

SCOPE OF WORK

Construct new 3 stories single family residence with attached garage on a property located in Santa Clara County.

PROPERTY INFORMATION

Owner:

Stephen Chen
210 Creek Side Village Drive
Los Gatos, CA

Applicant:

Stephen Chen
210 Creek Side Village Drive
Los Gatos, CA

Project Address:

Moody Rd., Santa Clara County

APN:

351-01-014

Zoning:

RHS-sr

Lot Size:

6,098.00 ft2

Area Calculation:

Lot Area = 6,098.00 ft2
First Floor AREA = 1763 ft2
Second Floor Area = 1763 ft2
Heated Area = 3,526.00 ft2
Garage Area = 1,238.00 ft2
Lot Coverage = Not Applicable
Percent Coverage = Not Applicable
Percentage Allowed = Not Applicable

Setbacks and Height Limits for Zoning:

Front Yard Setback = 30'
Back Yard Setback = 25'
Side Yard Setback = 25'
Height Limit = 35'

Parking:

2 Covered, one Uncovered

Utilities:

Water Service: Municipal
Electrical Service: 200 amp PG&E
Gas Service :250 Gallon Propane Tank
Sewer System: Septic

BUILDING CODES

2022 California Building Code
2022 California Residential Code
2022 California Mechanical Code
2022 California Electrical Code
2022 California Plumbing Code
2022 California Eenergy Code
2022 California Fire Code

PROJECT TEAMS

Building Designer:

Fred Keshavarzi
110 Blueberry Ct.
Scotts Valley, CA 95066
Tel. (831) 588-1439

Structural & Civil Engineer:

Fred Keshavarzi
110 Blueberry Ct.
Scotts Valley, CA 95066
Tel. (831) 588-1439

Grading and Drainage Design:

Fred Keshavarzi
110 Blueberry Ct.
Scotts Valley, CA 95066
Tel. (831) 588-1439

Geotechnical Engineer:

C2EARTH
Tel. (408) 866-5436

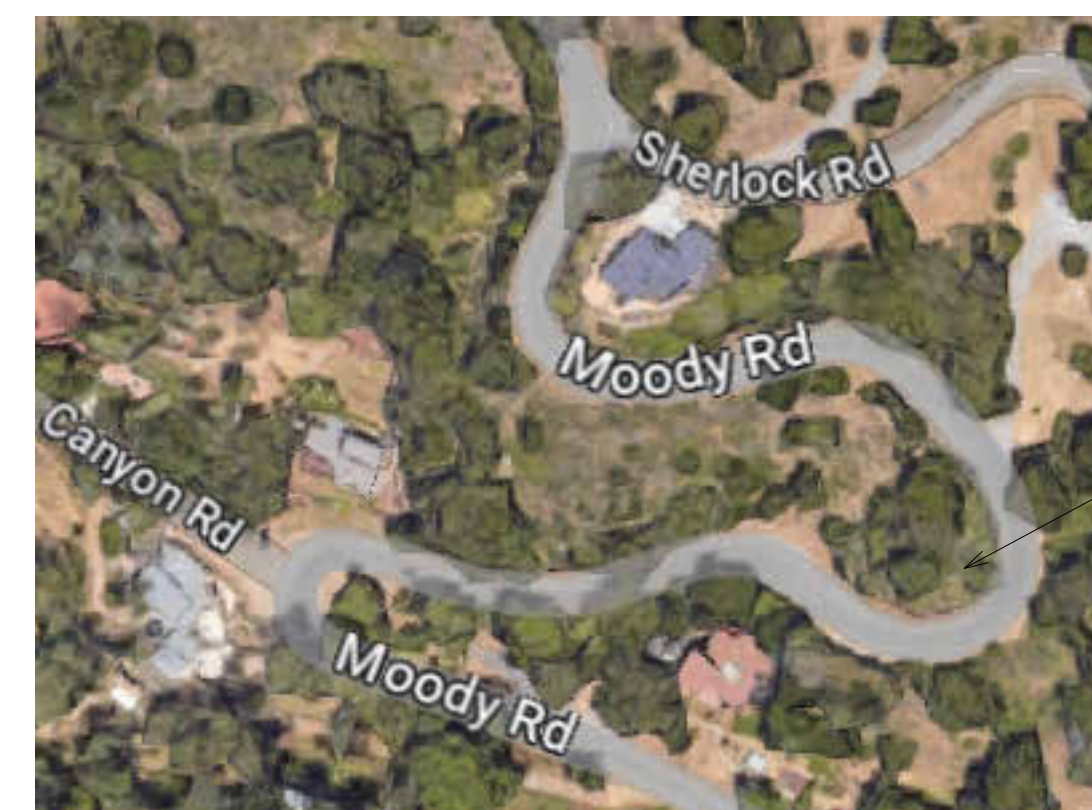
SHEET INDEX

Sheet No. Description

1	Project Site Information
2	Site Plan
3	Building Perspective View
4	Architectural Floor Plans
5	North and South Elevations
6	East and West Elevations
7	Survey Plan
8	Septic Plan
9	Septic Details

Description	Cut (CY)	Fill (CY)
Front Driveway	11	217
West Permeable Green Garden	6	34
East Permeable Green Garden	20	7
Back Driveway	16	7
First Level (within footprint of garage)	545	0
First Level (outside 240 footprint of garage)		0
TOTAL	838	265
NET	838 - 265 = 573	

CUT AND FILL QUANTITIES



Project Site

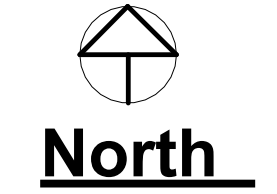
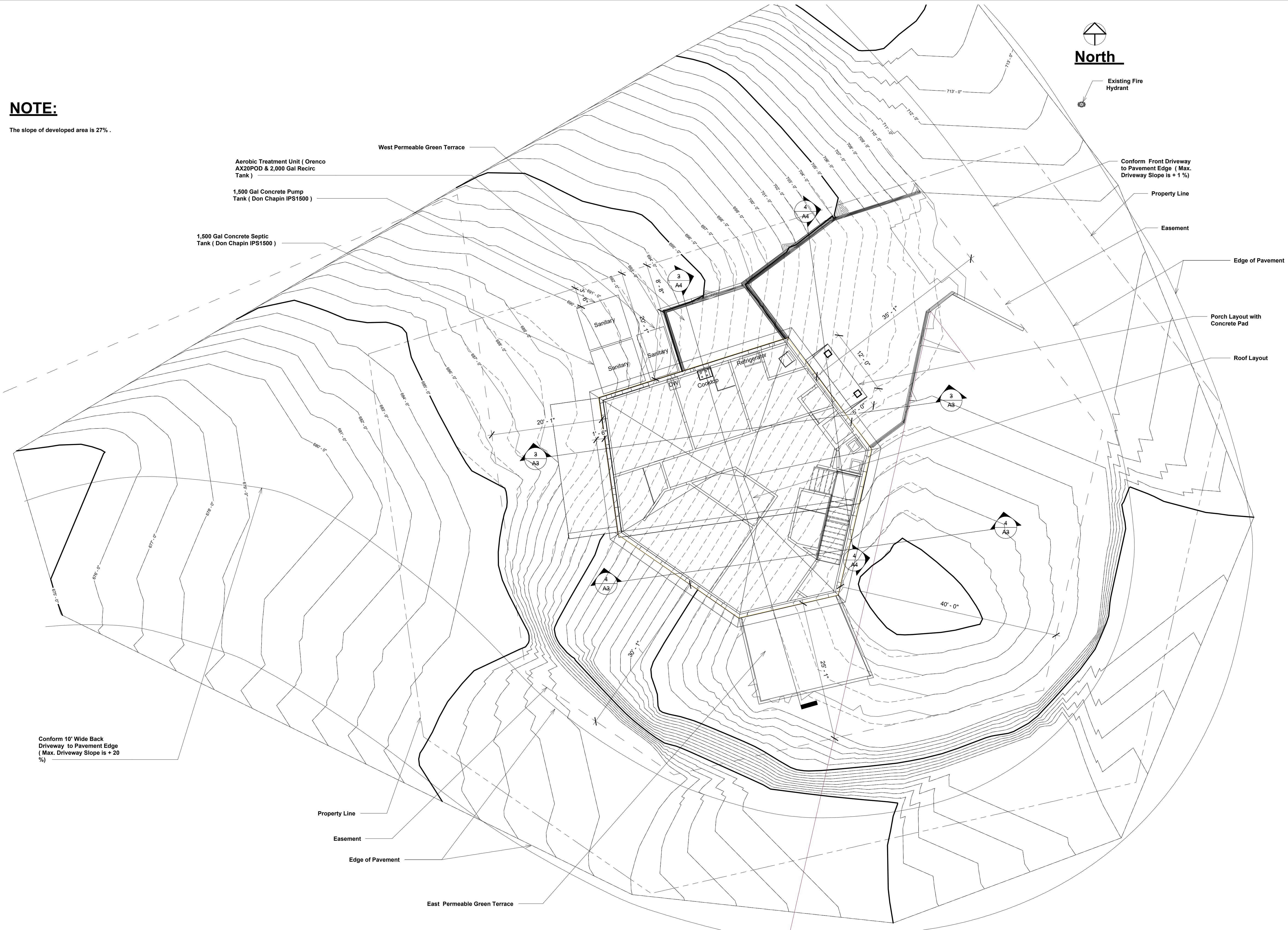
Project Location

Moody Rd., Santa Clara County
Site is Adjacent to 27761 Moody Rd. Los Altos Hills

PROJECT NO: 04-09-23	Project Site Information	SHEET T1	
DESIGN BY: Designer		SHEET NO.	TOTAL SHEET
OWNER: Stephen Chen	PROJECT LOCATION: APN 351-01-014 Moody Rd. Santa Clara County	1	9

NOTE:

The slope of developed area is 27%.



North

Existing Fire Hydrant

Conform Front Driveway to Pavement Edge (Max. Driveway Slope is +1%)

Property Line

Easement

Edge of Pavement

Porch Layout with Concrete Pad

Roof Layout

Conform 10' Wide Back Driveway to Pavement Edge (Max. Driveway Slope is +20%)

