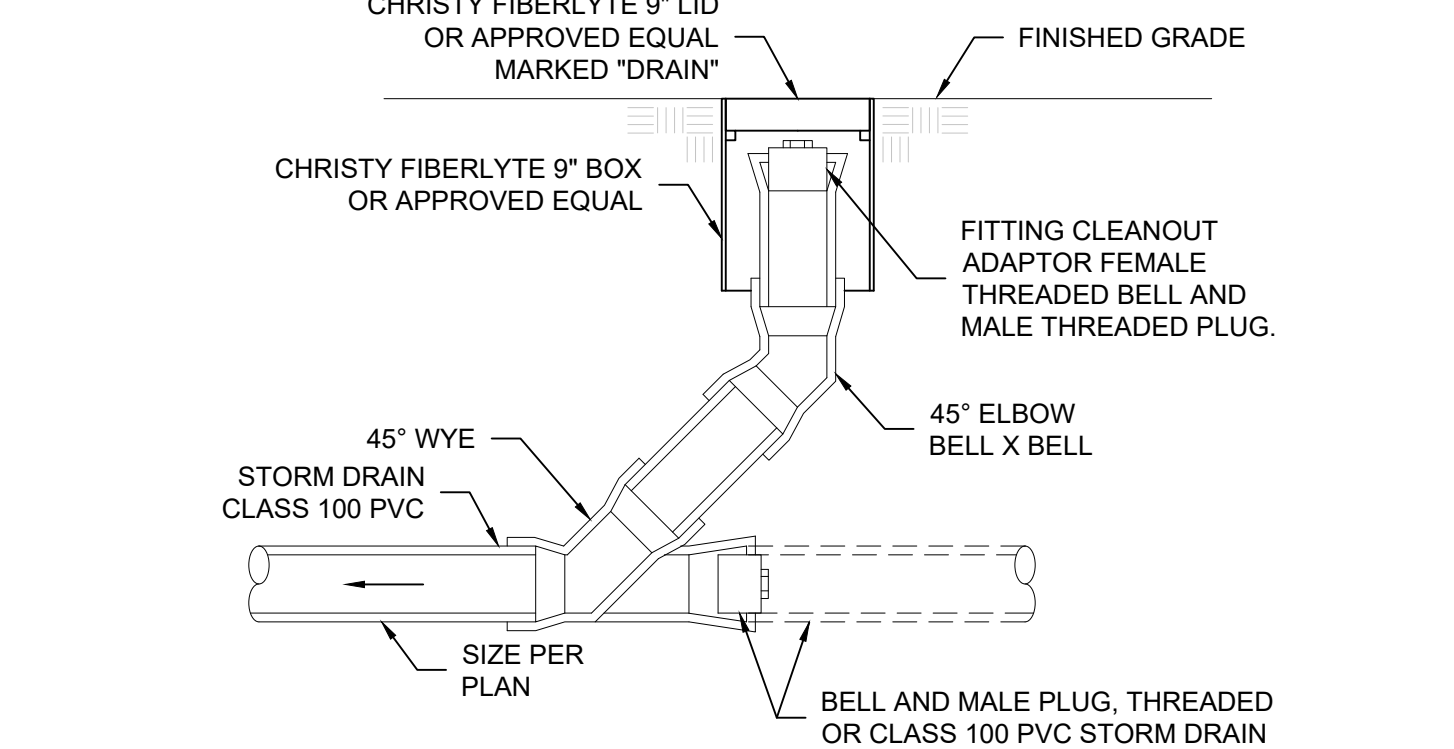
2 BUILDING GRADE CONTROL DETAIL NTS



3 SEWER LATERAL TRENCH SECTION NTS



4 LANDSCAPE SEWER CLEANOUT DETAIL NTS



5 LANDSCAPE STORM DRAIN CLEANOUT DETAIL NTS

ROCK GRADATION TABLE	
PERCENT LESS THAN ROCK DIAMETER (IN)	
100%	9"
50-70%	6"
35-50%	4"
2-10%	2"

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Engineer of Record:



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3239 CLIFF DRIVE
SANTA BARBARA, CA 93109

Revisions:

1	BLDG. DEPT. SUBMITTAL - 02/15/24
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3	---
4	---
5	---
6	---

Project Engineer: DWW Ext: 122
Project Manager: JJJ
Date: 1.12.2023 Scale: PER PLAN
AV Job No: 20248 Sheet Size: 30" x 42"


LANDSCAPE COMPLIANCE STATEMENT

LANDSCAPE COMPLIANCE CHECKLIST

The person who prepared the landscape plan must sign this checklist and include it on the landscape plans. Check each box to verify compliance and add sheet references or indicate N/A if "not applicable".

- Limit Your Lawn**
 - Commercial projects have no lawn or turf grass areas N/A
 - No turf grass in lawns, medians, or other areas with any dimension of less than 8 feet L301
 - No turf grass in located on slopes of 20% or greater L301
- Plant Water-Wise**
 - Commercial projects are designed with 100% water-wise plants N/A
 - Residential, mixed-use, and institutional are designed with minimum 80% water-wise plants L301
 - Plant list includes botanical name, common name, and WUCOLS designation L301
 - Plans show total square feet and percent of water-wise, medium, high-water-using landscaping L301
- Mulch, Mulch, Mulch**
 - All appropriate landscaped areas will be covered with at least 3 inches of mulch L301 & L351
- Irrigate Efficiently**
 - Drip irrigation, using emitters with < 2 GPH, is provided on at least 25% of the landscaped area L201
 - Valves are separated for hydrozones based on plant water needs and sun/shade requirements L201
 - A weather-based irrigation controller with a rain shut-off sensor is provided PER OTHER PERMIT
 - Areas less than 8 feet are irrigated with bubblers, pop-up rotating nozzle, sub-surface, or drip L201
 - Irrigation systems are designed to avoid overspray and runoff L201
 - Sprinklers have matched precipitation rates within each valve and circuit L201
 - Sprinklers have uniform distribution, head-to-head spacing, and setbacks from paved areas L201
 - Check valves are provided at the low end of irrigation lines to prevent unwanted draining L201
 - Pressure regulators are provided for mainline, if necessary; inline regulators at each valve L201
- Minimize Steep Slopes**
 - Slope allows for water retention, creates swales, mimics natural flow, and maintains flow width N/A

I certify that the foregoing is true and correct and that verification will be necessary upon final inspection.

Signature:  Name: Stephen Carroll License # and Exp. Date: 3977 EXPIRATION DATE: 08/31/2025

IRRIGATION PLAN NOTE

THE IRRIGATION DESIGN PRESENTED IN THESE DOCUMENTS IS INTENDED TO BE DIAGRAMMATIC. ALL IRRIGATION EQUIPMENT, PIPING AND VALVE LOCATIONS, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION AND SHALL ONLY BE INSTALLED IN PLANTING AREAS. IRRIGATION CONTRACTOR SHALL INSTALL ALL REMOTE CONTROL VALVES, QUICK COUPLERS, AND GATE VALVES, IN SHRUB PLANTING AREAS OR AS APPROVED BY OWNER'S REPRESENTATIVE & THE LANDSCAPE IRRIGATION DESIGNER. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.

IRRIGATION SLEEVE AND CONDUIT NOTES

- SLEEVES ARE REQUIRED FOR ALL IRRIGATION PIPE AND CONTROL WIRE CONDUIT UNDER PAVING (TYPICAL). REFER TO IRRIGATION SLEEVE SIZES AND CONTROL WIRE CONDUIT CHARTS FOR APPROPRIATE SLEEVE AND CONDUIT SIZING.
- FOR DRAWING CLARITY, NOT ALL IRRIGATION SLEEVES ARE SHOWN BUT SHALL BE INSTALLED AND INCLUDED AS PART OF THE CONTRACTOR'S BID. ALSO, FOR DRAWING CLARITY, NOT ALL CONDUITS AND IRRIGATION SLEEVES ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION FOR SLEEVES AND CONDUITS OF APPROPRIATE SIZE UNDER ALL PAVED AREAS AS WELL AS ALL SLEEVES PIPES AND CONDUITS THAT ARE SHOWN ON THE DRAWINGS.
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL DIFFERENCES IN GRADE, LOCATION OF SEATWALLS, LOCATION OF RETAINING WALLS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL IRRIGATION WORK WITH THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, AND ALL OTHER SUBCONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF IRRIGATION RELATED SLEEVES THROUGH WALLS, STRUCTURES, UNDER ROADWAYS, PAVING, ETC.

OBSERVATION SCHEDULING

The landscape contractor shall schedule an irrigation site observation by the irrigation designer, and/or the owner's representative, which shall occur without at least 48 hours prior notification. The following items shall be reviewed:

- Pre-jobkick-off meeting with contractor, general contractor, and irrigation designer.
- Mainline, backflow preventer, master valves, flow sensors, booster pump installation and operation, installation review prior to backfilling trenches, irrigation mainline pressure test, etc. The entire sprinkler irrigation system shall be under full automatic operation for a period of seven days prior to any planting. For drip irrigation, drip tubing shall be installed immediately after planting. The contractor shall ensure water daily to planting areas that do not have irrigation. Contractor is responsible for plants that are immediately dying due to lack of water.
- Finalizing the location for the controller assemblies - landscape contractor shall coordinate with the irrigation designer to verify connection of flow sensors and associated equipment to each controller assembly and for certification/warranty of equipment.
- Irrigation coverage test - a dynamic pressure test shall be performed by the landscape contractor and shall be observed by the owner (or the owner's representative) and the irrigation designer for each valve during the irrigation coverage test.

CONTROL WIRE CONDUIT SIZING CHART

SLEEVE SIZE	2" MIN.	2-1/2"	3"	4"
WIRES IN SLEEVE	0-16	17-24	25-40	41-48

IRRIGATION SLEEVE SIZING CHART

PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
SLEEVE SIZE	3"	3"	3"	4"	4"	4"	6"

PRESSURE CALCULATIONS FOR DOMESTIC IRRIGATION

Project Name and/or Tract: 3239 CLIFF DRIVE
 Date and Source of Information: 7/7/2022 CITY OF SANTA BARBARA
 Name of Contact Person and Phone Number: ROBERT CHAKS 805.964.5392
 P.O.C. Water Meter #: 1
 Water Meter Size and Type: 1 1/2"
 Hydraulic Grade Level: 173.5 FT
 Water Meter Elevation: 173.5 FT
 Highest Head Elevation on the System: FURTHEST GREATEST DEMAND
 Basis for Calculations:

Remote Control Valve#: 23
 Size of Remote Control Valve: 1" 19 GPM
 Demand at Remote Control Valve:

QUANTITY	SIZE	DESCRIPTION	FLOW (GPM)	LOSS (PSI)
1	1 1/2"	Water Meter	19	0
1	1 1/2"	Backflow RP	19	12.0
-	-	Pressure Regulator	-	-
1	1 1/2"	Gate Valve(s)	19	0
1	1 1/2"	Gate Valve(s)	19	0
1	1 1/2"	Master Valve	19	0.4
1	1 1/2"	Flow Sensor	19	0
501'-0"	1 1/2"	Mainline	19	5.7
		Mainline		
		Mainline		
1	1"	Remote Control Valve	19	2.6
		Lateral Line Losses (10%)		2
		Other Losses (10%)		2
		Elevation Loss or Gain		14.4
		Total		39.24

Pressure Required to Operate Irrigation Head	40
Sub-Total Pressure Required for Irrigation System	80
Total Pressure Required for Irrigation System (Sub-Total Pressure + 25%)	99
Static Pressure Available	105
Residual Pressure	6
(Subtract Total Pressure from Static Pressure)	

GENERAL IRRIGATION NOTES

- The irrigation contractor shall be responsible for familiarizing themselves with all differences in grade, location of seatwalls, location of retaining walls, etc. The contractor shall be responsible for coordinating all irrigation work with the general contractor, electrical contractor, and all other subcontractors for the location and the installation of irrigation related sleeves through walls, structures, under roadways, paving, etc.
- The irrigation design presented in these documents is intended to be diagrammatic. All irrigation equipment, piping and valve locations, etc. shown within paved areas are for design clarification and shall only be installed in planting areas. Irrigation contractor shall install all remote control valves, quick couplers, and gate valves, in shrub planting areas or as approved by owner's representative & the landscape irrigation designer. Avoid any conflicts between the sprinkler system, planting and architectural features. Contractor to maintain mainline locations a minimum of 10 feet away from base of all trees.
- The irrigation system design is based upon the minimum operating pressure and the maximum flow demand shown on the irrigation drawings at each point of connection. The irrigation contractor shall verify water pressure prior to construction. Any difference between the water pressure indicated on the drawings and the actual pressure reading at the irrigation point of connection shall be immediately reported in writing to the owner's authorized representative. If the pressure differences are not immediately reported prior to beginning construction, the irrigation contractor shall assume full responsibility for all revisions to the irrigation system deemed necessary by the owner's representative and all costs associated with those revisions.
- When it is apparent that the landscape contractor in the field that obstructions, grade differences, or differences in the calculated area dimensions exist that may have not been considered in the design of the system, the irrigation contractor shall not willfully install the irrigation system as indicated on the construction drawings. The owner's authorized representative shall be notified in writing of any such obstructions or differences prior to beginning any irrigation installation. If notification is not received prior to beginning installation, the irrigation contractor shall assume full responsibility for all revisions to the irrigation system as deemed necessary by owner's representative and all costs associated with those revisions.
- The irrigation contractor shall be responsible for installing all control wire sleeving of sufficient size, under all paved areas in addition to the control wire sleeving shown on the drawings.
- All piping and equipment shall be installed per the irrigation details. Teflon tape or Teflon pipe dope shall be applied to all male PVC pipe threads on all irrigation valve assemblies.
- All pop-up style irrigation heads located in shrub or groundcover areas shall be installed so the top of the irrigation head is 1" above finish grade.
- All pop-up style irrigation heads to be located in turf areas shall initially be installed so the top of the irrigation heads are flush with the adjacent sidewalk or curb. Within 10 days of being notified by the owner's representative, the irrigation contractor shall be responsible for adjusting all irrigation heads so the top of the irrigation head is 1/2" above finish grade.
- The irrigation contractor shall be responsible for flushing and adjusting all irrigation heads for optimum performance and to prevent over spray onto areas not intended for irrigation. This shall include selecting the proper arc pattern, adjusting the spray radius of the irrigation head with PRS screens and/or also throttling the flow control at each valve to obtain the optimum operating pressure for each system.
- The irrigation contractor shall be responsible for adjusting the pressure regulator on each electric control valve so the irrigation head furthest and highest in elevation from its associated control valve functions within the operating pressure shown on the irrigation legend (not to exceed 5 PSI above the indicated operating pressure).
- When installing Rain Bird 1800 series nozzles that require arc patterns other than the standard arc patterns (e.g. 360°, 180°, and 90°), the contractor shall use the appropriate fixed arc pattern (e.g. 120°, 240°, 270°). The contractor shall use Rain Bird variable arc nozzles (VAN) when installing irrigation heads using Rain Bird 1800 series nozzles only when required pattern is not one of the fixed arc patterns. Select the radius of VAN nozzles to match site conditions. For example, use 8-VAN where an 8 foot radius is required or a 12-VAN where a 12 foot radius is required.
- The irrigation contractor shall be responsible for making field adjustments to the irrigation system by installing a quarter circle or half circle sprinkler head on each side of any vertical element (posts, street lights, trees, etc.) which prevents proper coverage by interfering with the spray pattern of the irrigation head. All adjustments shall be made at an additional cost to the owner.
- Drainage of irrigation water through spray head will not be allowed. Rain Bird SAM feature shall be used to prevent spray head drainage. During construction, the contractor shall change spray bodies from Rain Bird 1800-PRS to 1800-SAM-PRS for spray heads showing signs of draining after the irrigation system is operated from an ON to OFF position. Installation of Rain Bird SAM heads shall be included in the Bid Prices of the irrigation system.
- The irrigation contractor shall be responsible for making the final connection between the power source and the automatic controller. 120 volt electrical power source shall be provided by others at the automatic controller location.
- Adhesives, sealants and caulks shall meet local or regional air pollution control or South Coast AQMD rule 1168 VOC and statewide VOC standards.
- Contractor shall verify exterior mounted rain sensor location and provide wiring between rain sensor and controller.

IRRIGATION CONSTRUCTION NOTES

- The landscape contractor shall purchase and install one 1 1/2" domestic water meter located per the civil engineer's sewer & water plan and as shown on the installation plan. Verify that the static pressure is .105 PSI prior to construction. Contractor shall furnish and install mainline to the flanged gate valves, backflow preventer, quick couplers, master valve, and flow sensor per the irrigation legend and details. (Refer to the irrigation plans for sizing). Refer to irrigation legend and irrigation construction notes for model numbers. Install the flow sensor per the manufacturer's recommendations and details. Contractor shall furnish all materials and labor to execute and install the irrigation system per the irrigation plans.
- Install the gate valves, backflow preventer, master valves, flow sensors, and quick couplers within the shrub planting areas only.
- The flow sensor wire shall be manufactured by "Rain Master", model HEV-CAB-SEN. No field splices allowed between flow sensor and controller. All flow sensor wires shall be installed within a gray 1-1/2" DIA., SCH 40 PVC conduit. Each conduit shall have a separate flow sensor cable installed within it based on the corresponding controller assembly. Imperial Technical Services shall make the final connections from the flow sensor to the controller assemblies.
- Mainline shown in landscape areas is diagrammatic. Mainlines are intended to be installed within the shrub areas only. Any mainline, lateral, or control wires that run under landscape areas shall be installed in SCH. 40 PVC sleeves which shall be sized a minimum of twice the diameter of the actual pipe diameter. Refer to irrigation details for installation and depths of sleeving.

CONTROLLER INFORMATION

MANUFACTURER: RAINBIRD
 TYPE: ESP-LXME2 WITH (2) 12 STATION MODULES
 ASSEMBLED BY:
 CONTROLLER IDENTIFICATION: CONTROLLER PART NUMBER
 A ESP-LXME2 WITH (2) ESP-LXM-SM12 STATION
 INTERNET REQUIRED: YES, WIFI
 FLOW SENSOR CABLE: YES
 Install flow sensor cable in a 1 1/2" UL PVC SCH. 40 gray conduit.
 The 120 volt power supply connection to the irrigation controller assembly shall be the responsibility of the irrigation contractor. Refer to electrical plans for additional information. Final location of the irrigation controller assembly shall be approved by the owner's authorized representative prior to installation. All sprinkler heads shall be field adjusted to prevent over spray onto the irrigation controller assembly enclosure.
 The system is designed for the operation of one valve at a time per controller. The system has been designed for one valve opening and one valve closing.
 The controller shall be located as shown on the drawings or as directed by the owner's authorized representative.
 Contractor to determine best way to provide internet connectivity for controller in prioritized order per site conditions. Ethernet cable, WIFI, cellular. Components in controller to provide internet connectivity will vary.

IRRIGATION LEGEND

SYMBOL	RAD.	MANF.	MODEL NO. WITH NOZZLE SIZE & TYPE
○	6'-12"	Hunter	MP800SR-90/360 on PRO-06-PRS30-CV
○	8'-12"	Hunter	MP800SR-90/360 on PRO-06-PRS40-CV
○	8'-12"	Hunter	MP-CORNER on PRO-06-PRS30-CV
○	10'-14"	Hunter	MP-CORNER on PRO-12-PRS40-CV
○	8'-15"	Hunter	MP1000-90/270/360 on PRO-06-PRS40-CV
○	8'-15"	Hunter	MP1000-90/270/360 on PRO-12-PRS40-CV
○	13'-21"	Hunter	MP2000-90/270/360 on PRO-06-PRS40-CV
○	13'-21"	Hunter	MP2000-90/270/360 on PRO-12-PRS40-CV
○	22-30"	Hunter	MP3000-90/270/360 on PRO-06-PRS40-CV
○	22-30"	Hunter	MP3000-90/270/360 on PRO-12-PRS40-CV
□	5x30"	Hunter	MPSS-530 on PRO-06-PRS40-CV
□	5x15"	Hunter	MPCLS-515 on PRO-06-PRS40-CV
□	5x15"	Hunter	MPRC-515 on PRO-06-PRS40-CV
●	-	RainBird	RWS-B-C-1402 (50 GPM)
○	-	RainBird	1402 on 1802 w/ PA-80
	-	Netafim (Shrub)	Irrigation Dripine - Techline CV Dripine TLVCV-18
	-	Hunter (Shrub)	Irrigation Point Source - IH-06-10-CV w/ diffuser cap (HE-DIFF)
■	-	Netafim	Air Relief Valve
■	-	Netafim	TLSOV - Manual Flush Valve
⌋	-	Netafim	Drip Connector
WM	-	-	Existing Domestic Water Meter
WM	-	-	1 1/2" Potable Water - Sub Meter Per Civil
W	-	Wilkins	975XL - 1 1/2" Reduced Pressure Backflow Preventer
N	-	Nibco	T-111 Gate Valve - Line Size 2 1/2" and smaller.
MV	-	Superior	3300 - 1 1/2" Normally Open Master Valve
CS	-	Creative Sensor Technology	FSI-T15-SP3 Series: 1 1/2" PVC Flow Sensor
○	-	RainBird	33-DNP - 3/4" Quick Coupler Valve
○	-	RainBird	PESB-R PRS-D
○	-	RainBird	KCZ-PRB-100-COM - up to 25 GPM KCZ-PRB-150-COM - up to 35 GPM
□	-	King Bros.	Line Size Check Valve
○	-	RainBird	RSD-BEX - Rain Sensor
A	-	RainBird	Rain Bird ESP-LXME2 with (2) ESP-LXM-SM12
○	-	-	Spare Wire Pull Box
---	-	-	Existing Mainline
---	-	-	Mainline
---	-	-	Lateral Line
---	-	-	PVC Sleeves

IRRIGATION VALVE CALLOUT:



DESCRIPTION

DESCRIPTION	PSI	FLOW RATE IN GPM				DETAIL
		F	H	Q	A	
6" Pop-Up Rotary Nozzle	30	66	33	17	35	J / L251
6" Pop-Up Rotary Nozzle	40	78	42	23	43	J / L251
6" Pop-Up Rotary Nozzle @ 45°	30	-	-	-	-	J / L251
12" Pop-Up Rotary Nozzle on 9" Riser	40	-	-	-	-	J / L251
6" Pop-Up Rotary Nozzle	40	84	42	21	63	J / L251
12" Pop-Up Rotary Nozzle on 9" Riser	40	84	42	21	63	J / L251
6" Pop-Up Rotary Nozzle	40	148	77	43	110	J / L251
12" Pop-Up Rotary Nozzle on 9" Riser	40	148	77	43	110	J / L251
6" Pop-Up Rotary Nozzle	40	3.64	1.82	86	2.73	J / L251
12" Pop-Up Rotary Nozzle on 9" Riser	40	3.64	1.82	86	2.73	J / L251
6" Pop-Up Rotary Side Strip Nozzle	40	-	-	-	-	J / L251
6" Pop-Up Rotary Left Corner Strip Nozzle	40	-	-	-	-	J / L251
6" Pop-Up Rotary Right Corner Strip Nozzle	40	-	-	-	-	J / L251
Bubbler in Sleeve with Grate	30	50	-	-	-	K / L251
Flood Bubbler on 2" pop-up Spray Head	30	50	-	-	-	J / L251
Space lateral rows at 18" Dripper spacing at 18". Install 3" min - 6" max below grade per specifications. Application rate: 0.43 inch. Time to apply 1/4" - 36 minutes. Install Netafim air relief and manual flush valve per manufacturers specifications.	30	1.0 GPH Flow Rate				LM/N / L251
Point Source Emitter w/ diffuser cap on flexible 6" PVC riser. All laterals to use hard pipe drip system. To be installed on Schedule 40 PVC lateral and header. Install air relief and manual flush valve per manufacturer's specifications.	-	Install per manufacturers specifications.				S / L251
Bubbler in Sleeve with Grate	-	Install per manufacturers specifications.				LM / L251
Contractor to verify location and size of existing domestic water meter.	-	See the civil engineers plans for additional information.				-
Verify location in field prior to installation. Installed under separate permit.	-	Verify location in field prior to installation. Installed under separate permit.				A / L251
For mainline sizes 3" and larger, use Nibco F-615-SON, epoxy coated. Assemble with stainless steel hardware. Install in a 1 1/2" round valve box.	-	Master Valve to be installed in rectangle valve box adjacent to flow sensor. Installed under separate permit.				B / L251
Size per plan. Install per detail. See irrigation construction notes for additional information and model numbers. Installed under separate permit.	-	Quick coupler valve with locking rubber cover. Install in round Carson Valve Box per detail.				O / L251
Remote control valve, angle flow pattern, purple colored flow control handle, size per plan. Install in rectangle Carson Valve Box.	-	Remote control valve kit with pressure regulating basket filter. Install in rectangle Carson Valve Box per detail.				H / L251
Provide spring check valve when direction of water flow is uphill. Provide spring check valve when direction of flow is downhill. Install per manufacturer's specifications.	-	Rain Sensor. Verify location in field. Installed under separate permit.				R / L251
Irrigation controller assembly with flow sensing and ET capability located per irrigation plans. See irrigation construction notes for more information. Installed under separate permit.	-	Four (4) continuous spare control wires, blue in color and one (1) white common wire, 24" coil minimum.				H / L251
Protect in place.	-	Irrigation Mainline - PVC SCH. 40 IPS for mainline sizes 1" to 2". PVC Class 315 IPS for mainline sizes 2 1/2" and larger. Sleeve mainline per notes and details.				E / F / L251
Lateral Pipe - Minimum pipe size shall be 3/4" - size laterals per plan. PVC SCH. 40 IPS for sizes 3/4" to 2 1/2". PVC Class 315 IPS for sizes 3" and larger.	-	PVC SCH. 40 IPS - sleeves shall be installed for any mainline, lateral, or wires crossing under landscape per irrigation construction notes. Size to be two times the pipe diameter or wire bundle.				E / F / L251
PLANT MATERIAL ABBREVIATIONS:	DOMESTIC WATER POINT OF CONNECTION EQUIPMENT SIZES:					
PLANT TYPE:	P.O.C. #					
TF TURF	WM	BS	MV	FS	POC = WATER METER	
SB SHRUB/GROUNDCOVER	XX	XX	XX	XX	WM = WATER METER	
TR TREES	CONTROLLER		BS = BASKET STRAINER			
PT POTS	CONTROLLER		MV = MASTER VALVE			
	CONTROLLER		FS = FLOW SENSOR			

WATER EFFICIENT LANDSCAPE WORKSHEET

Reference Evapotranspiration (ET₀) 40.6 Project ETAF 0.55

Valve #	Hydrozone # /Planting Descriptions ^a	Plant Factor (PF)	Irrigation Method ^b	Irrigation Efficiency (IE) ^c	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^d
Regular Landscape Areas								
1	Low Water Use Plants	0.2	Bubbler	0.81	0.25	264	65.19	1,640.84
2	Low Water Use Plants	0.2	Drip	0.81	0.25	659	162.72	4,095.89
3	Low Water Use Plants	0.2	Drip	0.81	0.25	357	88.15	2,218.87
4	Low Water Use Trees	0.2	Bubbler	0.81	0.25	36	8.89	223.75
Subtotals						1,316	324.94	8,179.35
Special Landscape Areas								
N/A						0	0	0
Subtotals						0	0	0
Total Landscape Area						1,316		
ETWU Total								8,179
ETWU (in acre-feet)								0.03
Maximum Allowed Water Allowance (MAWA)^e								18,219
MAWA (in acre-feet)								0.05513498

^a Hydrozone/Planting Description
 E.g.
 1) Front Lawn
 2) Low water-use plantings
 3) Medium water-use planting

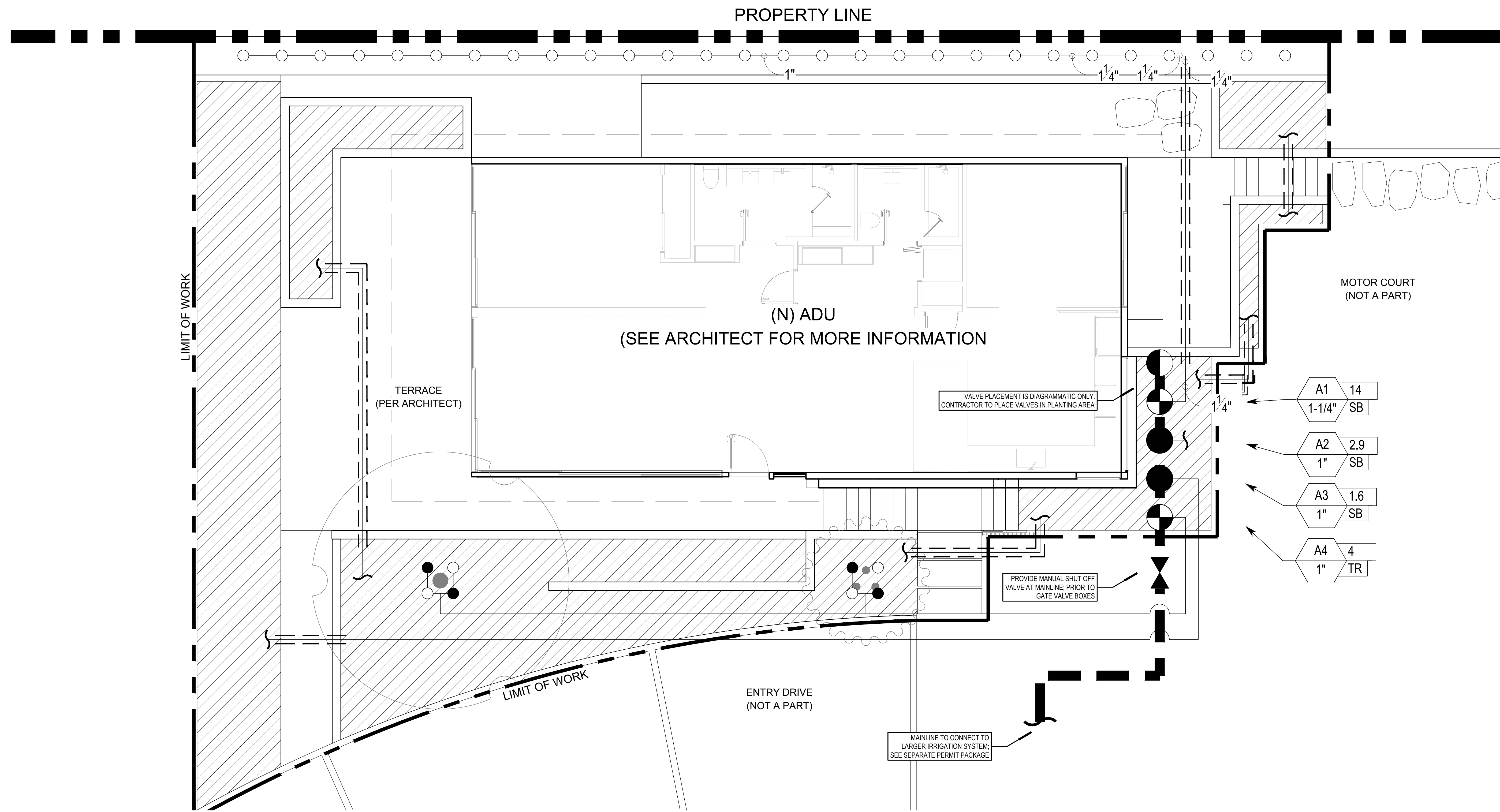
^b Irrigation Method
 Overhead spray or drip
 .75 for spray head
 .81 for drip

^c Irrigation Efficiency
 .75 for spray head
 .81 for drip

^d ETWU (Annual Gallons Required) = ET₀ x 0.62 x ETAF x Area
 where 0.62 is conversion factor that converts acre-inches per acre per year to gallon per square foot per year.

