POINT REYES STATION

COASTAL PERMIT AND USE PERMIT

11401 ST. RT. 1, POINT REYES STATION, CA
POINT REYES STATION, CA 94956
APN: 119–198–03

OWNER: JULIE VAN ALYEA
50 PROFESSIONAL CENTER DR., STE. 100
ROHNERT PARK, CA 94928
(415) 999–0650
julie@redwoodoil.net

CLIMATE ZONE: 3

POINT REYES STATION

COASTAL PERMIT AND
USE PERMIT

11401 ST. RT. 1, POINT REYES STATION, CA
POINT REYES STATION, CA 94956
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SHEET INDEX

DZA - Attachment #8

COVER SHEET

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY,

REGISTERED PROFESSIONAL ENGINEER MATTHEW E. DONOHUE NO. C57219 CIVIL STATE OF CALIFORNIA

MATTHEW E. DONOHUE
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TRANS TECH CONSULTANTS
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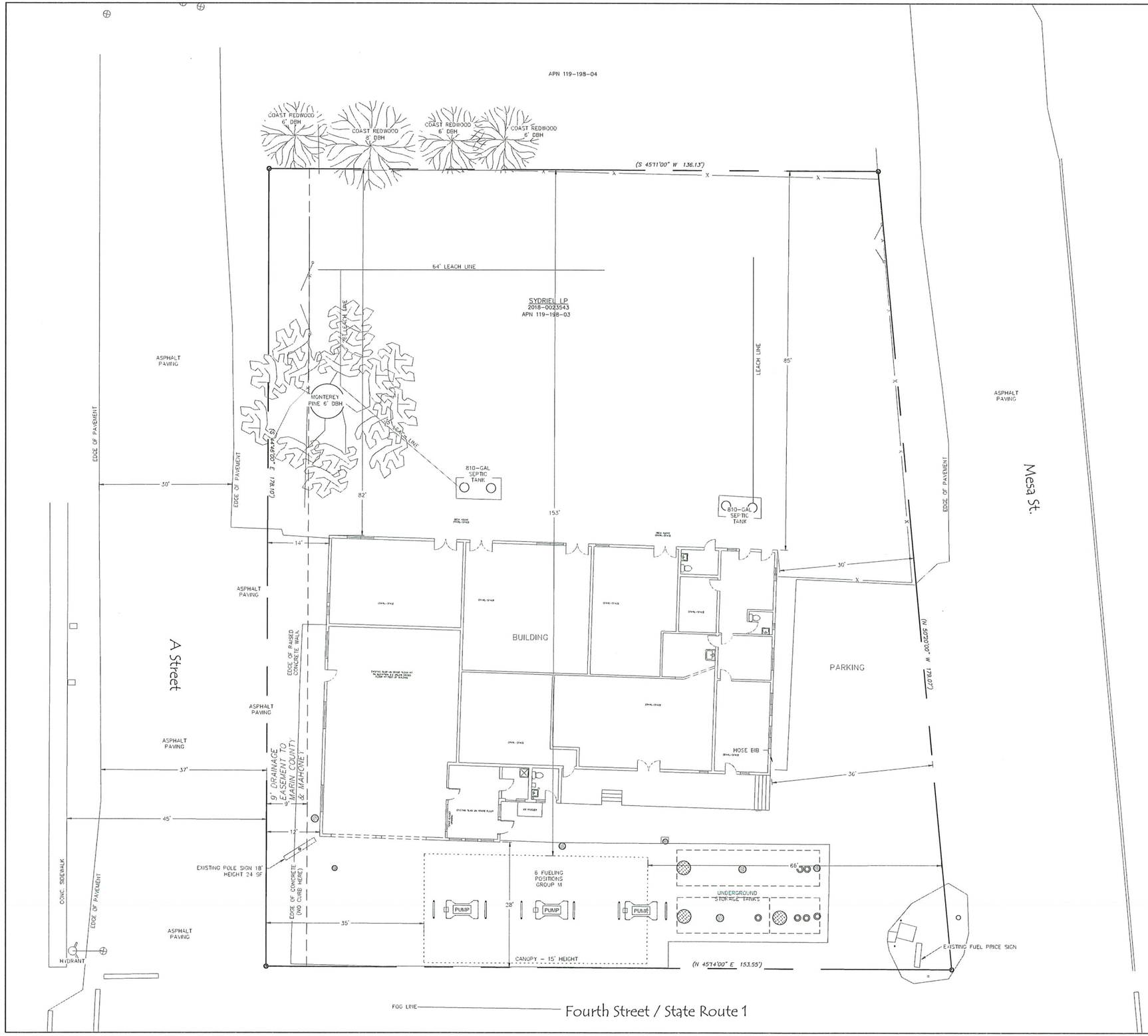
WINDSOR, CA 95492
PHONE: 707–837–8408 FAX: 707–837–7334

COASTAL PERMIT AND USE PERMIT
POINT REYES STATION
11401 STATE ROUTE 1, POINT REYES STATION, CA 94956
APN: 119–198–03

DATE: 11/16/2023
DRAWN: MED
JOB#: 2823.01
SHEET
CVR



REVISIONS			
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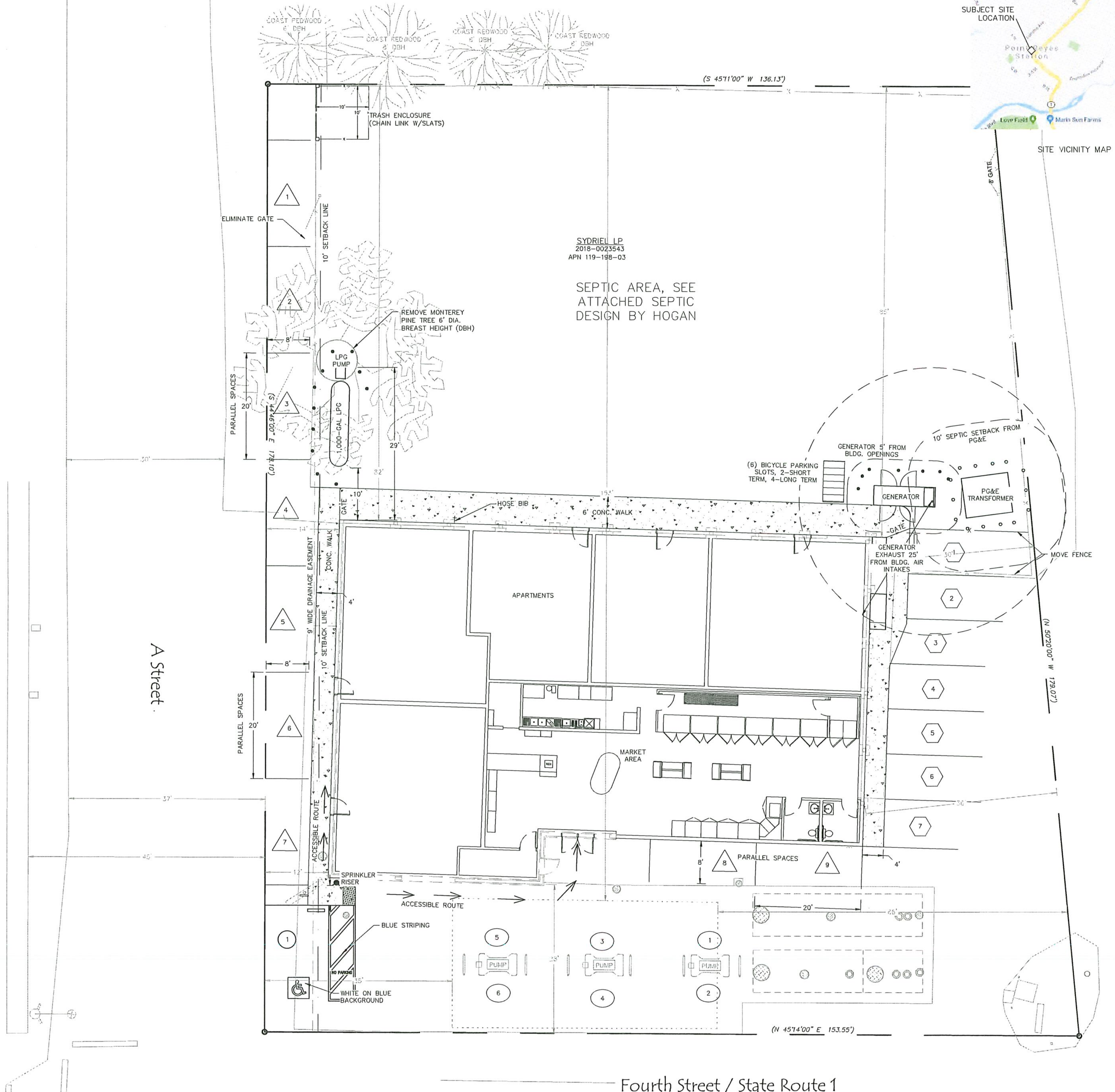
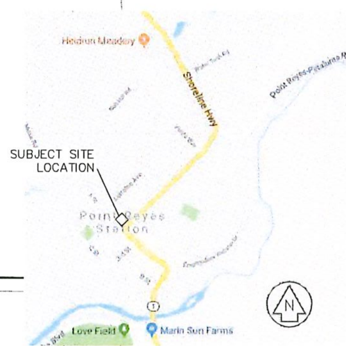
DRAWN: MED
JOB#: 2823.01
SHEET 1