Property Line

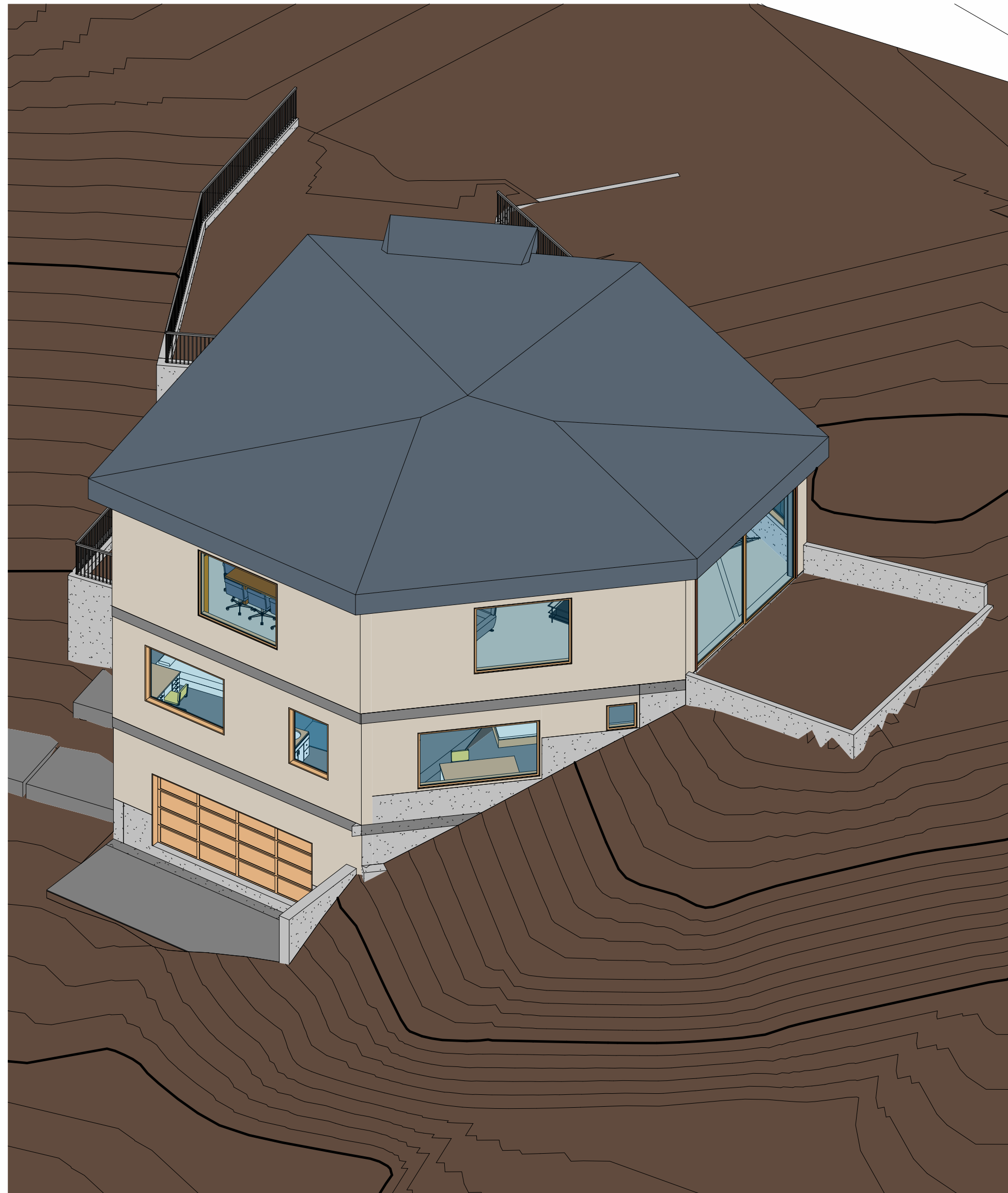
Easement

Edge of Pavement

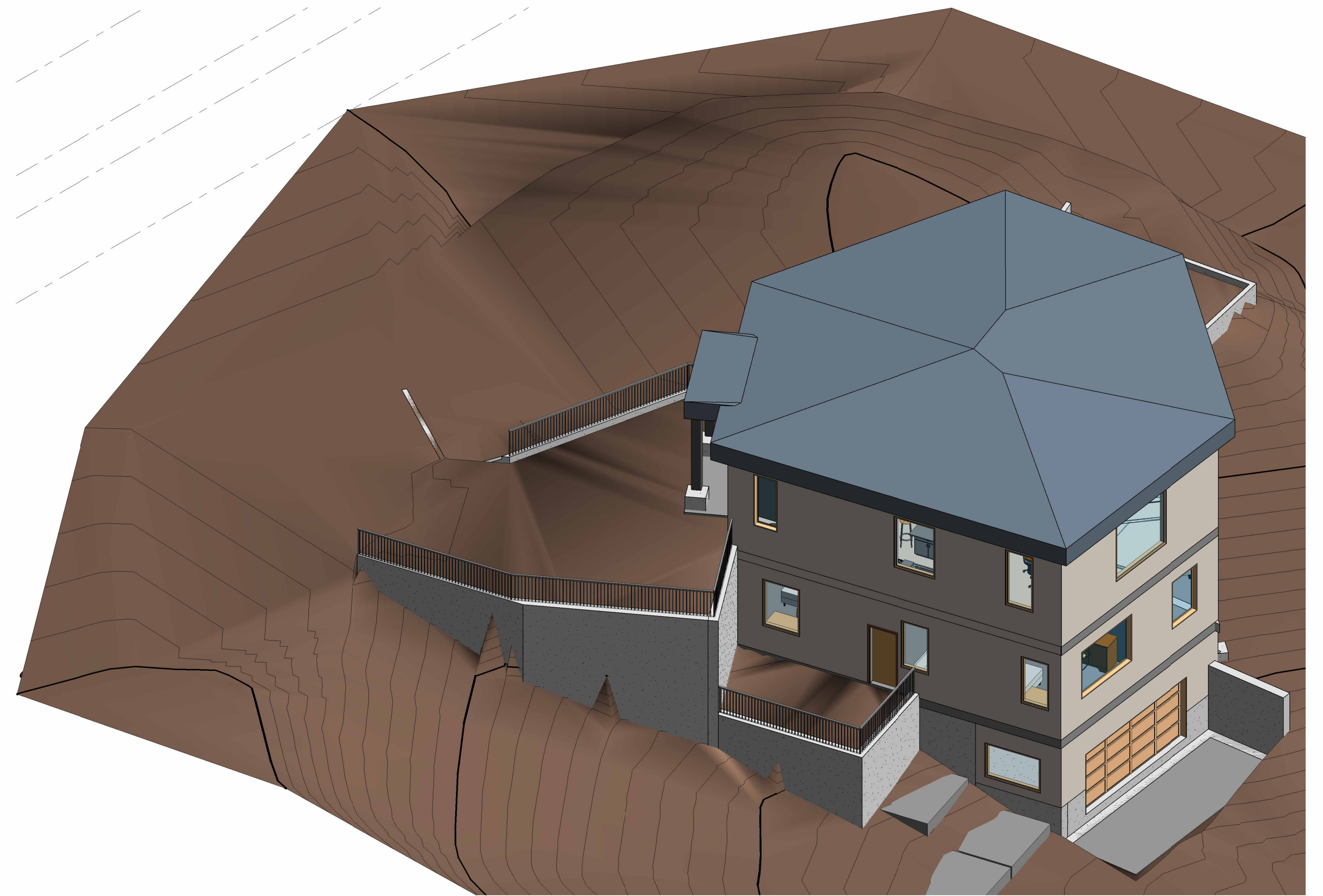
East Permeable Green Terrace

1 Site Plan
1/8" = 1'-0"

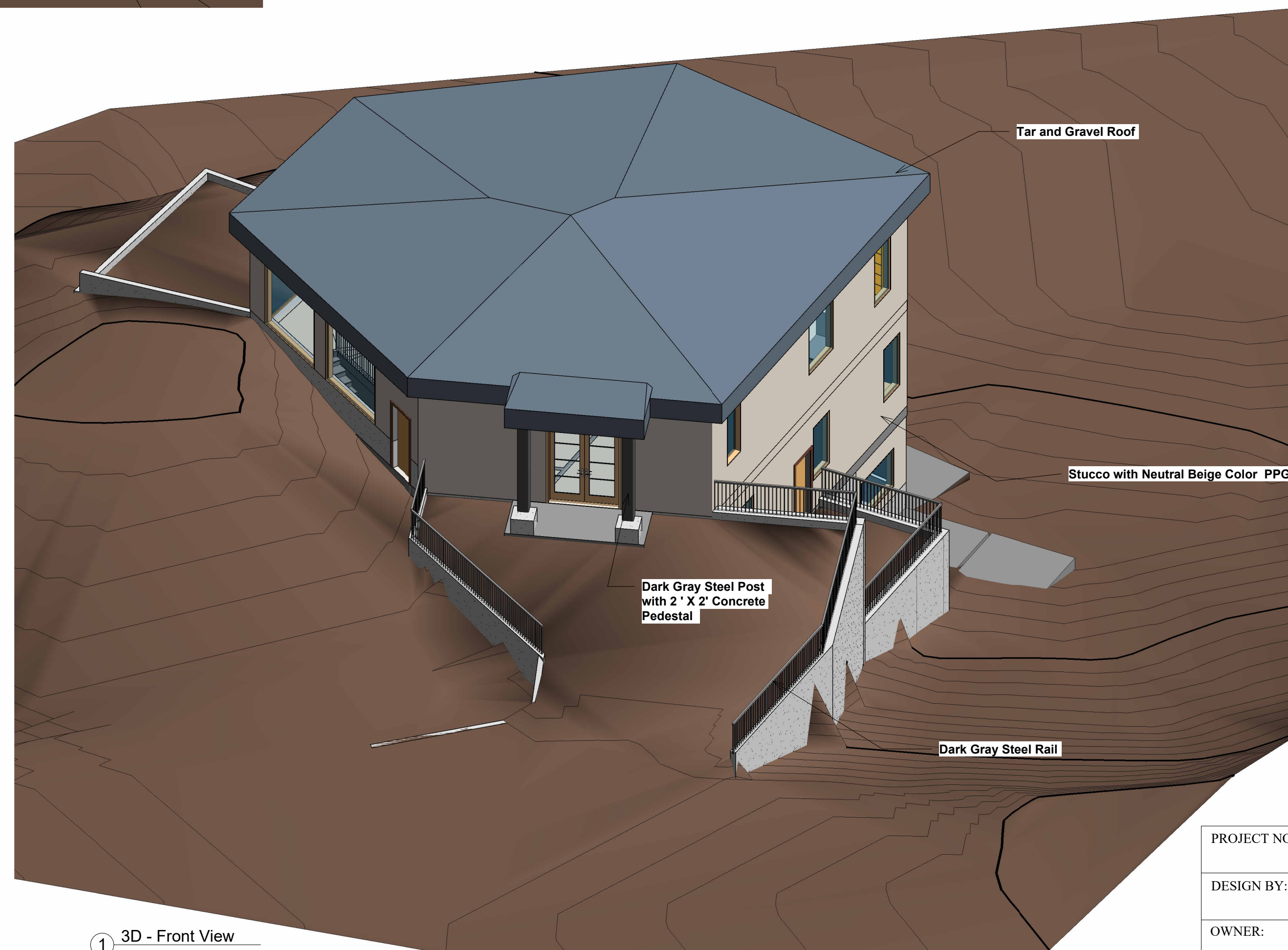
PROJECT NO: 04-09-23	Site Plan	SHEET T2	
DESIGN BY: Designer	PROJECT LOCATION: APN 351-01-014 Moody Rd. Santa Clara County	SHEET NO.	TOTAL SHEET
OWNER: Stephen Chen		2	9