^e MAWA (Annual Gallons Allowed) = (ET₀) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
 where 0.62 is conversion factor that converts acre-inches per acre per year to gallon per square foot per year. LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is 0.55 for residential areas and 0.45 for non-residential areas

ETAF Calculations	
Regular Landscape Areas	
Total ETAF x Area	324.94
Total Area	1316
Average ETAF	0.25
All Landscape Areas	
Total	



SLEEVE SIZE	2" MIN.	2-1/2"	3"	4"
WIRES IN SLEEVE	0-16	17-24	25-40	41-48

PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
SLEEVE SIZE	3"	3"	3"	4"	4"	4"	6"

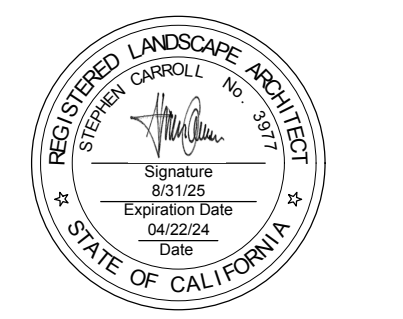
IRRIGATION PLAN NOTE
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SYMBOL	DESCRIPTION
(WM)	Existing Domestic Water Meter
(WM)	1 1/2" Potable Water - Sub Meter Per Civil
(W)	Wilks 975XL - 1 1/2" Reduced Pressure Backflow Preventer
(N)	Nibco T-111 Gate Valve - Line Size 2 1/2" and smaller
(MV)	Superior 3300 - 1 1/2" Normally Open Master Valve
(FS)	Creative Sensor Technology FSJ-T15-SP3 Series: 1 1/2" PVC Flow Sensor
(C)	RainBird 33-DNP - 3/4" Quick Coupler Valve
(P)	RainBird PESB-R PRS-D
(X)	RainBird X-CZ-PRB-100-COM up to 25 GPM X-CZ-PRB-150-COM up to 35 GPM
(K)	King Bros. Line Size Check Valve
(R)	RainBird RSD-BEX - Rain Sensor
(L)	RainBird Rain Bird ESP-LXME2 with (2) ESP-LXM-SM12
(S)	Spare Wire Pull Box
(---)	Existing Mainline
(- - - -)	Mainline
(---	Lateral Line
(- - - - -)	PVC Sleeves

SYMBOL	RAD.	MANF.	MODEL NO. WITH NOZZLE SIZE & TYPE
(O)	6-12"	Hunter	MP900SR-90/360 on PRO-06-PRS40-CV
(O)	6-12"	Hunter	MP900SR-90/360 on PRO-06-PRS40-CV
(O)	6-12"	Hunter	MP-CORNER on PRO-06-PRS30-CV
(O)	10-14"	Hunter	MP-CORNER on PRO-12-PRS40-CV
(O)	8-15"	Hunter	MP1000-90/270/360 on PRO-06-PRS40-CV
(O)	8-15"	Hunter	MP1000-90/270/360 on PRO-12-PRS40-CV
(O)	13-21"	Hunter	MP2000-90/270/360 on PRO-06-PRS40-CV
(O)	13-21"	Hunter	MP2000-90/270/360 on PRO-12-PRS40-CV
(O)	22-30"	Hunter	MP3000-90/270/360 on PRO-06-PRS40-CV
(O)	22-30"	Hunter	MP3000-90/270/360 on PRO-12-PRS40-CV
(O)	5x30"	Hunter	MPS-530 on PRO-06-PRS40-CV
(O)	5x15"	Hunter	MPLCS-515 on PRO-06-PRS40-CV
(O)	5x15"	Hunter	MPLCS-515 on PRO-06-PRS40-CV
(O)	-	RainBird	RWS-B-C-1402 (50 GPM)
(O)	-	RainBird	1402 on 1802 w/ PA-80
(Hatched)	Netafirm (Shrub)	Netafirm	Irrigation Dripine - Technine CV Dripine TLCV-16
(Cross-hatched)	Hunter (Shrub)	Hunter	Irrigation Point Source - IH-06-10-CV w/ diffuser cap (HE-DIFF)
(Square)	Netafirm	Netafirm	Air Relief Valve
(Triangle)	Netafirm	Netafirm	TLSOV - Manual Flush Valve
(Circle)	Netafirm	Netafirm	Drip Connector

Station No.	Plant Type	Valve Size
X-X	GPM	3/4"
X-X	GPM	1"
X-X	GPM	1 1/4"
X-X	GPM	1 1/2"
X-X	GPM	2"
X-X	GPM	2 1/2"
X-X	GPM	3"

NOTE: THE LATERAL SIZE BETWEEN TWO IDENTICAL TCK MARKS SHALL BE THE SAME. MINIMUM PIPE SIZE IS 3/4"



21108B1	TEAM
PIC	SC
PA	SS
PM	EPT

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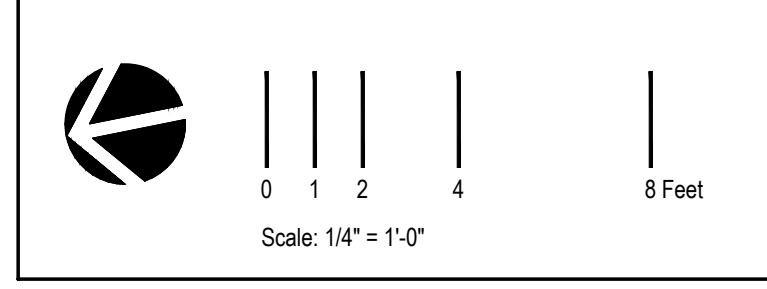
DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23
ADU CDP RESUBMITTAL	02/06/24
ADU CDP RESUBMITTAL	04/22/24

NO.	DESCRIPTION	DATE

IRRIGATION PLAN AND NOTES - ADU

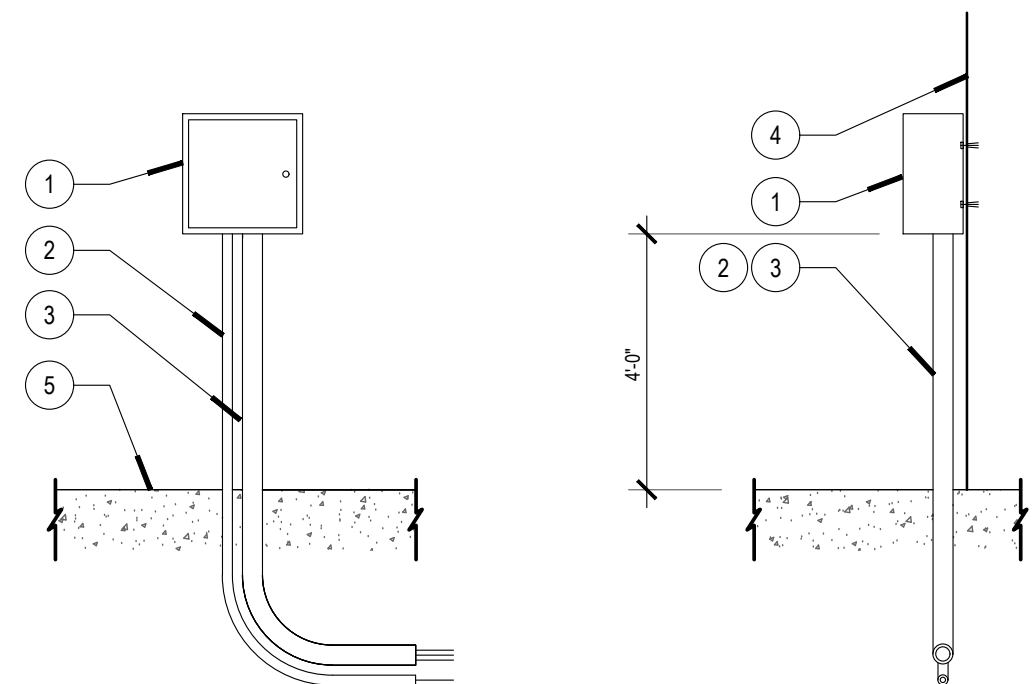
L201

REFER TO SHEET L351 FOR PLANTING NOTES AND DETAILS



INSTALLED UNDER
SEPARATE PERMIT

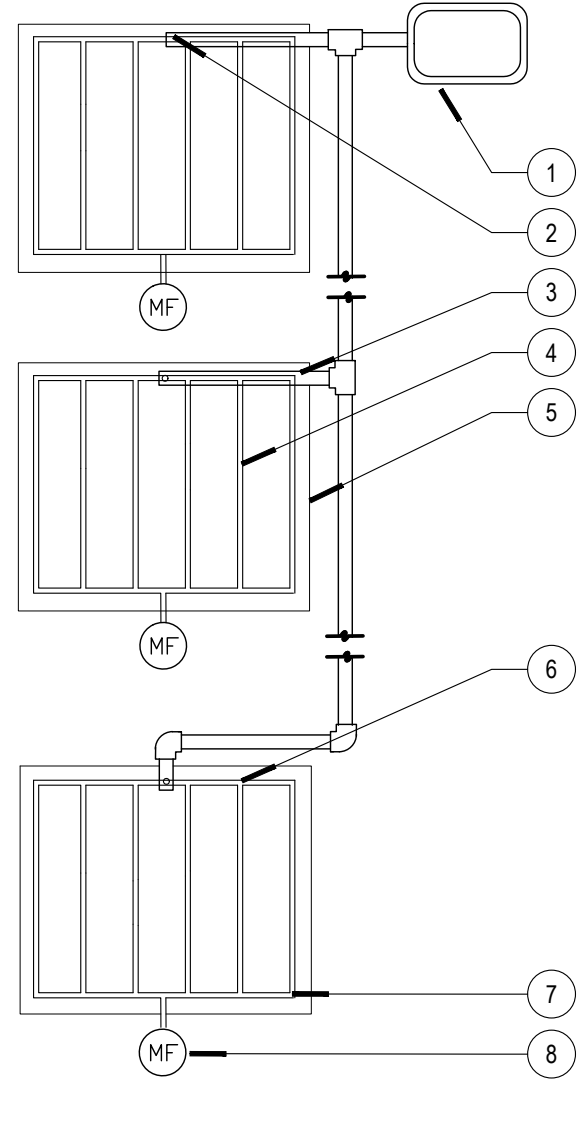
- IRRIGATION CONTROLLER, PER PLAN, MOUNT TO WALL PER MANUF. SPECS
 - SCH 80 PVC CONDUIT, SIZE AS REQ., TO 120V POWER SUPPLY
 - SCH 80 PVC CONDUIT, SIZE AS REQ., FOR IRRIGATION CONTROL WIRES. PROVIDE PVC SWEEP ELL BELOW GRADE
 - FACE OF WALL, PER PLAN
 - FINISH GRADE
- NOTES:
A. INSTALL ALL WIRING PER LOCAL CODE
B. ALL CONDUIT ABOVE GRADE TO BE SCH 80 PVC OR RIGID GALV. STEEL



Q Wall Mounted Controller
Scale: 1"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

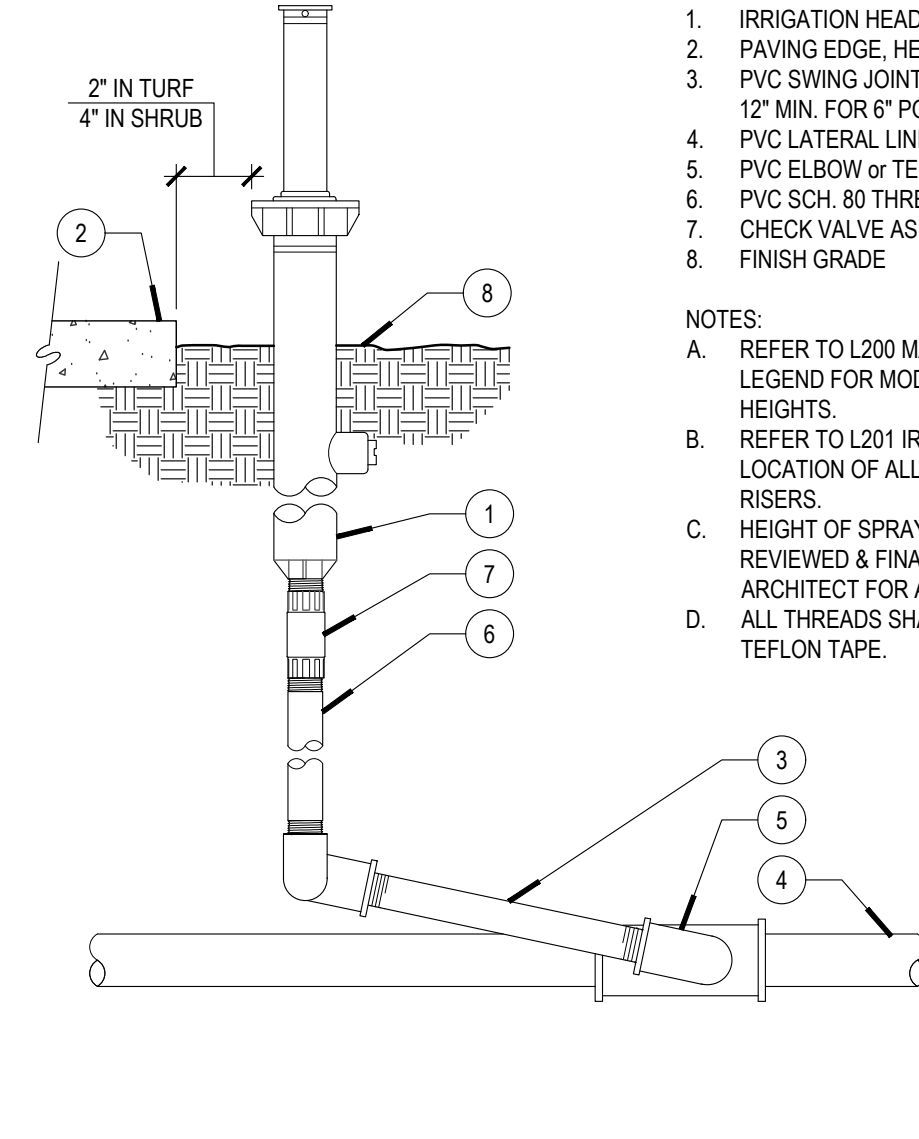
- REMOTE CONTROL VALVE WITH DISC FILTER AND PRESSURE REGULATING VALVE
 - DRIP TUBING START CONNECTION MALE ADAPTER
 - PVC OR POLY SUPPLY HEADER
 - DRIP TUBING, SEE LEGEND FOR EMITTER AND LATERAL LINE SPACING
 - ISLAND PERIMETER
 - DRIP TUBING TEE
 - DRIP TUBING ELL
 - MANUAL FLUSH VALVE PLUMBED TO DRIP TUBING
- NOTES:
A. PROVIDE AIR RELIEF VALVE PER IRRIGATION LEGEND & MANUFACTURER'S SPECIFICATIONS.



M Dripline Island Layout
Scale: NTS

INSTALLED UNDER
SEPARATE PERMIT

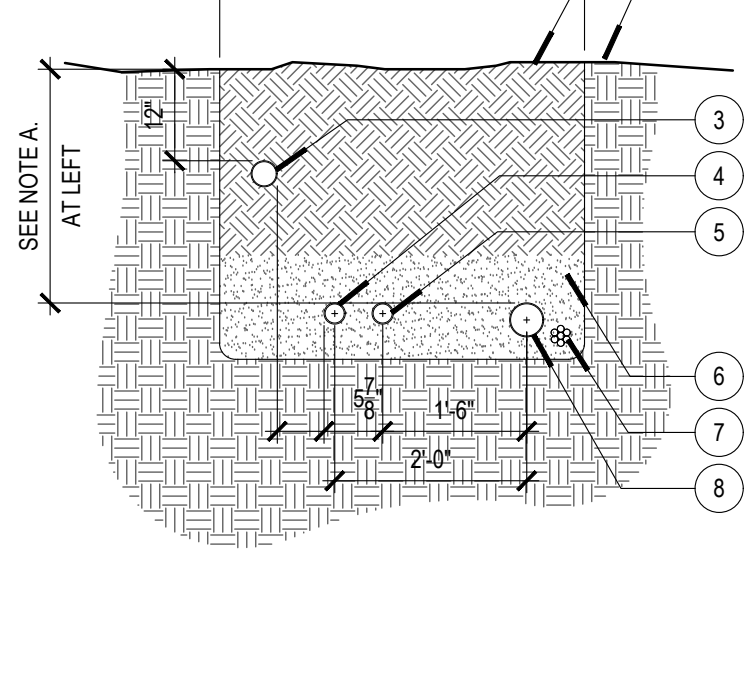
- IRRIGATION HEAD PER PLAN
 - PAVING EDGE, HEADER OR WALL
 - PVC SWING JOINT - 1/8" MIN. FOR 12" POPUPS & 12" MIN. FOR 6" POPUPS
 - PVC LATERAL LINE
 - PVC ELBOW OR TEE
 - PVC SCH. 80 THREADED RISER
 - CHECK VALVE AS REQUIRED
 - FINISH GRADE
- NOTES:
A. REFER TO L200 MASTER CONSTRUCTION LEGEND FOR MODEL, MANUFACTURER AND HEIGHTS.
B. REFER TO L201 IRRIGATION PLAN FOR LOCATION OF ALL POPUP SPRAY HEADS WITH RISERS.
C. HEIGHT OF SPRAY HEAD ABOVE GRADE TO BE REVIEWED & FINALIZED WITH LANDSCAPE ARCHITECT FOR APPROVAL.
D. ALL THREADS SHALL BE WRAPPED WITH TEFLON TAPE.



I Popup Spray Head with Riser
Scale: 1 1/2"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

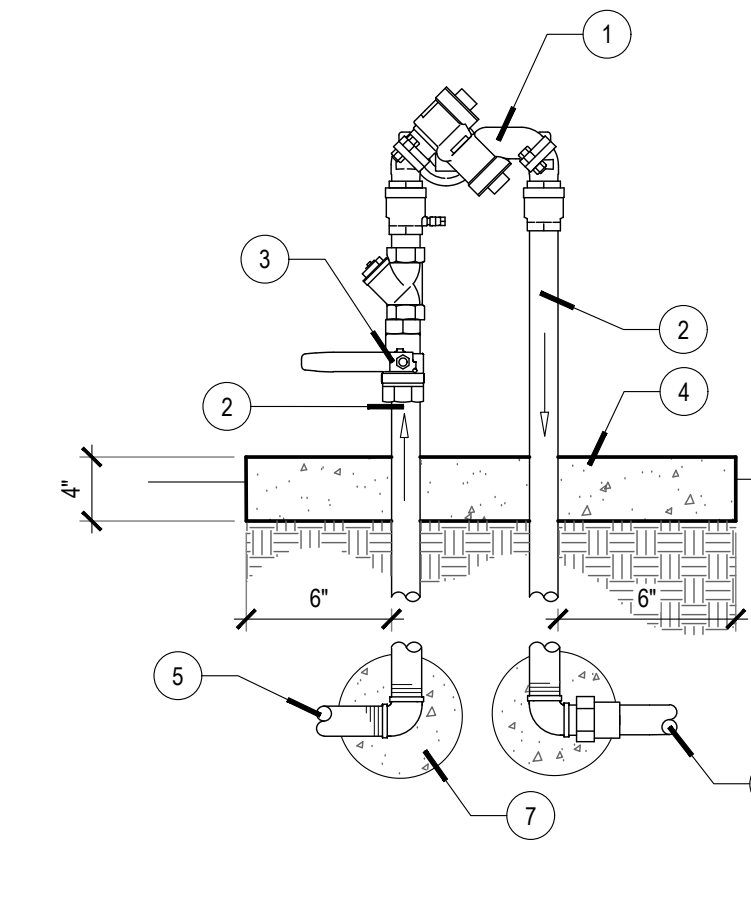
- REFER TO IRRIGATION SPECS FOR BACKFILL AND COMPACTION REQUIREMENTS
 - FINISH GRADE
 - NON-PRESSURIZED LATERAL LINE PIPING
 - COMMUNICATION CABLE CONDUIT (WHERE REQUIRED)
 - FLOW SENSOR CABLE AND CONDUIT
 - APPROVED TOP SOIL OR SAND BACKFILL - PROVIDE 1" UNDER PIPE AND 5" ABOVE PIPE
 - CONTROL WIRES BUNDLED AND TAPED AT 10'-0" INTERVALS - INSTALL ADJACENT TO MAINLINE PRESSURIZED MAINLINE PIPING
- NOTES:
A. MINIMUM BACKFILL DEPTHS FROM FINISH GRADE TO TOP OF MAINLINE SHALL BE AS FOLLOWS:
- 24" IN PLANTING AREAS
- 36" UNDER PAVED AREAS
B. ALL PLASTIC PIPING SHALL BE SNAKED IN TRENCHES
C. TIE A LOOSE 20' LOOP IN WIRING AT ANY CHANGE IN DIRECTION GREATER THAN 30°. UNITE ANY LOOPS AFTER ALL CONNECTIONS HAVE BEEN MADE



E Trenching Detail
Scale: 1/2"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

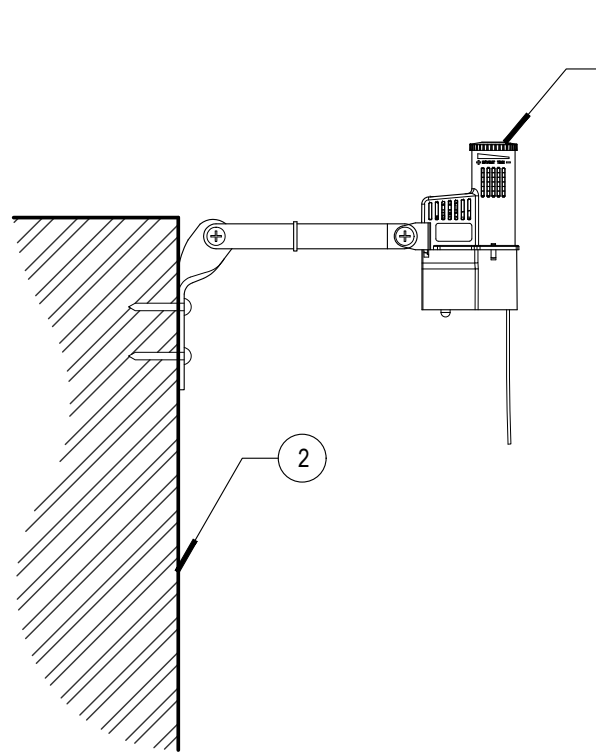
- REDUCED PRESSURE TYPE BACKFLOW PER LEGEND
 - BRASS RISER
 - BALL VALVE, INLET SIDE
 - CONCRETE BASE
 - FRONT POINT OF CONNECTION - ADAPT AS REQUIRED
 - TO IRRIGATION SYSTEM - ADAPT AS REQUIRED
 - CONCRETE TRESTLE BLOCK
 - BRASS 90 DEG ELL, TYP.
- NOTES:
A. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.
B. CONFIRM EQUIPMENT LOCATIONS WITH OWNERS REPRESENTATIVE, ARCHITECT, AND LANDSCAPE ARCHITECT.



A Reduced Pressure Backflow Preventer
Scale: NTS

INSTALLED UNDER
SEPARATE PERMIT

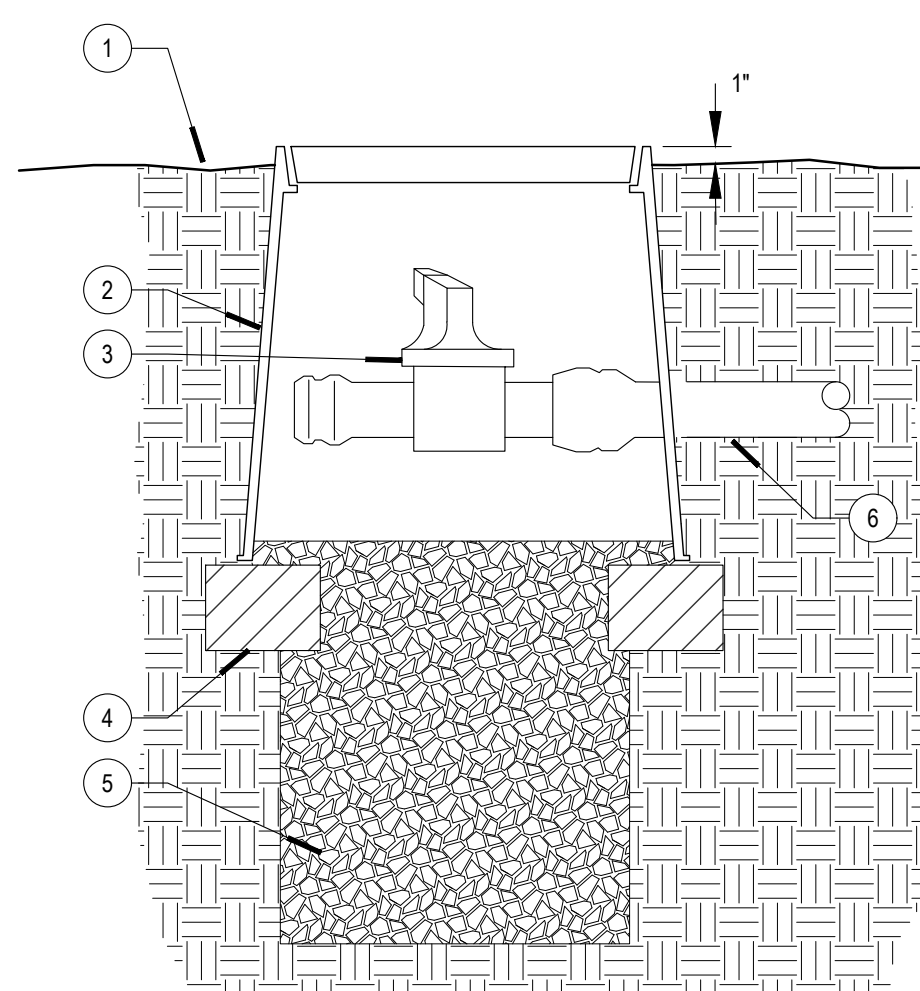
- WIRELESS RAIN-CLIK RAIN SENSOR
 - MOUNTING SURFACE
- NOTES:
A. MOUNT SENSOR ON A SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY. NO MORE THAN 1,000" FROM RECEIVER UNIT.
B. RECEIVER UNIT WILL BE PREASSEMBLED INSIDE CONTROLLER ENCLOSURE.
C. INSTALL PER MANUFACTURER'S SPECIFICATIONS.