Scale: 1" = 10'

N ACTUAL NORTH W E S PLAN DIRECTIONS

SITE PLAN - EXISTING





SITE VICINITY MAP

3501 Civic Center Dr

San Rafael, CA 94903

> Get on US-101 N

> Take exit 456 from US-101 N

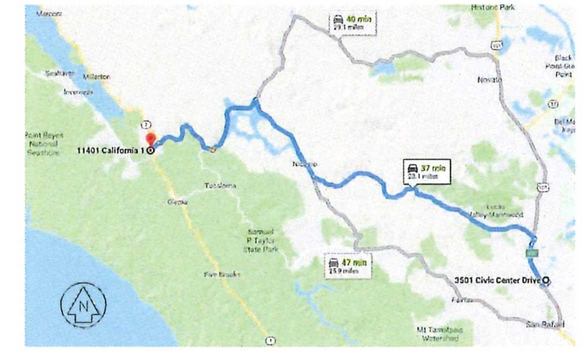
> Continue on Lucas Valley Rd. Take Pt. Reyes - Petaluma Rd to CA-1 S in Point Reyes Station

Turn left onto CA-1 S

Destination will be on the right

11401 CA-1

Point Reyes Station, CA 94956



DIRECTIONS TO SITE

DATA TABLE

ENGINEER OF RECORD:	MATTHEW E. DONOHUE 707 837-8408
ZONING:	C-VCR-B2
PARCEL NUMBER:	119-198-03
LOT AREA:	0.60 AC.
BLDG. GROSS FLOOR AREA (SF):	5,650 (EXISTING), 5,800 (PROP.)
CONSTRUCTION TYPE:	VB
FUELING CANOPY AREA:	1,250 SF (EXISTING)
CONSTRUCTION TYPE:	IIB
BUILDING WILL BE SPRINKLED.	
FLOOR AREA RATIO (FAR):	0.26
OCCUPANCY GROUP:	FUEL&STORE: M RESIDENCES: R-2
FEMA ZONE:	X, 0.2% ANNUAL CHANCE FIRM06041C0233D
LAT. LONG.	38°04'08" NORTH LAT., 122°48'24" WEST LONG.

PARKING TABLE

USE	Occ.	QTY	AREA (SQUARE FEET)	PARKING FACTOR	Automobile Parking Factor	SPACE(S)	Rounded Up	Bicycle Parking Factors Short Term	Bicycle Parking Factors Long Term	Total Bicycle Spaces Short Term	Total Bicycle Spaces Long Term
PARKING REQUIRED:											
MARKET	M		1,930	1/200 SQUARE FEET	200	9.7					
STUDIO OR SINGLE	R-2	0		1/UNIT + 1 GUEST PER 5 DWELLINGS	1	0.0					
ONE BED APT.	R-2	2		1.25/UNIT + 1 GUEST PER 5 DWELLINGS	1.25	2.5		0.5	0.33	1.0	0.66
TWO BED APT.	R-2	3		1.5/UNIT + 1 GUEST PER 5 DWELLINGS	1.5	4.5		0.33	1	1.0	3.0
GUEST PARKING	SUM	5		GUEST 1/5 UNITS	0.2	1.0					
					SUM:	17.7	18				
					SUM RESIDENTIAL:	8.0	8				
PARKING PROVIDED:											
STANDARD STALLS						7.0					
PARALLEL						9.0					
VAN ACCESSIBLE						1.0					
FUELING POSITIONS						6.0					
					TOTAL PARKING PROVIDED:	23.0	23			2	4
					PARKING MINUS FUELING POSTIONS:	17.0	17				

LEGEND

7 STANDARD PARKING SPACES

9 NO. OF PARKING SPACES PARALLEL

1 NO. OF VAN ACCESSIBLE SPACES

6 NO. OF FUELING SPACES

HEAD-IN PARKING SPACES SHALL BE A MINIMUM EIGHT AND ONE-HALF FEET BY EIGHTEEN FEET. PARALLEL SPACES SHALL BE A MINIMUM EIGHT FEET BY TWENTY FEET.

N ACTUAL NORTH W E S PLAN DIRECTIONS

0 10' 20'
Scale: 1" = 10'

SITE PLAN – PROPOSED

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY,

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JOB#: 2823.01

SHEET

2

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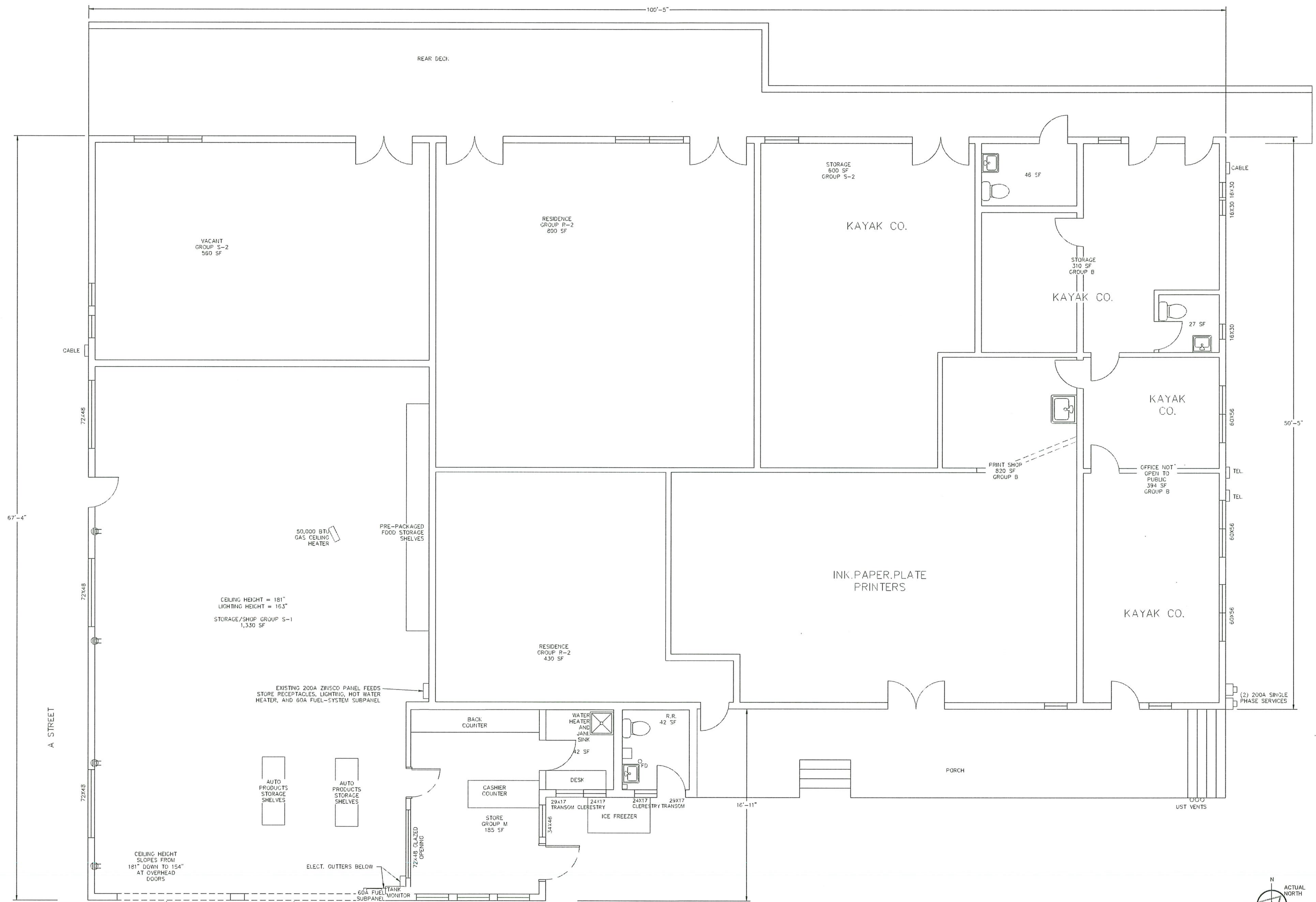
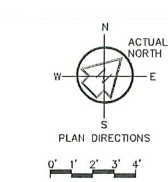