3 3D - Back View

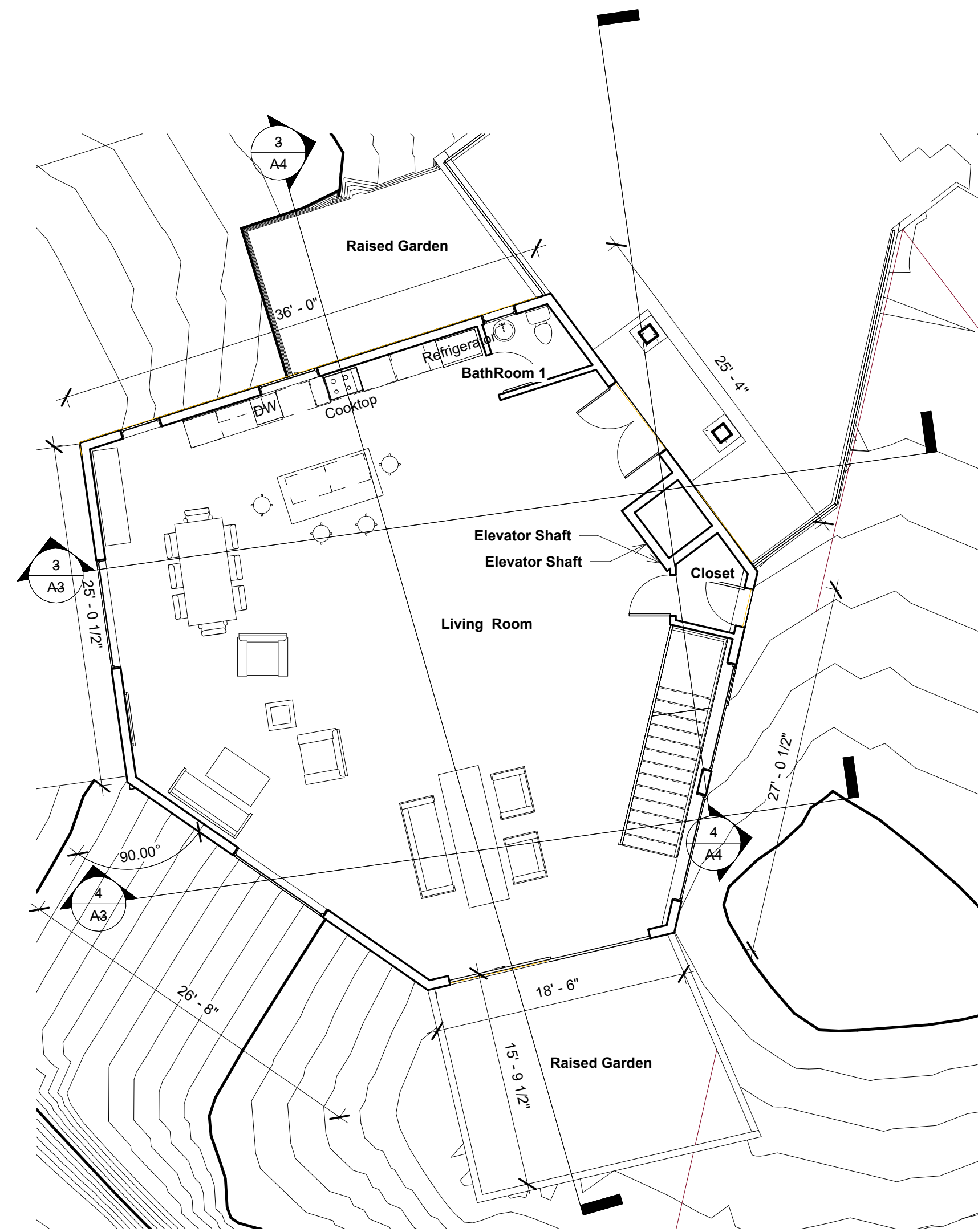


2 3D - Right View

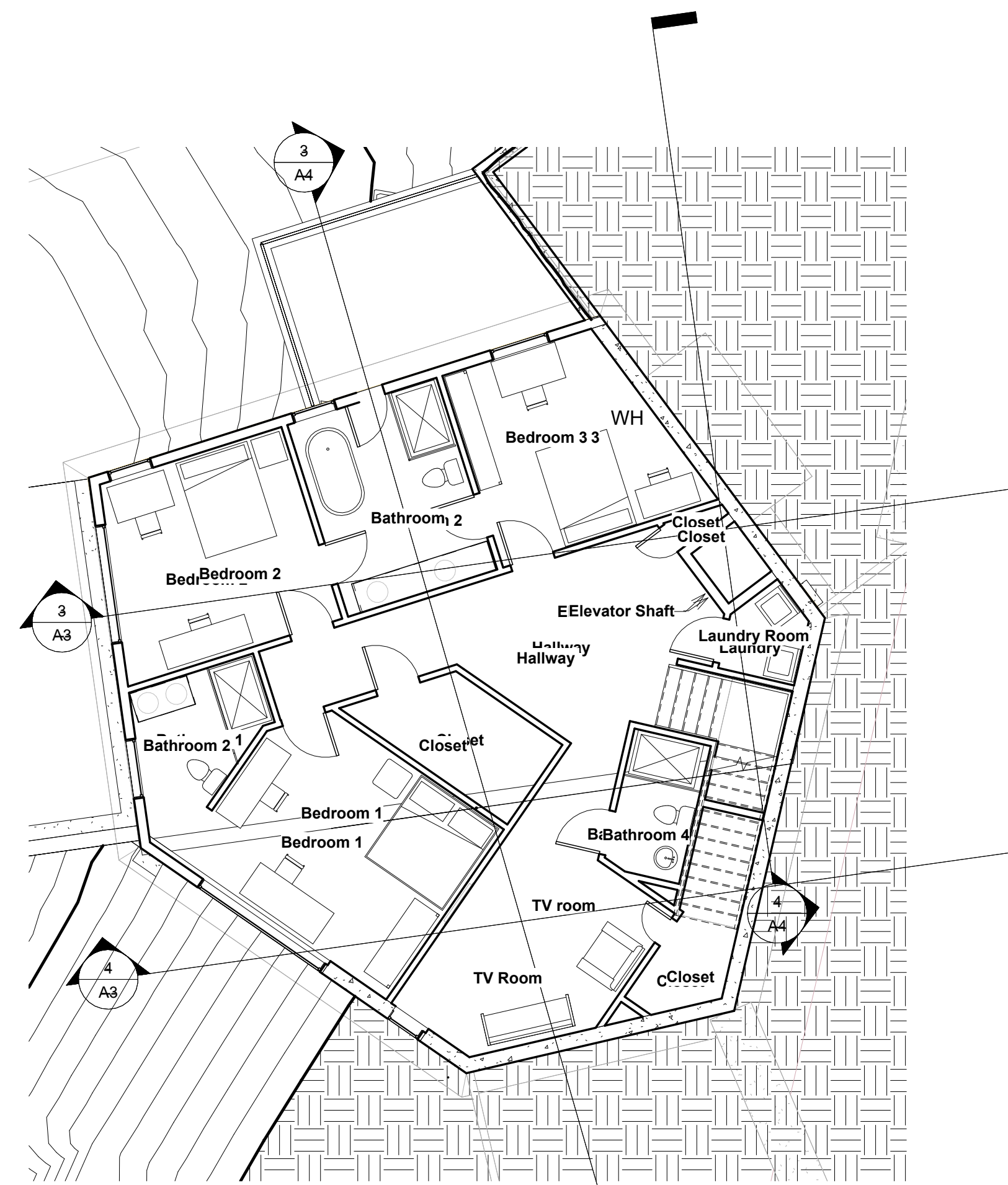


1 3D - Front View

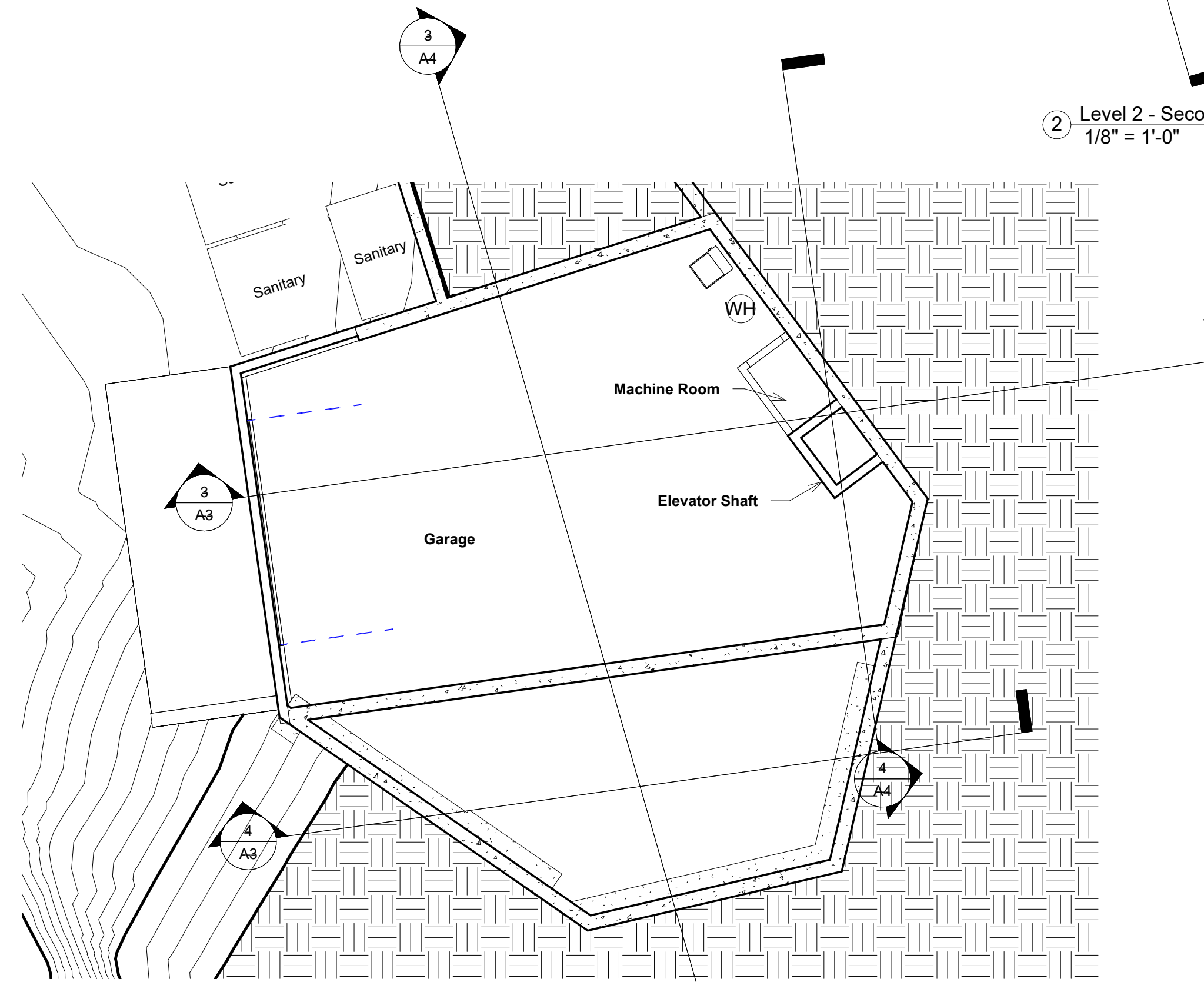
PROJECT NO:	04-09-23	Building Perspective View	SHEET	
DESIGN BY:	Designer		A1	
OWNER:	Stephen Chen		SHEET NO.	TOTAL SHEET
PROJECT LOCATION:		APN 351-01-014 Moody Rd. Santa Clara County		
		3	9	



① Level 3 - Main Architectural Floor Plan
1/8" = 1'-0"

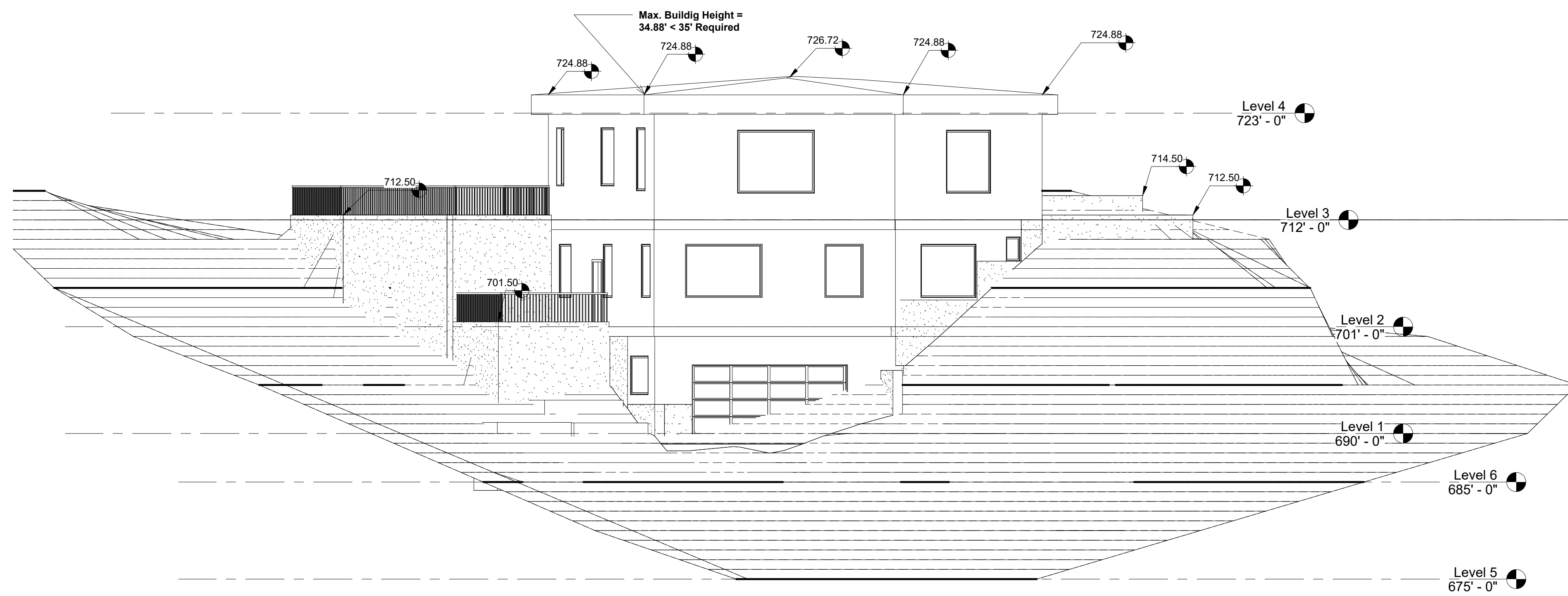


② Level 2 - Second Architectural Floor Plan
1/8" = 1'-0"

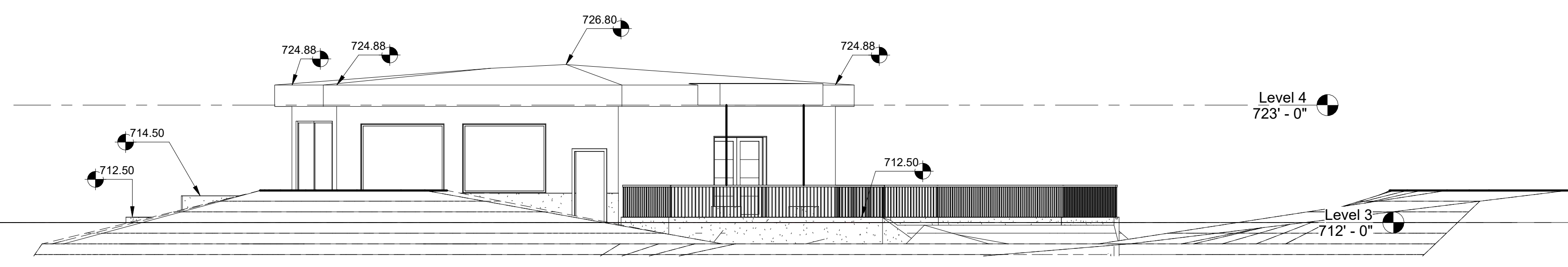


③ Level 1 - Garage
1/8" = 1'-0"

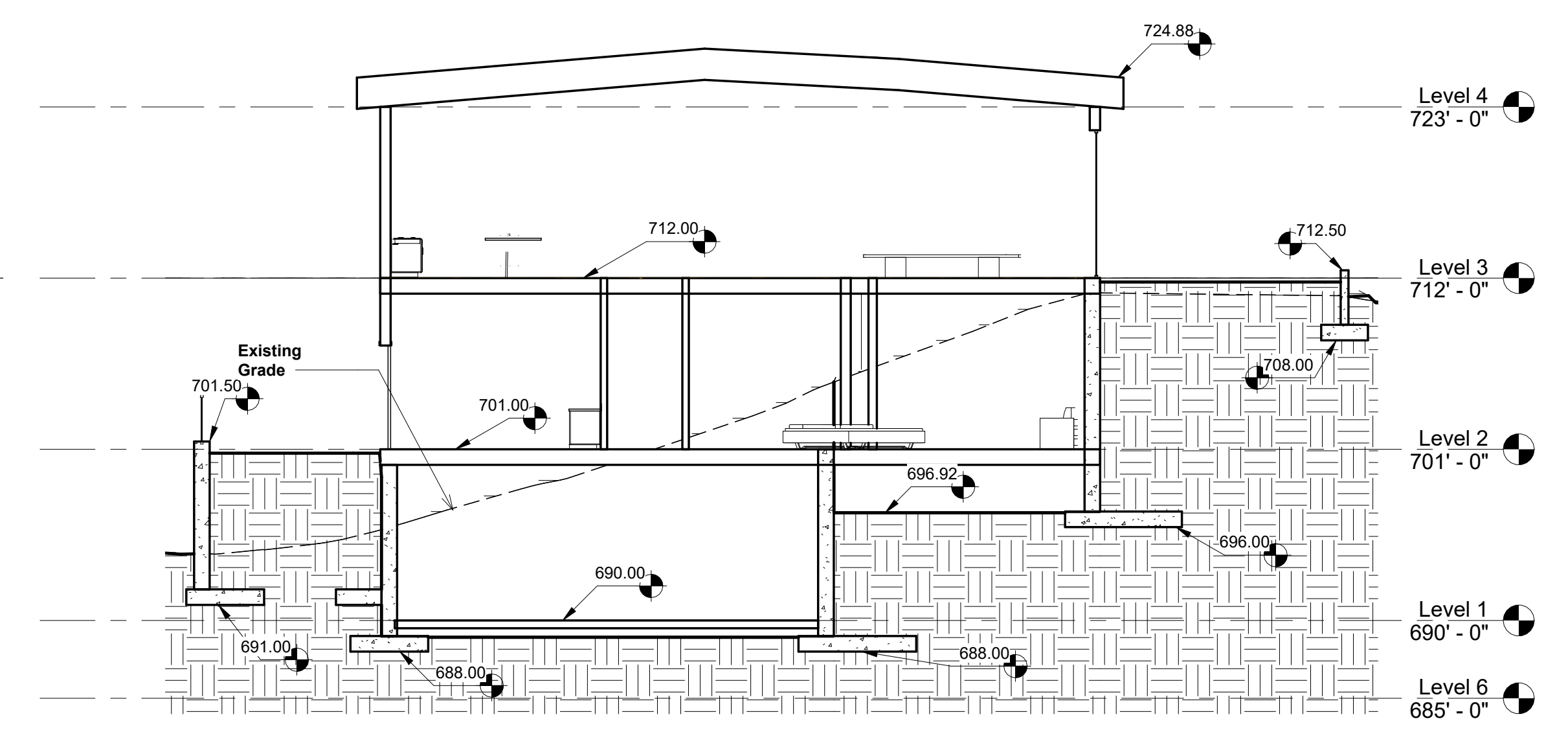
PROJECT NO: 04-09-23	Architectural Floor Plans	SHEET	
DESIGN BY: Designer		A2	
OWNER: Stephen Chen	PROJECT LOCATION: APN 351-01-014 Moody Rd. Santa Clara County	SHEET NO.	TOTAL SHEET
		4	9