R Wireless Rain-Clk Sensor
Scale: 3"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

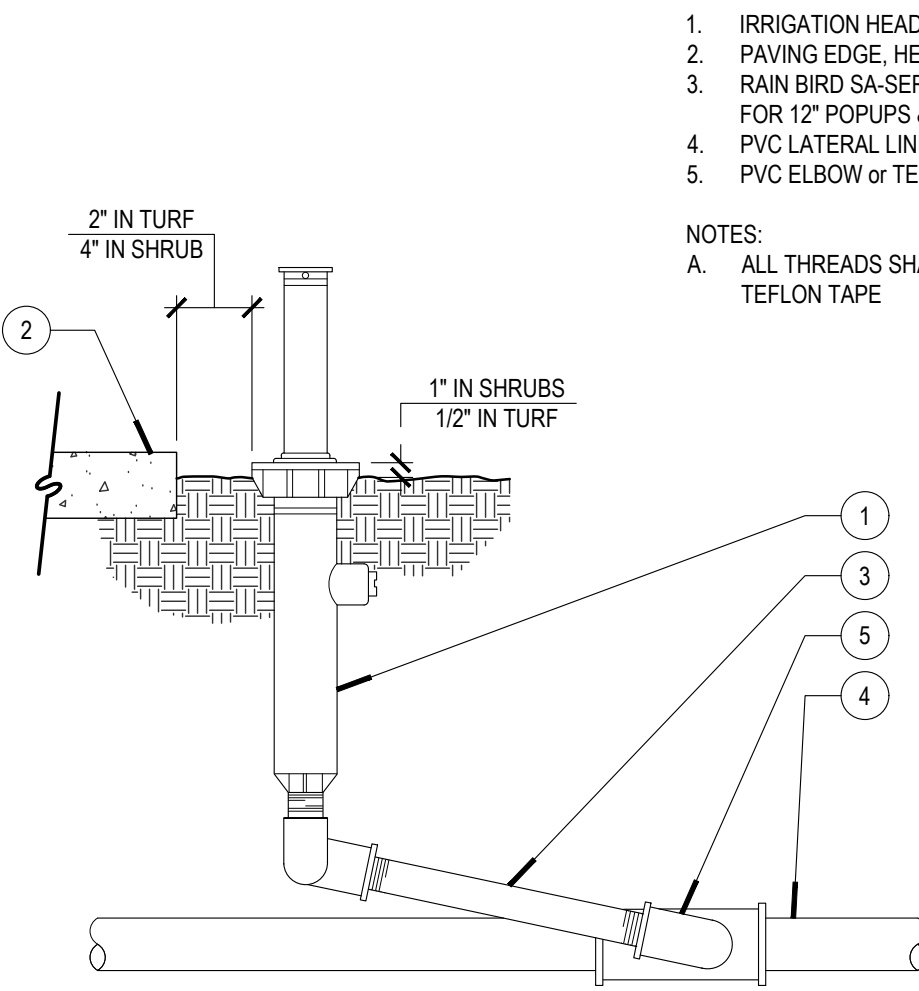
- FINISH GRADE
- VALVE BOX, SEE SPECS
- LINE FLUSHING VALVE (T/SO)
- BRICK SUPPORTS (3)
- 3/4" GRAVEL SUMP (1 CUBIC FT.)
- 17mm PVC LATERAL (OR EXHAUST HEADER)



N Manual Line Flushing Valve - Plumbed to PVC
Scale: NTS

INSTALLED UNDER
SEPARATE PERMIT

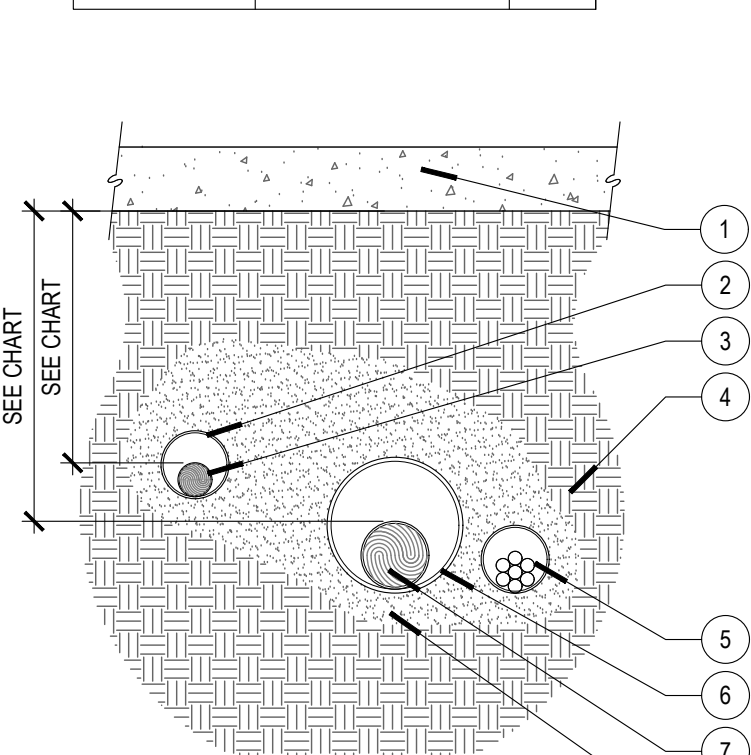
- IRRIGATION HEAD PER PLAN
 - PAVING EDGE, HEADER OR WALL
 - RAIN BIRD SA-SERIES SWING JOINT - 1/8" MIN. FOR 12" POPUPS & 12" MIN. FOR 6" POPUPS
 - PVC LATERAL LINE
 - PVC ELBOW OR TEE
- NOTES:
A. ALL THREADS SHALL BE WRAPPED WITH TEFLON TAPE



J Popup Spray Head - Typical Detail
Scale: 1 1/2"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

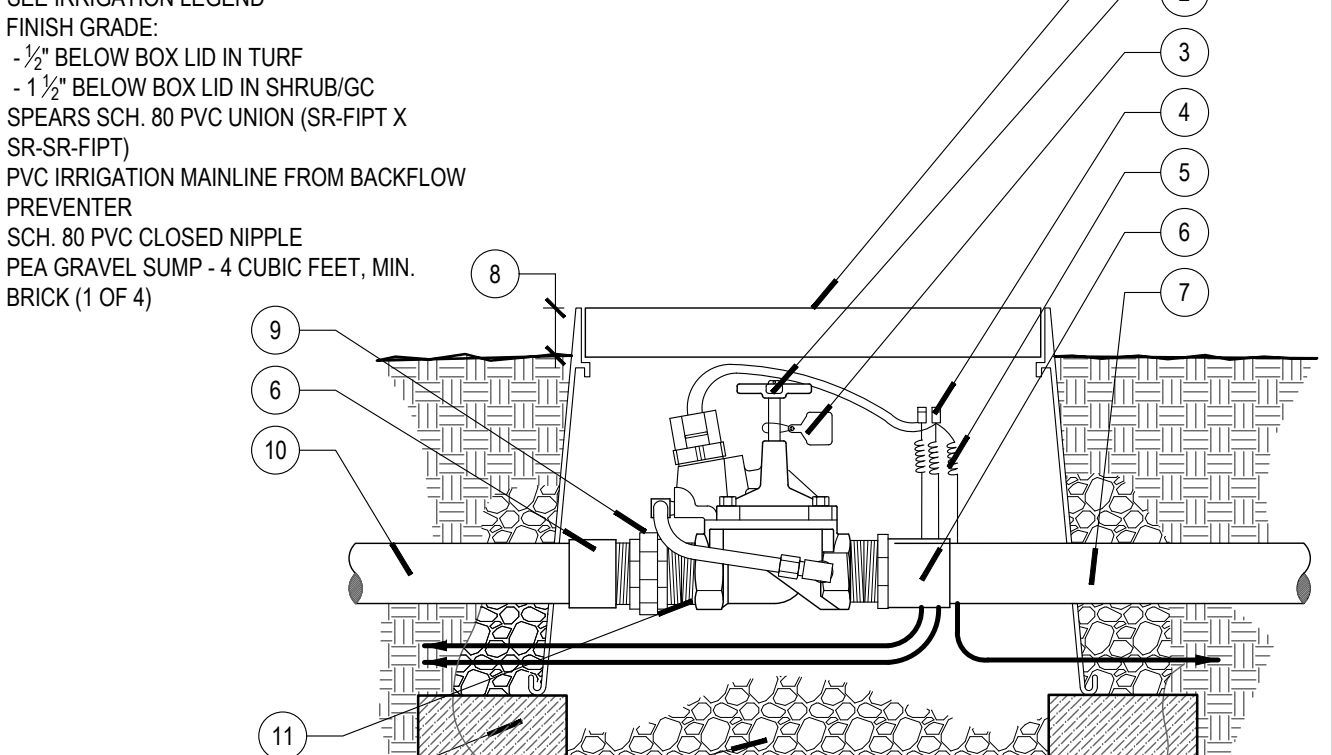
- | LINE TYPE | LOCATION | DEPTH |
|----------------------|-------------------|-------|
| PRESSURIZED MAINLINE | IN LANDSCAPE | 24" |
| LATERAL LINES | UNDER VEH. PAVING | 36" |
| LATERAL LINES | IN LANDSCAPE | 18" |
| LATERAL LINES | UNDER VEH. PAVING | 30" |
- VEHICULAR or PEDESTRIAN PAVING - REFER TO CONSTRUCTION LAYOUT PLANS FOR SPECIFIC CONSTRUCTION
 - LATERAL LINE SLEEVING SHALL BE SCH. 40 PVC - SLEEVE DIA. SHALL BE 2 x LATERAL DIA.
 - LATERAL LINE - REFER TO SPECIFICATIONS
 - 90% COMPACTED TRENCH BACKFILL
 - CONTROL WIRE BUNDLE SLEEVING SHALL BE SCH. 40 PVC PIPE
 - MAINLINE SLEEVING SHALL BE SCH. 40 PVC PIPE - SLEEVE DIA. SHALL BE 2 x MAINLINE DIA.
 - MAINLINE - REFER TO SPECIFICATIONS
 - SAND BACKFILL - 2" BASE & 6" OF COVER, MIN.
- NOTES:
A. ALL IRRIGATION WIRES, LATERALS AND MAINLINE SHALL BE PLACED IN SLEEVES
B. ALL SLEEVING LOCATIONS & SIZES WITH HARDSCAPE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION
C. ALL SLEEVES SHALL EXTEND A MINIMUM OF 12" BEYOND THE EDGE OF THE HARDSCAPE SURFACE



F Irrigation Sleeving
Scale: 1"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

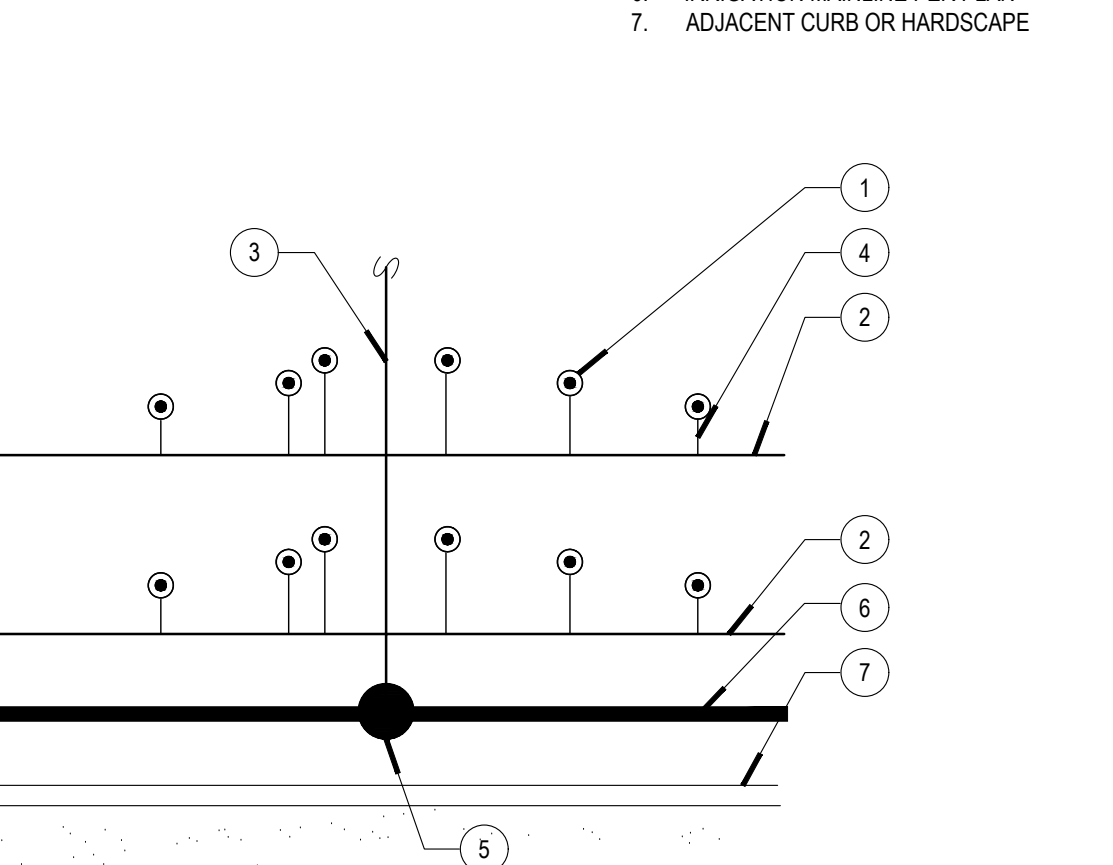
- PLASTIC VALVE BOX
- MASTER VALVE PER LEGEND
- CHRISTY'S TAG #8-MAX-PC-RCP2
- WATERPROOF CONNECTOR - REFER TO IRRIGATION SPECIFICATIONS
- CONTROL AND MASTER VALVE WIRES WITH EXPANSION LOOP
- SCH. 80 PVC MALE ADAPTER
- PVC IRRIGATION MAINLINE TO FLOW SENSOR - SEE IRRIGATION LEGEND
- FINISH GRADE
- 3/2" BELOW BOX LID IN TURF
- 3/2" BELOW BOX LID IN SHRUB/CC
- SCH. 80 PVC UNION (SR-FPT X SR-SR-FPT)
- PVC IRRIGATION MAINLINE FROM BACKFLOW PREVENTER
- SCH. 80 PVC CLOSED NIPPLE
- PEA GRAVEL SUMP - 4 CUBIC FEET, MIN.
- BRICK (1 OF 4)



B Master Valve
Scale: 3"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

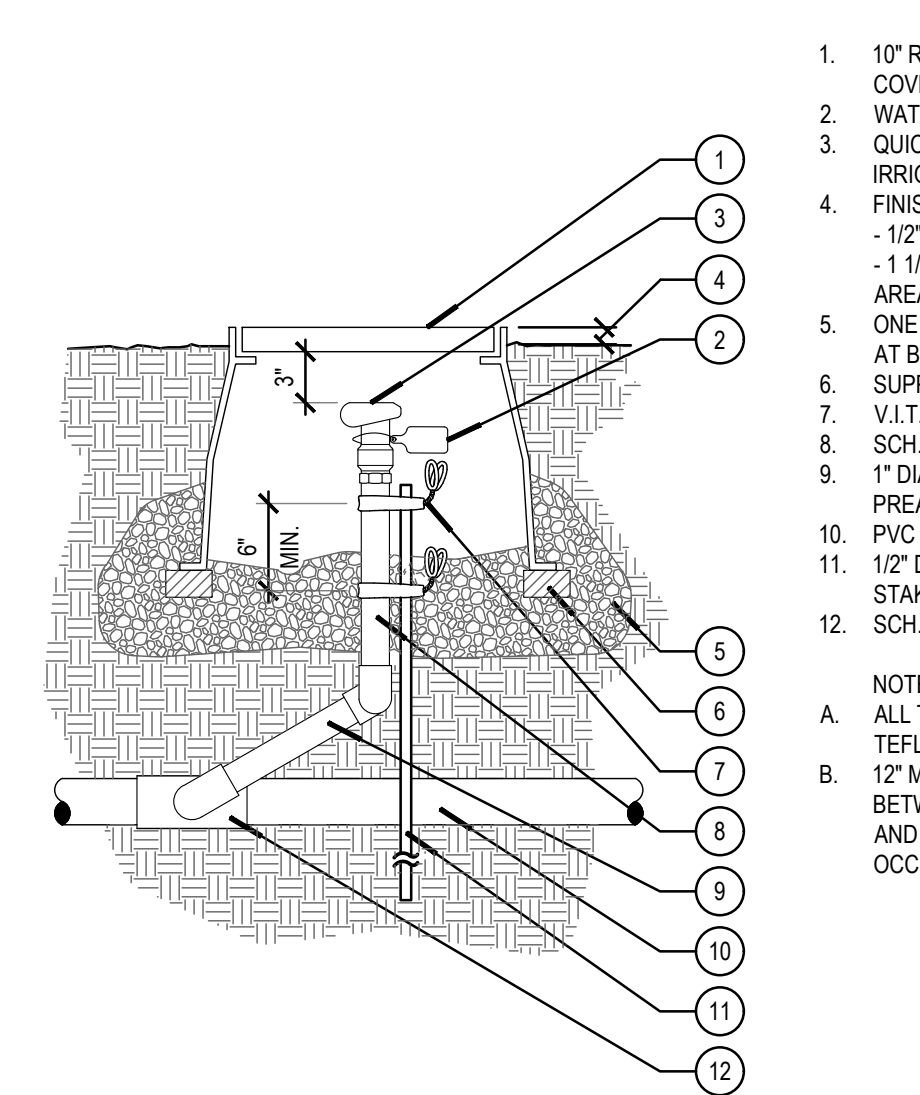
- DRIP EMITTER PER IRRIGATION PLAN AND LEGEND, SEE DETAIL ML251
 - BURIED SCH. 40 PVC SUPPLY PIPE
 - IRRIGATION LATERAL LINE PER PLAN
 - PVC SCH. 80 NIPPLE
 - REMOTE CONTROL DRIP VALVE PER PLAN
 - IRRIGATION MAINLINE PER PLAN
 - ADJACENT CURB OR HARDSCAPE
- NOTES:
A. CONTRACTOR TO SUBMIT POINT SOURCE EMITTER LAYOUT FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLATION



S Point Source System Layout
Scale: NTS

INSTALLED UNDER
SEPARATE PERMIT

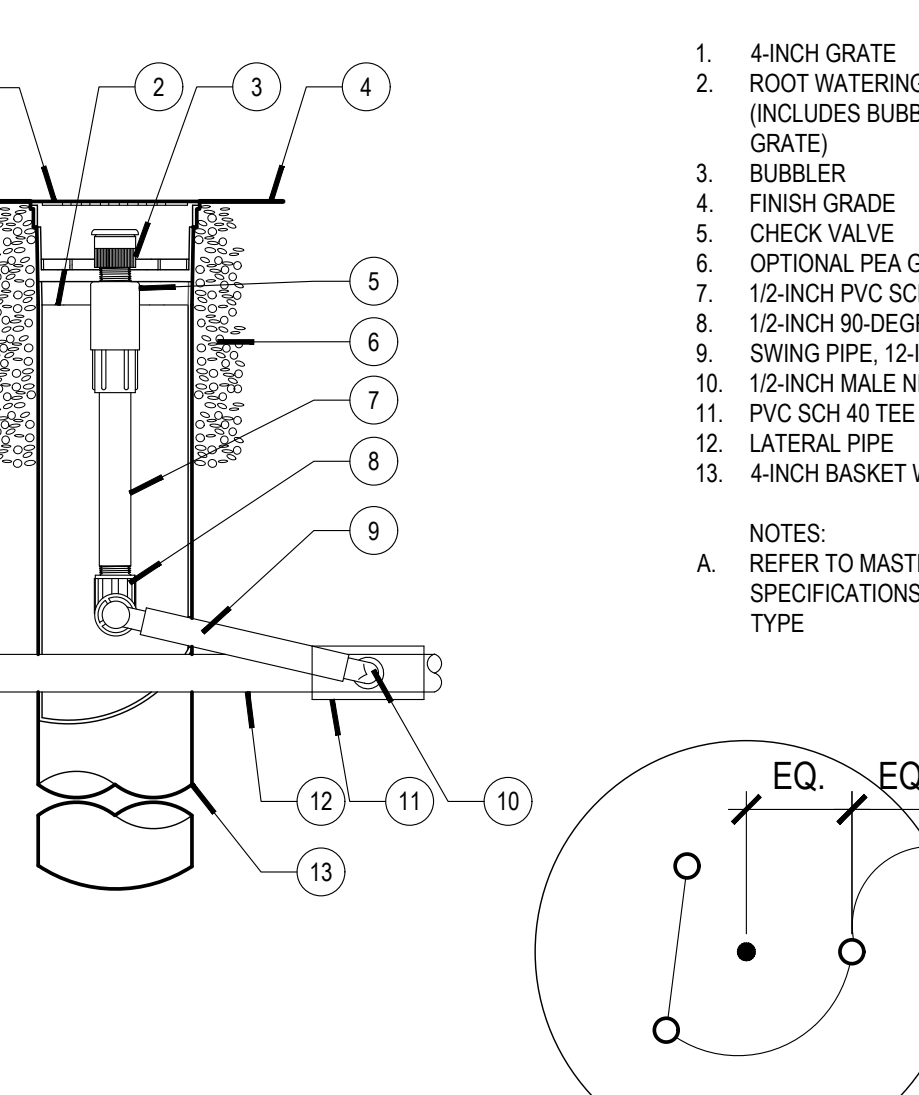
- 10" ROUND VALVE BOX WITH BOLT DOWN COVER, HEAT BRANDED "GV"
 - WATER ID TAG
 - QUICK COUPLER VALVE - REFER TO IRRIGATION LEGEND
 - FINISH GRADE
 - 1/2" BELOW BOX LID IN TURF AREAS
- 1/2" BELOW BOX LID IN SHRUB/CC AREAS
 - ONE (1) CU. FT. (MIN.) OF 3/4" CRUSHED ROCK AT BASE OF VALVE BOX
 - SUPPORT - COMMON RED BRICK
 - V.I.T. STAINLESS STEEL TIES - TYPICAL
 - SCH. 80 PVC NIPPLE - LENGTH AS REQUIRED
 - 1" DIA. SCH. 80 PVC SWING JOINT - PREASSEMBLED BY SPEARS
 - PVC MAINLINE
 - 1/2" DIA. x 24" LENGTH GALVANIZED PIPE STAKE
 - SCH. 80 PVC TEE FITTING
- NOTES:
A. ALL THREADS SHALL BE WRAPPED WITH TEFLON TAPE
B. 12" MIN. CLEAR SPACE SHALL BE MAINTAINED BETWEEN THE QUICK COUPLER VALVE BOX AND ANY ADJACENT HARDSCAPE - WHERE OCCURS



O Quick Coupler Valve
Scale: 3/4"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

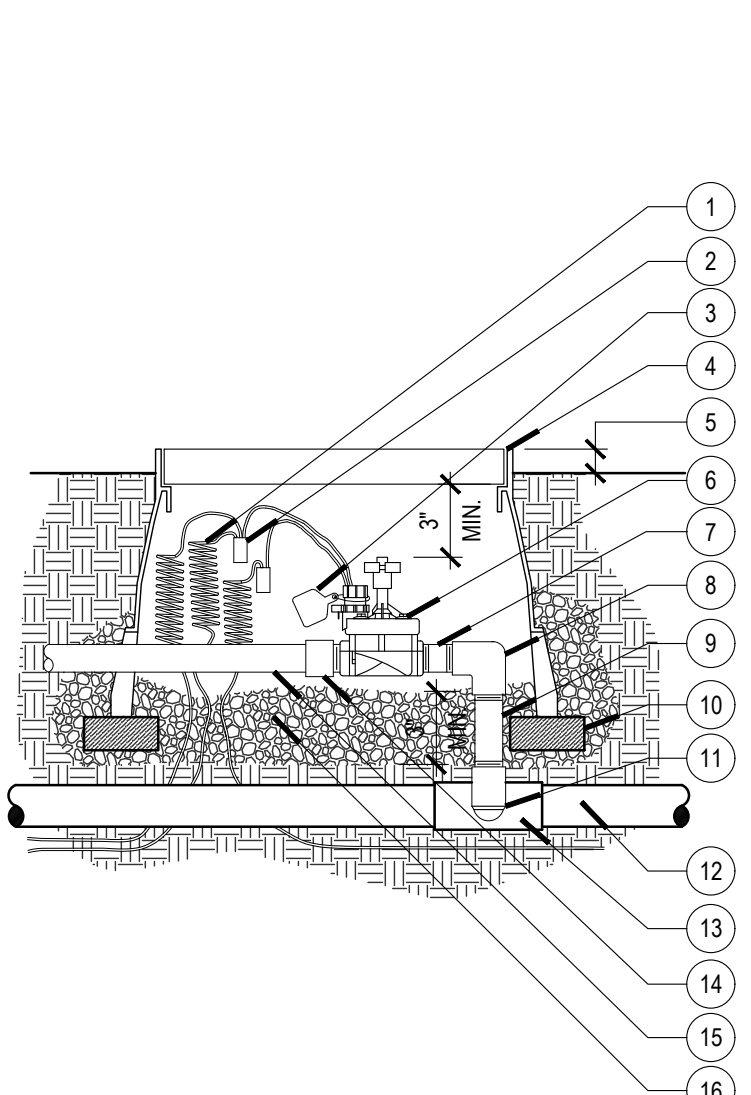
- 4-INCH GRATE
 - WATERING SERIES: RAINBIRD RWS (INCLUDES BUBBLER, CHECK VALVE AND GRATE)
 - BUBBLER
 - FINISH GRADE
 - CHECK VALVE
 - OPTIONAL PEA GRAVEL FOR SANDY SOILS
 - 12-INCH PVC SCH. 80 NIPPLE
 - 12-INCH 90-DEGREE ELBOW
 - SWING PIPE, 12-INCH SWING ASSEMBLY
 - 11" DIA. SCH. 80 PVC UNION
 - PVC SCH. 40 TEE OR ELL
 - LATERAL PIPE
 - 4-INCH BASKET WEAVE CANISTER
- NOTES:
A. REFER TO MASTER IRRIGATION LEGEND AND SPECIFICATIONS FOR EQUIPMENT MODEL AND TYPE



K Root Watering System
Scale: NTS

INSTALLED UNDER
SEPARATE PERMIT

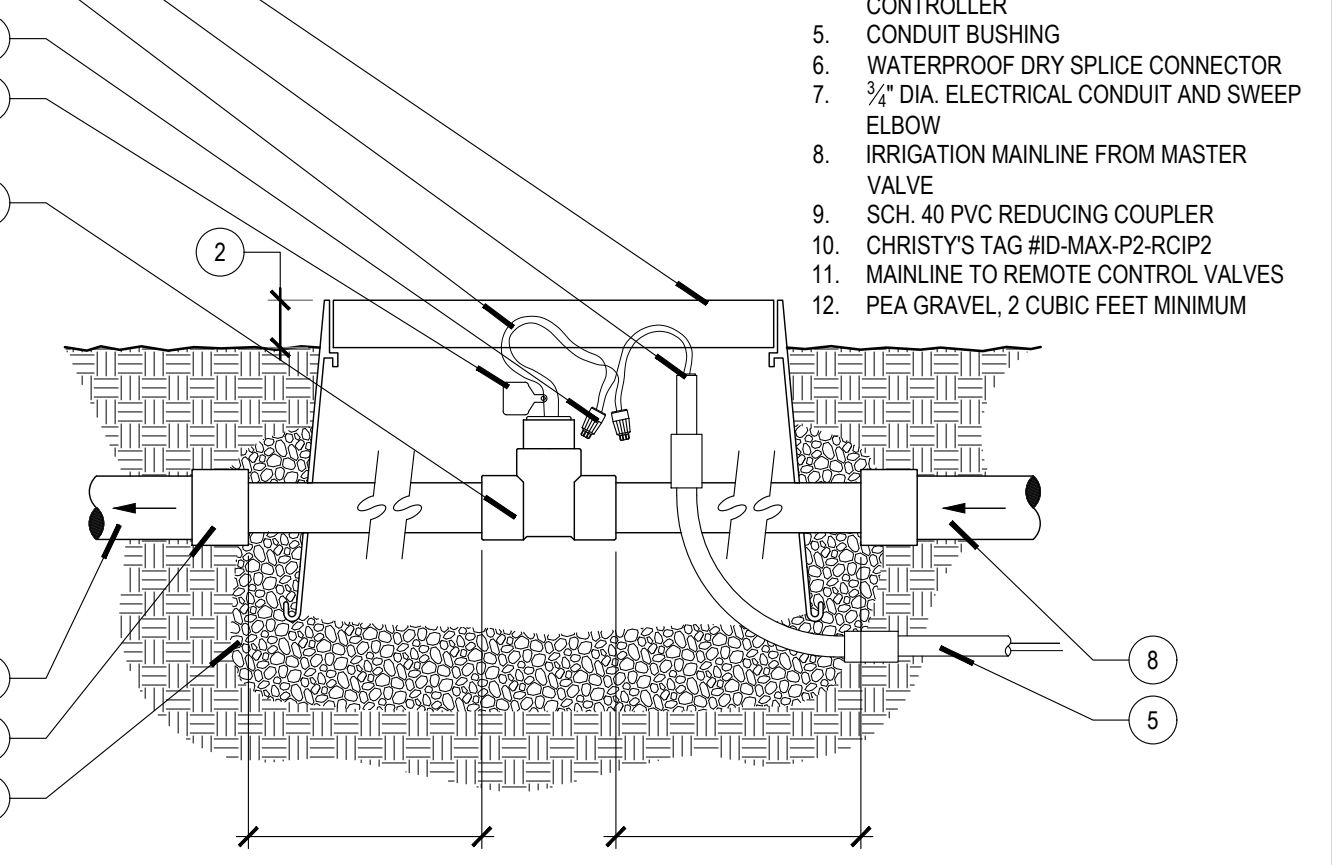
- 30' LENGTH OF COILED WIRE
 - WATER PROOF CONNECTOR - REFER TO IRRIGATION SPECIFICATIONS
 - CHRISTY'S TAG #8-MAX-PC-RCP2
 - RECTANGULAR PLASTIC VALVE BOX WITH LOCKING COVER - LID SHALL BE HEAT BRANDED WITH LETTERS "R01" & STATION NUMBER. REFER TO IRRIGATION SPECIFICATIONS
 - FINISH GRADE
 - 1/2" FROM TOP OF BOX LID IN TURF
 - 1/2" FROM TOP OF BOX LID IN SHRUB/CC
 - REMOTE CONTROL VALVE - REFER TO IRRIGATION LEGEND
 - SCH. 80 PVC NIPPLE (CLOSE)
 - SCH. 40 PVC ELL
 - SCH. 80 PVC NIPPLE (LENGTH AS REQUIRED)
 - SCH. 80 PVC MALE ADAPTER
 - SCH. 80 PVC NIPPLE (2" LENGTH, HIDDEN) AND SCH. 40 PVC ELL
 - SCH. 40 PVC TEE OR ELL
 - SCH. 40 PVC MALE ADAPTER
 - (3) CUBIC FEET, MIN. OF 3/2" MINUS, WASHED GRAVEL
- NOTE:
A. ALL THREADS SHALL BE WRAPPED WITH TEFLON TAPE