5,650 SQUARE FEET
GROSS FLOOR AREA

STATE ROUTE 1



FLOOR PLAN-EXISTING

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

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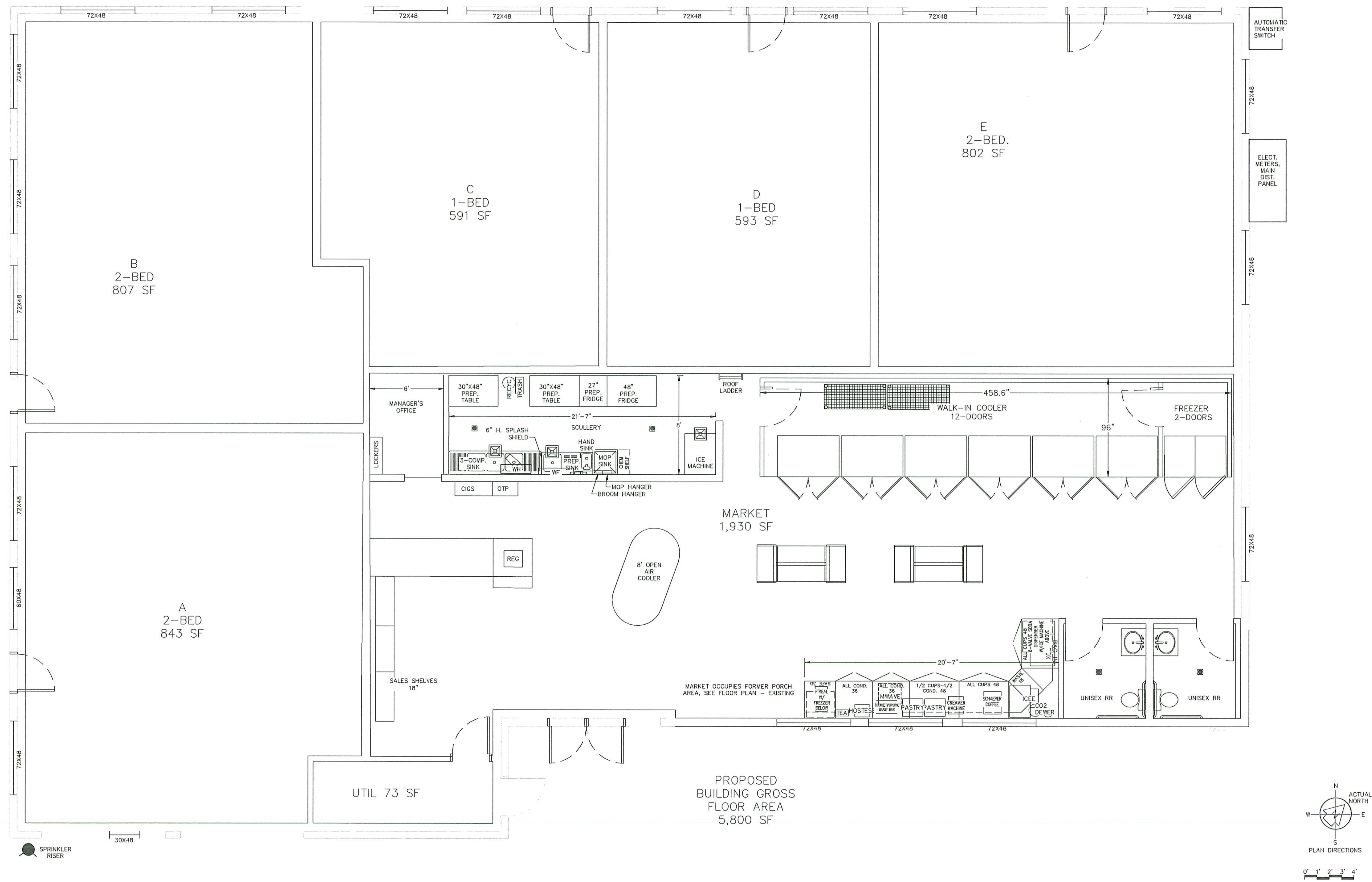
3



FLOOR PLAN – MARKET

REVISIONS		
NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY,

MATTHEW E. DONOHUE
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JOB#: 2823.01
SHEET
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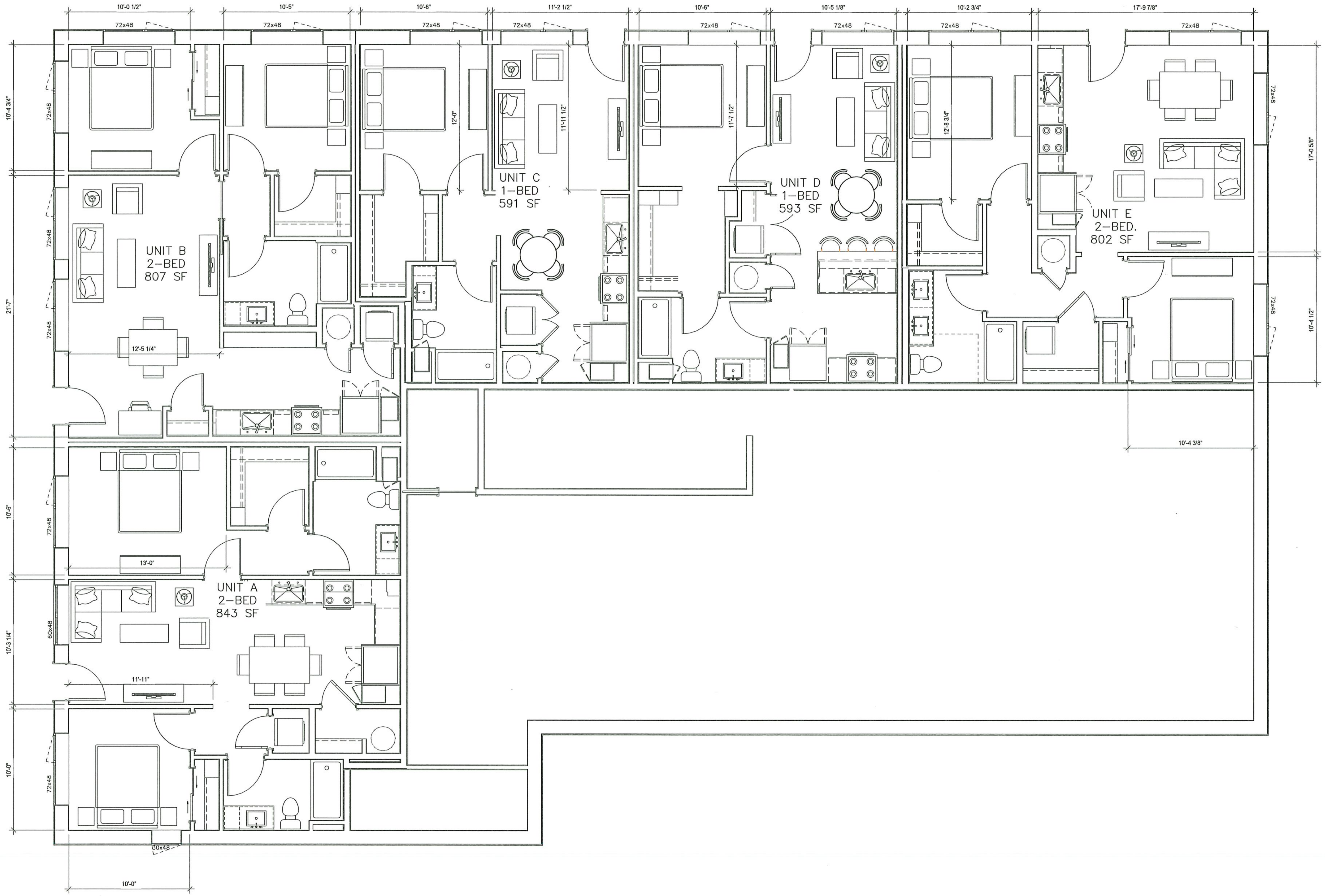