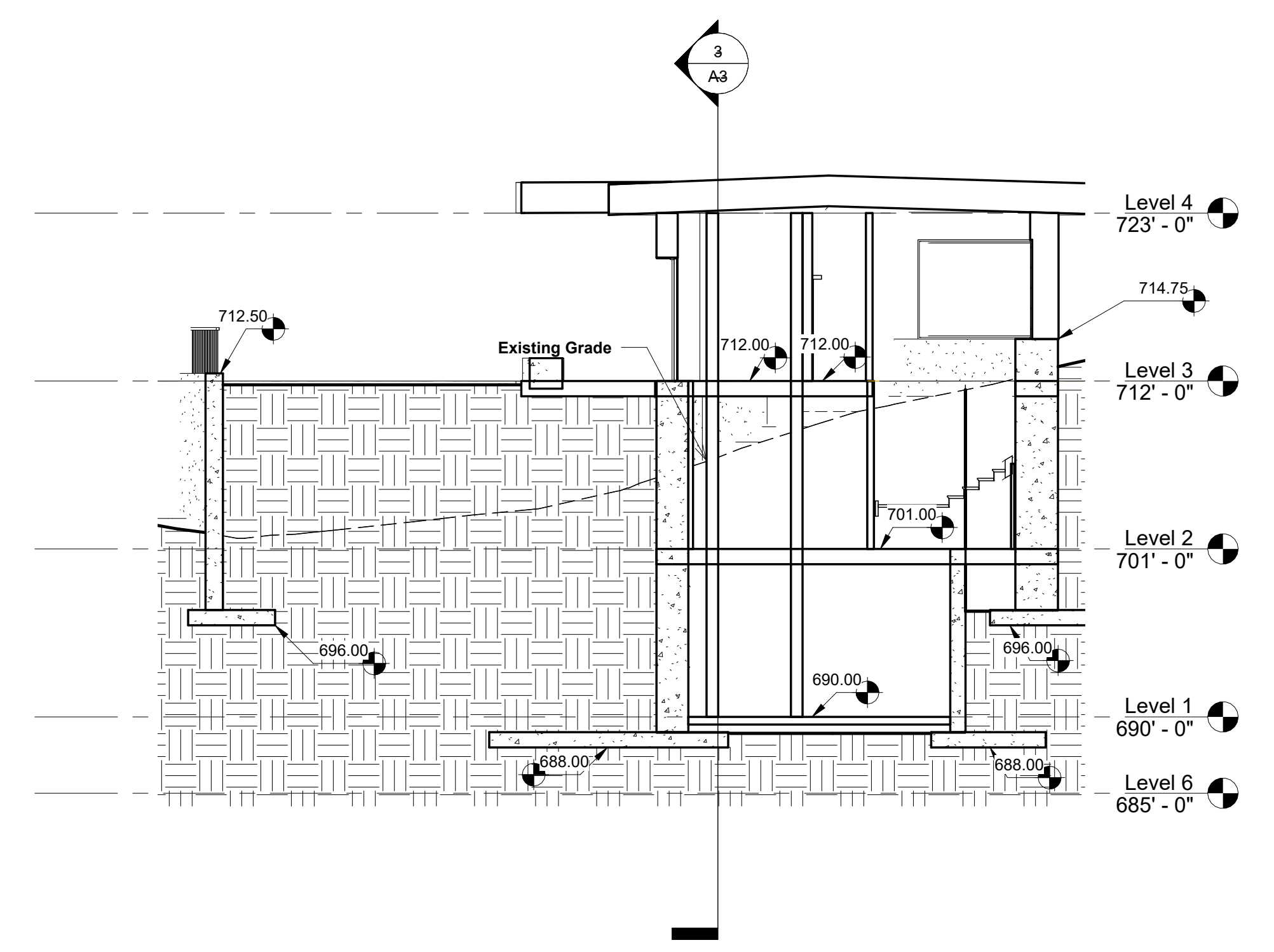
① East
1/8" = 1'-0"



② West
1/8" = 1'-0"



③ South Section 1
1/8" = 1'-0"



④ South Section 2
1/8" = 1'-0"

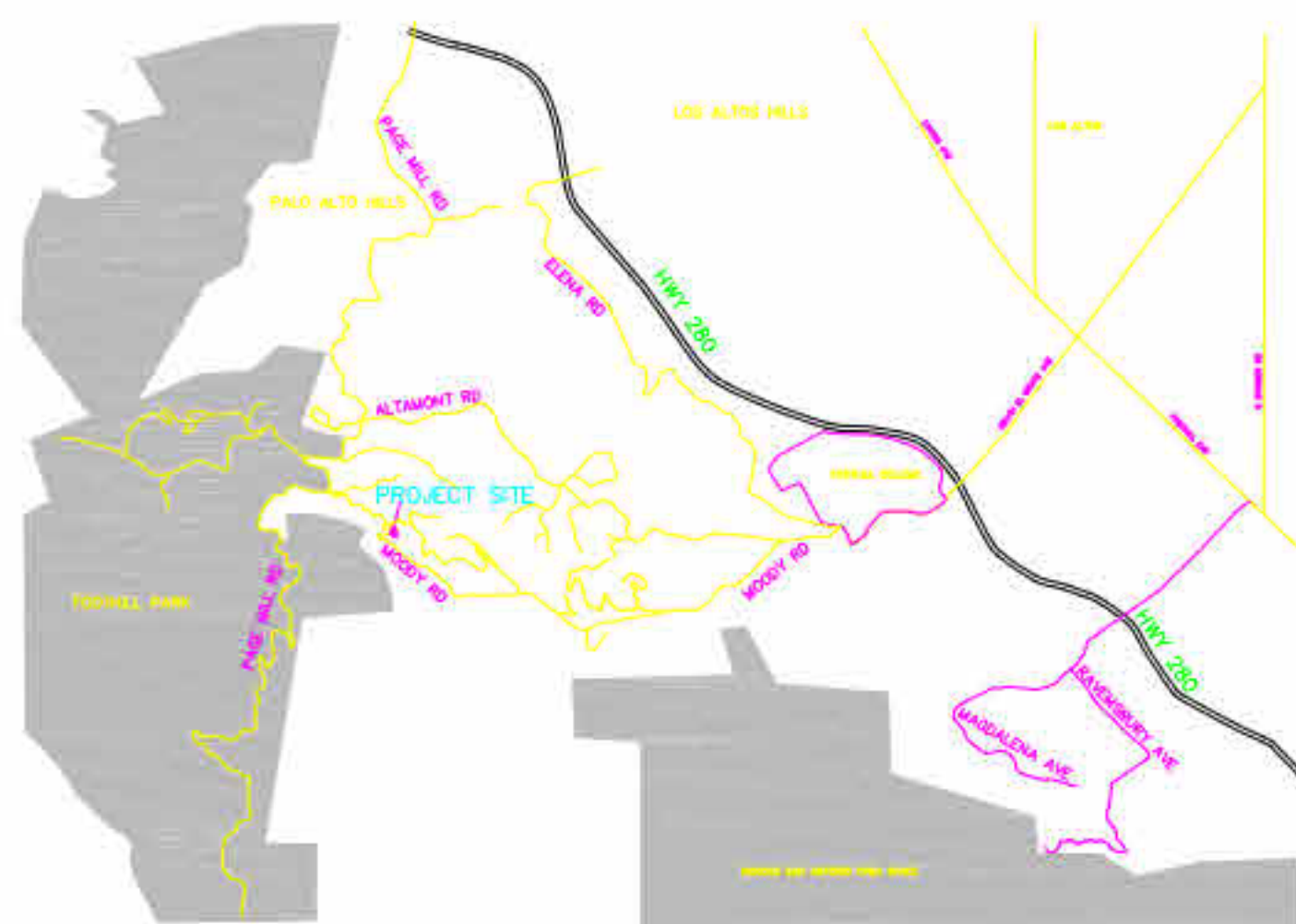
PROJECT NO: 04-09-23	East and West Elevations PROJECT LOCATION: APN 351-01-014 Moody Rd. Santa Clara County	SHEET A4	
DESIGN BY: Designer		SHEET NO.	TOTAL SHEET
OWNER: Stephen Chen		6	9

GENERAL NOTES

- 1) ELEVATIONS ARE APPROXIMATED FROM NAVD88 DATUM.
- 2) CONTOUR INTERVAL= ONE FOOT
- 3) TREE TYPES ARE INDICATED WHEN KNOWN. TREES ARE LABELED IN INCHES. MULTI-PRONG TREES LABELED "X-P". TREES SMALLER THAN 6" ARE NOT SHOWN.
- 4) NOT ALL UNDERGROUND UTILITIES WERE LOCATED. ONLY VISIBLE FACILITIES ABOVE AND FLUSH WITH THE SURFACE ARE SHOWN. SUB-SURFACE UTILITY LINES DRAWN MAY NOT BE COMPLETE AND SHOULD BE VERIFIED BY FIELD RECONNAISSANCE. UNDERGROUND UTILITY LOCATIONS CAN BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANIES, PUBLIC AGENCIES, OWNER'S AS-BUILT DRAWINGS, ETC., AND SHOULD BE THOROUGHLY COMPILED AND DEEMED COMPLETE WITHIN THE PROJECT AREA PRIOR TO ANY SITE DEVELOPMENT DESIGN AND/OR CONSTRUCTION.
- 5) THIS MAP PORTRAYS THE SITE AT THE TIME OF THE SURVEY (03/21/2018) AND DOES NOT SHOW SOILS OR GEOLOGY INFORMATION, UNDERGROUND CONDITIONS, EASEMENTS, ZONING OR REGULATORY INFORMATION OR ANY OTHER ITEMS NOT SPECIFICALLY REQUESTED BY THE PROPERTY OWNER AND/OR THEIR REPRESENTATIVES.
- 6) THIS MAP DOES NOT REPRESENT A BOUNDARY SURVEY. PROPERTY LINES SHOWN HEREON ARE FROM RECORD DEED AND MAPS.

LEGEND:

- PROPERTY BOUNDARY
- LIMITS OF ROAD EASEMENT
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- A.C. PAVEMENT
- APPROXIMATE DRIP LINE
- FOUND CENTERLINE MONUMENT
3/4" IRON PIPE WITH NAIL
- TREE



VICINITY MAP N.T.S.

APN 351-01-23

APN 351-01-14



CITY OF LOS ALTOS HILLS

COUNTY OF SANTA CLARA

PROJECT NO: 04-09-23
 DESIGN BY: Designer
 OWNER: Stephen Chen

Survey Plan
 PROJECT LOCATION:
 APN 351-01-014 Moody Rd. Santa Clara County

SHEET
S1
 SHEET NO. 7 TOTAL SHEETS 9

SCALE: 1"=10'
 DATE: MARCH 2018
 PREPARED BY: ZJK

TOPOGRAPHIC MAP

OF
 THE PARCEL AS DESCRIBED IN DEED RECORDED AS,
DOCUMENT# 23701204
 FOR
 MOODY ROAD, SANTA CLARA COUNTY, CALIFORNIA

APPROVED BY:



P.L.S. No. 8296
 NEAL DICKEY

PLAN BY: Christopher Day, R.E.H.S.
 P.O. Box 26, Redwood City, CA 94061
 Tel: 650-293-1045
 Email: christopherday@gmail.com
 ORIGINAL: 21 MAY 23
 REV 1:
 REV 2:
 OWNER: Stephen Chen
 Tel: 408-464-5131
 stephen210chen@gmail.com
 Property on Moody Rd., Los Altos Hills, CA 94020
 APN 351-01-014
 SITE PLAN
 Drip Dispersal w/ Pretreatment Septic System
 (To Serve Conceptual 4 BR House)
 OWS1
 SHEET NO. 8 TOTAL SHEET 9

GENERAL NOTES

- ELEVATIONS ARE APPROXIMATED FROM NAVD83 DATUM.
- CONTOUR INTERVAL= ONE FOOT
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- NOT ALL UNDERGROUND UTILITIES WERE LOCATED. ONLY VISIBLE FACILITIES ABOVE AND FLUSH WITH THE SURFACE ARE SHOWN. SUB-SURFACE UTILITY LINES DRAWN MAY NOT BE COMPLETELY ACCURATE. BE VERIFIED BY FIELD RECONNAISSANCE. UNDERGROUND UTILITY LOCATIONS CAN BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANIES, PUBLIC AGENCIES, OWNER'S AS-BUILT DRAWINGS, ETC., AND SHOULD BE THOROUGHLY COMPILED AND DEEMED COMPLETE WITHIN THE PROJECT AREA PRIOR TO ANY SITE DEVELOPMENT DESIGN AND/OR CONSTRUCTION.
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- THIS MAP DOES NOT REPRESENT A BOUNDARY SURVEY. PROPERTY LINES SHOWN HEREON ARE FROM RECORD DEED AND MAPS.