G Remote Control Valve Box
Scale: 1 1/2"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

- RECTANGULAR GREEN PLASTIC VALVE BOX WITH LOCKING COVER
- FINISH GRADE
- 1/2" BELOW BOX LID IN TURF
- 1/2" BELOW BOX LID IN SHRUB/CC
- FLOW SENSOR
- REFER TO CONSTRUCTION NOTES FOR TYPE OF CABLE FROM FLOW SENSOR TO CONTROLLER
- CONDUIT BUSHING
- WATERPROOF DRY SPLICE CONNECTOR
- 3/2" DIA. ELECTRICAL CONDUIT AND SWEEP ELLBOW
- IRRIGATION MAINLINE FROM MASTER VALVE
- SCH. 40 PVC REDUCING COUPLER
- CHRISTY'S TAG #8-MAX-PC-RCP2
- MAINLINE TO REMOTE CONTROL VALVES
- PEA GRAVEL, 2 CUBIC FEET MINIMUM



C Flow Sensor
Scale: 3"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

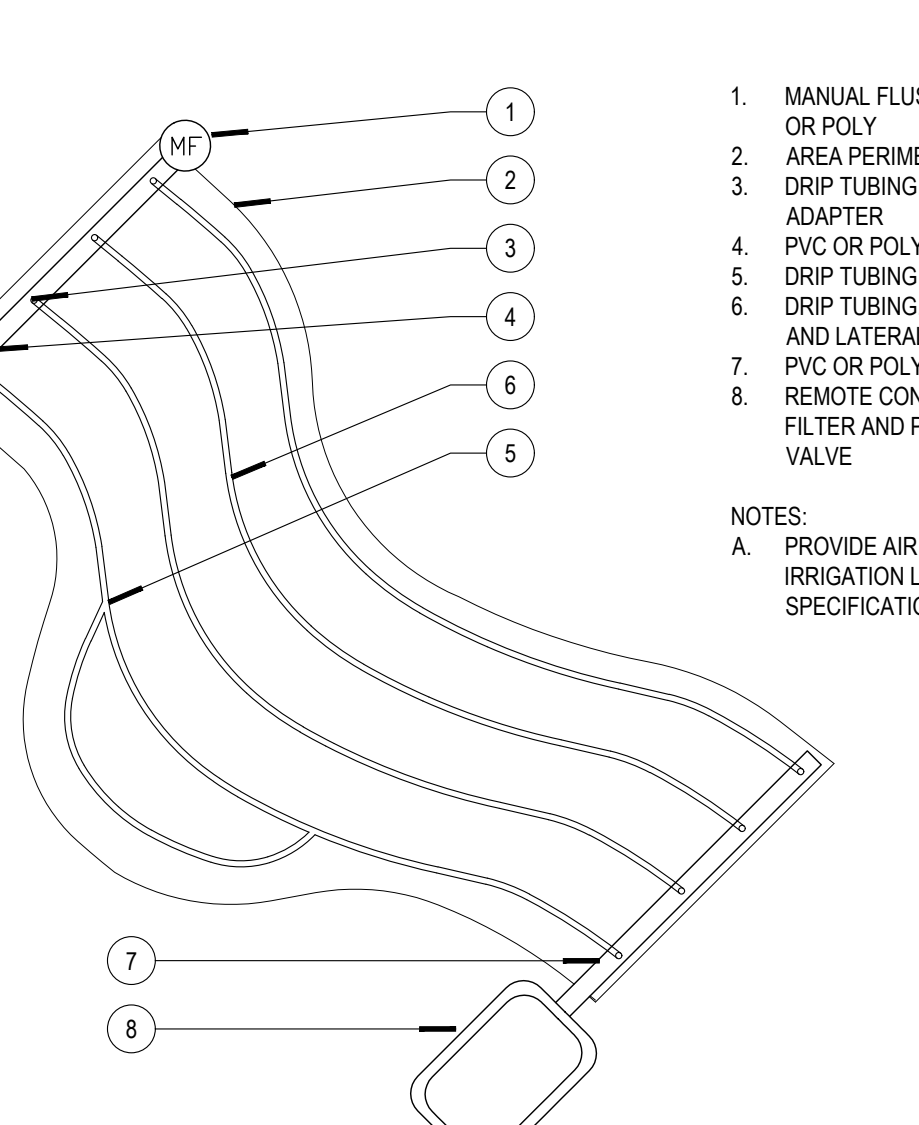
- FINISH GRADE
 - GREEN PLASTIC, RECTANGULAR VALVE BOX WITH BOLT DOWN COVER, HEAT BRANDED "PB"
 - PERMANENT I.D. BAND (ONE FOR EACH WIRE)
 - CONTROL WIRE WITH MINIMUM 36" COIL, REFER TO SPECIFICATIONS
 - CONDUIT BUSHING - TYPICAL
 - U.L. LISTED SCH. 40 PVC COUPLING
 - U.L. LISTED SCH. 40 PVC 90° SWEEP ELL
 - SUPPORT - COMMON RED BRICK
 - U.L. LISTED SCH. 40 PVC CONDUIT WATERPROOF CONNECTOR, REFER TO IRRIGATION SPECIFICATIONS
- NOTE:
A. REFER TO GENERAL NOTES FOR CONDUIT SIZE.



P Spare Wire Pull Box
Scale: 3"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

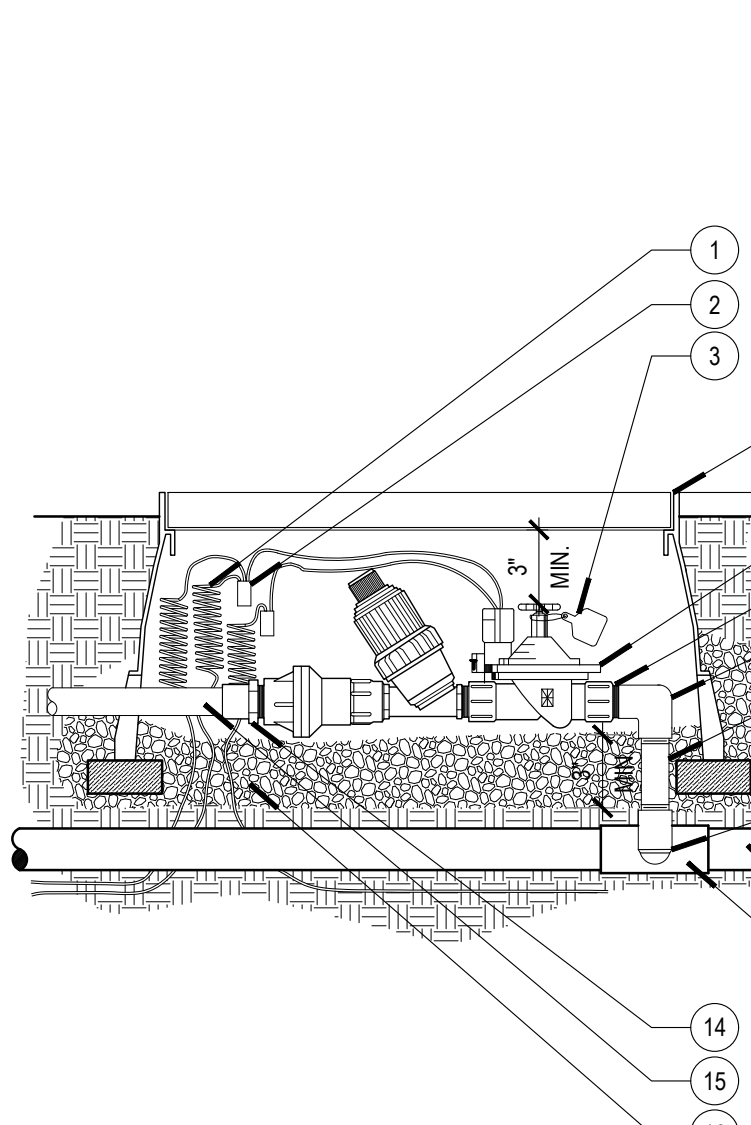
- MANUAL FLUSH VALVE PLUMBED TO PVC OR POLY
 - AREA PERIMETER
 - DRIP TUBING START CONNECTION MALE ADAPTER
 - PVC OR POLY EXHAUST HEADER
 - DRIP TUBING TEE
 - DRIP TUBING, SEE LEGEND FOR EMITTER AND LATERAL LINE SPACING
 - PVC OR POLY SUPPLY HEADER
 - REMOTE CONTROL VALVE WITH DISC FILTER AND PRESSURE REGULATING VALVE
- NOTES:
A. PROVIDE AIR RELIEF VALVE PER IRRIGATION LEGEND & MANUFACTURER'S SPECIFICATIONS.



L Dripline Layout - Irregular Curved Areas
Scale: NTS

INSTALLED UNDER
SEPARATE PERMIT

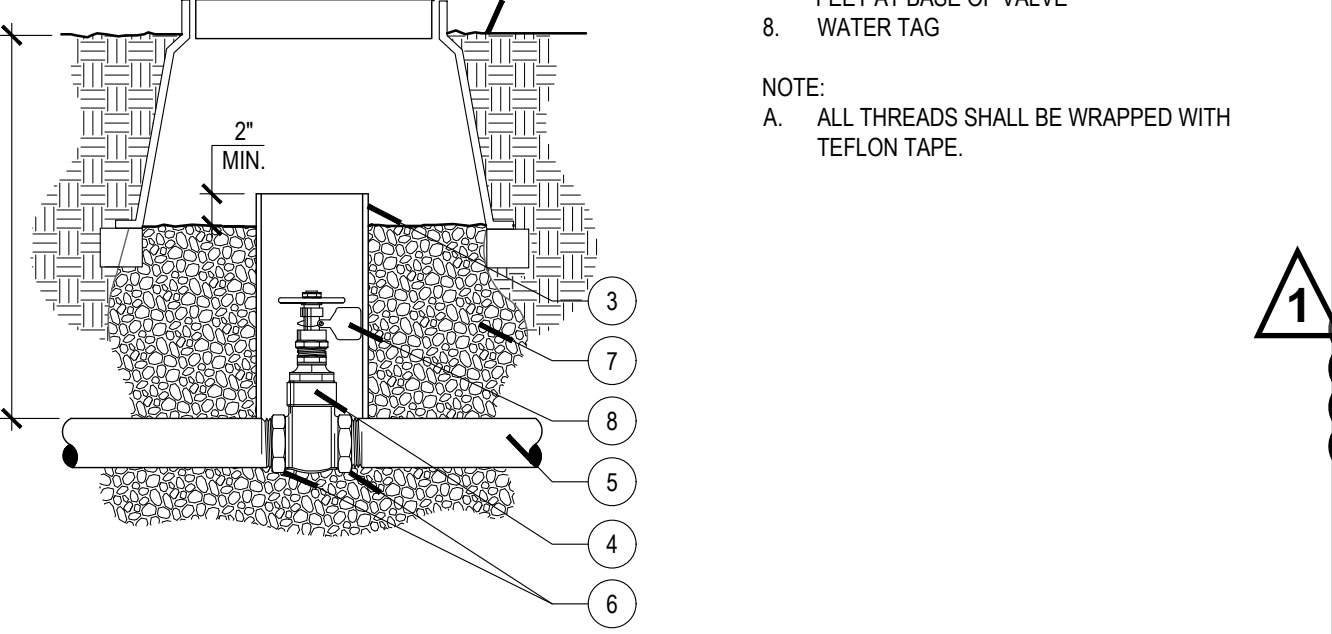
- 30' LENGTH OF COILED WIRE
 - WATER PROOF CONNECTOR - REFER TO IRRIGATION SPECIFICATIONS
 - ID TAG - REFER TO IRRIGATION SPECIFICATIONS
 - RECTANGULAR GREEN PLASTIC VALVE BOX WITH LOCKING COVER - LID SHALL BE HEAT BRANDED WITH LETTERS "R01" & STATION NUMBER. REFER TO IRRIGATION SPECIFICATIONS
 - FINISH GRADE
 - 1/2" FROM TOP OF BOX LID IN TURF
 - 1/2" FROM TOP OF BOX LID IN SHRUB/CC
 - REMOTE CONTROL VALVE WITH FILTER AND PRV - REFER TO IRRIGATION LEGEND
 - SCH. 80 PVC NIPPLE (CLOSE)
 - SCH. 40 PVC ELL
 - SCH. 80 PVC NIPPLE (LENGTH AS REQUIRED)
 - SCH. 80 PVC NIPPLE (2" LENGTH, HIDDEN) AND SCH. 40 PVC ELL
 - SCH. 40 PVC TEE OR ELL
 - SCH. 40 PVC MALE ADAPTER
 - (3) CUBIC FEET, MIN. OF 3/2" MINUS, WASHED GRAVEL
- NOTE:
A. ALL THREADS SHALL BE WRAPPED WITH TEFLON TAPE



H Remote Control Drip Valve and Filter
Scale: 1 1/2"=1'-0"

INSTALLED UNDER
SEPARATE PERMIT

- FINISH GRADE
 - 1" IN TURF
 - 2" IN GROUND COVER
 - ROUND, PLASTIC VALVE BOX WITH LOCKING COVER SHALL BE BRANDED "GV" - REFER TO IRRIGATION LEGEND
 - 6" Ø PVC PIPE EXTENSION - LENGTH AS REQUIRED
 - GATE VALVE - REFER TO IRRIGATION LEGEND FOR SPECS
 - PVC MAINLINE - REFER TO IRRIGATION LEGEND
 - PVC MALE ADAPTER - TWO (2) REQUIRED
 - 3" WASHED PEA GRAVEL - TWO (2) CUBIC FEET AT BASE OF VALVE
 - WATER TAG
- NOTE:
A. ALL THREADS SHALL BE WRAPPED WITH TEFLON TAPE



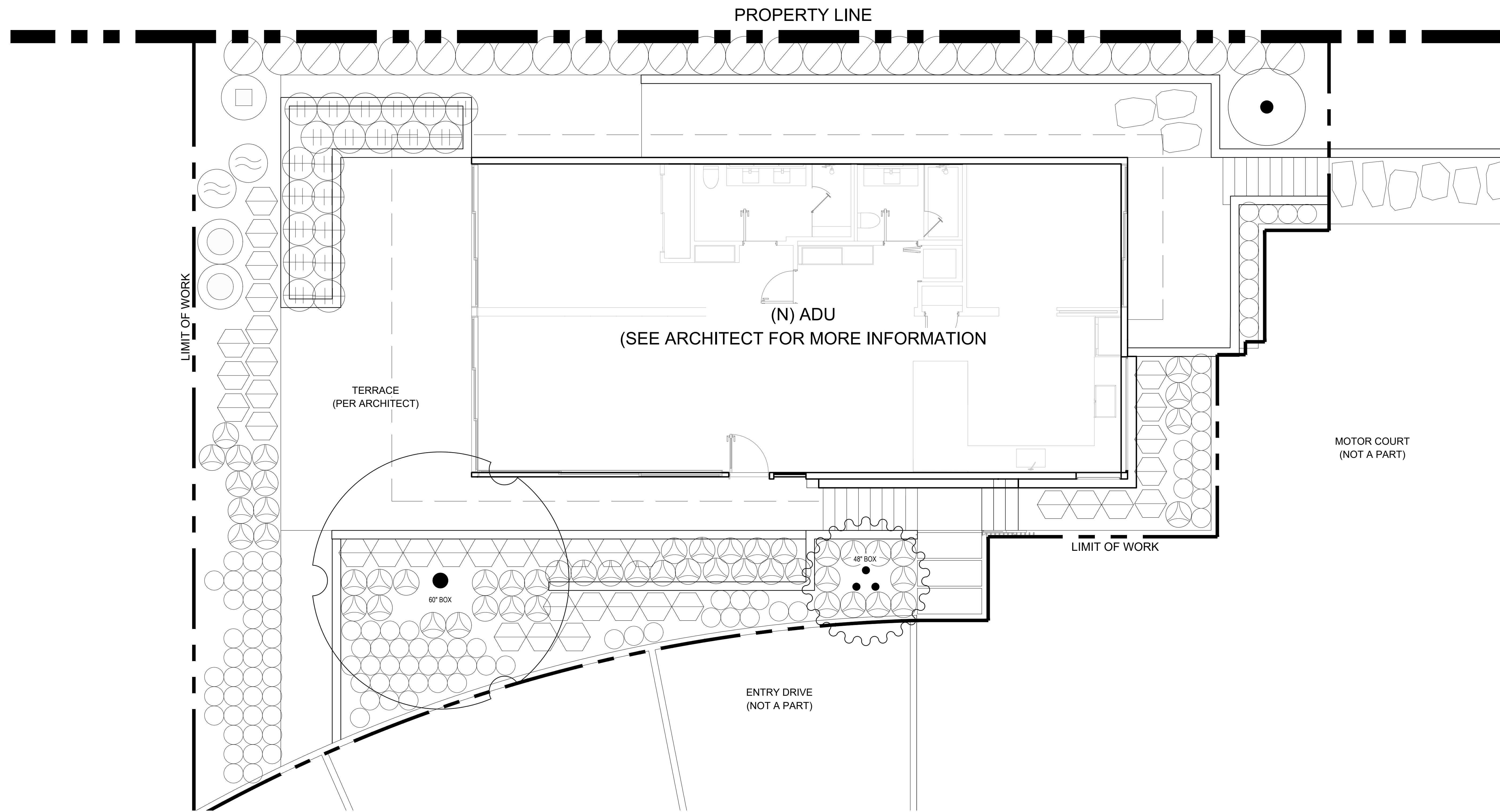
D Gate Valve
Scale: 1"=1'-0"

REVISIONS

NO.	DESCRIPTION	DATE

IRRIGATION
DETAILS





PROPERTY LINE

LIMIT OF WORK

TERRACE
(PER ARCHITECT)

(N) ADU
(SEE ARCHITECT FOR MORE INFORMATION)

MOTOR COURT
(NOT A PART)

LIMIT OF WORK

ENTRY DRIVE
(NOT A PART)

PLANTING LEGEND: Shrubs, Groundcover, & Vines

SYMBOL	NAME	SIZE	WATER REQ.	QTY	DETAIL
⊙	BOUTELOUA GRACILIS BLUE GRAMA	1 GAL @ 24" O.C.	LOW	53	D.E.F.G / L351
○	CAREX TUMULICOLA BERKELEY SEDGE	1 GAL @ 18" O.C.	LOW	97	D.E.F.G / L351
⊕	CHONDRPETALUM TECTORUM CAPE REED	5 GAL @ 30" O.C.	LOW	21	D.E.F.G / L351
⊕	FRANGULA CALIFORNICA 'EVE'S CASE' EVE'S CASE COFFEBERRY	5 GAL @ 30" O.C.	VLOW	2	D.E.F.G / L351
⊕	HETEROMELES ARBUTIFOLIA TOYON	15 GAL @ 6" O.C.	VLOW	1	D.E.F.G / L351
⊕	LIGUSTRUM JAPONICUM 'TEXANUM' WAXLEAF PRIVET	24" BOX @ 36" O.C.	LOW	28	D.E.F.G / L351
⊕	MUHLENBERGIA RIGENS DEER GRASS	1 GAL @ 30" O.C.	LOW	37	D.E.F.G / L351
⊕	RIBES VIBURNIFOLIUM EVERGREEN CURRANT	5 GAL @ 42" O.C.	VLOW	1	D.E.F.G / L351
⊕	SALVIA 'ALLEN CHICKERING' ALLEN CHICKERING SAGE	1 GAL @ 42" O.C.	VLOW	2	D.E.F.G / L351

PLANTING LEGEND: Trees

SYMBOL	NAME	SIZE	WATER REQ.	QTY	DETAIL
⊙	ARBUTUS UNEDO STRAWBERRY TREE	SIZE PER PLAN SPECIMEN QUALITY	LOW	1	A,B,C / L351
⊙	QUERCUS AGRIFOLIA COAST LIVE OAK	SIZE PER PLAN SPECIMEN QUALITY	LOW	1	A,B,C / L351

IRRIGATION SYSTEM NOTES

ALL PLANTING TO RECEIVE WATER EFFICIENT, SUB-SURFACE DRIP IRRIGATION. SYSTEM TO CONNECT TO LARGER SITE IRRIGATION SYSTEM UTILIZING WEATHER BASED CONTROLLER.

DESIGNARC

ARCHITECTURE + INTERIORS
29 West Calle Laureles
Santa Barbara, CA 93105
T: 805.687.1525

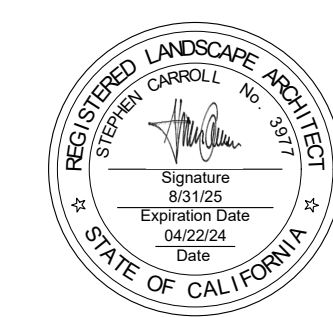
EPTDESIGN

414 OLIVE STREET
SANTA BARBARA, CA 93101
626.795.2008
EPTDESIGN.COM

**RASKOPF
RESIDENCE**

3239 Cliff Dr., Santa
Barbara, CA 93109

3239 CLIFF DRIVE ADU



JOB NUMBER
2110881

PIC PA PM TEAM
SC SHC SS EPT

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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23
ADU CDP RESUBMITTAL	02/06/24
ADU CDP RESUBMITTAL	04/22/24

REVISIONS

NO.	DESCRIPTION	DATE

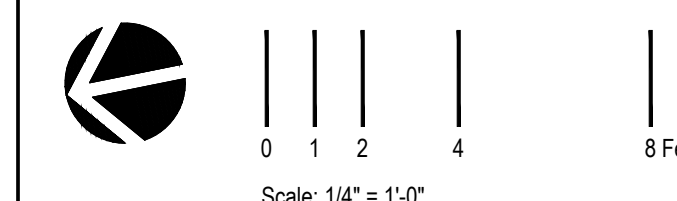
**PLANTING PLAN
AND NOTES - ADU**

L301

SCALE DATE: 04/22/24

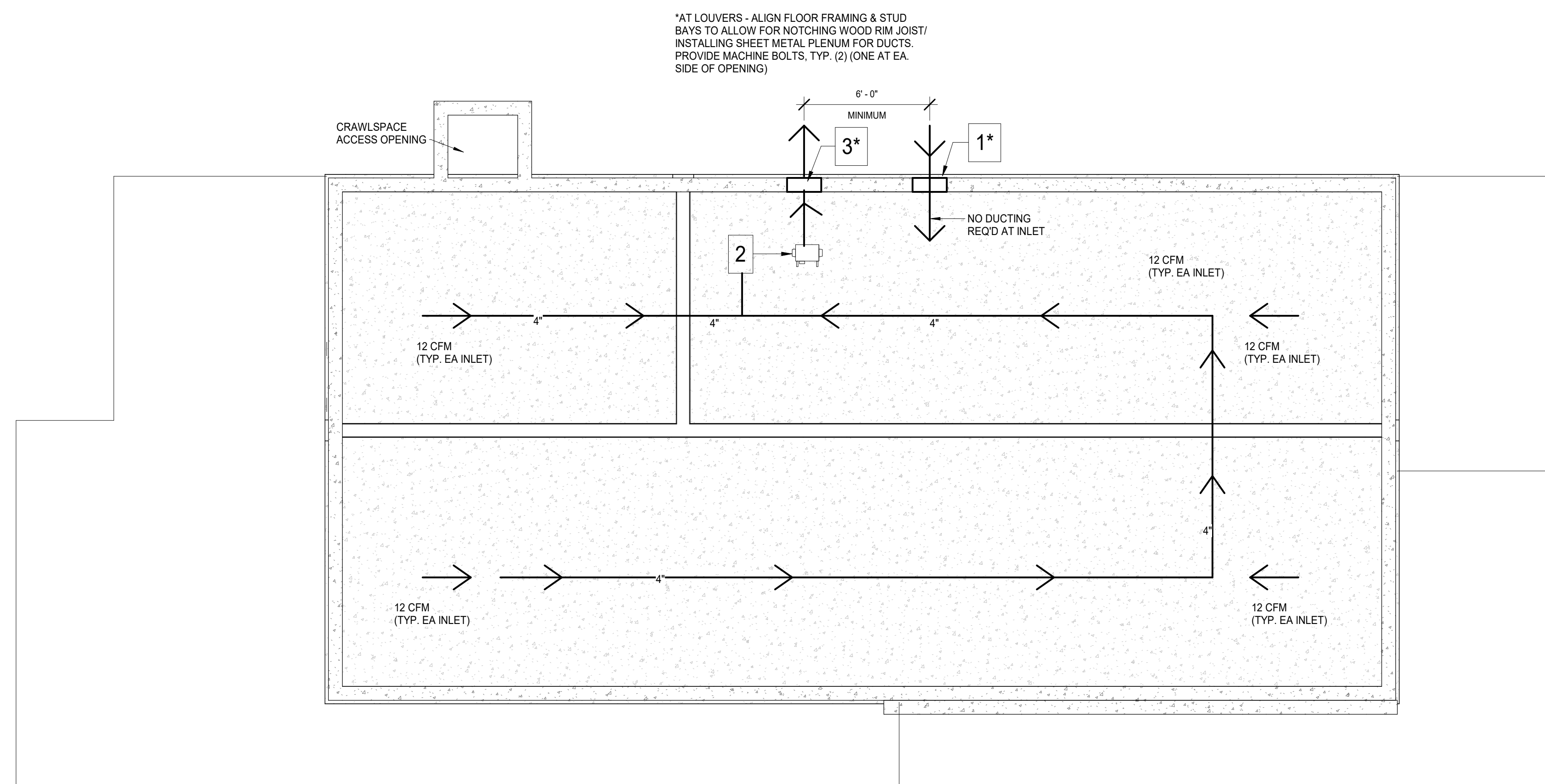
REFER TO SHEETS L200, L201, AND L251
FOR IRRIGATION PLAN, NOTES AND DETAILS

REFER TO SHEET L351 FOR
PLANTING NOTES AND DETAILS

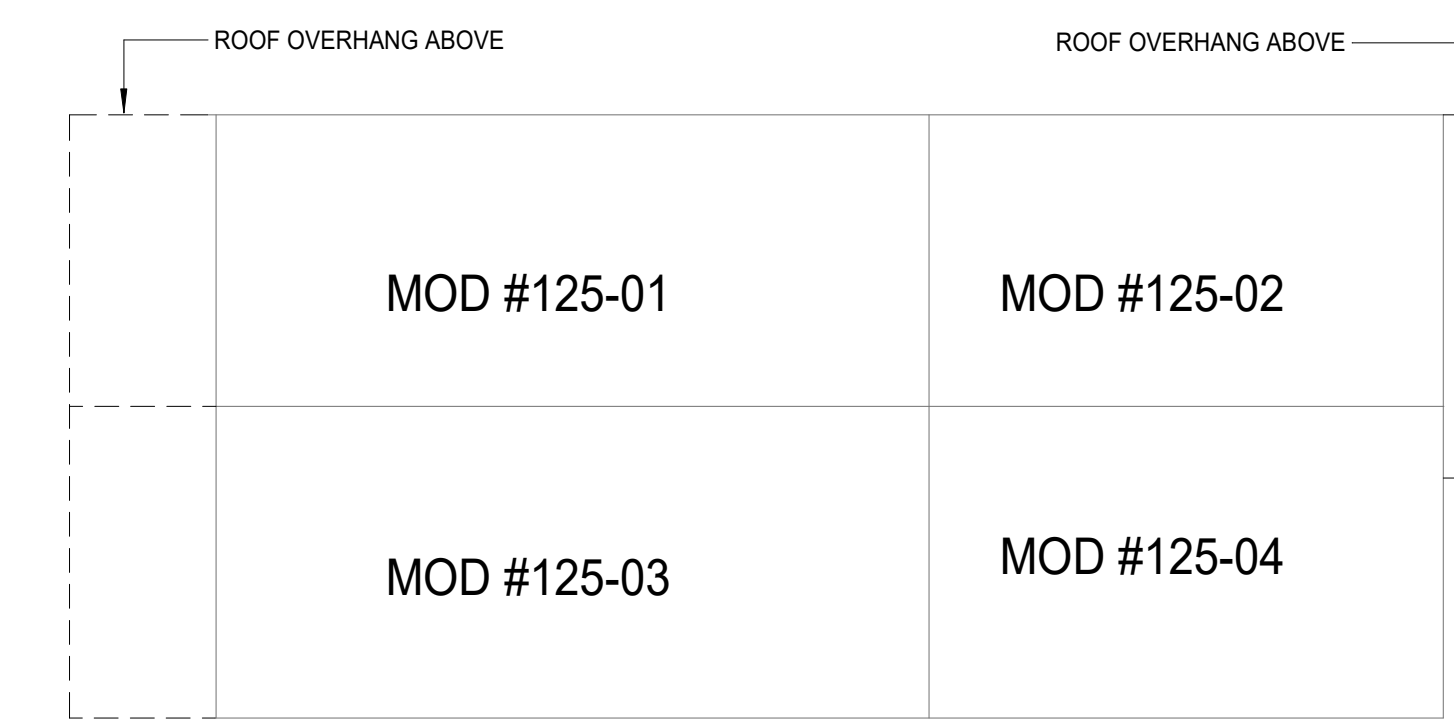


(SCALE NOTED AS FOR 30x42 FULL-SIZE DRAWINGS)

REVISIONS		
NO.	DATE	DESCRIPTION



1 MECHANICAL PLAN CRAWLSPACE
1/4" = 1'-0"

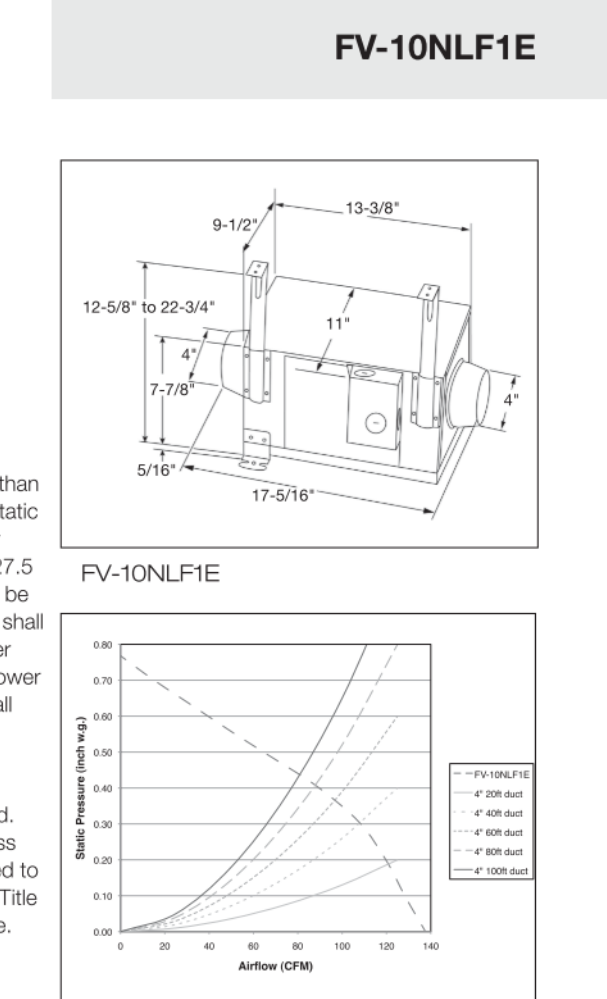


MODULE KEY PLAN

WhisperLine
VENTILATION FAN

Specification Submittal Data / Panasonic Ventilation Fan

- Description:** Ventilating fan shall be low noise remote mount type rated for continuous run. Fan shall be ENERGY STAR® rated and certified by the Home Ventilating Institute (HVI). Evaluated by Underwriters Laboratories and conform to both UL and cUL safety standards.
- Motor/Blower:** Four-pole totally enclosed condenser motor rated for continuous run. Power rating shall be 120 volts and 60 Hz. Fan shall be UL listed for tub/shower enclosure when GFCI protected.
- Housing:** Rust proof epoxy and polyester resin coating; 26 gauge galvanized steel body. Insulated housing to prevent condensation and noise. Tapered duct adapter for easy connection.
- Easy Installation:** 5 positions installation. Joints, truss and suspension brackets included.
- Warranty:** 3 Year limited warranty.
- Architectural Specifications:** Ventilation fan shall be remote mount, ENERGY STAR® certified, with no less than 120 CFM as certified by the HVI at 2 static pressure in inches water gauge. Power consumption shall be no greater than 27.5 Watts and energy efficiency rating shall be no less than 4.4 CFM/Watt. The motor shall be totally enclosed, four pole condenser type engineered to run continuously. Power rating shall be 120v/60Hz. Housing shall be insulated to reduce condensation. Duct diameter shall be no less than 4". Fan shall be UL listed for tub/shower enclosure when GFCI protected. Brackets shall be provided for joist, truss or suspension installations. Can be used to comply with ASHRAE 62.2, LEED, CA Title 24, EarthCraft and WA Ventilation Code.