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ARCHITECTURE

950 HOWARD STREET
SAN FRANCISCO
CA 94103

P (415) 677-0966

CLIENT

CONSULTANT

POINT REYES STATION

REV	ISSUE	DATE

STAMP

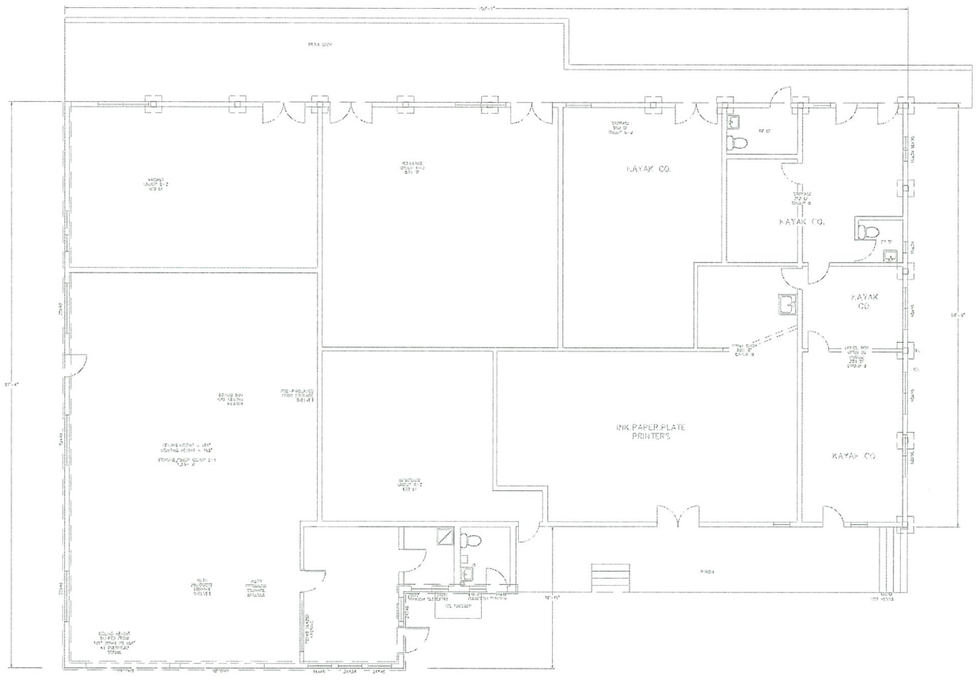
FLOOR PLAN - DWELLING UNITS

SHEET TITLE

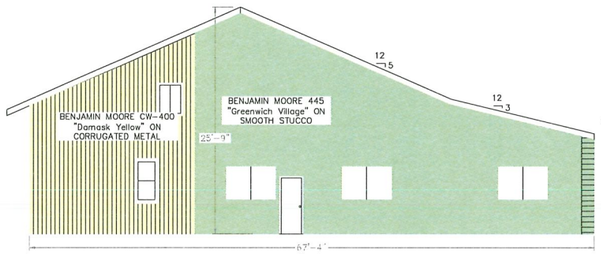
SCALE 1/4" = 1'-0"

PROJ. # XXXX DRAWN BY XX

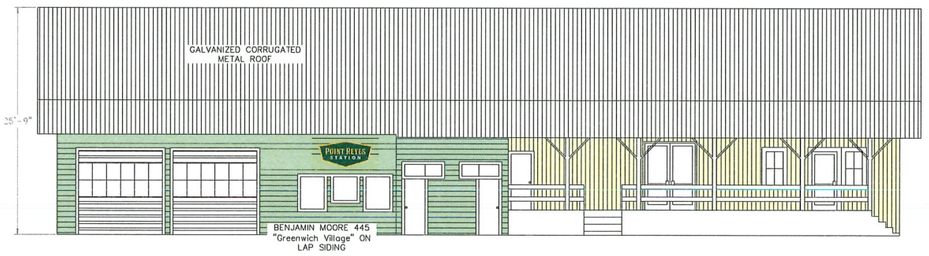
SHEET SIZE 36 X 24



5,650 SQUARE FEET
GROSS FLOOR AREA

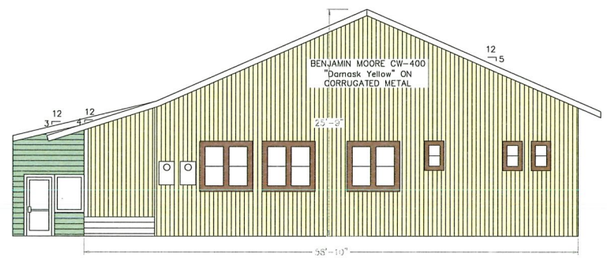


WEST ELEVATION



SOUTH ELEVATION

BENJAMIN MOORE CW-400
"Damask Yellow" ON
CORRUGATED METAL



EAST ELEVATION

0' 1' 2' 4' 8'
1/8" = 1'

ELEVATIONS–EXISTING

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

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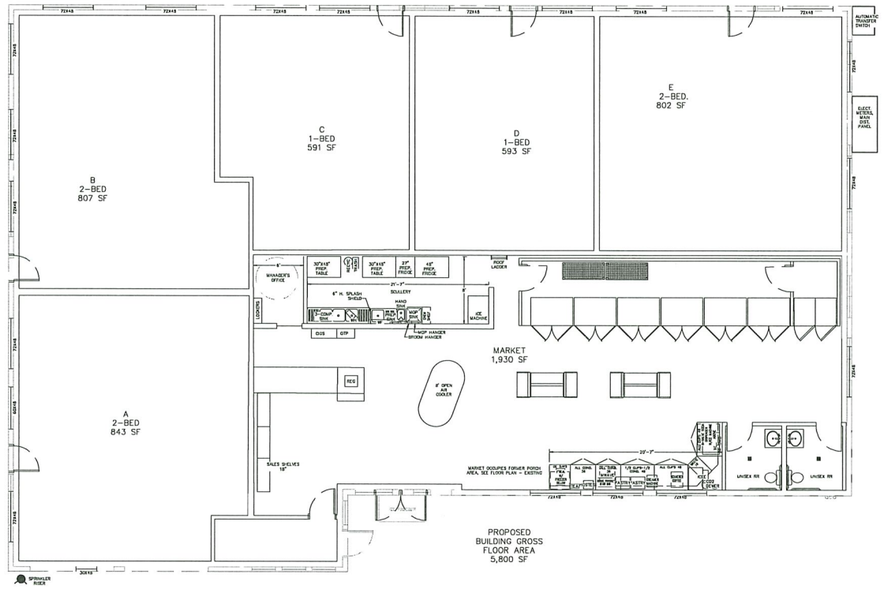
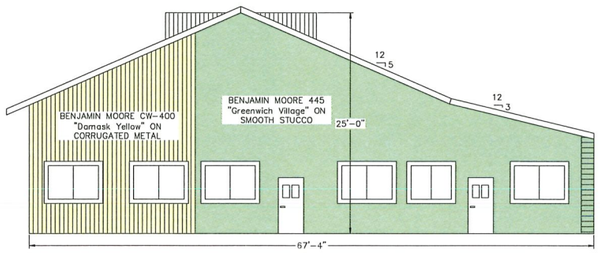
SHEET
6





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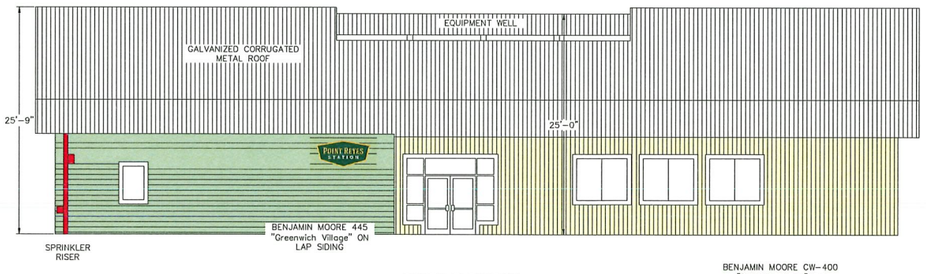

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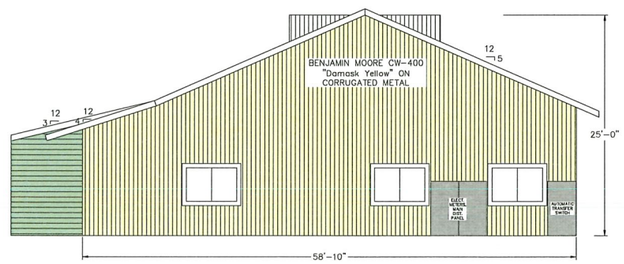

EAST ELEVATION

ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS.