PUMPED SEWAGE LINE FROM HOUSE TO SEPTIC TANK TO BE REVIEWED & APPROVED BY BUILDING DEPT.
 (SPECIFICATIONS ARE NOT PART OF THIS DESIGN PLAN)

SCOPE & RATIONALE:

This septic design is to update the plan dated 9/26/2018 which received a feasibility letter from DEH signed 12/5/2018. This plan differs from the original design in that: 1) setback to road easement line to septic is increased from 5 ft to 10 ft in response to reported County plans to widen Moody Rd. by 5 ft on each side, and 2) the system capacity is reduced from 5 BR to 4 BR. The corresponding changes to the system layout & related items are shown below and in detail on OWS2. The new property owner is requesting a feasibility letter from DEH at this time.

A drip dispersal alternative septic design was selected for this project due to the apparent limited and insufficient area meeting requirements for conventional gravity flow. Drip dispersal was selected from possible alternative options due to the relatively smaller footprint possible with drip, and due to reduced risk of effluent seepage to daylight in adjacent steep slopes & cut banks expected with the uniform and slow rate of drip dispersal fields.

The entire dripfield areas shall be protected from disturbance and compaction. Heavy equipment used to excavate the tank pits shall enter and exit the site by skirting the edges of the dripfields to the extent practical. This heavy equipment shall make only one (1) pass along the dripfield area edge and shall complete all necessary excavations before exiting again by skirting the dripfield edges.

THE ENTIRE DRIPFIELD AREA SHALL BE FENCED OFF DURING CONSTRUCTION OF THE RESIDENCE AND/OR OTHER PROPERTY IMPROVEMENTS TO PREVENT DISTURBANCE TO THE SOIL.

LEGEND:

- PROPERTY BOUNDARY
- LIMITS OF ROAD EASEMENT
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- A.G. PAVEMENT
- APPROXIMATE DRIP LINE
- FOUND CENTERLINE MONUMENT 3/4" IRON PIPE WITH NAIL
- TREE

SEPTIC PLAN LEGEND:

- soil profile test holes (SP1, SP2)
- percolation test holes (P1 - P6)
- concrete thrust block
- 1" PVC supply (Field A or B)
- 1" PVC return (Common)
- Electric/Signal Wire (in 2 ft trench)

All PVC is Sch. 40, solvent welded, 150 psi rated.
 (unless otherwise specified)

Electrical Building Permit Required

Soil Profile Test Data
 Moody Rd., Los Altos Hills, CA 94022
 APN 351-01-014 (SR0857366)
 Owners: Renee & Carmen Gabriele

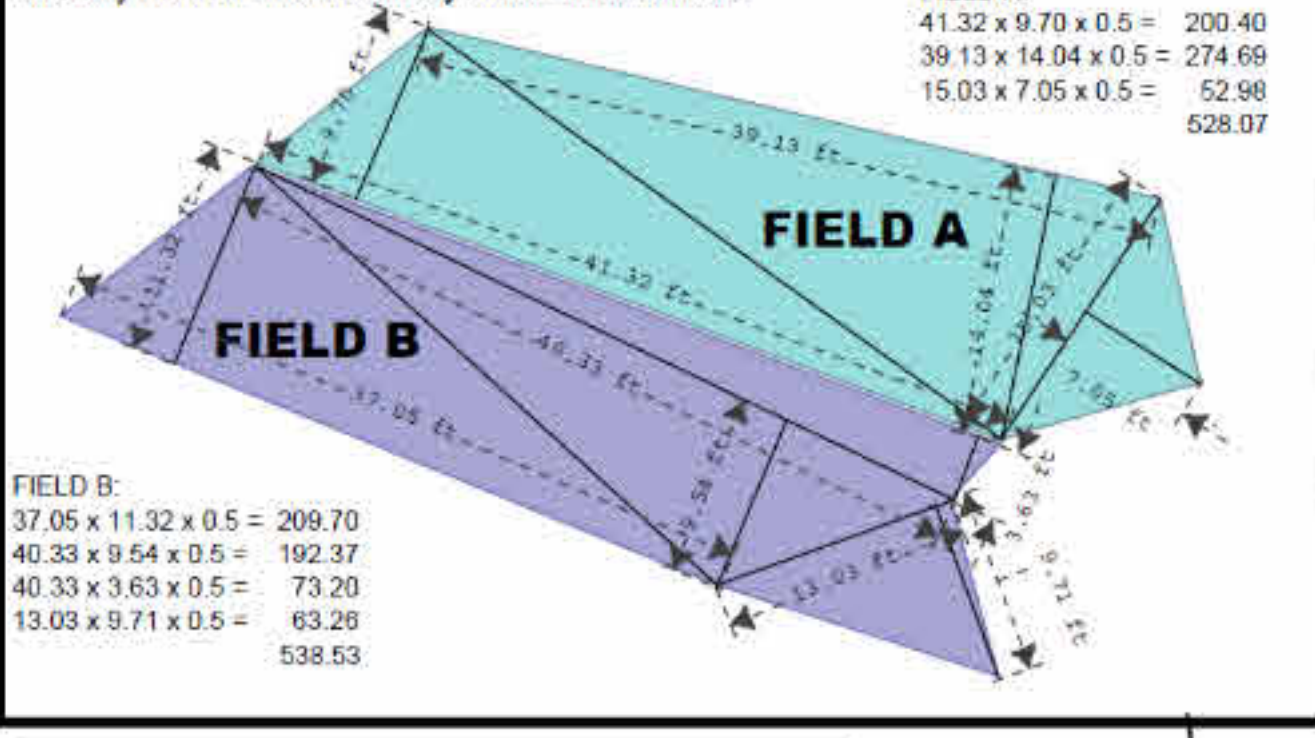
SP1, SP2

Soil Profile Test Hole #1	Depth: 4 ft	Restrictive:
0 to 6 in	Sandy Loam Roots Medium & Common Pores Coarse & Common Weak Subangular Structure Less Than 15% Rock Dry Condition of Soil Color Dark Brown No Mottling	Not Restrictive
6 in to 4 ft	Clay Sand Roots None Pores Coarse & Common Weak Subangular Structure About 35% Rock Dry Condition of Soil Color Medium Brown No Mottling	Not Restrictive

INFILTRATIVE AREA CALCULATIONS & SPECIFICATIONS

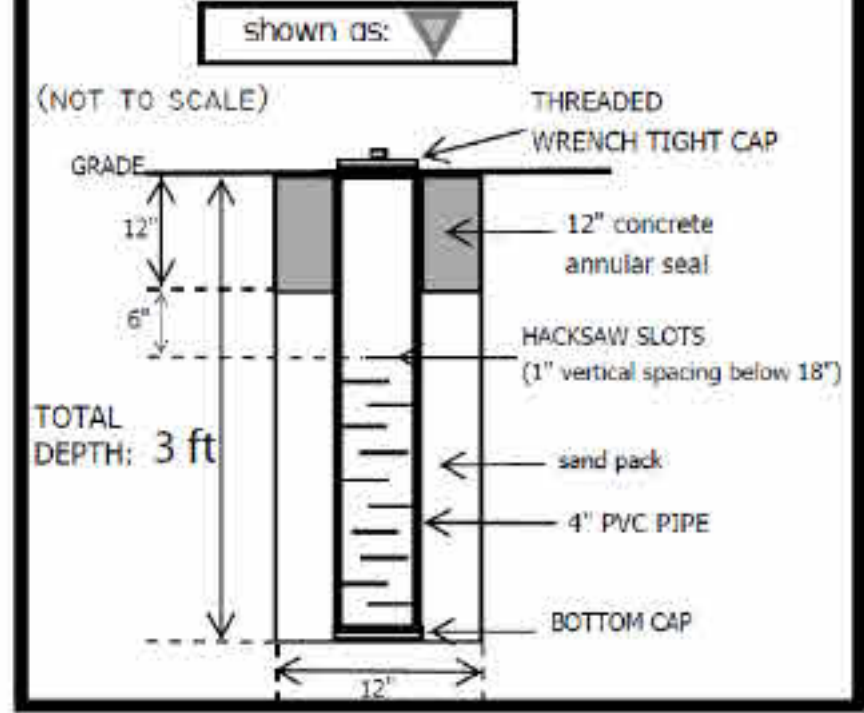
TYPE OF SEPTIC SYSTEM:	Dual Drip Dispersal with Secondary Treatment
DESIGN CALCULATIONS:	DRIP DISPERSAL SYSTEM A:
Average Percolation Rate: 11 MPI	Drip/line / Emitter Spacing: 2 ft / 2 ft
Application Rate: 1.0 gal/sq. ft./day (Table DD-2)	Drip/line Area: > 525 sq. ft.
Wastewater Flow: 525 gpd (4 BR House)	Number of Emitters: 135
	Slope in Dispersal Area: 10 to 40%
	DRIP DISPERSAL SYSTEM B:
Infiltrative Area: 525 sq. ft. (525 gpd / 1.0 gpd/sq. ft.)	Drip/line / Emitter Spacing: 2 ft / 2 ft
Infiltrative Area per Emitter: 4 sq. ft.	Drip/line Area: > 525 sq. ft.
# of Emitters Required: 131 (525 sq. ft. / 4 sq. ft. emitter)	Number of Emitters: 135
Depth to GW: >3 ft (SP 1 & 2 to 4 ft depth)	Slope in Dispersal Area: 7 to 11%

INFILTRATIVE AREA: 1 in = 10 ft (A = 1/2 B x H)
 to verify measurement done by Adobe Pro software



NOTE THAT INSPECTION WELLS WITHIN DRIPFIELDS ARE AT THE APPROXIMATE CENTER OF EACH FIELD.

INSPECTION WELL DETAIL: (6)



County of Santa Clara - Department of Environmental Health
 SOIL PERCOLATION TEST RECORDED MEASUREMENTS (Electronic Version by Chris Day, R.E.H.S.)

OWNER/APPLICANT:	SR #:	PLN FILE #:
Renee & Carmen Gabriele	857366	8/1/2018
LOCATION: Moody Rd., Los Altos Hills, APN 351-01-014	Project: OWS1	
CONTACT PERSON: CHRIS DAY, R.E.H.S.	PHONE: 650-293-1045	DATE: 8/1/2018

HOLE #1	DEPTH: 18" (27 3/4 on ruler)	TIME	WATER LEVEL	START	FINISH	START	FINISH	Δ MIN	Δ INCH	MPI
2:08	2:38	21	1/2	24	1/8	30	2	5/8	11	5
2:39	3:25	21	1/2	24	1/4	48	2	3/4	17	7
3:26	3:56	21	1/2	23	1/2	30	2	3/2	15	5
3:57	4:27	21	1/2	23	3/8	30	1	7/8	16	6
4:28	4:58	21	1/2	23	3/8	30	1	7/8	16	6
4:59	5:29	21	1/2	23	1/2	30	1	1	15	5

HOLE #2	DEPTH: 12" (26 1/4 on ruler)	TIME	WATER LEVEL	START	FINISH	START	FINISH	Δ MIN	Δ INCH	MPI
2:10	2:41	20	1/2	DRY	31					
2:42	3:10	20	3/8	DRY	48					
3:31	4:01	20	1/2	DRY	30					
4:02	4:32	20	1/2	DRY	30					
4:33	4:43	20	1/2	24	3/4	10	4	1/4	2	1
4:44	4:54	20	1/2	24	1/2	10	4	3	3	1
4:55	5:05	20	1/4	24	1/4	10	4	3	3	1
5:06	5:16	20	1/4	24	1/4	11	4	3	3	1
5:17	5:27	20	3/8	24	1/8	10	3	3/4	3	1

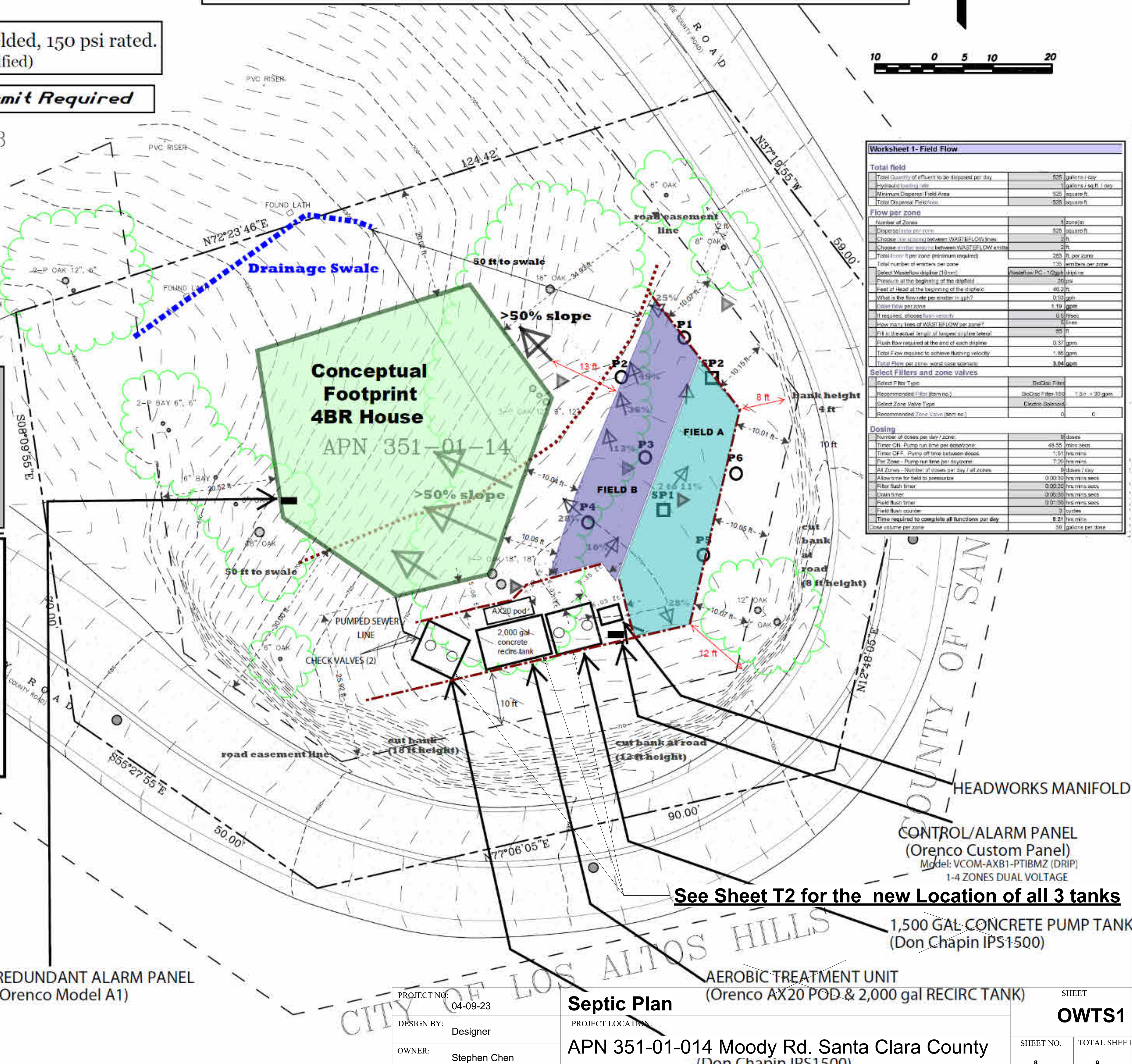
HOLE #3	DEPTH: 18" (27 3/4 on ruler)	TIME	WATER LEVEL	START	FINISH	START	FINISH	Δ MIN	Δ INCH	MPI
2:09	2:39	20	1/2	26	1/2	30	6	5	5	5
2:40	3:27	20	1/2	27	47	6	1/2	7	6	6
3:18	3:58	20	1/2	26	30	5	3/2	5	5	5
3:58	4:28	20	1/2	25	5/8	31	5	1/8	6	6
4:30	5:00	20	3/8	25	5/8	30	5	1/4	6	6
5:00	5:30	20	3/8	25	5/8	30	5	1/4	6	6