Static Pressure in inches w.g.	Air Volume (CFM)	Power Consumption (Watts)	Energy Efficiency (CFM / Watts)	Speed (RPM)	Current (amps)
0.2	120	27.5	4.4	1562	0.24
0.3	108	25.6	4.4	1566	0.22
0.4	89	24.3	3.9	1637	0.21

For complete installation instructions visit us.panasonic.com/ventfans

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

Panasonic Eco Solutions North America
Eco Products Division
Two Riverfront Plaza
Newark, NJ 07102
us.panasonic.com/ventfans



MECHANICAL FIXTURES LEGEND			
SYMBOL	QTY	DESCRIPTION	SPEC / NOTES
T	TBD	THERMOSTAT	WALL-MOUNTED, WIFI COMPATIBLE THERMOSTAT TO BE PROVIDED BY HVAC INSTALLER
H	2	HUMIDISTAT	CONDENSATION SENSOR WALL SWITCH WITH MANUAL CONTROL (PANASONIC FV-WCCS1-W) BATH FAN MUST BE SET TO HUMIDISTAT EXCEPT AT POWDER ROOM
[Fan Icon]	2	FAN AT BATH	PANASONIC WhisperValue DC Ventilation Fan (FV-09-10N31) SET TO HUMIDISTAT, UL-LISTED FOR WET AREAS 4" OVAL DUCT, 80 CFM, 7.2W, 0.13A, 120V/ 60Hz ENERGY STAR CERTIFIED, YES 10.25" SQ MOUNTING OPENING, 13" SQ GRILLE
[Fan Icon]	1	FAN AT CRAWLSPACE	PANASONIC WhisperLine Ventilation Fan (FV-10NLF1E) 4" DUCT, 120 CFM, 27.5W, 0.24A, 120V/ 60Hz ENERGY STAR CERTIFIED, YES FAN TO BE INSTALLED AT UNDERSIDE OF FLOOR IN CRAWLSPACE, SUSPENDED FROM 2X8 FLOOR JOISTS
[Condenser Unit Icon]	1	CONDENSER UNIT	MITSUBISHI, 18 BTU, M SERIES OUTDOOR CONDENSER, SUZ-KA18NA2, LOCATED AT GARAGE, 30 DBA AT PROPERTY LINE
[Air Handler Icon]	1	DUCTED AIR HANDLER AT CRAWLSPACE	MITSUBISHI, 18k BTU, M SERIES MULTI POSITION AIR HANDLER, SVZ-KP18NA,

ALL SPECIFIED ITEMS TO BE PROVIDED AS LISTED OR EQUIVALENT

MECHANICAL PLAN (CRAWL SPACE) - KEYNOTES

- EXHAUST LOUVER FOR MECHANICALLY VENTED CRAWL SPACE PANASONIC PC-NLF04S OR EQUIVALENT
- MECHANICAL EXHAUST FAN (SEE CUT SHEET AT RIGHT) PANASONIC WHISPERLINE VENTILATION FAN FV-10NLF1E OR EQUIVALENT
- INTAKE LOUVER FOR MECHANICALLY VENTED CRAWL SPACE PANASONIC PC-NLF04S OR EQUIVALENT

NOTE:

- EXHAUST FAN SYSTEMS TO HAVE BACKDRAFT OR AUTOMATIC DAMPERS.
- UNVENTED CRAWL SPACE ALLOWED PER CALIFORNIA RESIDENTIAL CODE 2019 SECTION 9408.3
- EXPOSED EARTH AT CRAWL SPACE TO BE COVERED WITH CONTINUOUS CLASS II VAPOR RETARDER. JOINTS OF THE VAPOR RETARDER SHALL OVERLAP BY 6" AND SHALL BE SEALED OR TAPED. THE EDGES OF THE VAPOR RETARDER SHALL EXTEND NOT LESS THAN 6" UP THE STEM WALL AND SHALL BE ATTACHED AND SEALED TO THE STEM WALL OR INSULATION.
- CONTINUOUSLY OPERATED MECHANICAL EXHAUST VENTILATION SHALL BE PROVIDED AT A RATE EQUAL TO 1 CUBIC FOOT PER MINUTE FOR EACH 50 SQUARE FEET OF CRAWL SPACE FLOOR AREA, INCLUDING AN AIR PATHWAY TO THE COMMON AREA (SUCH AS A DUCT OR TRANSFER GRILLE).

CRAWL SPACE = 1,564 SF
1,564 SF / 50 SF = 31.28 SF X 1 CFM = 31.28 CFM REQ'D
120 CFM PROVIDED > 31.28 CFM REQ'D

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Santa Barbara, CA 93109

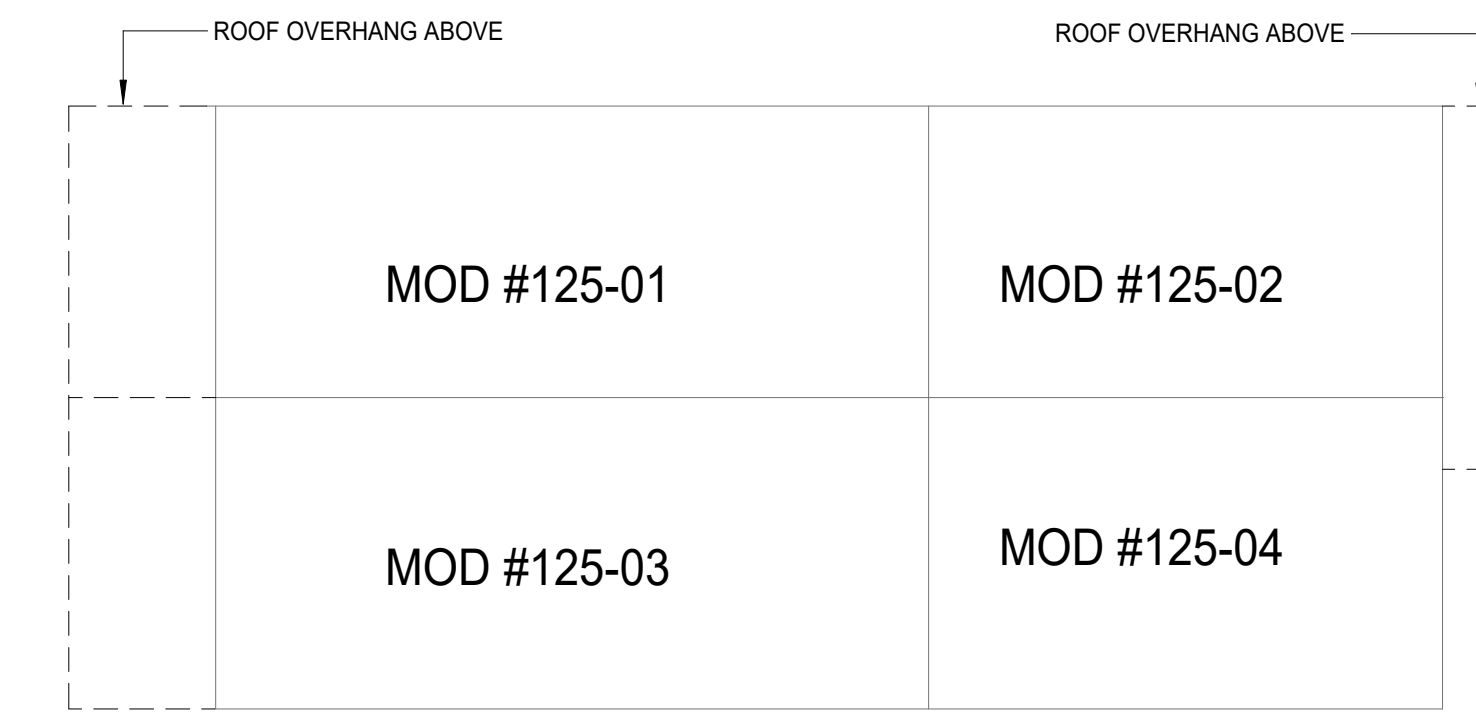
PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Mechanical Plan - Crawl Space

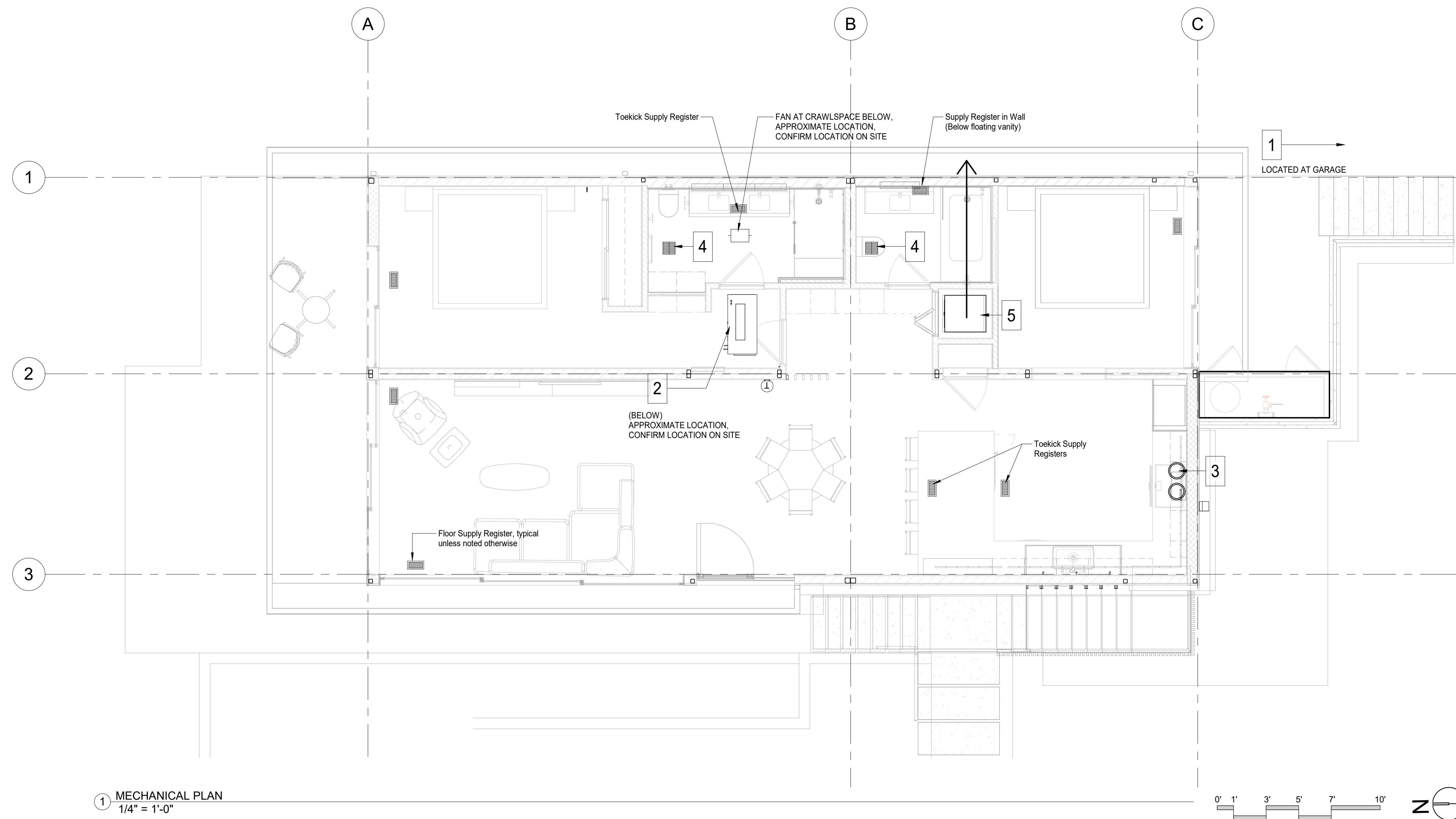
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REVISIONS

NO.	DATE	DESCRIPTION
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MODULE KEY PLAN



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

MECHANICAL FIXTURES LEGEND			
SYMBOL	QTY	DESCRIPTION	SPEC / NOTES
	TBD	THERMOSTAT	WALL-MOUNTED, WIFI COMPATIBLE THERMOSTAT TO BE PROVIDED BY HVAC INSTALLER
	2	HUMIDISTAT	CONDENSATION SENSOR WALL SWITCH WITH MANUAL CONTROL (PANASONIC FV-WCCS1-W) BATH FAN MUST BE SET TO HUMIDISTAT EXCEPT AT POWDER ROOM
	2	FAN AT BATH	PANASONIC WhisperValue DC Ventilation Fan (FV-05-10V51) SET TO HUMIDISTAT, UL-LISTED FOR WET AREAS 4" OVAL DUCT, 80 CFM, 7.2W, 0.13A, 120V/ 60Hz ENERGY STAR CERTIFIED, YES 10.25" SQ MOUNTING OPENING, 13" SQ GRILLE
	1	FAN AT CRAWLSPACE	PANASONIC WhisperValue DC Ventilation Fan (FV-10NLF1E) 4" DUCT, 120 CFM, 27.5W, 0.24A, 120V/ 60Hz ENERGY STAR CERTIFIED, YES FAN TO BE INSTALLED AT UNDERSIDE OF FLOOR IN CRAWLSPACE, SUSPENDED FROM 2X8 FLOOR JOISTS
	1	CONDENSER UNIT	MITSUBISHI, 18 BTU M SERIES OUTDOOR CONDENSER, SUZ-KA18NA2, LOCATED AT GARAGE, 30 DBA AT PROPERTY LINE
	1	DUCTED AIR HANDLER AT CRAWLSPACE	MITSUBISHI, 18k BTU, M SERIES MULTI POSITION AIR HANDLER, SVZ-KP18NA,

ALL SPECIFIED ITEMS TO BE PROVIDED AS LISTED OR EQUIVALENT

WHOLE BUILDING VENTILATION REQS:

PER ASHRAE 62.2 SECTION 4:
REQUIRED WHOLE-BUILDING AIRFLOW RATE
= 0.01 (CONDITIONED SF) + 7.5 (NUMBER OF BEDROOMS + 1)
= 0.01 (1200 SF) + 7.5 (2 + 1) = 34.5
= 34.5 CFM MINIMUM REQ'D AIRFLOW RATE
80 CFM PROVIDED > 34.5 CFM REQ'D

MECHANICAL PLAN - KEYNOTES

- CONDENSER UNIT- DUCTED MINI SPLIT SYSTEM, MITSUBISHI, 18 BTU M SERIES OUTDOOR CONDENSER, SUZ-KA18NA2, 30 DBA AT PROPERTY LINE, LOCATED AT GARAGE
- DUCTED AIR HANDLER AT CRAWL SPACE MITSUBISHI, 18k BTU, M SERIES MULTI POSITION AIR HANDLER, SVZ-KP18NA, PROVIDE HEPA FILTER
- RANGE VENT THROUGH WALL, 36" VISER HOOD VENTILATION SYSTEM, GAGGENAU 200 SERIES A72/0791, 500 CFM, VENT COVER- SEIKO SFX SERIES, LOUVERED CAP WITH HOOD
- 4" EXHAUST VENT THROUGH ROOF
- 4" EXHAUST DRYER VENT THROUGH CRAWL SPACE TO EXTERIOR DRYER SPEC. TBD

WHOLE BUILDING VENTILATION NOTES:

- THE CEILING MOUNTED WHOLE-BUILDING VENTILATION FAN HAS A SOUND RATING OF ONE SONE OR LESS AT THE REQUIRED VENTILATION AIRFLOW RATE.
- THE EXHAUST FAN CONTROL(S) USED FOR WHOLE-BUILDING CONTINUOUS OPERATION IS LABELED TO COMMUNICATE THE REQUIRED CONTINUOUS BUILDING VENTILATION FUNCTION AND IMPORTANCE WITH A STATEMENT TO MAKE CLEAR HOW THE CONTROL (E.G. ON / OFF SWITCH) IS TO BE OPERATED.
- LABEL TEXT SHALL BE IN BOLD TYPE, ON A WHITE BACKGROUND AND NO SMALLER THAN ARIAL 12 POINT TYPE.
- TO MAINTAIN MINIMUM LEVELS OF OUTSIDE AIR VENTILATION REQUIRED FOR GOOD HEALTH, THE FAN CONTROL SHOULD BE ON AT ALL TIMES WHEN THE BUILDING IS OCCUPIED (UNLESS THERE IS SEVERE OUTDOOR AIR CONTAMINATION).
- THE EXHAUST FAN(S) USED FOR CONTINUOUS WHOLE-BUILDING VENTILATION IS RATED BY THE HOME VENTILATION INSTITUTE (HVI) TO PROVIDE THE REQUIRED RATE AT A MINIMUM OF STATIC PRESSURE OF 0.25 INCHES OF WATER COLUMN.
- THE DUCT DESIGN FOR THE WHOLE-BUILDING VENTILATION SYSTEM MEETS THE REQUIREMENTS OF ASHRAE TABLE 7.1

NOTE:

- EXHAUST FAN SYSTEMS TO HAVE BACKDRAFT OR AUTOMATIC DAMPERS.
- GRAVITY VENTILATING SYSTEMS SERVING CONDITIONED SPACE HAVE EITHER AUTOMATIC OR READILY ACCESSIBLE MANUAL OPERATED DAMPERS.
- BATHROOM EXHAUST FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
- UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50% TO 80%.
- VERIFY REQUIREMENTS FOR EACH MECHANICAL FIXTURE WITH MANUFACTURER'S SPECIFICATIONS.

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#125 Raskopf ADU

3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO: #125

DATE: 4/22/2024 1 PM

DRAWN BY: A. Arora

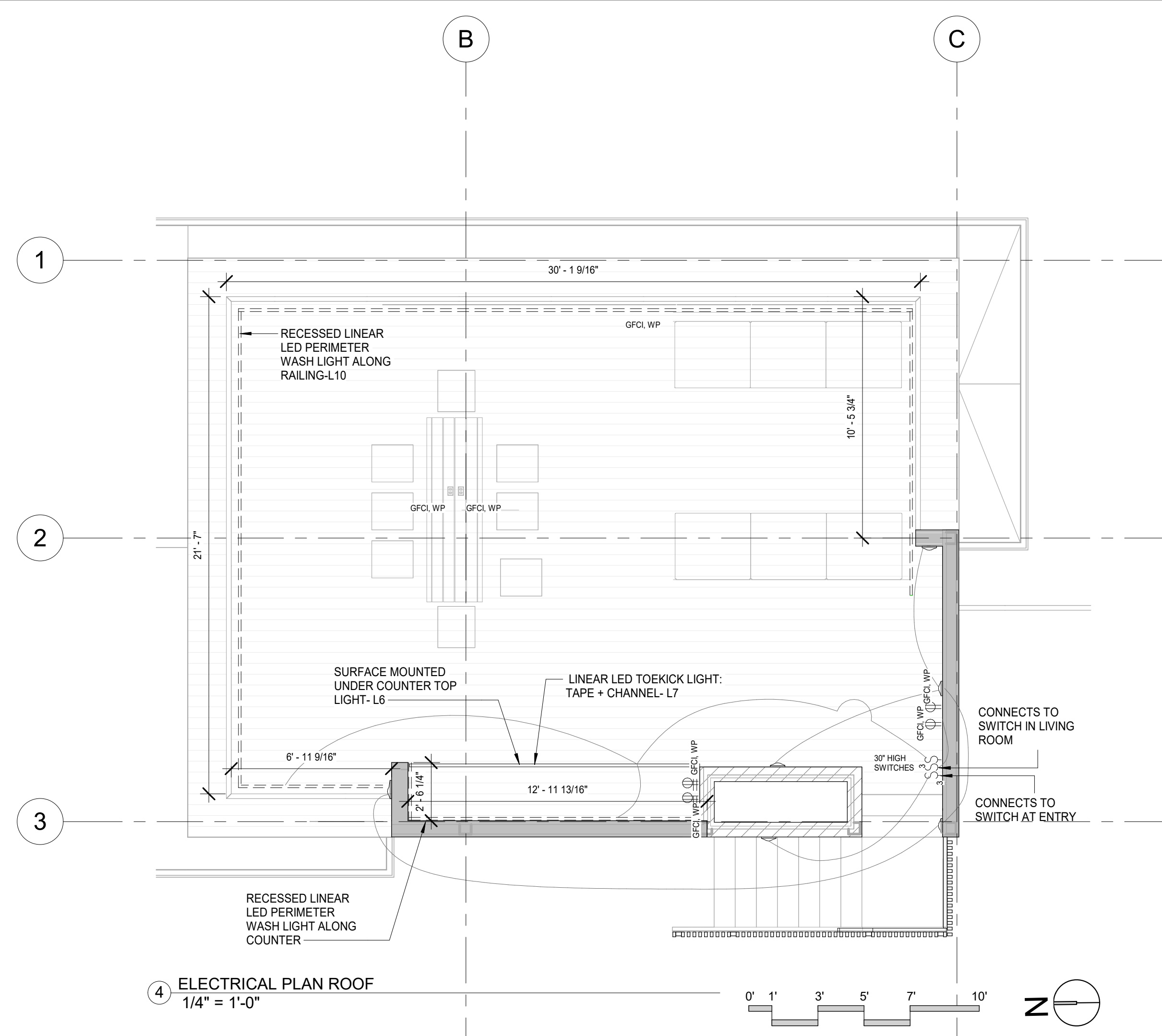
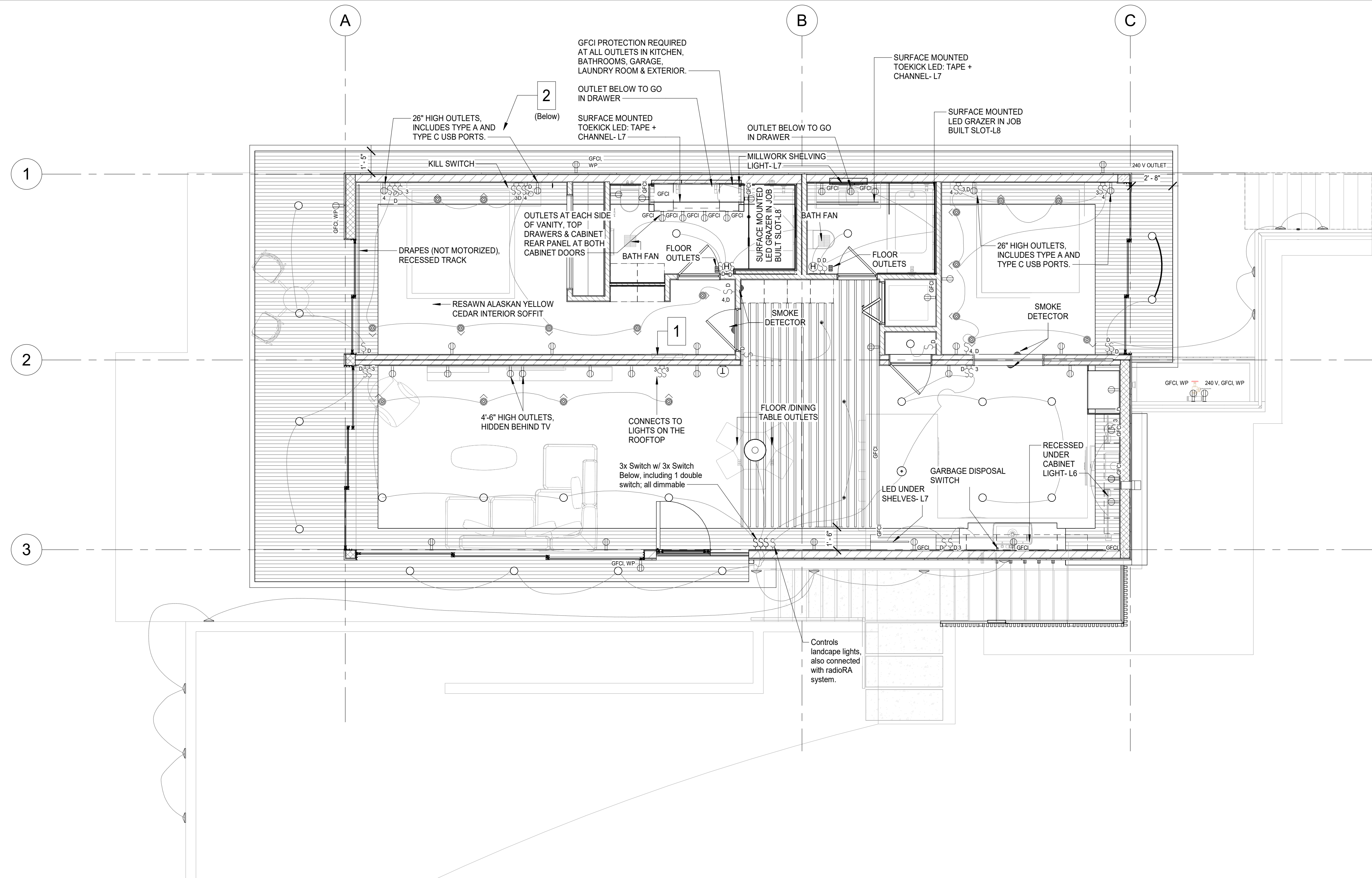
CHECKED BY: B. Henson

Mechanical Plan

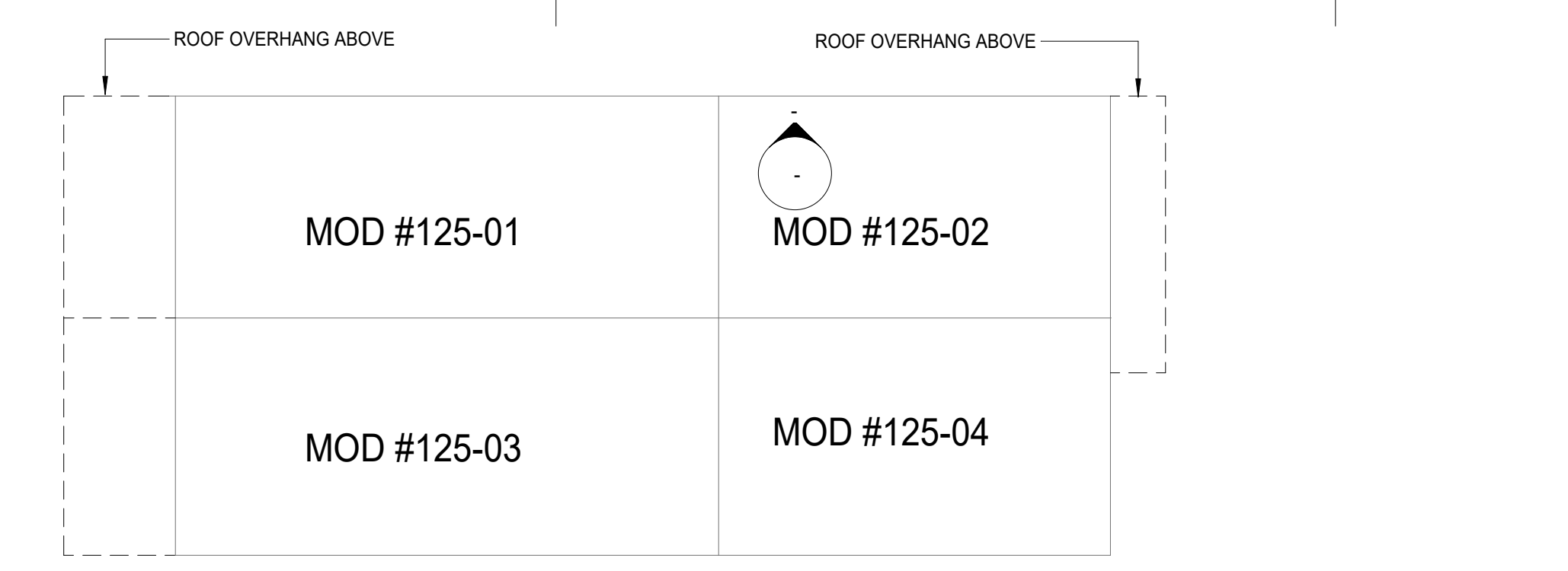
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REVISIONS

NO.	DATE	DESCRIPTION



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



MODULE KEY PLAN

SOLAR REQUIREMENTS

PER NEC 180.1(i)(14), PV SYSTEM SHALL PROVIDE ELECTRICAL OUTPUT EQUAL TO OR GREATER THAN THE DWELLING'S ANNUAL ELECTRICAL USAGE AS DETERMINED BY EQUATION 150.1-C.