0' 1'2" 4' 8'
1/8" = 1'

ELEVATIONS–PROPOSED

REVISIONS

NO.	DATE	DESCRIPTION	BY
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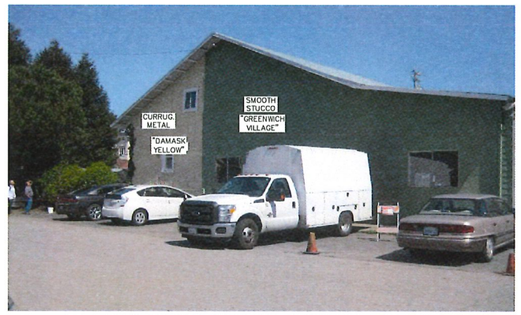
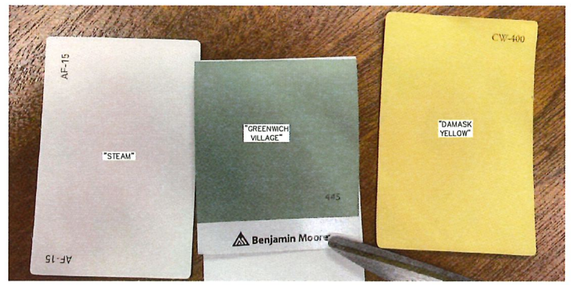


WEST ELEVATION

SOUTH (FRONT) ELEVATION

EAST ELEVATION



ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS.

COLORS AND MATERIALS

REVISIONS

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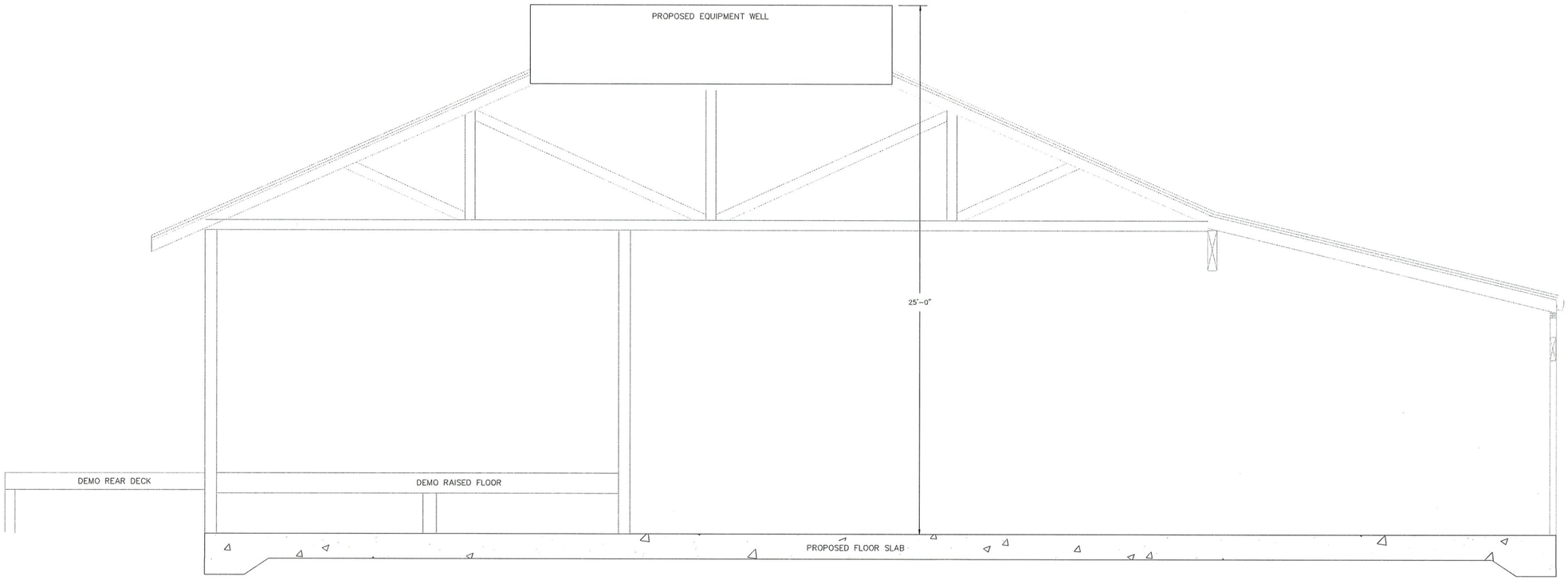

BUILDING CROSS SECTION (LATERAL)

0" 16" 32"
3/8" = 1'

REVISIONS

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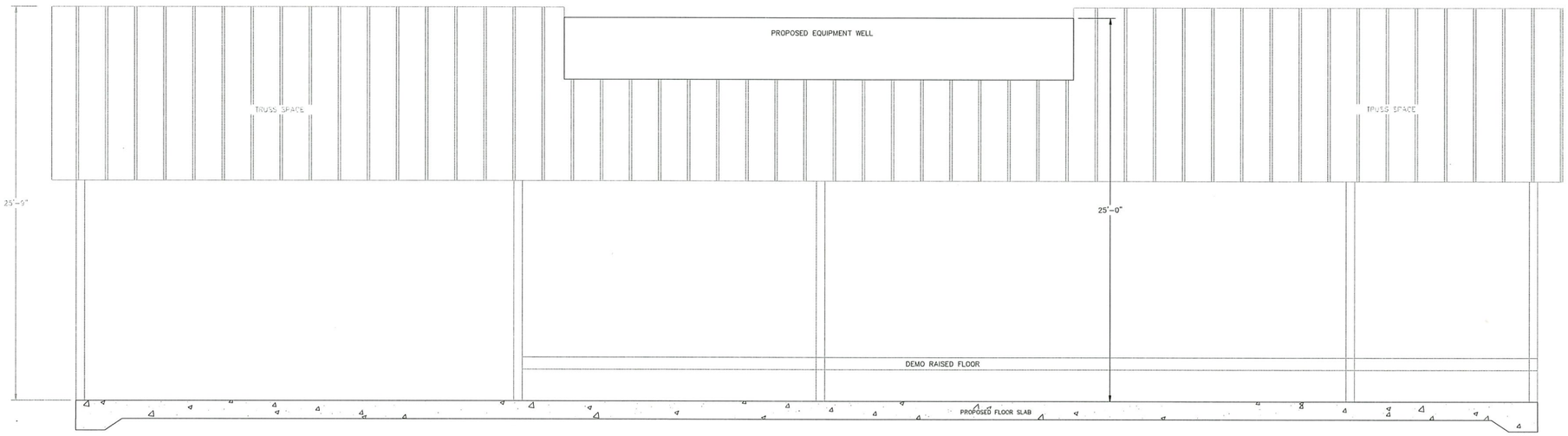

0' 1' 2' 3' 4'
1/4" = 1'

BUILDING CROSS SECTION (LONGITUDINAL)

REVISIONS			
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			MED

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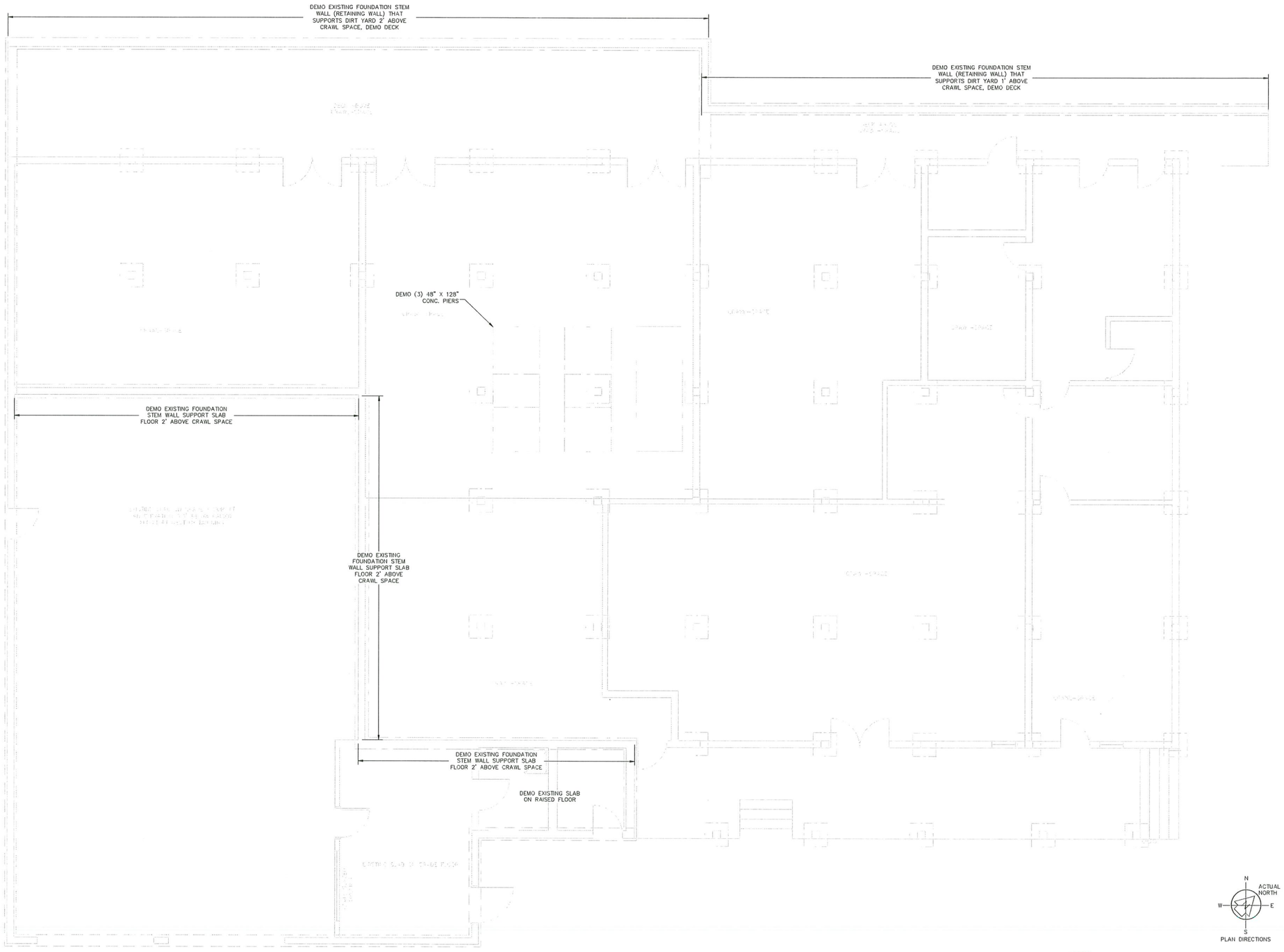