HOLE #4	DEPTH: 18" (26 1/4 on ruler)	TIME	WATER LEVEL	START	FINISH	START	FINISH	Δ MIN	Δ INCH	MPI
2:11	2:42	21	3/8	26	1/2	DRY	31			
2:44	3:11	21	1/2	DRY	47					
3:32	4:02	20	1/2	DRY	30					
4:03	4:34	20	1/2	DRY	31					
4:35	4:45	20	1/2	DRY	10					
4:45	4:50	20	25	1/2	5	5	1/2	0.9		
4:51	5:02	20	1/2	DRY	10					
5:02	5:14	20	1/2	DRY	9					
5:12	5:18	20	1/2	DRY	6					
5:32	5:37	20	1/2	25	1/2	5	5	1.0		
5:38	5:48	20	1/2	25	1/2	5	5	1.0		
5:44	5:49	20	1/2	25	5/8	1	4	3/8	1.0	

HOLE #5	DEPTH: 18" (27 3/4 on ruler)	TIME	WATER LEVEL	START	FINISH	START	FINISH	Δ MIN	Δ INCH	MPI
2:12	2:44	20	1/4	24	1/8	32	4	1/8	8	8
2:46	3:23	18	1/2	24	3/4	47	6	1/4	8	8
3:59	4:04	19	7/8	23	1/2	15	1	5/8	7	7
4:05	4:36	21	3/8	24	31	2	5/8	12	12	12
4:37	5:07	21	23	1/2	30	2	1/2	12	12	12
5:08	5:38	20	1/2	23	1/4	30	2	3/4	11	11

HOLE #6	DEPTH: 12" (26 1/4 on ruler)	TIME	WATER LEVEL	START	FINISH	START	FINISH	Δ MIN	Δ INCH	MPI
2:13	2:46	21	3/8	25	1/4	33	3	7/8	9	9
2:48	3:35	21	25	1/4	49	4	1/4	12	12	12
3:36	4:06	20	1/4	24	30	3	3/4	8	8	8
4:08	4:38	21	24	30	3	10				
4:39	5:09	21	24	30	3	10				
5:10	5:40	21	24	30	3	10				

STABILIZED MPI	R	1	2	3	4	5	6
Stabilized MPI	R	16	6	3	1	12	10
Adjusted Stabilized MPI	R _a = R x 1.4	22	8	4	1	17	14
Average Adjusted Stabilized MPI	R _a = (Σ R _a) / # Holes					11	
# Bedrooms	3	FOR OFFICE USE ONLY					
		Tank Size (Gal)					Leach Line (ft)



Worksheet 1- Field Flow

Total field	
Total Quantity of effluent to be disposed per day	525 gallons / day
Hydraulic loading rate	1 gallons / sq. ft. / day
Minimum Dispersal Field Area	525 square ft.
Total Dispersal Field Area	525 square ft.

Flow per zone	
Number of Zones	2 zones
Dispersal area per zone	525 square ft.
Choose area spacing between WASTELINES	2 ft
Choose area spacing between WASTELINES	2 ft
Total number of emitters per zone	135 emitters per zone
Select Wasteline design (100%)	Standard PVC - 1/2" dia
Position at the beginning of the dripfield	20 gpd
Feet of Head at the beginning of the dripfield	49.2 ft
What is the flow rate per emitter in gpd?	0.25 gpd
Emitter flow per zone	1.19 gpm
If required, choose flow velocity	0.5 ft/sec
How many lines of WASTELINES per zone?	5 lines
Fit at the actual length of longest pipeline lateral	85 ft
Flush flow required at the end of each emitter	0.57 gpm
Total Flow required to achieve flushing velocity	1.96 gpm
Total Flow per zone, total zone capacity	3.04 gpm

Select Filters and zone valves	
Zone Filter Type	Backflow Filter
Recommended Filter (microns)	100 - 200 microns
Zone Valve Type	Electric Solenoid
Recommended Zone Valve (microns)	100

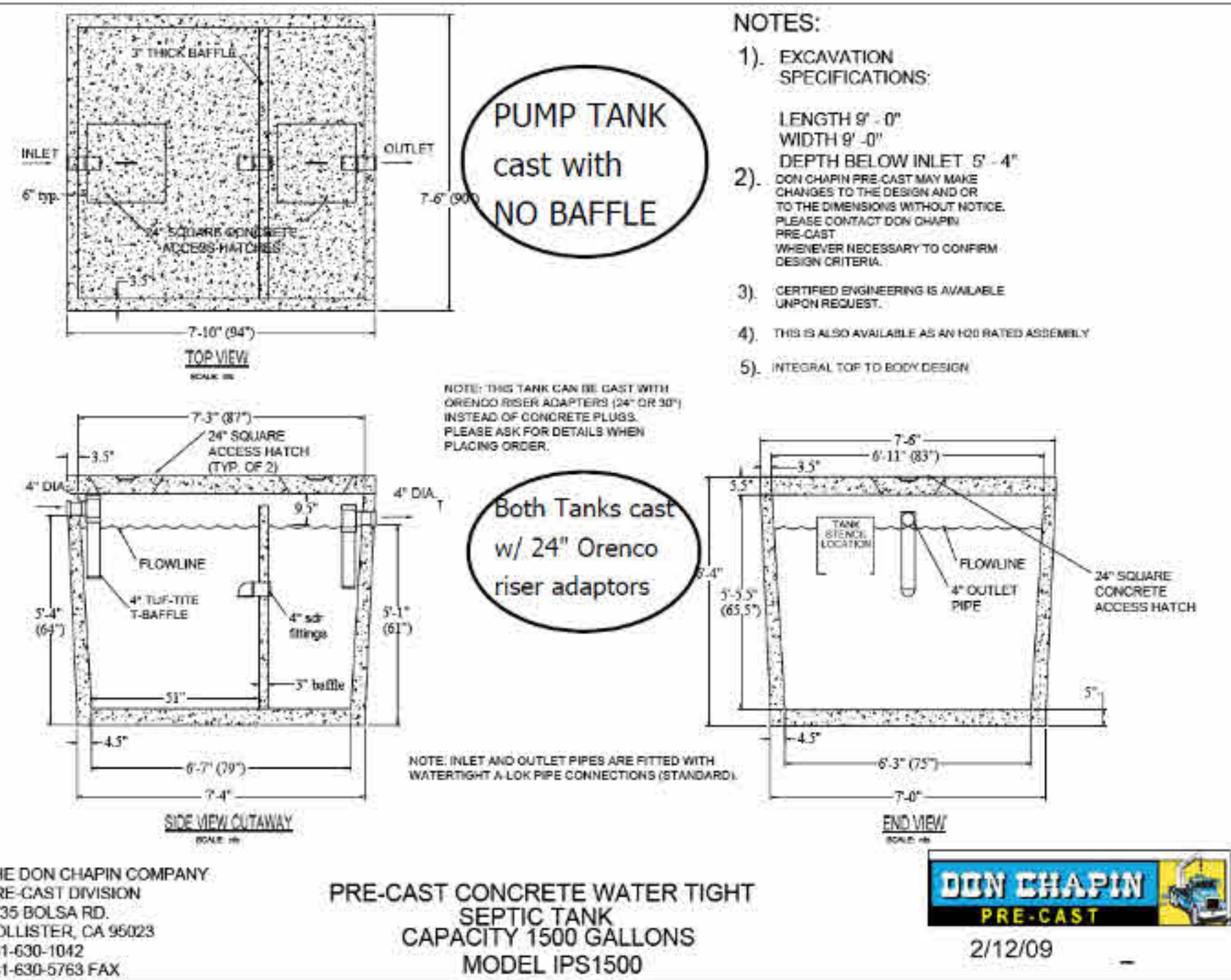
Dosing	
Number of doses per day / zone	10 doses
Time On Pump run time per dosing zone	48.53 hrs/zone
Time Off Pump run time between doses	5.91 hrs/zone
Per Zone - Pump run time per day/zone	7.30 hrs/day
All Zones - Number of doses per day / all zones	20 doses / day
Allow time for field to pressurize	0.0020 hrs/zone/secs
Pilot fluid timer	0.0020 hrs/zone/secs
Drain timer	0.0020 hrs/zone/secs
Flush flush timer	0.0020 hrs/zone/secs
Flush flush counter	3 cycles
Time required to complete all functions per day	8.21 hrs/zone
Dose volume per zone	58 gallons per zone

PROJECT NO:	04-09-23	SHEET	OWTS1
DESIGN BY:	Designer	SHEET NO.	TOTAL SHEET
OWNER:	Stephen Chen	8	9
Septic Plan		APN 351-01-014 Moody Rd. Santa Clara County (Don Chapin IPS1500)	

THIS PLAN is for DEH feasibility letter only. Hydraulic calculations and pump selection criteria will be provided in an updated plan for DEH conditional approval stamp in conjunction with submittal of proposed house plans to Planning Dept.

TANKS & TREATMENT SPECIFICATIONS:

SEPTIC & PUMP TANK: 2 tanks:

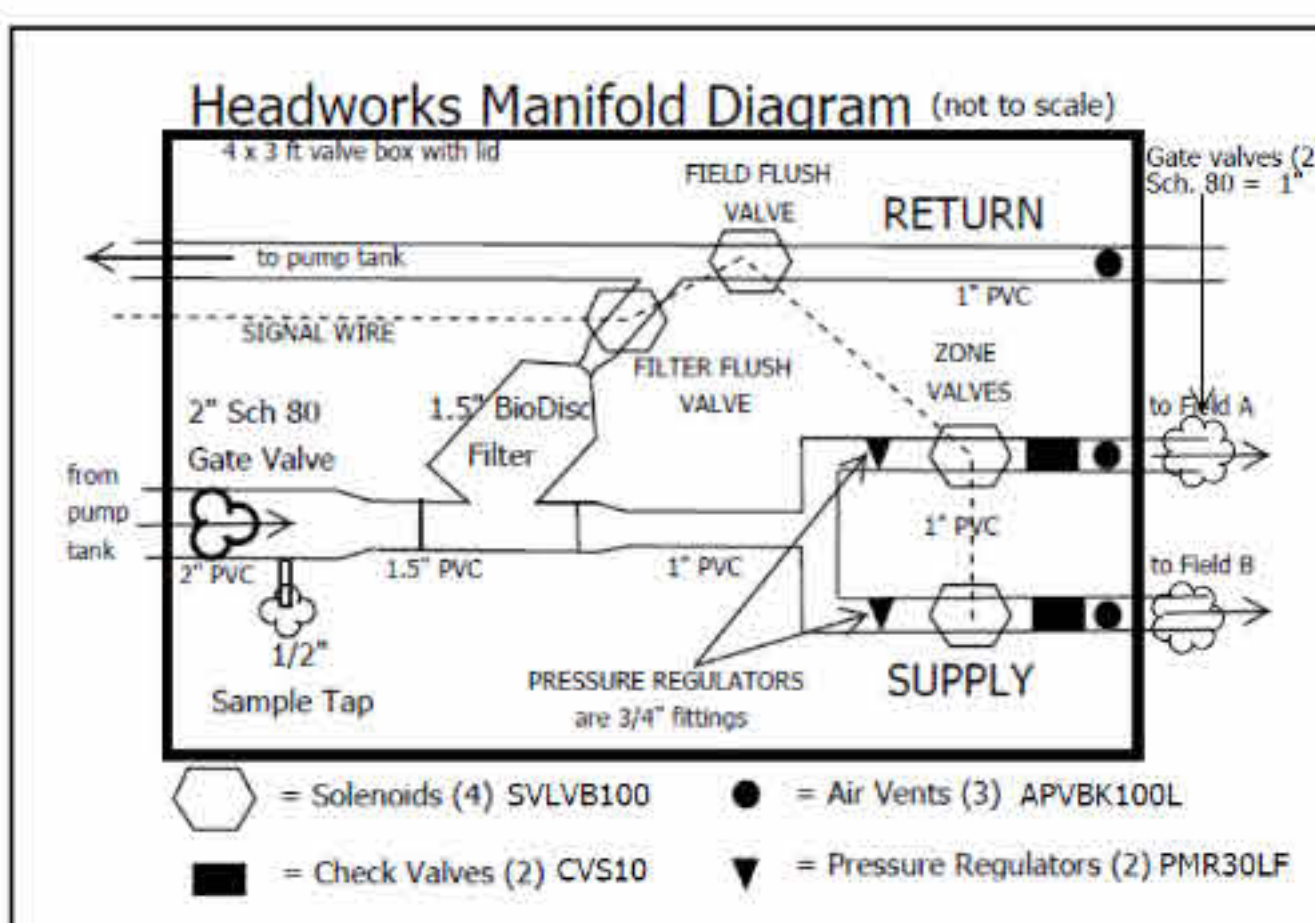


Tanks risers & lids:
Septic Tank: Orenco RR2412 (2) risers
Pump Tank: Orenco RR2436 (1) riser
Orenco RR24365 (1) riser
Lids: FLD24G (4) lids