$kW_{PV} = (CFA \times A) / 1000 + (NDwell \times B)$

$kW_{PV} = kW_{DC}$ size of PV System (Req'd)

CFA: Conditioned Floor Area
(E) Main House (3620 SF) + (N) ADU (1,200 SF) = 4820 SF

NDwell: Number of Dwelling Units
(1) Existing Main House + (1) Proposed ADU = (2) Units Total

A = Adjustment Factor From Table 150.1-C
Project Climate Zone = 6; "A" Factor = 0.594

B = Dwelling Adjustment Factor From Table 150.1-C
Project Climate Zone = 6; "B" Factor = 1.23

$kW_{PV} = (4820 \times 0.594) / 1000 + (2 \times 1.23)$

$kW_{PV} = 5.32$

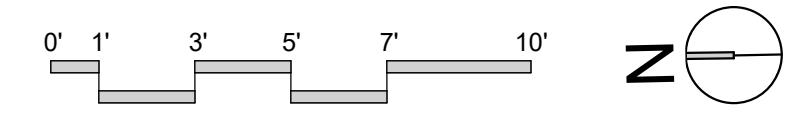
EXISTING PV SYSTEM AT MAIN HOUSE CURRENTLY PRODUCES 15.36 kW.
15.36 kW (EXISTING) ± 5.32 kW (REQUIRED)

NO PROPOSED ALTERATION / EXPANSION OF EXISTING PV SYSTEM PROPOSED. CURRENTLY SIZED LARGE ENOUGH TO ACCOMMODATE EXISTING MAIN HOUSE & PROPOSED ADU, PER CALCULATION ABOVE.

NOTES

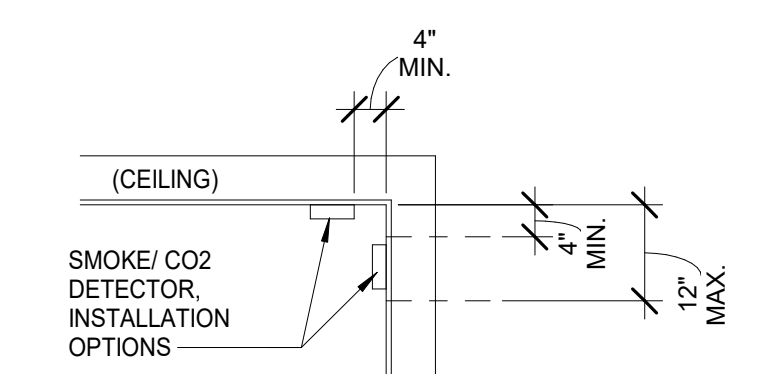
- Motorized shades to be installed at all windows.
- All switches to be standard decora switches.

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



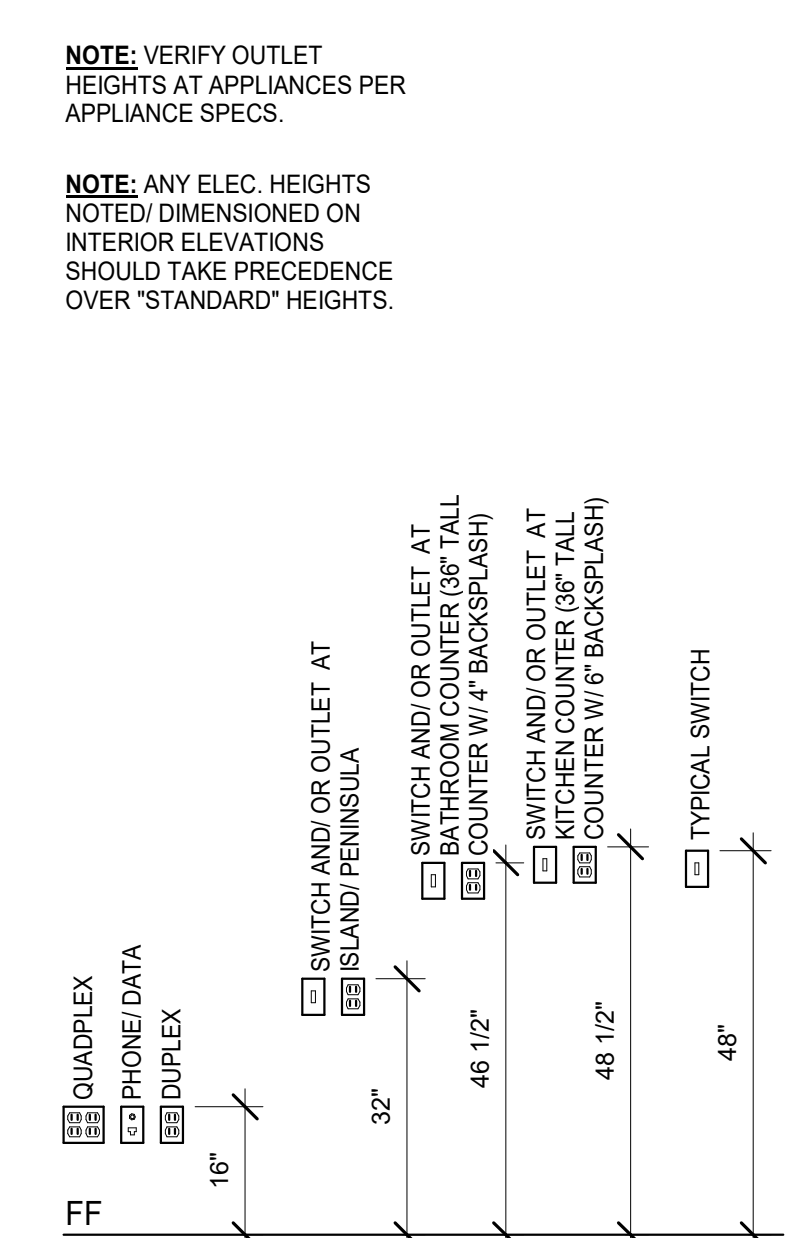
ELECTRICAL PLAN - KEYNOTES

- 200 AMP RECESSED ELECTRICAL PANEL W/ 30" CLEARANCE
- CRAWL SPACE ACCESS - PROVIDE LIGHT, SWITCH AND OUTLET IN CRAWL SPACE



3 Smoke / CO Detector
1/2" = 1'-0"

- LIGHTS, SMOKE DETECTORS, AND EXHAUST FANS ARE REQUIRED IN AREAS SHOWN. LOCATIONS FOR THESE ITEMS AND OUTLETS AND SWITCHES ARE TO BE LOCATED AND WIRED PER LOCAL CODES.
- UNDERGROUND ELECTRICAL SERVICE SHALL BE MINIMUM 18" DEEP AND INSTALLED IN 2" RIGID RISER AND ELBOWS ATTACHED TO 2" PVC ELECTRICAL DUCT TO WITHIN 1' OF PANEL.
- ALL 120 VOLT, 15 AND 20 AMP BRANCH CIRCUITS SUPPLYING OUTLETS IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, BEDROOMS, RECREATIONAL ROOMS, CLOSETS, HALLWAYS, PARLORS, LIBRARIES OR OTHER SIMILAR ROOMS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE DEVICE AS REQUIRED BY ARTICLE 210.128.
- SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS SHALL BE HARD WIRED TO THE HOUSE AND SHALL HAVE BATTERY BACK-UP. SMOKE DETECTORS SHALL BE WIRED IN SERIES WITH CARBON MONOXIDE DETECTORS.
- ALL ELECTRICAL OUTLETS/ RECEPTACLES TO BE TAMPER RESISTANT.
- SWITCHES IN THE SAME VICINITY SHALL BE PLACED IN THE SAME BOX WITH A SINGLE GANG COVER PLATE.
- PROVIDE ONE ELECTRICAL OUTLET AND ONE LAMP MINIMUM IN CRAWL SPACE.
- PROVIDE ONE ELECTRICAL OUTLET AND ONE LAMP MINIMUM IN ATTIC SPACE.
- ANY ALL EXTERIOR LIGHTS SHALL BE CONTROLLED BY A MANUAL ON/OFF SWITCH, A MOTION SENSOR AND A PHOTOCONTROL, NOT HAVING AN OVERRIDE OR BYPASS SWITCH THAT DISABLES THE ASTRONOMICAL TIME CLOCK.



ELECTRICAL GENERAL NOTES

2 Switch & outlet heights
1/2" = 1'-0"

MECHANICAL FIXTURES LEGEND

SYMBOL	QTY	DESCRIPTION	SPEC / NOTES
T	TBD	THERMOSTAT	WALL-MOUNTED, WIFI COMPATIBLE THERMOSTAT TO BE PROVIDED BY HVAC INSTALLER
H	2	HUMIDISTAT	CONDENSATION SENSOR WALL SWITCH WITH MANUAL CONTROL, (PANASONIC FV-00CS1-M) BATH FAN MUST BE SET TO HUMIDISTAT EXCEPT AT POWDER ROOM
FAN	2	FAN AT BATH	PANASONIC WhisperValue DC Ventilation Fan (FV-05-10V31) SET TO HUMIDISTAT, UL-LISTED FOR WET AREAS 4" OVAL DUCT, 80 CFM, 7.2W, 0.13A, 120V/ 60Hz ENERGY STAR CERTIFIED, YES 10.25" SQ MOUNTING OPENING, 13" SQ GRILLE
FAN	1	FAN AT CRAWLSPACE	PANASONIC WhisperLine Ventilation Fan (FV-10NLF1E) 4" DUCT, 120 CFM, 27.5W, 0.24A, 120V/ 60Hz ENERGY STAR CERTIFIED, YES FAN TO BE INSTALLED AT UNDERSIDE OF FLOOR IN CRAWLSPACE, SUSPENDED FROM 2X6 FLOOR JOISTS
CONDENSER UNIT	1	CONDENSER UNIT	MITSUBISHI, 18 BTU M SERIES OUTDOOR CONDENSER, SUZ-KA18NA2, LOCATED AT GARAGE, 30 DBA AT PROPERTY LINE.
DUCTED AIR HANDLER	1	DUCTED AIR HANDLER AT CRAWLSPACE	MITSUBISHI, 18K BTU, M SERIES MULTI POSITION AIR HANDLER, SVZ-KP18MA.

ALL SPECIFIED ITEMS TO BE PROVIDED AS LISTED OR EQUIVALENT

ELECTRICAL FIXTURES LEGEND

NAME	SYMBOL	QTY	DESCRIPTION	SPEC / NOTES	LOCATION
L1	○	22	INTERIOR & EXTERIOR RECESSED LED DOWNLIGHT	CSL: A3-IC-R-ST-10-S-SHB-A3-27-90-R-ST-WT-NL-50, LED 2700K, 10W	EXTERIOR SOFFIT (10), LIVING (4), KITCHEN (5), BATH 1 (1), BATH 2 (1), PANTRY (1)
L2	⊙	18	RECESSED ADJUSTABLE LED DOWNLIGHT - SPOT OPTIC	CSL: A3-IC-R-ST-10-S-SHB-A3-27-90-R-ST-WT-NL-30, LED 2700K, 10W	LIVING (4), BED 1 (7), BED 2 (7)
L3	○	1	SUSPENDED DECORATIVE PENDANT	FLAT 5940 VIBA 2700 K	DINING TABLE
L4	⊙	2	SUSPENDED DECORATIVE PENDANT	LIGHTOLOGY- SKYBELL PLUS S/1L PENDANT BOV1025311	BEDROOM 1
L5	⊙	1	SUSPENDED DECORATIVE PENDANT	LUMENS- RA LINE LED LINEAR SUSPENSION 55"	KITCHEN ISLAND
L6	—	31 FT	LINEAR LED LIGHT- UNDER CABINET	CORE LIGHTING: LSM40HF-27-LENGTHS PER PLAN-24-ALLU-SF, LED 2700K, 4W/FT	KITCHEN - UNDER CABINETS, ROOFTOP UNDER CABINETS
L7	—	39 FT	LINEAR LED LIGHT- TOE KICK AND MILLWORK	CORE LIGHTING: LSM25-27K-LENGTHS PER PLAN-24-ALLU-SF, LED 2700K, 2.2W/FT	BATH 1 & BATH 2 VANITY TOE KICK, BATH 1 & BATH 2 O/C COUNTER, KITCHEN UNDER SHELVES, ROOFTOP TOE KICK
L8	—	12 FT	SURFACE MOUNTED LINEAR LED GRAZER IN JOB BUILT SLOT	PURE EDGE: COWG-C-SW-BC1-120-27K6-WH-W, LED 2700K, 5W/FT	BATH 1 & BATH 2 SHOWER WALL
L9	—	18	IN-WALL STEPLIGHT	HK LIGHTING: ZXL-SL-FM-XX-12V-4W-27-BK-4W, 12V, MLVELV, LED, 2700K	CONCRETE WALL AT NORTH (4), NEXT TO STAIRS (4), ROOFTOP (6)
L10	—	85 FT	LED PERIMETER WASH LIGHT	PURE LIGHT: VGN-CHLN-LENGTHS PER PLAN-VG-1RE-JBOX-ST2A-4PIN-24V-40-27K-LC-PFE-B80	ROOFTOP UNDER HANDRAIL, ROOFTOP UNDER WALL CAP
L11	*	3	1" TRIMLESS RECESSED DOWNLIGHT	CSL: A1-IC-R-ST-10-S-SHB-A1-27-90-R-TL-TL-NL-50, LED 2700K, 10W	IN BETWEEN SLATS IN LIVING ROOM

ALL SPECIFIED ITEMS TO BE PROVIDED AS LISTED OR EQUIVALENT

Residential Service Calculations
#125 Raskopf ADU - 3239 Cliff Dr
Santa Barbara, CA 93109

Square Footage of Conditioned Space*	Qty	VA	Total
# of Small Appliance Branch Circuits	2	1,500	3,000
# of 120V laundry circuits	1	1,500	1,500

Appliance Load	Qty	Amps	Volts	VA	Calculated
Oven	1	30	240		7,200
Induction Cooktop	1	50	240		12,000
Ventilation Hood	1	15	120		1,800
Microwave Drawer	1	15	120		1,800
Refrigerator / Freezer	1	30	120		3,600
Under-counter Wine Refrigerator	1	15	120		1,800
Dish Washer	1	10	120		1,200
Disposal - 3/4 HP	1	5	120		600
Instant Hot Water Tank	1	12	120		1,440
Clothes Dryer	1	30	240		7,200
Clothes Washer	1	10	120		1,200
Water Heater	1	30	240		7,200
Bathroom Fan	2	1	120		240
Crawl Space Ventilation Fan	1	1	120		120
Under-counter Refrigerator	1	15	120		1,800
Rooftop Deck Heater A	2	15	240		7,200
Rooftop Deck Heater B	1	20	240		4,800
Total General					69,300
1st 10kVA					10,000
40% of Remainder					23,720
Calculated General Load					33,720

HVAC Load	Qty	Amps	Volts	VA
Ducted Heat Pump (Electric Only)	1	20	240	4,800
Largest HVAC Load= 4,800				

Total Calculated Load of General + HVAC	Total VA
	38,520
	Amps @ 240V 160.5
	Amps @ 208V 185.2

*Square Footage of Conditioned Space x 3 VA = General Lighting Load per NEC Table 220.12
General Lighting Load includes the following per NEC 220.14(I):
(1) All general-use receptacle outlets of 20A rating or less, including receptacles connected to bathroom branch circuits as specified by 210.11(C)(3)
(2) Receptacle outlets connected to outdoor and garage circuits as specified by 210.52(E) & (G)
(3) All lighting outlets as specified by 210.70(A) & (B)

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#125 Raskopf ADU

3239 Cliff Dr
Santa Barbara, CA 93109

PROJECT NO:	#125
DATE:	4/22/2024 1 PM
DRAWN BY:	A. Arora
CHECKED BY:	B. Henson

Electrical Plan

E1.01

GENERAL NOTES

- The following notes, details, schedules & specifications shall apply to all phases of this project unless specifically noted otherwise. Notes and details on the structural plans shall take precedence over general notes and typical details. Where no details are given, construction shall be as shown for similar work.
- All drawings are considered to be part of the contract documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies shall be brought to the attention of the Engineer prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the contract documents or any applicable code requirements shall be corrected by the Contractor at no expense to the Owner or Engineer.
- All information on existing conditions shown on the structural plans are based on best present knowledge available, but without a guarantee of accuracy. The Contractor shall be responsible for the verifications of all dimension and conditions at the site. Any discrepancies between actual site conditions and information shown on the drawings or in the specifications shall be brought to the attention of the EOR prior to the start of construction.
- Refer to the Architectural plans for the following:
 - Dimensions
 - Size and location of all interior and exterior wall locations.
 - Size and location of all floor, roof and wall openings
 - Size and location of all drains, slopes, depressions, steps, etc.
 - Specification of all finishes & waterproofing
 - All other non-structural elements
- Refer to the mechanical, electrical and plumbing plans for the following:
 - Size and location of all equipment
 - Pipe runs, sleeves, hangers and trenches
 - All other mechanical, electrical or plumbing related elements
- DO NOT** scale structural plans. Contractor shall use all written dimensions on Architectural plans.
- Construction materials shall be uniformly spread out if placed on floor or roof so as to not overload the framing. Load shall not exceed the design live load per square foot. It is the Contractor's responsibility to provide adequate shoring and/or bracing as required.
- Specifications and detailing of all waterproofing and drainage items, while sometimes shown on the structural plans for general information purposes only, are solely the design responsibility of others.
- The Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the construction delineated by these plans. It should be understood that the Contractor or his/her agent(s) shall supervise and direct all work and shall be solely and completely responsible for all construction means, methods, techniques, sequences, procedures and conditions on the job site, including safety of all persons and property during the entire period of construction. Periodic observations by the Engineer, his staff or representatives are not intended to include verification of dimensions or review the adequacy of the Contractor's safety measures on or near the construction site.
- Modifications of the plans, notes, details and specifications shall not be permitted without prior approval from the Engineer.
- All workmanship shall conform to the best practice prevailing in the various trades performing the work. The Contractor shall be responsible for coordinating the work of all trades.
- It is the Contractor's responsibility to ensure that only approved structural plans are used during the course of construction. The use of unapproved documents shall be at the contractor's own risk. Corrections of all work based on such documents shall be performed at the Contractor's expense.
- These plans and specifications represent the structural design only. No information nor warranty is provided for the work of any other Consultant (Architect, Mechanical, Electrical, etc.). This includes, but is not limited to, waterproofing, drainage, ventilation, accessibility, or dimensions.

STRUCTURAL STEEL

- All structural steel and connections shall be fabricated and erected in accordance with AISC specifications, Seismic Provisions Supplements No. 1 and 2, and Code of Standard Practice as amended to date.
- Steel fabrication shop drawings shall be submitted for review by the Architect and Engineer prior to fabrication.
- Special Inspection: Continuous special inspection of structural welding is required by an inspector pre-qualified by the Building Department. The following exceptions are permitted for welds not in Special Moment-Resisting Frames:
 - Welding performed in an approved fabricator's shop in accordance with latest edition of the Governing Building Code, Section 1704.2.
 - The inspector need not be continuously present during welding of the following items, provided the materials, welding procedures, and welders qualifications are verified prior to the start of work; Periodic inspections are made of work in progress; and visual inspection of all completed welds is made prior to shipment:
 - Single-pass fillet welds not exceeding 5/16"
 - Floor and roof steel deck welding
 - Welded studs (for nailers, diaphragms or composite deck systems)
 - Welded light gauge cold-formed framing members (studs, joists, etc.)
 - Welding of stairs and railing systems
- Testing Procedures: All complete joint penetration welds (aka full penetration, FP, or CJP) groove or butt welded joints and splices in Special Moment-Resisting Frames shall be tested 100 percent in accordance with AISC Seismic Part I, Section 16 by either ultrasonic testing ("UT") or radiography (x-ray). The following exceptions are permitted:
 - Ultrasonic or radiographic testing is not required for all complete joint penetration welds on material less than 5/16" thick; continuous visual inspection is required.
 - At the discretion of the Building Official, the ultrasonic or radiographic testing rate for an individual welder may be reduced to 25% provided the reject rate is no more than 5% for all welds tested for that individual welder.
 - At the discretion of the Building Official, the ultrasonic or radiographic testing may be performed in the shop of an approved fabricator by a qualified inspector of their employ.
 - It is the responsibility of the Contractor to verify all the testing requirements of the local Building Department as the requirements vary with each governing agency. The testing procedures outlined above apply only to those complete joint penetration welds specified in Special Moment-Resisting Frames only; Ordinary Moment-Resisting Frames are exempt.
- Materials:
 - Wideflange (W) sections shall conform to ASTM A992.
 - Hollow Steel Sections (HSS) shall conform to ASTM A500 Gr. B.
 - Pipe sections shall be welded seamless pipe conforming to ASTM A53 Gr. B.
 - STD indicates Standard Wall
 - EXT indicates Extra Strong
 - DBL indicates Double Extra Strong
 - All other material (plate, bars, etc.) shall conform to ASTM A36, UNO specifically.
 - All plate material specified in steel moment frame connections shall conform to ASTM A572 Gr. 50.
- Bolts:
 - All bolts shall be ASTM F3125 Grade A325, UNO specifically on the structural plans.
 - High strength bolts complying with ASTM F3125 Grades A325 and A490, when specified, shall require special inspection in accordance with the Governing Building Code, Section 1705.2.6.
 - Threaded rod, where specified, shall conform with ASTM A307 unless specifically noted otherwise on the structural plans.
 - Bolt holes shall be drilled 1/32" to 1/16" larger than the specified bolt diameter.
- Welding:
 - All welding shall be performed using SMAW, GMAW or FCAW processes.
 - All welded connections to be in accordance with the latest edition of the AWS D1.1.
 - All welding shall be performed by certified welder.
 - All welding shall be performed with E70XX electrodes with a minimum CVN toughness of 20 ft-lb at -20°F.
 - Weld lengths specified on the plans are the net effective length required. Where fillet weld symbol is given without indication of size, use the minimum size welds as specified in section 1.17.2 of the AISC Manual of Steel Construction 15th Ed.
 - No field welding shall be UNO specifically on the plans or details.
- No holes other than those specifically detailed shall be allowed through structural steel members. Burning or torching of holes is not permitted under any circumstances.
- All structural steel shall be painted one shop coat and touched-up in the field with red lead (or approved zinc chromate primer) as necessary.
- Any steel member interfacing with wood framing shall have 1/2" diameter studs welded at 24" oc for attachment of wood nailers. Thru-bolting of nailers shall not be permitted unless specifically noted on the plans or details.
- Provide hot dip galvanizing or 3" min. concrete cover around all structural steel below grade.
- The filler metal for all welding shall have a notch toughness of net less than 20 ft-lbs at 0 degrees F, as measured by a standard Charpy V-Notch test, ASTM E-23, in accordance with the applicable filler metal specification referenced in AWE D1.1 and Seismic Supplement AWS D1.8.

MANUFACTURED SHEARWALLS

- Simpson Strong-Walls:
 - shall be fabricated by Simpson Strong-Tie Co. No substitutions shall be permitted without prior approval of the Engineer.
 - shall be located per structural plans
 - shall be installed in accordance with applicable code approvals and manufacturer's specifications.

CONCRETE

- All concrete shall have:
 - an ultimate compressive strength (Fc) of 3,000 psi at 28 days (UNO).
 - a maximum slump of 5" at point of placement.
 - a W/C (ratio of 0.55 or less for all slabs, walls, and columns, and 0.60 or less for all other concrete).
 - a normal dry-weight density (UNO).
 - Special inspection is NOT required as the foundations have been *designed* with Fc = 2,500 psi in accordance with the Governing Building Code, section 1705.3, exceptions 1, 2.1, and 2.3, unless explicitly specified herein, on the structural plans, or by the Building Department. At a minimum, special inspection is always required on:
 - structural slabs, flat plates
 - walls, columns, beams
 - pile: caissons
 - welding of reinforcement, installation of mechanical bar splice devices, epoxy applicationWhen required or specified, special inspection services shall conform to the Governing Building Code, Chapter 17 and shall be provided by an ICC certified inspector or Building Department approved engineer. The Building Department reserves the right to waive or require special inspections. Nothing in these plans waives the Building Department's right to require special inspection at any point and on any material.
 - Testing of materials used in concrete construction must be performed as noted on structural plans or at the request of the Building Department to determine if materials are quality specified. Tests of materials and of concrete shall be made by an approved agency; such tests shall be made in accordance with the standards listed in the Governing Building Code, Table 1705.3. When testing of concrete is required, four (4) test cylinders shall be taken from each 150 yards, or fraction thereof, poured in any one day. One (1) cylinder shall be tested at seven (7) days; two (2) at 28 days; one (1) shall be held in reserve. Where 4x8 cylinders are used, (5) test cylinders shall be taken, with (3) cylinders tested at 28 days. If Contractor elects to have additional tests performed for "early-break" results, additional test cylinders must be taken. At no time shall the Contractor instruct the testing agency to perform tests on a schedule different than above without the prior approval of the Engineer. The Contractor is responsible for providing all applicable testing requirements of the Building Department. Copies of all test reports shall be provided to Engineer and Building Department for review in a timely manner.
 - The Contractor shall remove and replace any concrete which fails to attain specified 28 day compressive strength if so directed by the Engineer. Any defects in the hardened concrete shall be repaired to the satisfaction of the Engineer and/or Architect or the hardened concrete shall be replaced at the Contractor's expense.
 - All concrete work shall conform with the Governing Building Code, Chapter 19.
 - All cement shall be Portland Cement Type I or II and shall conform to ASTM C150.
 - All aggregates shall conform to ASTM C33. Maximum aggregate sizes:
 - Footings: 1-1/2"
 - All other work: 3/4"
 - Where not specifically detailed, the minimum concrete cover on reinforcing steel shall be:
 - Permanently exposed to earth or weather
 - Cast against earth: 3"
 - Cast against forms: 2"
 - Not exposed to earth or weather
 - Slabs, walls, joists: 3/4"
 - Beams, girders, columns: 1-1/2"
 - The minimum lap splice length for all reinforcing steel shall be as noted in the typical details on sheet S-1.1. All lap splices to be staggered.
 - All reinforcing steel, anchor bolts, dowels, inserts, and any other hardware to be cast in concrete shall be well secured in position prior to foundation inspection. All hardware to be installed in accordance with respective manufacturer's specifications. Refer to architectural and structural plans for locations of embedded items.
 - Locations of all construction joints, other than specified on the structural plans, shall be approved by the Architect and Engineer prior to forming. Construction joints shall be thoroughly air and water cleaned and heavily roughened so as to expose coarse aggregates. All surfaces to receive fresh concrete shall be maintained continuously wet at least three (3) hours in advance of concrete placement. Unless specifically detailed or otherwise noted, construction and control joints shall be provided in all concrete slabs-on-grade. Joints shall be located such that the area does not exceed 400 sq. feet.
 - The Architect, Engineer and appropriate inspectors shall be notified in a timely manner for a reinforcement inspection prior to the placement of any concrete.
 - The Contractor shall obtain approval from the Architect and the Engineer prior to placing sleeves, pipes, ducts, chases, coring and opening on or through structural concrete beams, walls, floors, and roof slabs unless specifically detailed or noted on the plans. All pipes or conduits passing through concrete members shall be sleeved with standard steel pipe sections.
 - The Contractor is responsible for design, installation, maintenance and removal of all formwork. Forms shall be properly constructed, sufficiently tight to prevent leakage, sufficient strength to maintain their shape and alignment until no longer needed for concrete support. Joints in formwork shall be tightly fitted and blocked, and shall produce a finished concrete surface that is true and free from blemishes. Forms for exposed concrete shall be pre-approved by the Architect to ensure conformance with design intent.
 - Remove formwork in accordance with the following schedule:
 - Forms at slab edge: 1 day
 - Side forms at footings: 2 days
 - All other vertical surfaces: 7 days
 - Beams, columns, girders: 15 days
 - Elevated slabs: 28 daysEngineer reserves the right to modify removal schedule above based on field observations, concrete conditions, and/or concrete test results.
 - Retaining walls shall not be backfilled until concrete has set a minimum of 14 days. Refer to structural plans for slab and/or framing installation sequencing.
 - All concrete (except slabs-on-grade or less) shall be mechanically vibrated as it is placed. Vibrator to be operated by experienced personnel. The vibrator shall be used to consolidate the concrete. The vibrator shall not be used to convey concrete, nor shall it be placed on reinforcing and/or forms.
 - Concrete shall be maintained in a moist condition for a min. of five (5) days after placement.
 - Concrete shall not be permitted to free fall more than six (6) feet. For heights greater than six (6) feet, use concrete pump, or other method consistent with applicable standards.
 - When specified ultimate compressive strength is greater than 2500 psi, Contractor shall submit mix designs to Architect and Engineer for approval seven (7) days prior to placement. Mix designs shall be prepared by an approved testing laboratory. Suffcient data must be provided for all admixtures.
- Refer to Architectural plans for locations of all dimensions, slab depressions, slopes, drains, curbs, and control joints.