FOUNDATION DEMO PLAN

NO.	DATE	DESCRIPTION	BY
		REVISIONS	MED

APPROVED BY.

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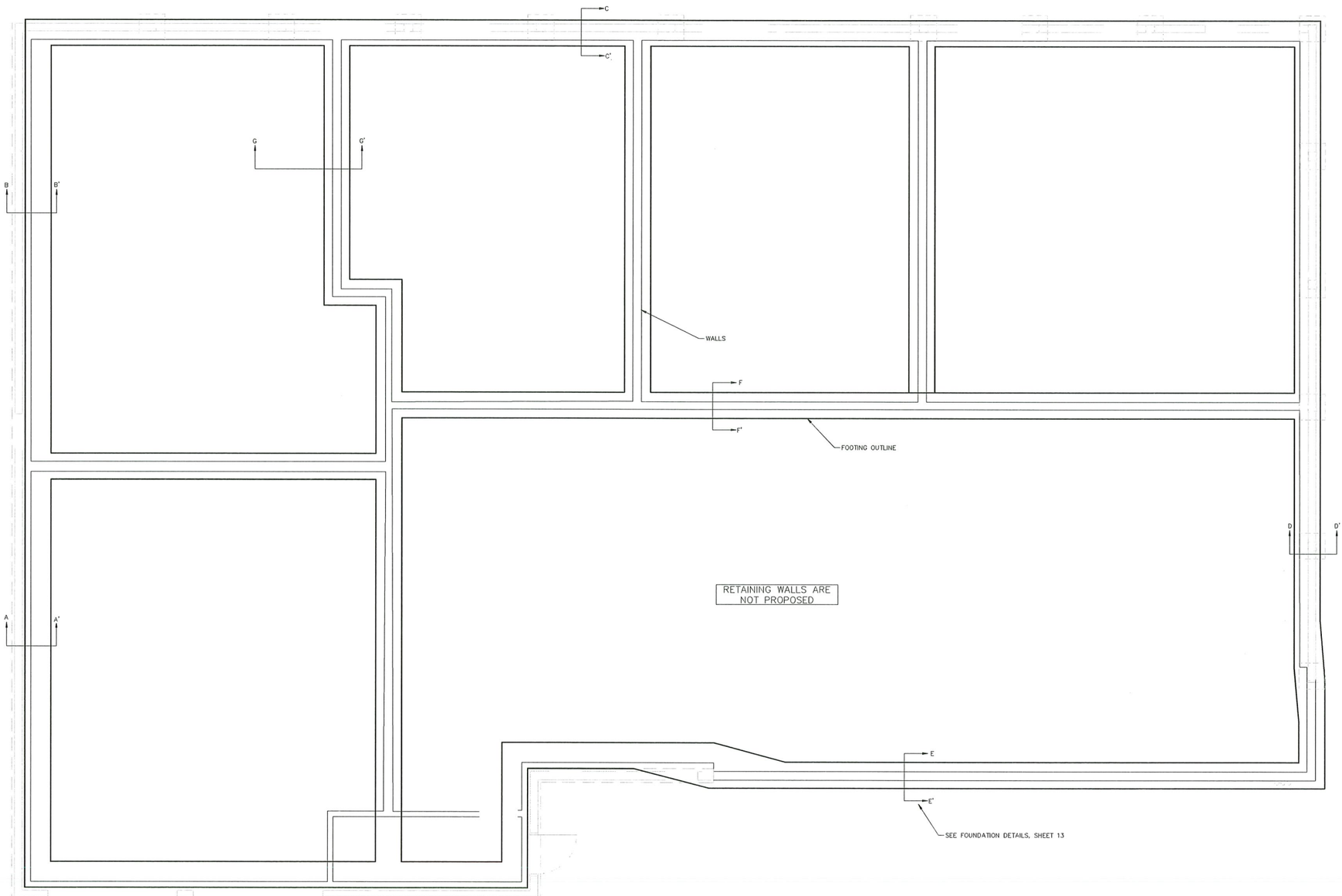
SHEET 11



N
ACTUAL NORTH
W
E
S
PLAN DIRECTIONS

0' 1' 2' 3' 4'
1/4" = 1'

FOUNDATION PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

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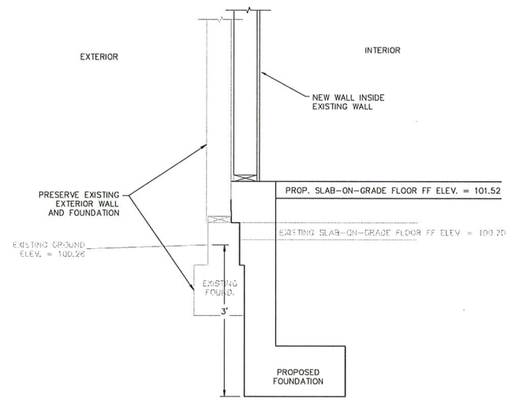
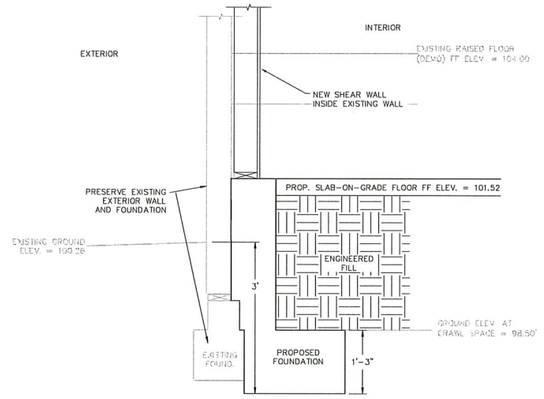


FOUNDATION SECTION A–A'



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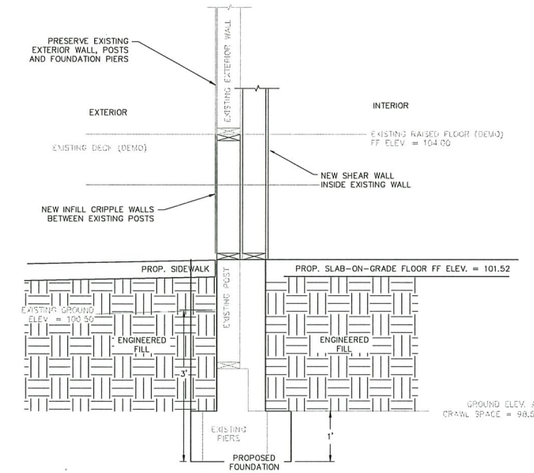
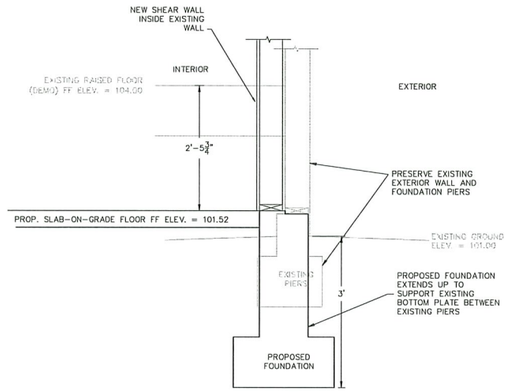
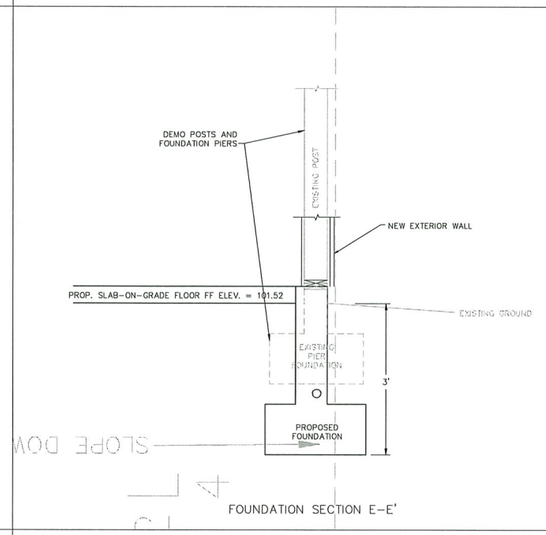