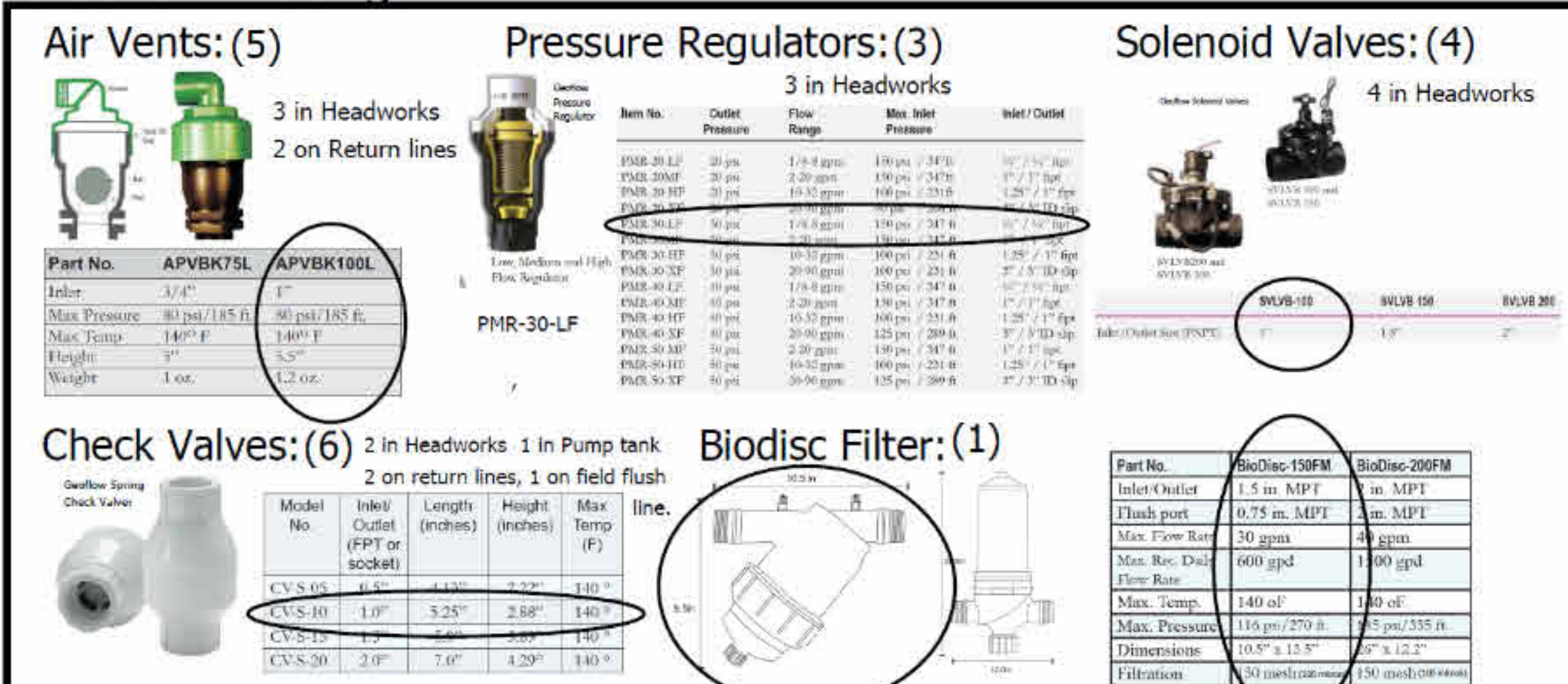
Septic Tank sizing:
2 x peak flow (525 gpd) = 1,050 gpd
Tank size of 1,500 gal exceeds 2 x flow

Septic Tank Effluent Filter:
Orenco Biotube Filter
Model FTS0444-36V

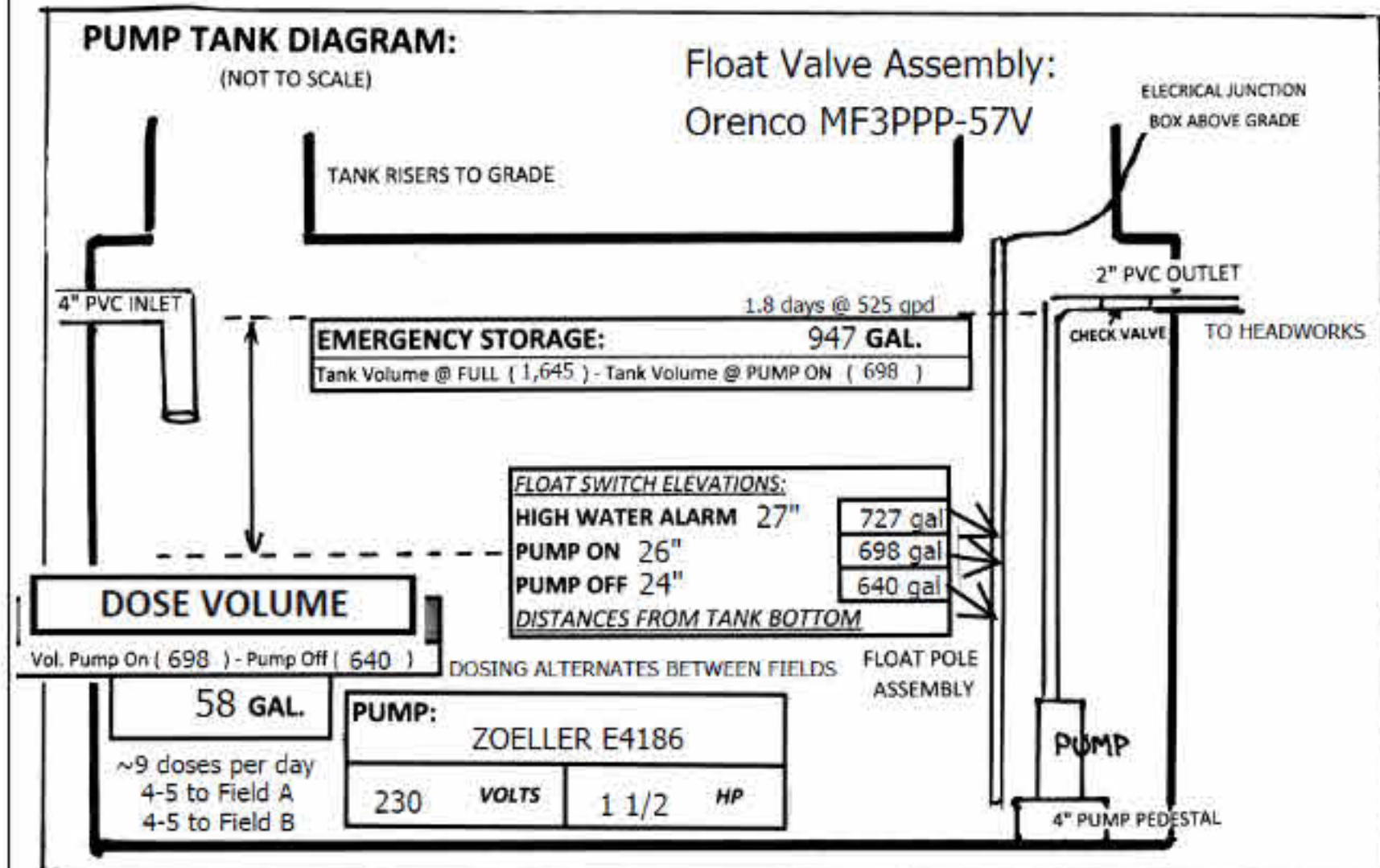
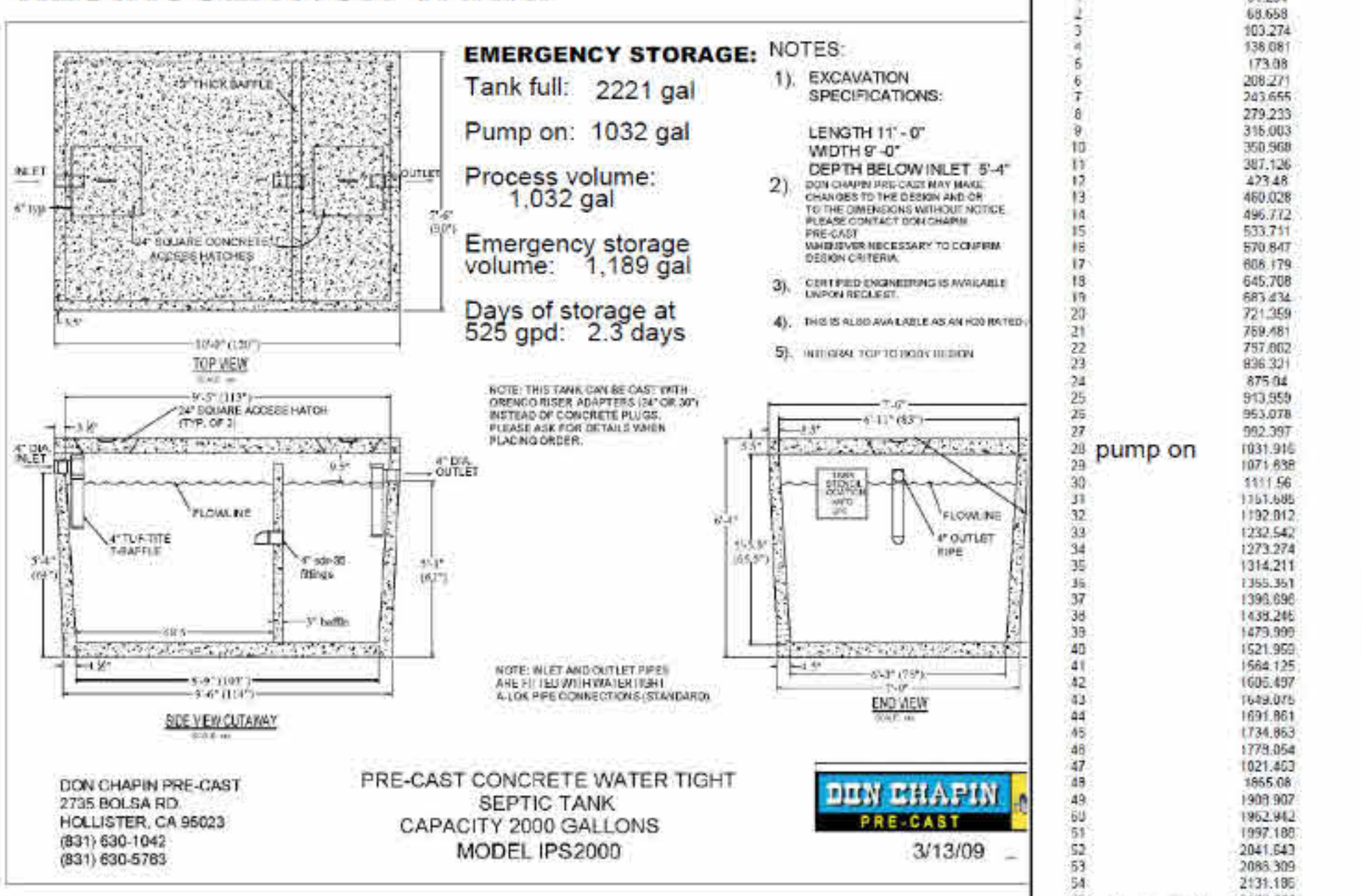
HEADWORKS AND PUMP SPECIFICATIONS:



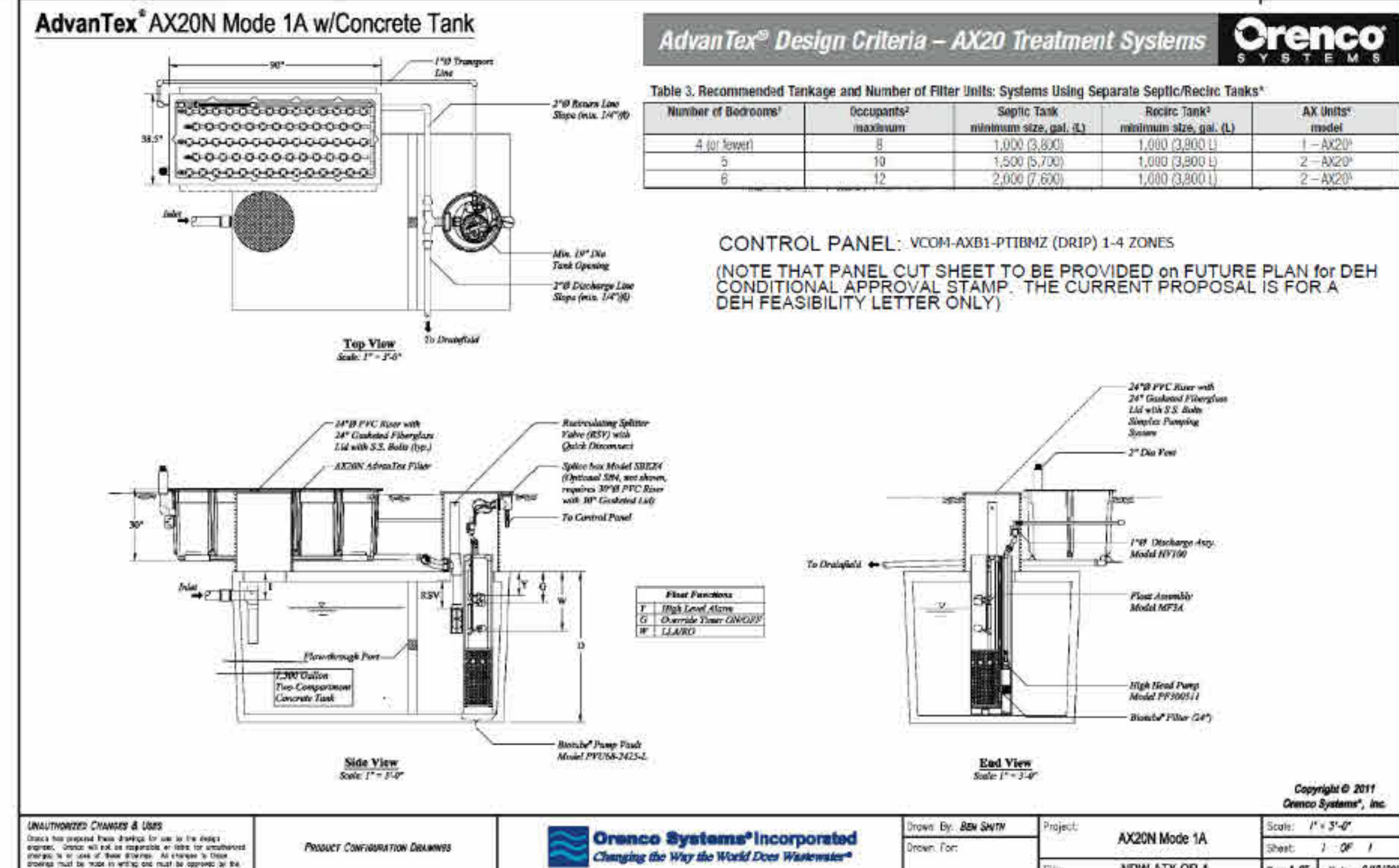
Geoflow Fittings:



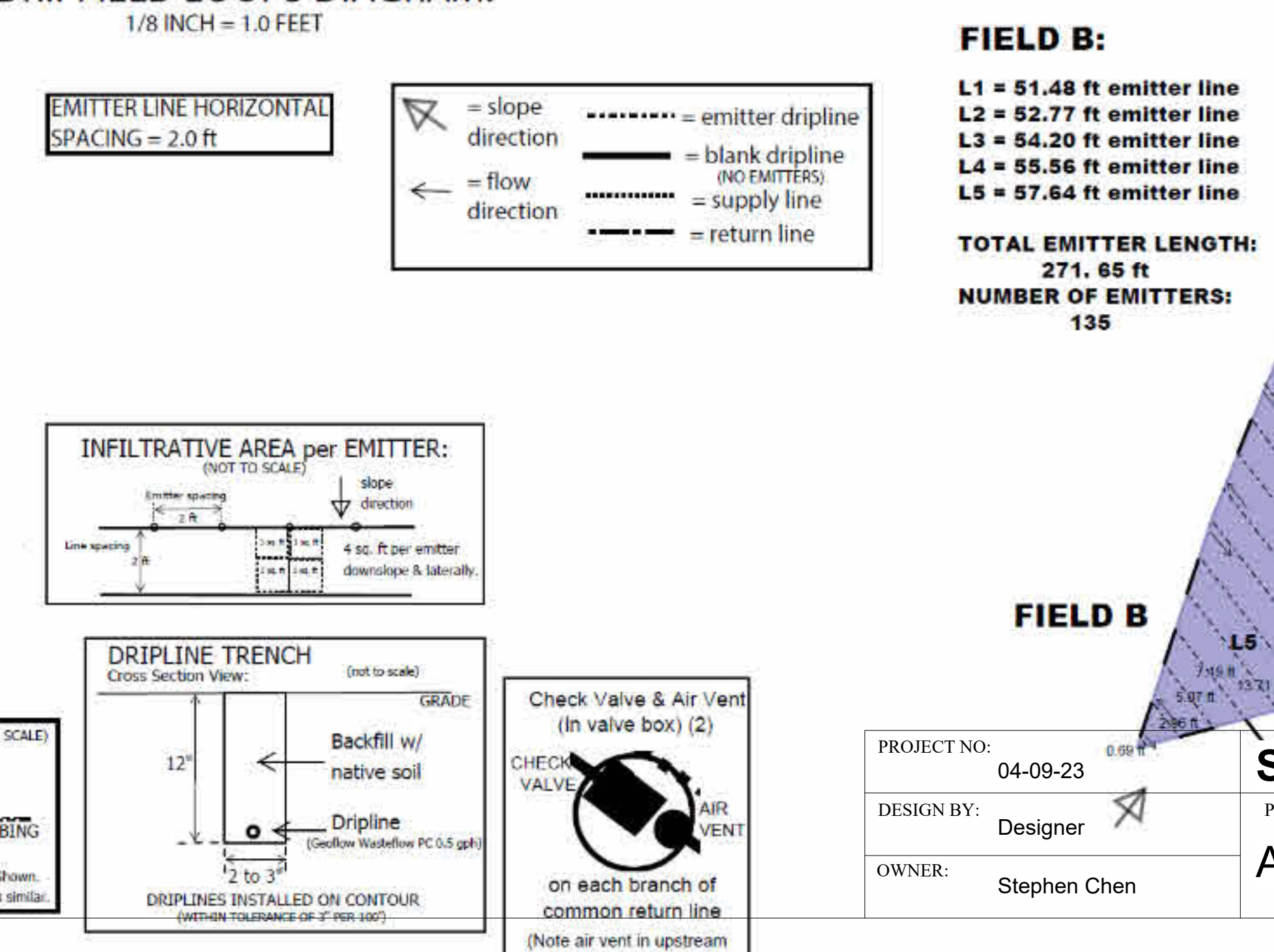
RECIRCULATION TANK:



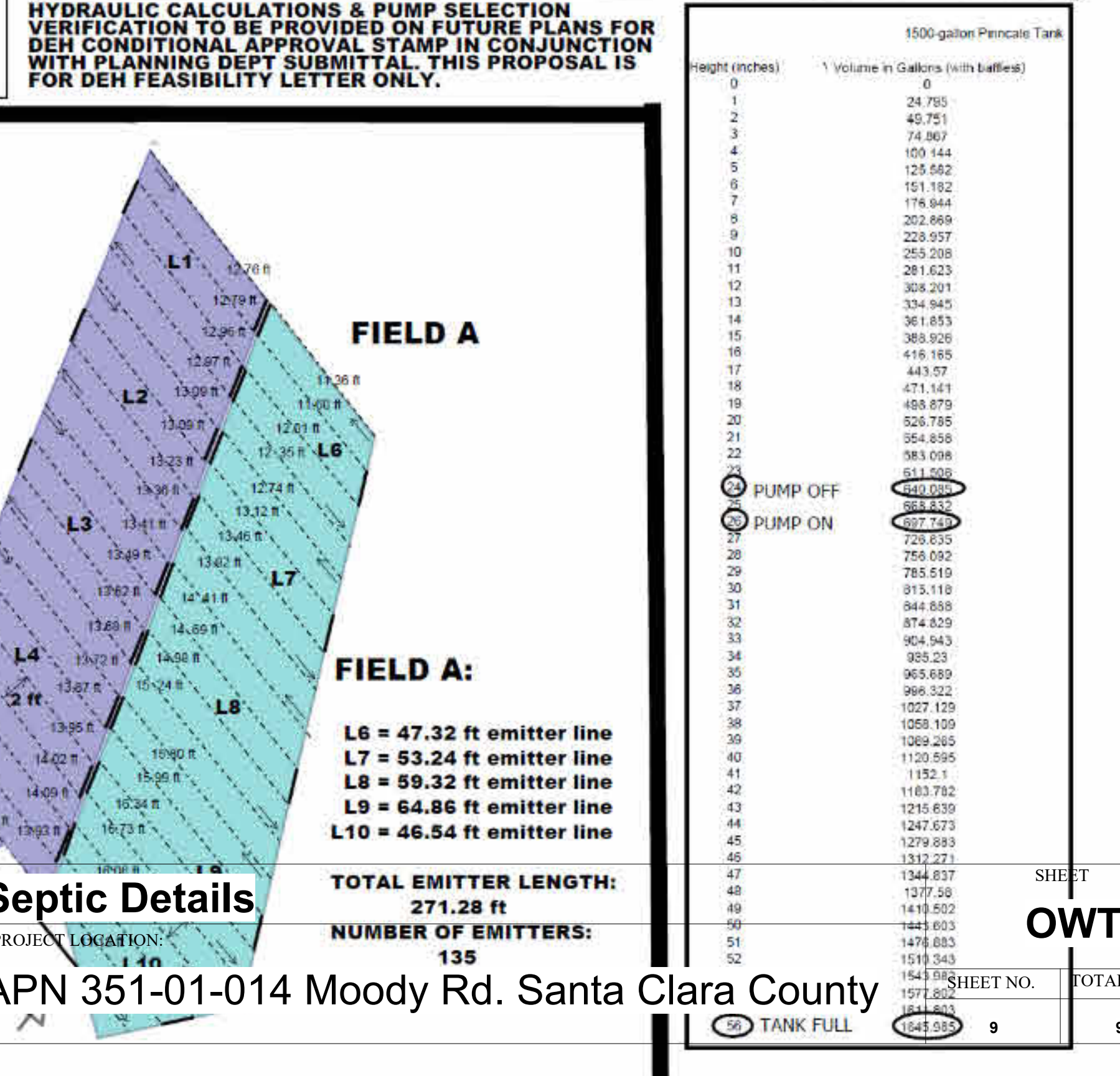
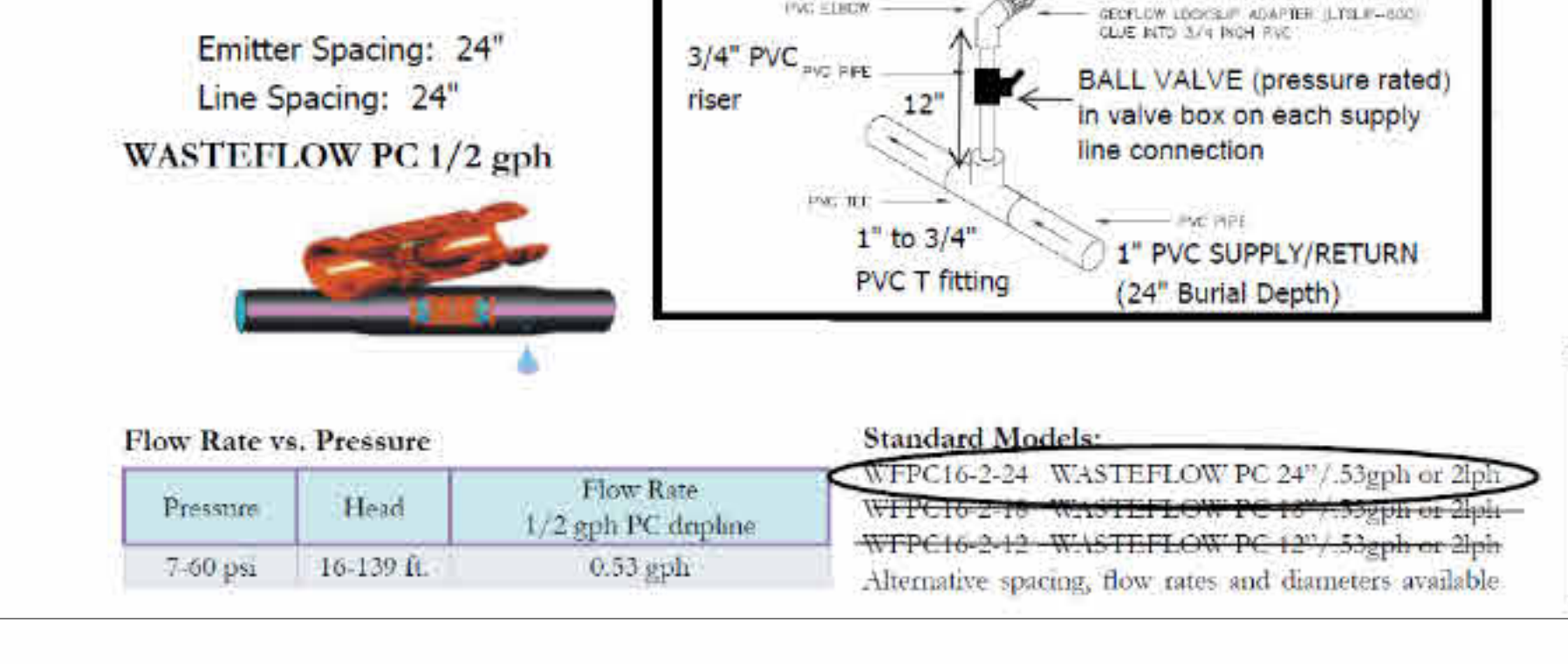
TREATMENT UNIT:



DRIFIELD LOOPS DIAGRAM:



DRIFIELD SPECIFICATIONS:



Property on Moody Rd., Los Altos Hills, CA 94020
APN 351-01-014

OWNER: Stephen Chen
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stephen210chen@gmail.com

PLANNING DEPT. REVIEW: 21 MAY 23
REV 1: 11/15/2011
REV 2: 11/15/2011

PROJECT LOCATION: 110

SHEET 9 TOTAL SHEETS 9