FOUNDATIONS

- Refer to Structural Design Parameters section on sheet S-1.1 for all soil design values used in calculations.
- Soils values per geologic/geotechnical report (or "soils report") by Braun & Associates, Inc., Project No. 3097, dated Dec. 7, 2021, and Addendum Dated Feb. 5, 2024. This report and all recommendations contained therein are to be considered a part of these plans.
- It is the Contractor's responsibility to obtain a copy of the soils report from the Owner. A copy of the soils report shall be on the job site during the course of construction.
- Unexpected Soil Conditions: Allowable values and subsequent foundation designs are based on soil conditions which are shown by test borings. Actual soil conditions which deviate appreciably from that shown in the test borings shall be reported to the EOR and/or soils engineer immediately.
- All compaction, fill, backfilling and site preparation shall be performed in accordance with project soils report and the Governing Building Code Chapter 18 & Appendix J. All such work shall be subject to approval by the building official and/or soils engineer.
- Excavate to required depths and dimensions (as indicated in the drawings), cut square and smooth with firm level bottoms. Care shall be taken not to over-excavate foundation at lower elevation and prevent disturbance of soils around high elevation.
- Foundations shall be poured in neat excavations.
- Excavate all foundations to required depths into compacted fill or natural soil (as per plans and specifications) and be verified by the building official and/or soils engineer.
- All foundations shall be inspected and approved by the appropriate building official and/or a representative of the soils engineer prior to forming and placement of reinforcing or concrete.
- Foundations shall not be poured until all required reinforcing steel, framing hardware, sleeves, inserts, conduits, pipes, etc. and formwork is properly placed and inspected by the appropriate building official(inspector's).
- It is the responsibility of the contractor in charge of framing to properly position all holdown anchors and base plates, and all other cast-in-place hardware. Refer to typical details. All hardware to be secured prior to foundation inspections.
- The sides and bottoms of dry excavations must be moistened to optimum moisture content or just above, just prior to placing concrete. Conversely, de-water footings as required to remove standing water and to maintain optimum working conditions.
- The Contractor shall be solely responsible for all excavation procedures including lagging, shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with the local, state and local safety ordinances. The Contractor shall provide for the design and installation of all cribbing, bracing and shoring required.

ROUGH CARPENTRY

- Refer to latest edition of the Governing Building Code, Table 2304.10.2, for all minimum nailing requirements sections for applicable material specifications.
- Refer to individual sections for applicable material specifications.
- Fabricate, size, install, connect, fasten, bore, notch, and cut wood and plywood with joints true, tight, and well-nailed, screwed or bolted as required, all members to have solid bearing without being shimmed, unless noted otherwise. Set horizontal members subject to bending with the crown up. Install framing plumb, square, true and cut for full bearing. Splices are not permitted between bearings. Use full lengths unless otherwise specified.
- Metal framing angles, anchor, clips, straps, ties, holdowns, etc. shall be mfg by Simpson Strong-Tie Co. No substitutions shall be permitted without prior approval of the Engineer.
- All walls are to have continuous double 2x top plates spliced as followings unless specifically noted otherwise on the plans and details.
- Wall Studs:
 - Unless specifically noted on the plan and details, use the following guidelines for wall framing:
 - Use 2x4 studs at 16" oc for walls less than 9'-0" tall.
 - Walls 9'-0" to 16'-0" tall shall be constructed of 2x6 studs at 16" oc.
 - Request specifically engineered wall details for walls greater than 16'-0" tall.
- Blocking:
 - Provide min. one row of nominal 2" thick blocking of same width as stud, fitted snugly and spiked into studs at mid-height of partitions or walls over 8' high.
 - All foundation cripple walls (or "pony walls") less than 14" in height shall be solid blocking.
 - Rim blocking/rim board to be 1-1/4" minimum width x full depth at bearing walls, UNO per plans and details. Refer to shearwall section for additional rim/blocking requirements.
- Notching:
 - Is not permitted of any structural member without prior approval
 - In exterior and bearing walls, notches shall not exceed 25% of the stud depth.
 - Non-bearing partition walls, notches shall not exceed 40% of the stud depth.
 - Successive notches in the same member shall be spaced a min of 18" apart.
- Boring:
 - Is not permitted of any structural member without prior approval
 - In exterior and bearing walls, holes shall not exceed 40% of the stud depth.
 - Non-bearing partition walls, may be drilled not greater than 60% of stud depth.
 - Successive holes in the same member shall be spaced a minimum of 18" apart.
- Bearing:
 - Provide a min. of 1-1/2" of bearing for all 2x joists and hdrs 4x10 / 6x8 & smaller.
 - Provide a min. of 3" of bearing for all beams and hdrs 4x12 / 6x10 & larger, UNO on plans.
 - Members bearing on prefabricated hangers are to have full bearing and nailing per manufacturer's specifications.
- Posts:
 - Posts inside walls shall bear on sill plates and shall be continuous between top and bottom plates, unless specifically noted otherwise.
 - Provide posts under all beams, girders or double joists equal to the width of the supported member.
 - Posts on upper levels are to be stacked on posts of equal size at levels below, unless a larger post is specified on the plans.
 - Vertically oriented blocking ("squash blocking") shall be used to fully transfer the post area through floors to foundation. Vertical blocking shall be equal to floor thickness plus 1/16".
 - Headers framing into continuous posts without trimmer studs shall be supported in Simpson HUC hangers unless noted otherwise on the plans.
 - Posts when isolated, shall be seated in Simpson post or column bases, unless noted otherwise on the plans.
- Roof Framing:
 - Provide wood joists, as specified, laid with the crown up and spaced as indicated.
 - Provide a minimum of 1-1/2" end bearing unless otherwise shown.
 - Provide full depth solid 2x blk or cross-bridging between the joists at 8' oc max.
 - Provide all cricket framing required to achieve positive drainage per Arch.
 - Install plywood sheathing with the face grain across the framing and close joints and nail at each support. Fully nail with common nails per the plans.
 - Plywood panels shall not be less than 4' x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of undersized panels are supported by and fastened to framing members or blocking.
 - Provide Simpson "PSCl" clips at all plywood joints perpendicular to framing. Provide clips midway between framing members at the unsupported edges of plywood when members are spaced at 24" oc or greater. If clips are not used, provide solid blocking for joints perpendicular to framing.
- Floor Framing:
 - Provide wood joists, as specified, laid with the crown up and spaced as indicated.
 - Provide a minimum of 1-1/2" end bearing unless otherwise shown.
 - Provide full depth solid 2x blk or cross-bridging between the joists at 8' oc max. For floors framed with 1 joists, refer to the mfg's spec's for blk requirements.
 - Provide full depth solid 2x blocking between the joists under all walls and partitions where the wall or partition is perpendicular to the floor framing (including floors framed with 1 joists)
 - Install plywood sheathing with the face grain across supports, end supports staggered, and the edges of sheets centered over supports. If T&G plywood is used, blocking need not be provided at all plywood edges (UNO per plan). If T&G plywood is not used, blocking shall be provided at all plywood edges. Glue plywood to joists and fully nail with common nails per the plans.
 - Plywood panels shall not be less than 4' x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of undersized panels are supported by and fastened to framing members or blocking.
- Shear Walls:
 - Refer to plans for all shearwall locations, length type and nailing.
 - Refer to Shearwall Schedule on title sheet for additional information.
 - Shear wall lengths specified on plans are minimum required.
 - Shear walls to be nailed with common nails. All nails to have minimum 3/8" edge distance to panel or framing member.
 - Where 3x framing is required per the shear wall schedule, stagger edge nailing.
 - Oriented Strand Board (OSB) may be used in lieu of plywood.
 - Typical Rim Board/Blocking at Shearwalls shall be 1-3/4" Min. LSL (refer to Engineered Lumber Section for Material Specifications). Refer to Shearwall Schedule per Plan for Min. Rim/Blk Width Requirements per Transfer Fasteners.

TIMBER / LUMBER

- All structural lumber shall be Douglas Fir-Larch, SAS and shall conform to the Governing Building Code, section 2303.1.1.
- The minimum lumber grade of each member shall be as follows (unless specifically noted otherwise on plans and details):
 - 2x studs, blocking, plates: Stud
 - 2x joists #2 or better
 - 4x4, 4x6, or 6x6 beams or posts #2 or better
 - 4x4, 6x8, or larger beams or posts #1 or betterIt is recommended (but not required) that all exposed members be Select Structural or better and free of heart center due to visual characteristics.
- All lumber in contact with concrete or masonry shall be pressure treated Douglas Fir. Whenever it is necessary to cut, notch, bore or splice pressure treated material, all newly cut surfaces shall be thoroughly painted with the same preservative.
- Maximum moisture content for all structural members shall not exceed 19%.
- All plywood sheathing shall be CDX grade (or better) Douglas Fir with exterior glue. All sheathing shall conform to the Governing Building Code and grade-marked by the American Plywood Association (APA). Panel index to be 40/20 for floors and 24/0 for roofs unless specifically noted otherwise on the plans and details.

REINFORCEMENT

- Reinforcing steel shall be deformed, clean, free of rust, grease or any other material likely to impair concrete bond.
- All bars shall conform to ASTM A615, Grade 60 minimum (UNO on structural plans). All weld wire fabric (WWF) shall conform to ASTM A185.
- Reinforcing steel that is to be welded shall conform to ASTM A706. All welding of reinforcement shall be subject to special inspection.
- Contractor shall take necessary steps (standard ties, anchorage devices, etc.) to secure all reinforcing steel in their true position and prevent displacement during concrete placement.
- Fabrication, placement and installation of reinforcing steel shall conform to:
 - Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice
 - the Governing Building Code.
- Shop drawings for fabrication of reinforcing steel shall be approved by the Contractor and submitted to the Architect and Engineer for review and approval prior to fabrication. Shop drawings are not required for slabs-on-grade or foundations unless specifically noted on the structural plans.
- Heating of reinforcing steel to aid in bending and shaping of bars is not permitted. All bends in reinforcing steel are to be made cold. All bend radii shall conform to CRSI Manual of Standard Practice.
- Refer to Concrete and Masonry notes for specific minimum splice length and splice staggering requirements. Lap welded wire fabric (WWF) reinforcement two (2) modules minimum (UNO). All splices are to be staggered.

ENGINEERED LUMBER

- Glue-laminated Beams (GLB):
 - shall have the following properties:

Use	EWS Combination Symbol	Species / Grade	Flexural Stress, Fb (ksi)	Modulus of Elasticity, E (ksi)	Horiz. Shear Stress, Fv (psi)	Comp. Fc para. (ksi)	Comp. Fc perp. (ksi)
Simple Span Bm	24F-V4	DF	+2,400-1,850	1,800	265	1,650	650
Continuous or Cantilever Bm	24F-V8	DF	+/- 2,400	1,800	265	1,650	650
 - shall not be notched, cut or drilled without prior approval from the Engineer
 - shall have exterior glue and weather-treatment prior to installation
 - shall be fabricated by an approved manufacturer & in accordance with ANSI A 190.1
 - shall have factory standard camber of 3,500-5,000 ft on beams UNO per Plan
- Laminated Veneer Lumber (LVL):
 - shall be 1-3/4" minimum thickness with the following minimum properties:
 - E = 2000 ksi
 - Fb = 2600 psi
 - Fv = 285 psi
 - Fc (parallel) = 2500 psi
 - Fc (perp.) = 750 psi
 - Ft (parallel) = 1500 psi
 - Specific Gravity = 0.50
 - shall be fabricated by an approved manufacturer
 - shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points
 - shall be nailed in accordance with mfg's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than:
 - 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc
 - When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances.
 - shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or 1/4" lag screws in accordance with manufacturer's specifications.
 - shall not be cut, notched or drilled without specific written approval of the EOR.
- Laminated Strand Lumber (LSL):
 - shall be 1-3/4" minimum thickness with the following minimum properties:
 - E = 1550 ksi
 - Fb = 2325 psi
 - Fv = 310 psi
 - Fc (parallel) = 2170 psi
 - Fc (perp.) = 900 psi
 - Ft (parallel) = 1070 psi
 - Specific Gravity = 0.50
 - shall be fabricated by an approved manufacturer
 - shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points
 - shall be nailed in accordance with manufacturer's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than:
 - 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc
 - When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances.
 - shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or 1/4" lag screws in accordance with manufacturer's specifications.
 - shall not be cut, notched or drilled without specific written approval of the EOR.
- Parallel Strand Lumber (PSL):
 - shall be 2-1/2" minimum thickness with the following minimum properties:
 - E = 2200 ksi
 - Fb = 2900 psi
 - Fv = 290 psi
 - Fc (parallel) = 2900 psi
 - Fc (perp.) = 625 psi
 - Ft (parallel) = 2300 psi
 - Specific Gravity = 0.50
 - shall be fabricated by an approved manufacturer
 - shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points
 - shall be nailed in accordance with manufacturer's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than:
 - Narrow face: 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc
 - Wide Face: 16d @ 8" oc, and 10d & 8d @ 6" oc
 - When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances
 - shall not be cut, notched or drilled without specific written approval of the EOR.
- Plywood Joists:
 - shall be a manufacturer shall be clearly noted on the plans. Substitutions shall not be permitted without prior approval of the Engineer.
 - shall be installed in accordance with applicable code approvals and mfg's spec's.
 - shall bear a minimum of 1-3/4" at all end supports, and 3-1/2" at intermediate supports. Provide full depth solid blocking at all bearing points.
 - shall be installed with intermediate blocking or bridging as specified by the Mfr. Only omit intermediate blocking when specifically allowed by the Mfr.
 - shall not be cut, notched or drilled without specific written approval of the EOR.

FASTENERS

- Nails:
 - shall be with "common" nails unless noted otherwise.
 - shall not be driven closer than 1/2 their length nor closer than 1/4 of their length to the edge or end of a member, except for sheathing.
 - shall be installed in pre-drilled hole holes if necessary to avoid splitting.
 - shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper when in contact with preservative-treated wood.
 - When used in exterior applications, nails shall have coating types and weights in accordance with the treated wood or bolt manufacturer's Recs. A Min. of ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used.
 - When used in an interior, dry environment in SBX/DOT or zinc borate preservative-treated wood, plain carbon nails shall be permitted.
 - All nailing shall conform to the Governing Building Code, Table 2304.10.2.
- Lag screws:
 - shall be installed into pre-drilled lead holes. Lubricant (or soap) shall be used to facilitate installation and prevent damage to the screws.
 - shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood.
 - When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used.
 - When used in dry interior environments in SBX/DOT or zinc borate preservative-treated wood, plain carbon screws, nuts, and washers shall be permitted.
- Bolts:
 - shall conform to ASTM A307, UNO specifically on plans and details.
 - shall be installed in pre-drilled holes a max of 1/16" larger than the specified bolt dia. and nuts.
 - when installed against wood surfaces, shall have standard washers under the heads and nuts.
 - shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood.
 - When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used.
 - When used in dry interior environments in SBX/DOT or zinc borate preservative-treated wood, plain carbon screws, nuts, and washers shall be permitted.
- Anchor Bolts:
 - shall be installed at all exterior walls and all interior shear and/or bearing walls.
 - shall be 5/8" diameter with 3x3x3/229" steel plate washers at shearwalls.
 - shall be 5/8" diameter with 2x2x3/16" steel plate washers at non-shearwalls.
 - shall have 7" minimum embedment. (Contractor to coordinate length of bolts with sill plate thicknesses).
 - shall conform to ASTM F1554, Grade 36.
 - shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood.
 - When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used.
 - When used in dry interior environments in SBX/DOT or zinc borate preservative-treated wood, plain carbon screws, nuts, and washers shall be permitted.
 - shall not be spaced greater than 72" oc Refer to shearwall schedule for specific anchor bolt spacing requirements.
 - shall be placed a maximum of 12" from wall corners, wall ends, and sill plate splices (but not less than 7 dia.) , and a min. of two bolts per piece of sill plate is required.
 - shall be secured in place prior to foundation inspection.
- Powder Actuated Shot Pins:
 - shall be installed at all interior non-bearing, non-shearwalls.
 - shall be 0.145x3" with 1.5" diameter steel washers.
 - shall not be spaced greater than 32" o.c.



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Santa Barbara, CA 93101
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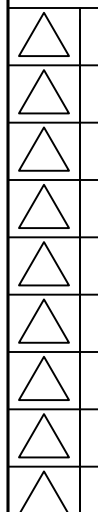
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Engineer of Record:



Raskopf ADU
3239 Cliff Dr.
Santa Barbara, CA 93109

Revision:



Proj. Engr.: Peter Z. Phone Ext.: 181

Proj. Mngr.: Paul B.

Date: 15 Feb. 2024 Scale: NTS

A&V Job No.: 231204

STRUCTURAL SPECIFICATIONS

S-1.2

DO NOT SCALE THESE DRAWINGS. Refer to Architectural plans for all dimensions

STATEMENT OF SPECIAL INSPECTIONS

- This Statement of Special Inspection is submitted in fulfillment of the requirements of the Governing Building Code, section 1704 and 1705.
- Special Inspections and Testings will be performed in accordance with the approved plans and specifications, this statement and the Governing Building Code, Section 1704, 1705, 1707, and 1708.
- The schedule of Special Inspections summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspection requirements. Any additional tests and inspections required by the approved plans and specifications will also be performed.
- Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with the Governing Building Code Section 1704.2.4.
- A Final Report of Special Inspections documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy (Section 1704.2.4). The Final Report will document:
 - Required special inspections.
 - Correction of discrepancies noted in inspections.
- The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In partial fulfillment of these obligations, the Owner will retain and directly pay for the Special Inspections as required in the Governing Building Code, Section 1704.2.
- 1704.4 Contractor responsibility. Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the owner or the owner's authorized agent prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.

SCHEDULE OF TESTING AGENCIES & SPECIAL INSPECTORS

The following are the testing agencies and special inspectors that will be retained to conduct tests and inspection on this project.

Responsibility	Firm	Address, Telephone, Email
1. Special Inspection (Except for Geotechnical)		
2. Materials Testing		
3. Geotechnical Inspection		
*		

* Additional inspections may be required at the discretion of the Building Official.

SEISMIC REQUIREMENTS (Section 1705.13)

Description of seismic-force-resisting system and designated seismic systems subject to special inspections per Section 1705.13:
 Light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets (ASCE 7, Table 12.2-1, Line A.15)
 The extent of the main seismic-force-resisting system is defined in more detail in the construction documents.

WIND REQUIREMENTS (Section 1705.12)

Description of main wind-force-resisting system and designated seismic systems subject to special inspections per Section 1705.12:
 Not Applicable
 The extent of the main wind-force-resisting system is defined in more detail in the construction documents.

SCHEDULE OF SPECIAL INSPECTIONS

Column Header Notation Used in Table:

- C Indicates continuous inspection is required.
- P Indicates periodic inspections are required. The notes and/or contract documents should clarify.

Box Entry Notation Used in Table:

- X Is placed in the appropriate column to denote either "C" continuous or "P" periodic inspections.
 - Denotes a one-time activity or one whose frequency is defined in some other manner.
- Additional details regarding inspections are provided in the project specifications or notes on the drawings.

Verification & Inspection	C	P	Notes
1705.6 - Soils			
1. Verify materials below shallow footings are adequate to achieve the desired bearing capacity		X	
2. Verify excavations are extended to proper depth and have reached proper material		X	
3. Perform classification and testing of compacted fill materials		X	
4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill	X		
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly		X	
1705.13.2 - Seismic Resistance - Structural Wood			
2. Inspect nailing, bolting, anchoring, and other fastening of elements of the main seismic force-resisting system, including wood shear walls, wood diaphragms, collectors (drag struts), braces, shear panels, and hold-downs	X		Inspection of shear walls and diaphragms with fasteners spaced greater than 4" oc is not required

1705.2 - Steel		
1. Material verification of high-strength bolts, nuts, and washers		X
a. Identification markings to conform to ASTM standards specified in the approved construction documents		X
b. Manufacturer's certificate of compliance required		X
2. Inspection of high-strength bolting:		
a. Bearing-type connections		X
b. Slip-critical connections	X	
3. Material verification of structural steel:		
a. Identification markings to conform to ASTM standards specified in the approved construction documents	--	--
b. Manufacturer's mill test reports	--	--
4. Material verification of weld filler materials:		
a. Identification markings to conform to AWS designation listed in the WPS	--	--
b. Manufacturer's certificate of compliance required	--	--
5. Inspection of Welding:		
a. Structural Steel		
1) Complete and partial penetration groove welds	X	
2) Multi-pass fillet welds	X	
3) Single-pass fillet welds > 5/16"		X
4) Single-pass fillet welds < 5/16"		X
5) Floor and roof deck welds		X
b. Reinforcing Steel		
1) Verification of weldability of reinforcing steel other than ASTM A706		X
2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls, and shear reinforcement	X	
3) Shear reinforcement	X	
4) Other reinforcing steel		X
6. Inspection of steel frame joint details for compliance with approved construction documents (bracing & stiffening, member locations, application of joint details at each connection, etc.)		X
7. Welded studs when used for structural diaphragms		X
8. Welding of cold formed sheet steel framing members		X
9. Welding of stairs and railing systems		X



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Engineer of Record:



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 3239 Cliff Dr.
 Santa Barbara, CA 93109

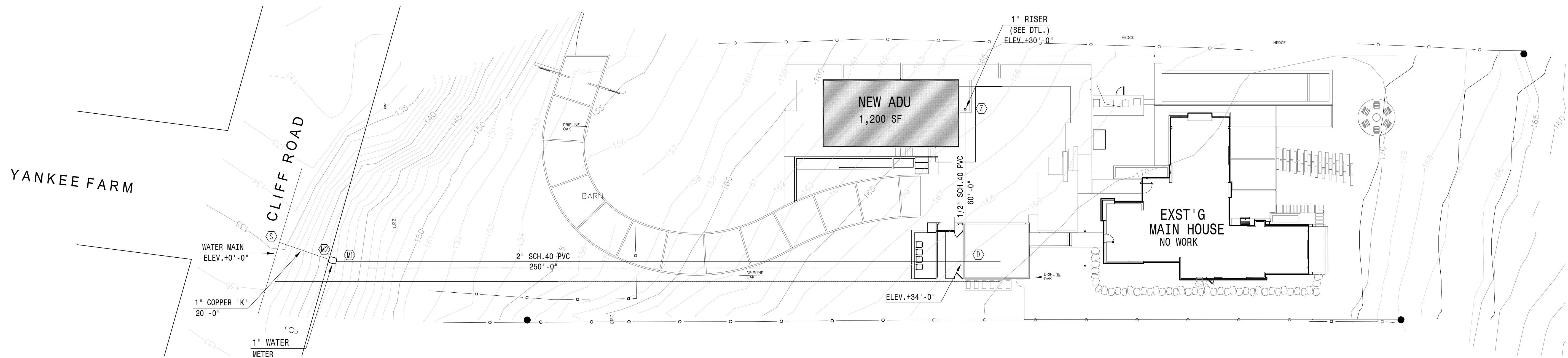
Revision:

- △
- △
- △
- △
- △
- △
- △
- △

Proj. Engr.: Peter Z. Phone Ext.: 181
 Proj. Mngr.: Paul B.
 Date: 15 Feb. 2024 Scale: NTS
 A&V Job No.: 231204

SPECIAL INSPECTIONS

S-1.3



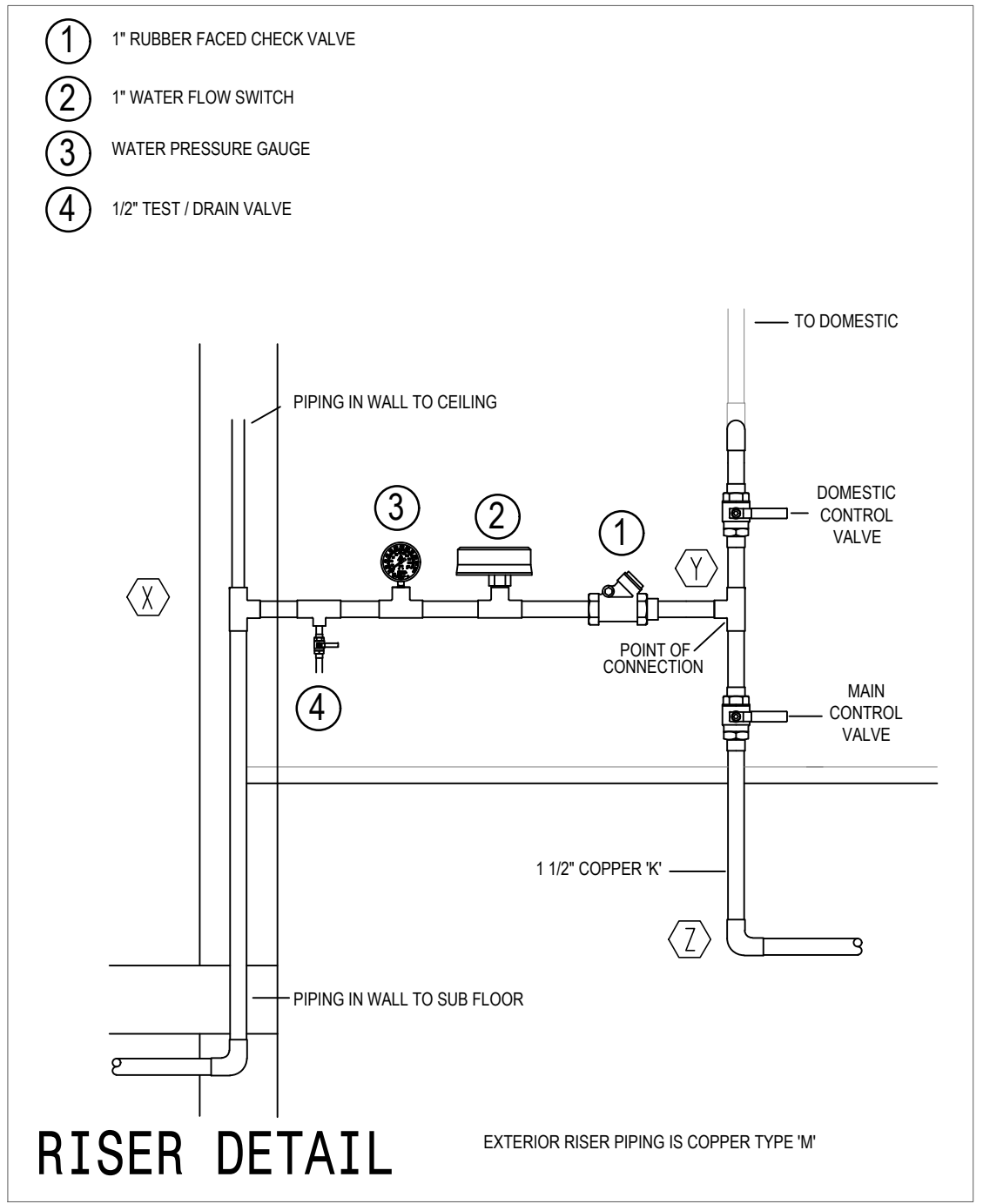
SITE PLAN

*UNDERGROUND IS SHOWN FOR REFERENCE ONLY.