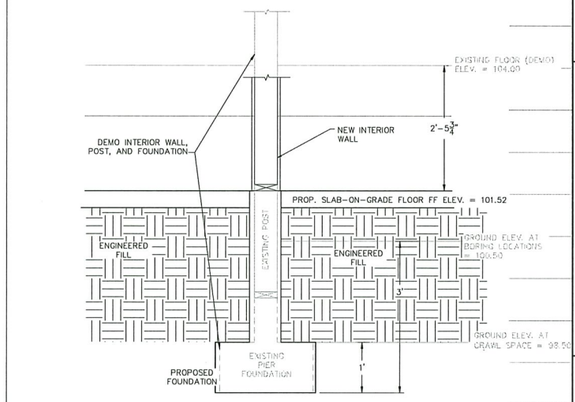
FOUNDATION SECTION C–C'



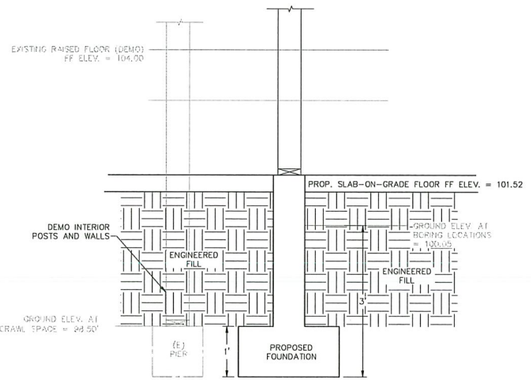
FOUNDATION SECTION D–D'



FOUNDATION SECTION E–E'



FOUNDATION SECTION F–F'



FOUNDATION SECTION G–G'

0' 1'
3/4" = 1'

FOUNDATION DETAILS

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY,

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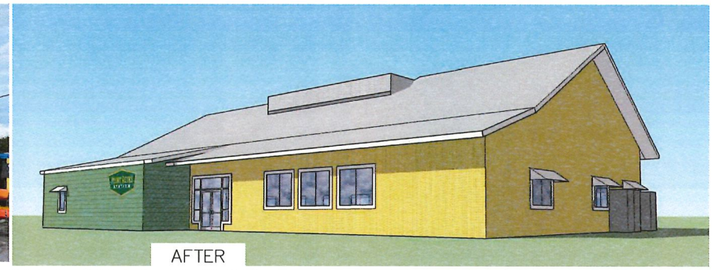
COASTAL PERMIT AND USE PERMIT
POINT REYES STATION
11401 STATE ROUTE 1, POINT REYES STATION, CA 94956
APN: 119-198-03

DATE: 11/16/2023
DRAWN: MED
JOB#: 2823.01
SHEET 13

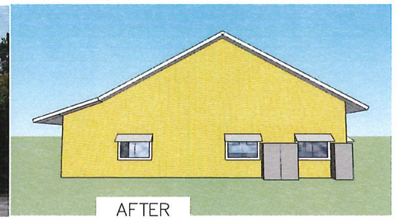
BEFORE



AFTER

VIEW OF PORCH FROM HWY. 1, (SOUTHEAST ELEV.)

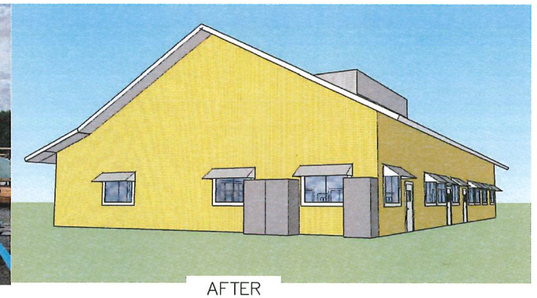
BEFORE



AFTER

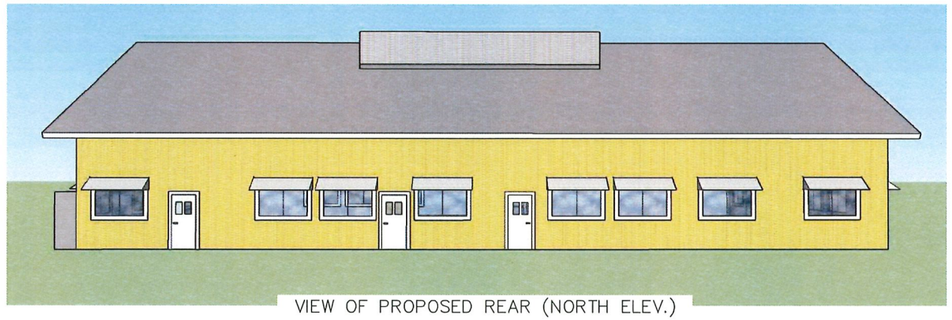
VIEW OF PORCH FROM MESA ST. (EAST ELEV.)

BEFORE



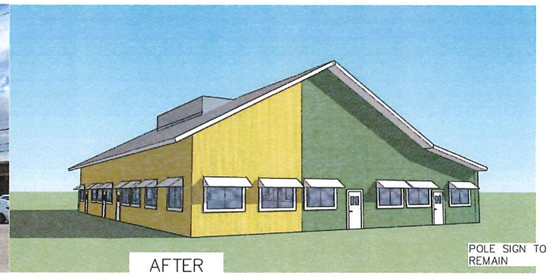
AFTER

VIEW OF REAR FROM MESA ST. (NORTHEAST ELEV.)



VIEW OF PROPOSED REAR (NORTH ELEV.)

BEFORE

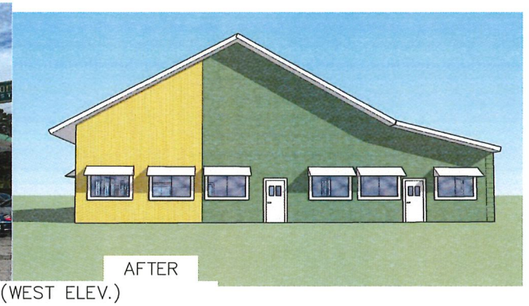


AFTER

POLE SIGN TO REMAIN

VIEW FROM A ST. (NORTHWEST ELEV.)

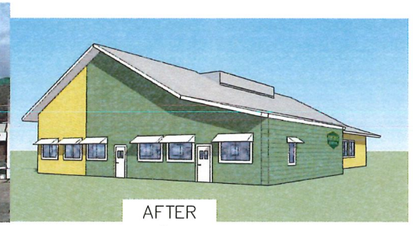
BEFORE



AFTER

VIEW FROM A ST. (WEST ELEV.)

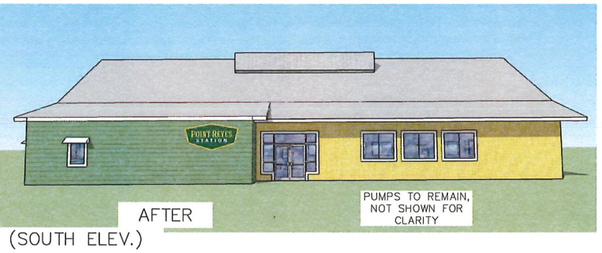
BEFORE



AFTER

VIEW FROM A ST. (SOUTHWEST ELEV.)

BEFORE



PUMPS TO REMAIN, NOT SHOWN FOR CLARITY

AFTER

VIEW FROM HWY.1 (SOUTH ELEV.)

RENDERINGS–BEFORE AND AFTER

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY.