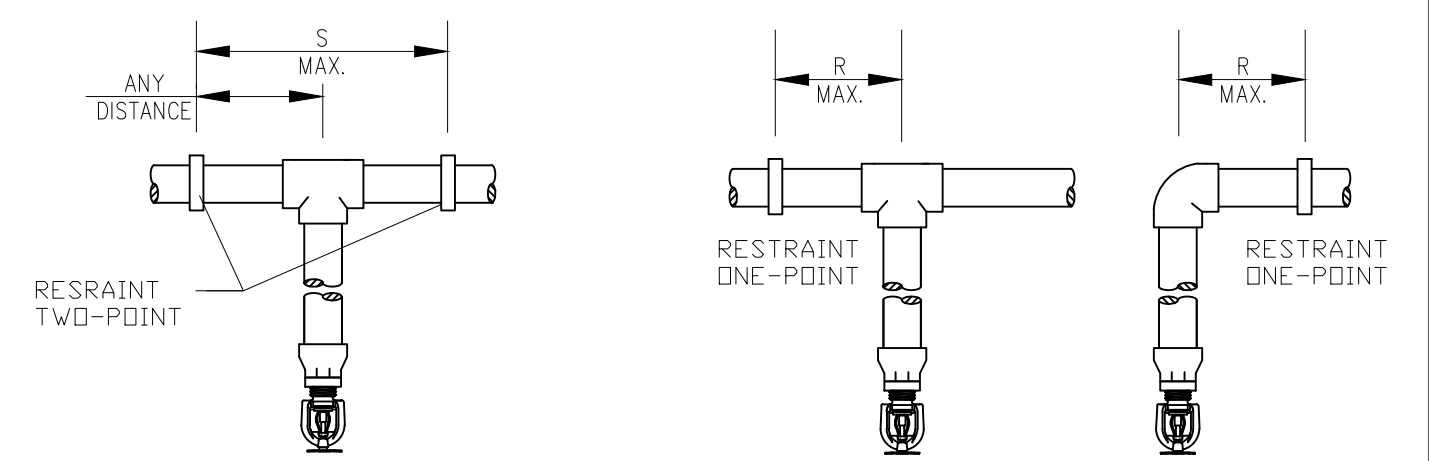
SCALE: 1" = 20'-0"



WATER PRESSURE
STATIC : 84 PSI
RESIDUAL : 20 PSI
FLOW : 500 GPM



PLASTIC PIPE HANGERS
HANGER LOCATION AND SPACING REQUIREMENTS.



SUPPORT SPACING

NOMINAL PIPE SIZE ANSI INCHES	SUPPORT SPACING IN FEET
3/4"	5'-6"
1 1/4"	6'-6"
1 1/2"	7'-0"
2"	8'-0"
2 1/2"	9'-0"
3"	10'-0"

TABLE S - TWO POINT OF RESTRAINT

NOMINAL PIPE SIZE ANSI INCHES	*S* LESS THAN 100 PSI (0.5 BAR)	*S* GREATER THAN 100 PSI (0.5 BAR)
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/4"	6'-0"	5'-0"
1 1/2" TO 3"	7'-0"	7'-0"

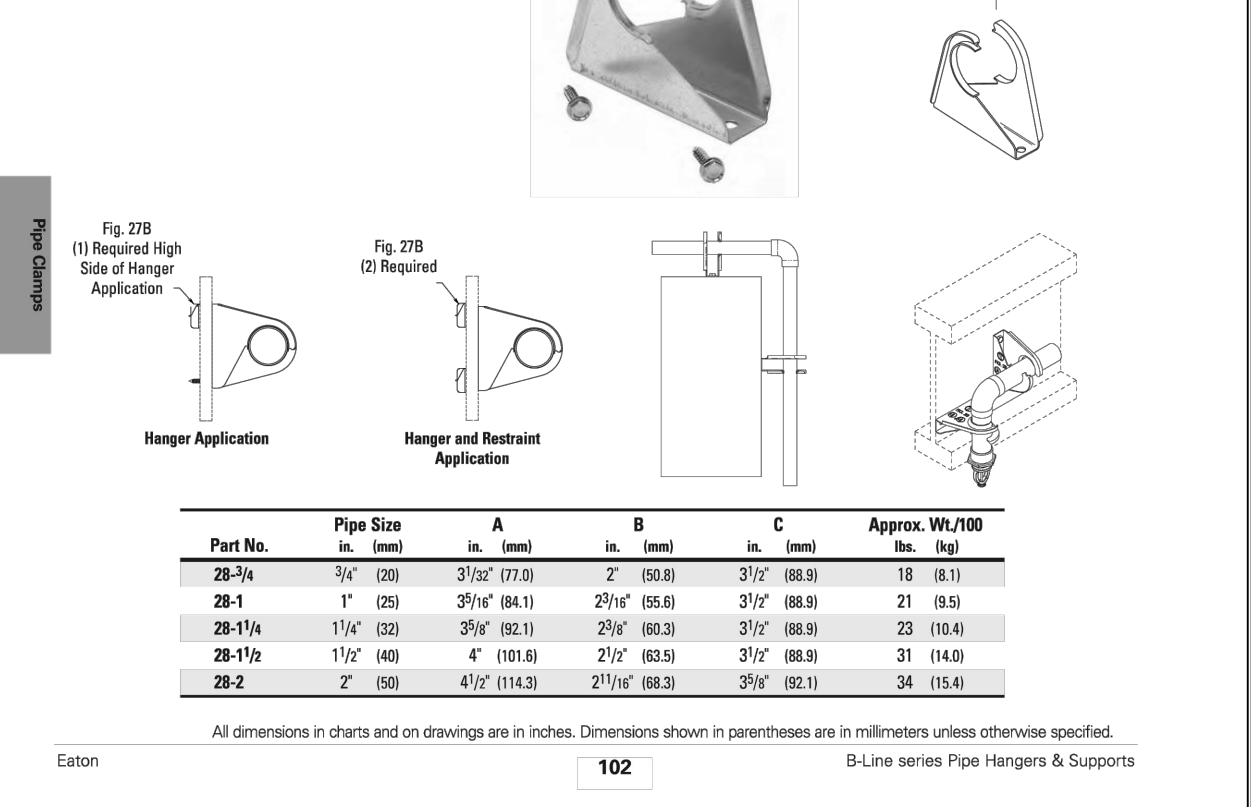
TABLE R - ONE POINT OF RESTRAINT

NOMINAL PIPE SIZE ANSI INCHES	*R* LESS THAN 100 PSI (0.5 BAR)	*R* GREATER THAN 100 PSI (0.5 BAR)
3/4"	0'-5"	0'-6"
1"	1'-0"	0'-9"
1 1/4"	1'-4"	1'-0"
1 1/2" TO 3"	2'-0"	1'-0"

HANGER SPACING FOR CPVC PIPE

Pipe Clamps

TOLCO® Fig. 28 - "Stand-Off" Hanger & Restraint for CPVC Plastic Pipe
Size Range: — 3/4" (20mm) through 2" (50mm)
Material: — Steel, Pre-Galvanized
Function: — Designed to be used as a hanger and restraint for CPVC piping when the "stand-off" design will save installation by eliminating the need for wood blocking.



FIRE SPRINKLER NOTES:

- THIS RESIDENTIAL SYSTEM SHALL BE DESIGNED & INSTALLED PER N.F.P.A. 13D 2022, OFC 2022 & AHJ.
- ONLY LISTED AND APPROVED DEVICES SHALL BE INSTALLED IN THIS SYSTEM. (EXCEPT HANGERS AND TANKS).
- ONLY NEW LISTED RESIDENTIAL SPRINKLERS SHALL BE USED IN THE INSTALLATION OF THIS SYSTEM. AT LEAST THREE SPARE SPRINKLERS AND A SPRINKLER WRENCH SHALL BE KEPT.
- THIS RESIDENTIAL SPRINKLER SYSTEM SHALL BE TESTED AND INSPECTED AT BOTH THE ROUGH AND FINAL STAGES, PRIOR TO OCCUPANCY BEING GRANTED.
- ALL VALVES SHALL HAVE PERMANENTLY AFFIXED SIGNS INDICATING ITS FUNCTION.
- PIPE SHALL BE HUNG FROM STRUCTURAL MEMBERS, PER PIPING MANUFACTURERS SPECIFICATIONS AND LOCAL JURISDICTIONS REQUIREMENTS.
- THE SPACING AND LOCATION OF SPRINKLERS SHALL CONFORM TO THE MANUFACTURERS AND N.F.P.A. REQUIREMENTS.
- ALARM BELL SHALL BE OF SUFFICIENT INTENSITY TO BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE WITH ALL INTERVENING DOORS CLOSED.
- ALL PIPING SHALL BE INSTALLED PER N.F.P.A. 13D AND THE MANUFACTURERS SPECIFICATIONS REGARDING PROTECTION FROM FREEZING.
- IT IS THE OWNERS SOLE RESPONSIBILITY TO PROPERLY MAINTAIN THE SYSTEM AND PROTECT THE SYSTEM FROM FREEZING.
- ALL OVERHEAD PIPING TO BE BLAZEMASTER CPVC WITH PLASTIC FITTINGS U.N.O.
- WHERE PIPE IS TO BE SOLDERED ONLY 95/5 SOLDER SHALL BE USED.
- ALARM BELL AND WATER FLOW SWITCH TO BE WIRED BY OTHERS.
- A SEPARATE ALARM SUBMITTAL AND PERMIT SHALL BE REQUIRED.

tyco WorldWide Contacts: www.tyco-fire.com

Series LFII Residential 4.2 K-factor Concealed Horizontal Sidewall Sprinkler Wet Pipe Systems

IMPORTANT: Refer to Technical Data Sheet TFP445 for warnings pertaining to installation and health information. Always refer to Technical Data Sheet TFP445 for the "WIRELESS WARNINGS" that provide cautions with respect to handling and installation of sprinkler systems and components. Improper handling and installation can potentially damage a sprinkler system or its components and cause the sprinkler to fail to operate in the situation or cause it to operate prematurely.

Technical Data

General Description

Sprinkler Identification Number (SIN)

Physical Characteristics

Maximum Working Pressure

Temperature Rating

Discharge Coefficient

Horizontal Adjustment

Finishes

Notes: The TYCO Series LFII Residential 4.2 K-factor Concealed Horizontal Sidewall Sprinkler (TY234) is a decorative, fast response, fusible link sprinkler designed for use in residential occupancies, including single-family dwellings, dormitories, and hotels. The Series LFII Concealed Horizontal Sidewall Sprinkler is intended for use in the following scenarios: • Wet pipe residential sprinkler systems for one and two-family dwellings and mobile homes per NFPA 13D. • Wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R. • Wet pipe sprinkler systems for the residential portion of any occupancy per NFPA 13. The Series LFII Concealed Horizontal Sidewall Sprinkler is intended for use in areas with finished walls, and provides 180° of coverage. The adjustment reduces the accuracy to which the pipe reacts to the sprinkler must be cut. The Series LFII Concealed Horizontal Sidewall Sprinkler has been designed with best sensitivity and water distribution characteristics proven to help in the control of residential fires and to improve the chance for occupants to escape or be rescued.

tyco WorldWide Contacts: www.tyco-fire.com

Series LFII Residential 4.9 K-factor Concealed Pendent Sprinkler Flat Plate, Wet Pipe System

IMPORTANT: Refer to Technical Data Sheet TFP446 for warnings pertaining to installation and health information. Always refer to Technical Data Sheet TFP446 for the "WIRELESS WARNINGS" that provide cautions with respect to handling and installation of sprinkler systems and components. Improper handling and installation can potentially damage a sprinkler system or its components and cause the sprinkler to fail to operate in the situation or cause it to operate prematurely.

Technical Data

General Description

Sprinkler Identification Number (SIN)

Physical Characteristics

Maximum Working Pressure

Temperature Rating

Discharge Coefficient

Horizontal Adjustment

Finishes

Notes: The TYCO Series LFII Residential 4.9 K-factor Concealed Pendent Sprinkler (TY234) is a decorative, fast response, fusible link sprinkler designed for use in residential occupancies, including single-family dwellings, dormitories, and hotels. The Series LFII Concealed Pendent Sprinkler is intended for use in the following scenarios: • Wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R. • Wet pipe sprinkler systems for the residential portion of any occupancy per NFPA 13. The Series LFII Concealed Pendent Sprinkler has been designed with best sensitivity and water distribution characteristics proven to help in the control of residential fires and to improve the chance for occupants to escape or be rescued.

tyco WorldWide Contacts: www.tyco-fire.com

Series LFII Residential 4.9 K-factor Concealed Pendent Sprinkler Flat Plate, Wet Pipe System

IMPORTANT: Refer to Technical Data Sheet TFP446 for warnings pertaining to installation and health information. Always refer to Technical Data Sheet TFP446 for the "WIRELESS WARNINGS" that provide cautions with respect to handling and installation of sprinkler systems and components. Improper handling and installation can potentially damage a sprinkler system or its components and cause the sprinkler to fail to operate in the situation or cause it to operate prematurely.

Technical Data

General Description

Sprinkler Identification Number (SIN)

Physical Characteristics

Maximum Working Pressure

Temperature Rating

Discharge Coefficient

Horizontal Adjustment

Finishes

Notes: The TYCO Series LFII Residential 4.9 K-factor Concealed Pendent Sprinkler (TY234) is a decorative, fast response, fusible link sprinkler designed for use in residential occupancies, including single-family dwellings, dormitories, and hotels. The Series LFII Concealed Pendent Sprinkler is intended for use in the following scenarios: • Wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R. • Wet pipe sprinkler systems for the residential portion of any occupancy per NFPA 13. The Series LFII Concealed Pendent Sprinkler has been designed with best sensitivity and water distribution characteristics proven to help in the control of residential fires and to improve the chance for occupants to escape or be rescued.

tyco WorldWide Contacts: www.tyco-fire.com

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487 ARCADE DRIVE
VENTURA, CA 93003
(805) 323-3216 C-16 1060914

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AP.N.: 047-082-022

RASKOPF ADU
3239 CLIFF DRIVE
SANTA BARBARA, CA 93109

FIRE SPRINKLER SYSTEM

DESIGN BY: T&S
DRAWN BY: G.E.S.
DATE: 02-05-24
JOB #: **FP-1**
SHEET: **FP-1**
OF 2

RASKOPF RESIDENCE

3239 Cliff Dr., Santa Barbara, CA 93109

3239 CLIFF DRIVE ADU



WEST ELEVATION



VIEW FROM DRIVEWAY



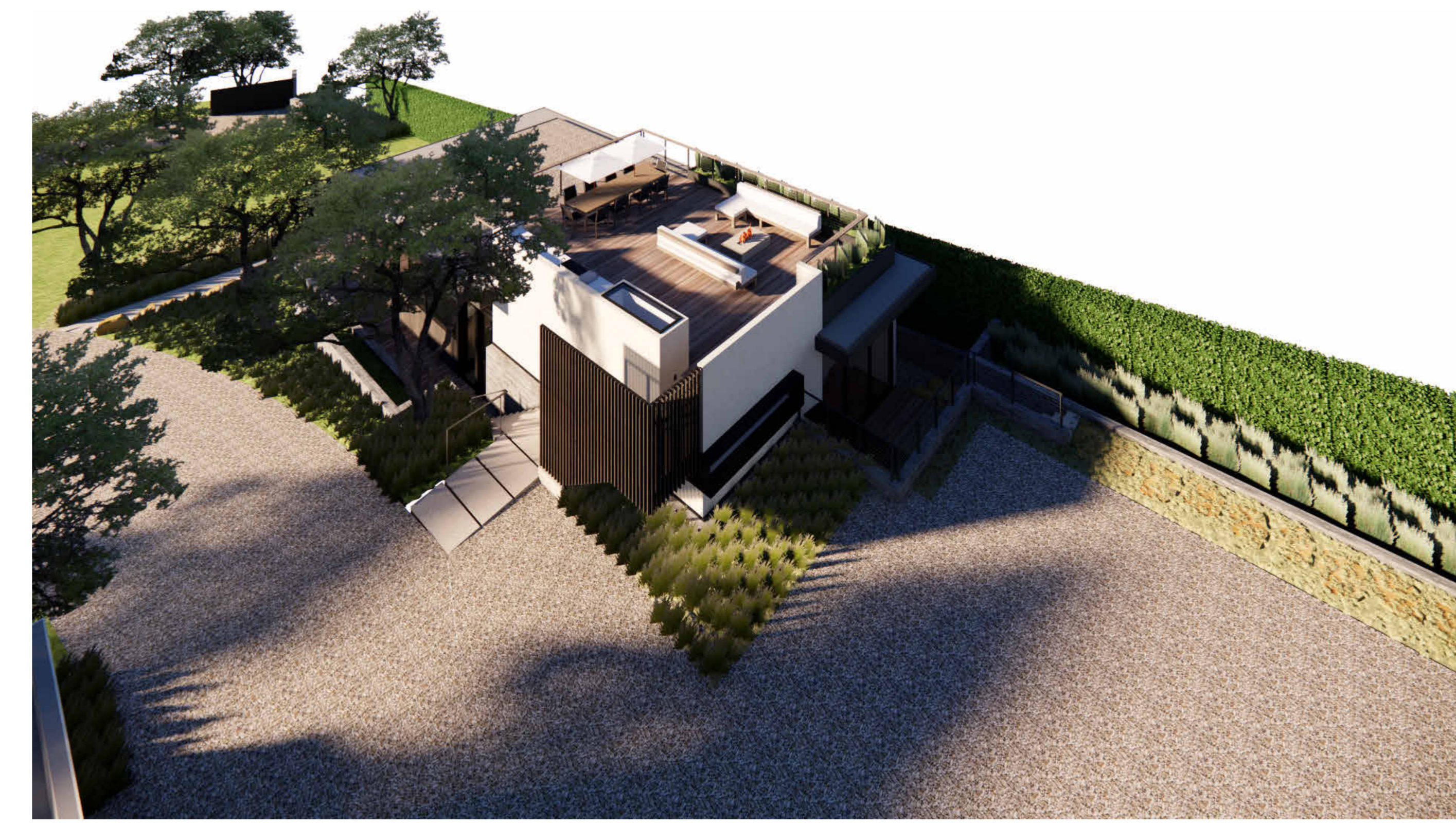
SOUTH PERSPECTIVE



SOUTH ELEVATION



AERIAL VIEW NORTH EAST



AERIAL VIEW SOUTH WEST

MATERIALS



METAL FASCIA [05.01]: PAINTED BENJAMIN MOORE 1603 "GRAPHITE"



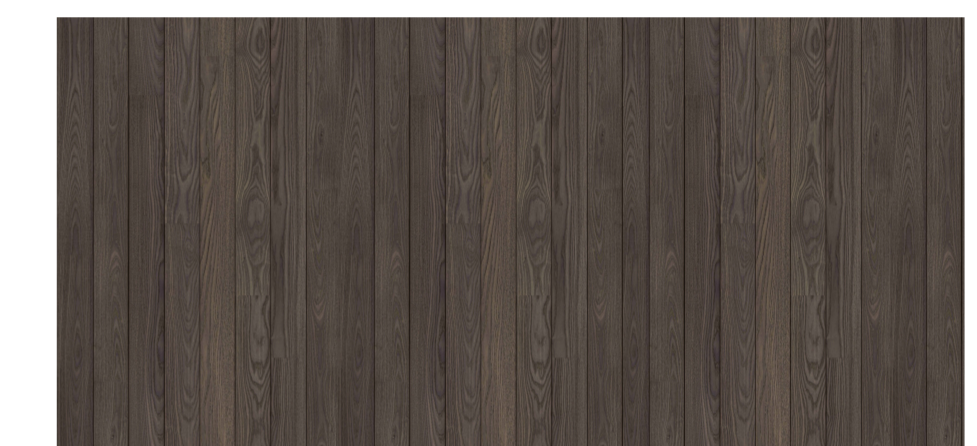
EXPOSED STEEL MEMBERS [S-01]: PAINTED - SHERWIN WILLIAMS 6258 "TRICORN BLACK" (MATCH FLEETWOOD CLASS 1 BLACK ANODIZED FINISH)



DOOR & WINDOW FRAMES: FLEETWOOD CLASS 1 BLACK ANODIZED FINISH



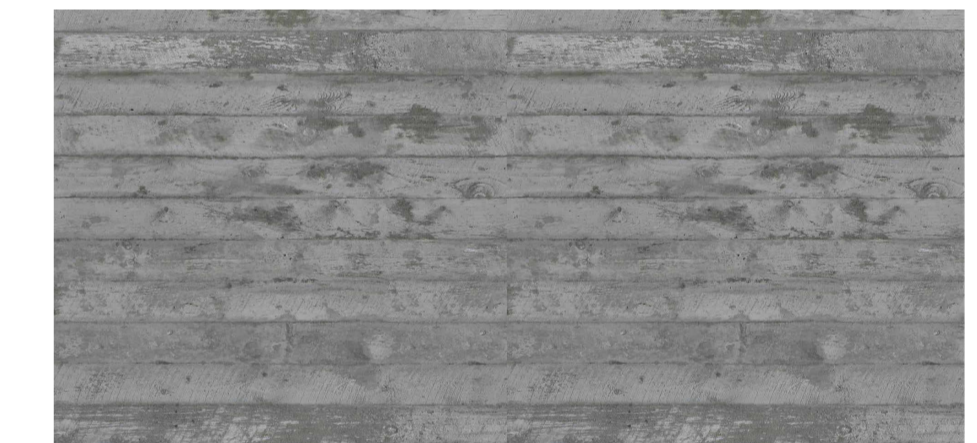
EXTERIOR WOOD SIDING AND SLATS [06.01]: RESAWN ALASKAN YELLOW CEDAR STAINED: CABOT "DARK SLATE" SEMI-OPAQUE



GATES AND FENCES [06.09]: RESAWN ALASKAN YELLOW CEDAR STAINED: CABOT "DARK SLATE" SEMI-OPAQUE



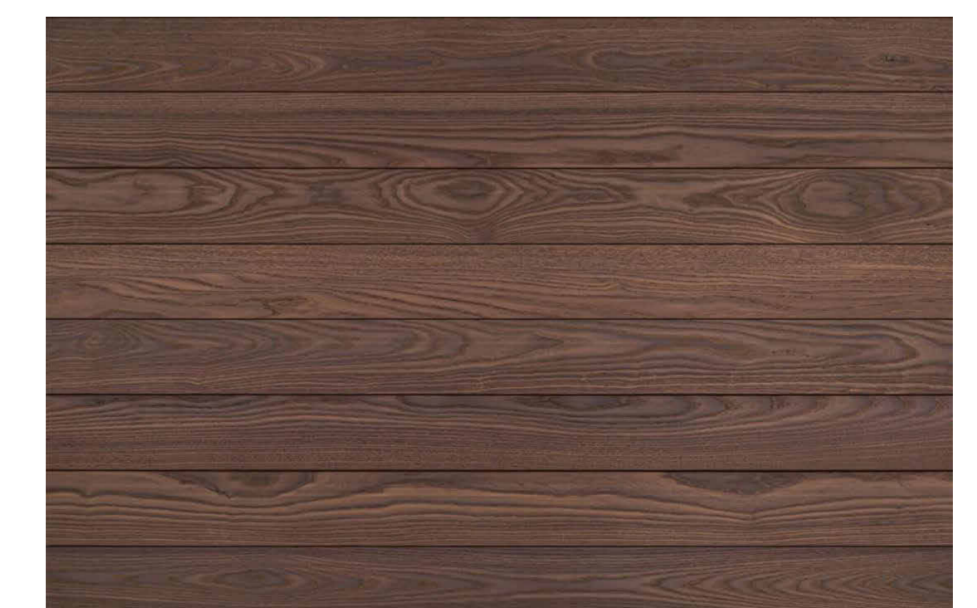
PLASTER WALLS [PL-01]: SMOOTH TROWELED CEMENT PLASTER, PAINTED (PL-1) DUNN EDWARDS DE6220 "POROUS STONE"



SITE WALLS [03.02]: BOARD FORMED CONCRETE WALLS 1x4 DOUGLAS FIR - WOOD TEXTURE ON TOP SURFACE



FLATWORK [03.01]: CONCRETE FLATWORK WITH COLOR ADMIXTURE AND TOPCAST TEXTURE COLOR: Davis "Mesa Buff" TOPCAST #03



WOOD DECK [06.13]: Thermory Deck "Bench Mark Ash"



WOOD SOFFIT [06.14]: ALASKAN YELLOW CEDAR - STAINED WEATHERED GRAY

JOB NUMBER
21108B1

PIC	PA	PM	TEAM
-----	----	----	------

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MILESTONES / SUBMITTALS

DESCRIPTION	DATE
ADU/CDP SUBMITTAL	07/28/23
ADU CDP RESUBMITTAL	11/17/23

REVISIONS

NO.	DESCRIPTION	DATE

MATERIAL BOARD

A701.1

SCALE: 12" = 1'-0"
DATE: 04/10/2024

(SCALE NOTED IS FOR 30x42 FULL-SIZE DRAWINGS)





FINAL APPROVAL CHECKLIST

SUPPLEMENTAL APPLICATION



GENERAL INFORMATION

WHAT IS FINAL APPROVAL?

Final approval is the last level of design review before applying for a Building Permit (BLD) application. Final approval generally occurs at a separate hearing, after project design approval, and includes a complete set of working drawings with all details, color samples, door hardware, and exterior lighting fixtures for review. Applicants may also request project design approval and final approval on the same hearing date, if sufficient details are provided.

HOW DOES THE PROCESS WORK?

Once a project receives project design approval, it shall constitute the substantive design approval of the project. If substantial changes to the plans are proposed after project design approval, a new project design approval will be required. Design review comments on final approval should only address whether the design substantially conforms to the project design approval, and comments on details and landscaping.

WHEN IS A COMPLETED CHECKLIST REQUIRED?

A completed **Final Approval Submittal Checklist** is required when you submit for final approval. To resubmit an application, upload documents, like plans and letters, into the record in the City's Accela Citizen Access Portal (ACA) system, along with the [Resubmittal Form](#). All forms must be completed, signed, and submitted as a PDF attachment to your electronic submittal.



FINAL APPROVAL CHECKLIST

Provide required details and sheet references with your submittal for final approval. Fill in the blank or indicate N/A if “not applicable”. Final approval does not permit the omission of any required information.

PROJECT ADDRESS: _____ PLN RECORD ID: _____

ALL BUILDING ELEVATIONS

Sheet #

Sheet #

- | | | | |
|--|-------|---|-------|
| <input type="checkbox"/> Exterior Details | _____ | <input type="checkbox"/> Paint or Stain Color (trim, etc.) | _____ |
| <input type="checkbox"/> Exterior Finishes | _____ | <input type="checkbox"/> Materials (roofing, plaster, etc.) | _____ |
| <input type="checkbox"/> Parapet Heights | _____ | <input type="checkbox"/> Exterior Lighting (incl. cut sheets) | _____ |
| <input type="checkbox"/> Roof/Attic/Understory Vents | _____ | <input type="checkbox"/> Specification Sheets, as applicable | _____ |

CONSTRUCTION DETAILS

Sheet #

Sheet #

- | | | | |
|---|-------|--|-------|
| <input type="checkbox"/> Retaining Wall | _____ | <input type="checkbox"/> Ironwork | _____ |
| <input type="checkbox"/> Window/Door detail | _____ | <input type="checkbox"/> Stairs | _____ |
| <input type="checkbox"/> Roof Details (eaves) | _____ | <input type="checkbox"/> Handrails | _____ |
| <input type="checkbox"/> Decks | _____ | <input type="checkbox"/> Skylights | _____ |
| <input type="checkbox"/> Fences/Arbors/Trellis | _____ | <input type="checkbox"/> Awnings | _____ |
| <input type="checkbox"/> Trash/Recycling Enclosures | _____ | <input type="checkbox"/> Gutters and Down Spouts | _____ |

ELECTRICAL/MECHANICAL/PLUMBING EQUIPMENT

Sheet #

- | | |
|---|-------|
| <input type="checkbox"/> Transformer Vault | _____ |
| <input type="checkbox"/> Utility Service Meter | _____ |
| <input type="checkbox"/> Screening Elements | _____ |
| <input type="checkbox"/> Generators/Electrical/Mechanical/HVAC (including cut sheets & dBA at property lines) | _____ |
| <input type="checkbox"/> Fire Valves (Verify Fire Sprinkler Ordinance per SBMC §8.04 requirements) | _____ |
| <input type="checkbox"/> Cross Connection Control Devices (backflow device) | _____ |

CONSULTANT/ENGINEER SHEETS

Sheet #

Sheet #

- | | | | |
|-------------------------------------|-------|-------------------------------------|-------|
| <input type="checkbox"/> Electrical | _____ | <input type="checkbox"/> Structural | _____ |
| <input type="checkbox"/> Mechanical | _____ | <input type="checkbox"/> Plumbing | _____ |

ROOFTOP ARCHITECTURAL DETAILS

Sheet # _____

- HVAC Equipment (exhaust fans, condensing units, air conditioning units, etc.) _____
- Dimensions of equipment and screening _____
- Mission tile roofing installation specifications _____
- Specification Sheets, if applicable _____
- Parapet Height _____
- Screens _____
- Chimney Caps _____
- Flashing _____
- Gutters/ Scuppers _____
- Solar panel location or potential future solar panel installation (if applicable) _____
- High fire roof coverings, valleys, gutters _____

COLOR AND MATERIAL BOARDS

Sheet # _____

- Paint and Stain Color Names and Numbers _____
- Material Type, Brand and Inventory Number _____

LANDSCAPE PLAN

Sheet # _____

Sheet # _____

- | | |
|---|---|
| <input type="checkbox"/> Irrigation Plan _____ | <input type="checkbox"/> High Fire/Defensible Space _____ |
| <input type="checkbox"/> Plant Species/Number/Sizes _____ | <input type="checkbox"/> Water Conservation Standards _____ |
| <input type="checkbox"/> Planters, Pots, Furniture _____ | <input type="checkbox"/> Site Walls (materials and color) _____ |
| <input type="checkbox"/> Paving Materials _____ | <input type="checkbox"/> Backflow Device _____ |
| <input type="checkbox"/> Erosion Control Measures _____ | <input type="checkbox"/> Rooftop Garden/Landscaped Roof _____ |

Storm Water Management Program (SWMP)

Sheet # _____

- Location of filtration devices _____
- Cross-section details _____
- Drainage flow from all impervious areas _____
- Amounts of new, replaced, or removed impervious areas _____
- Hydrology/Storm Water Report _____