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11401 STATE ROUTE 1, POINT REYES STATION, CA 94956
APN: 119-198-03

DATE: 11/16/2023
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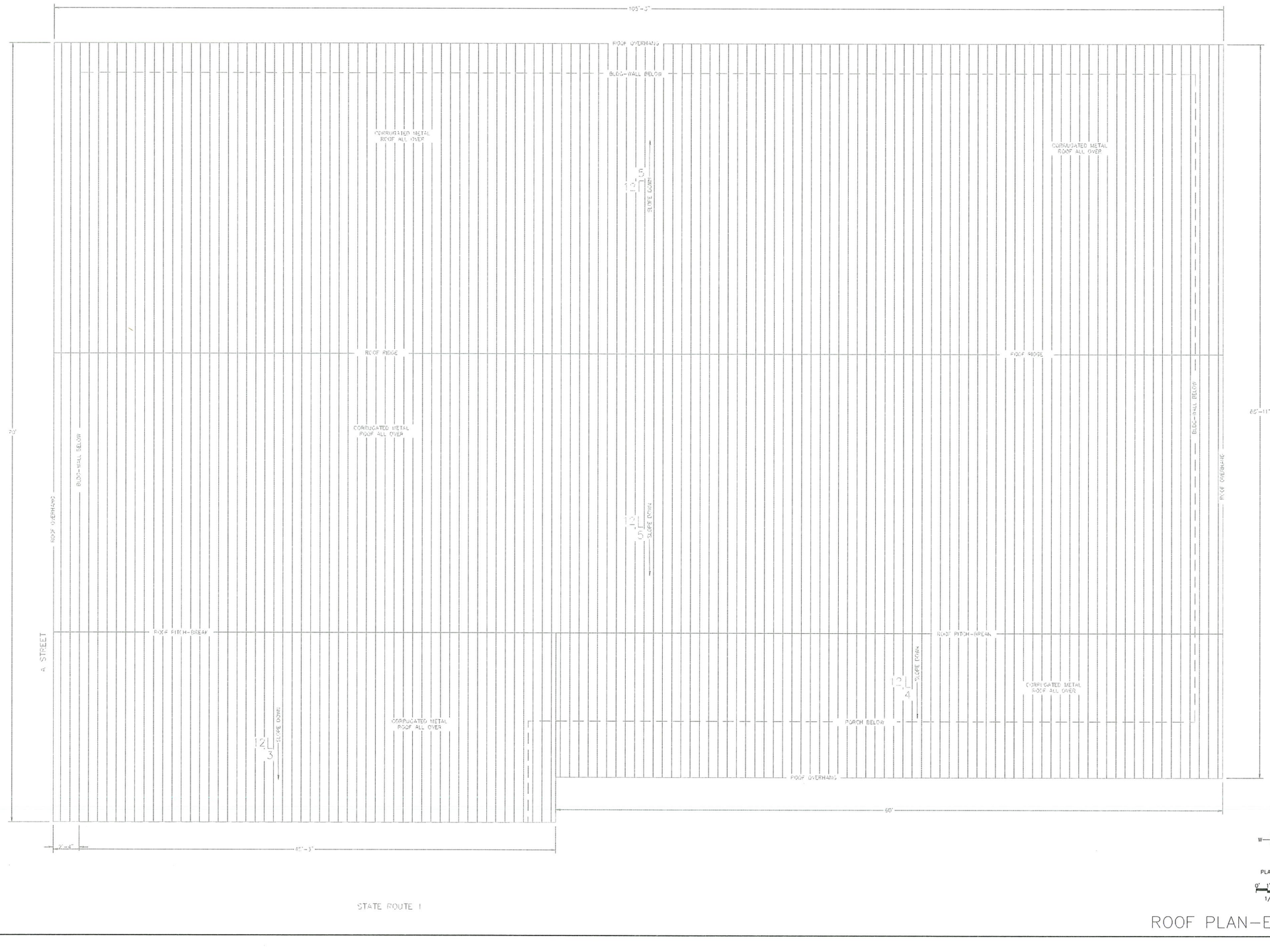
SHEET
14



N
ACTUAL NORTH
W
E
S

PLAN DIRECTIONS

0' 1' 2' 3' 4'
1/4" = 1'

ROOF PLAN–EXISTING

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY.

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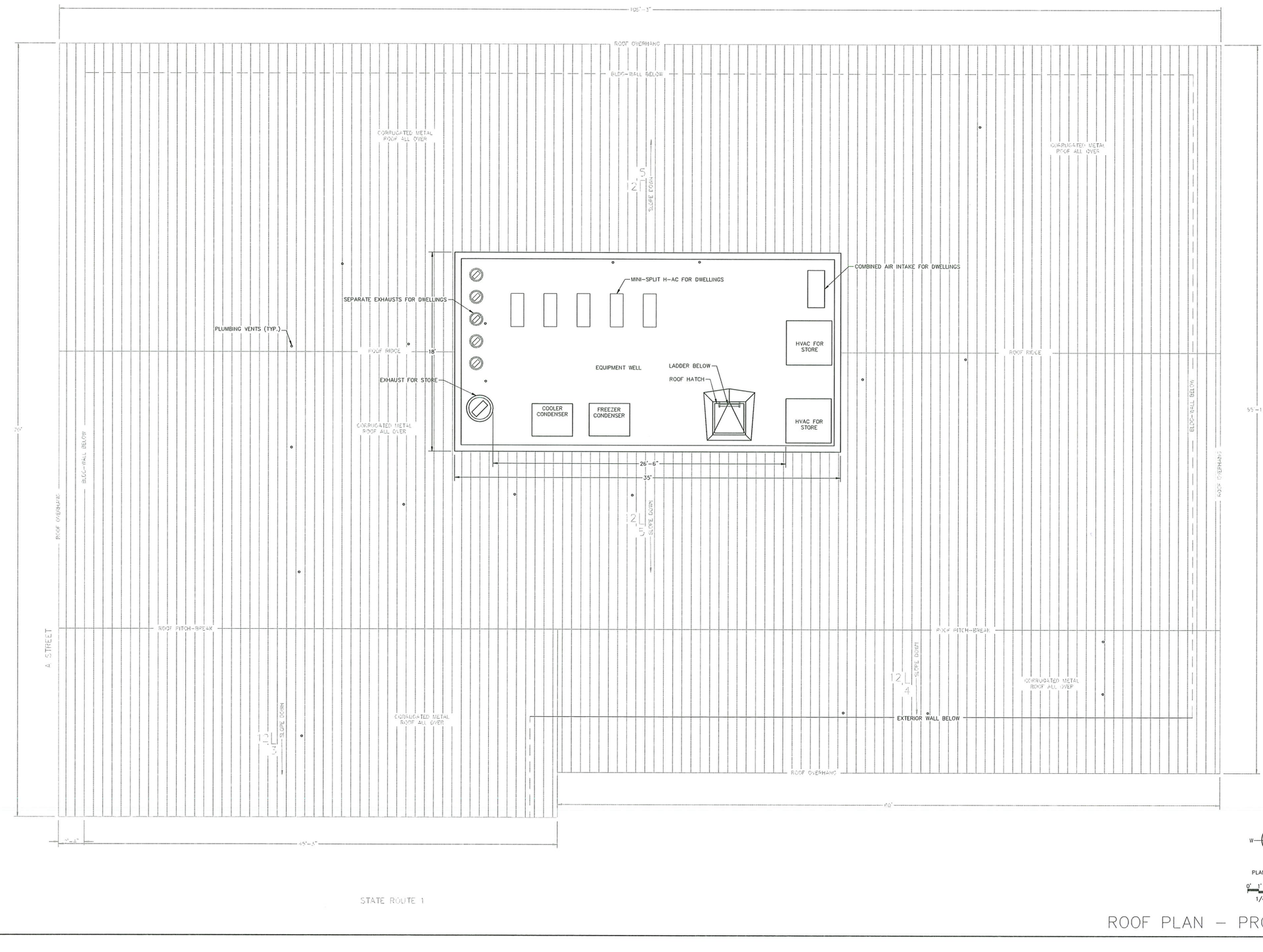
SHEET 15



ROOF PLAN – PROPOSED

N ACTUAL NORTH
W E
S
PLAN DIRECTIONS
0' 1' 2' 3' 4'
1/4" = 1'

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

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SHEET 16

(S 45°11'00" W 136.13')

SEPTIC AREA

(S 44°49'00" E 178.10')

1,000-GAL LPG

6" CONC. WALK

MORNING LIGHT (Miscanthus sinensis) (2-1 GAL) NON-NATIVE TO CA

(N 45°11'00" W 140.07')

Mesa St.

A Street

FOXTAIL FERN (Asparagus aethiopicus) (7-1 GAL) NON-NATIVE TO CA

EXISTING 190 SQ. FT. PLANTER

RIVER BLUE STONE

PUB-SP

PUB-SP

PUB-SP

(N 45°14'00" E 153.55')

Fourth Street / State Route 1

0 5' 10'
1" = 10'

N
ACTUAL NORTH
W E
S
PLAN DIRECTIONS

LANDSCAPE PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

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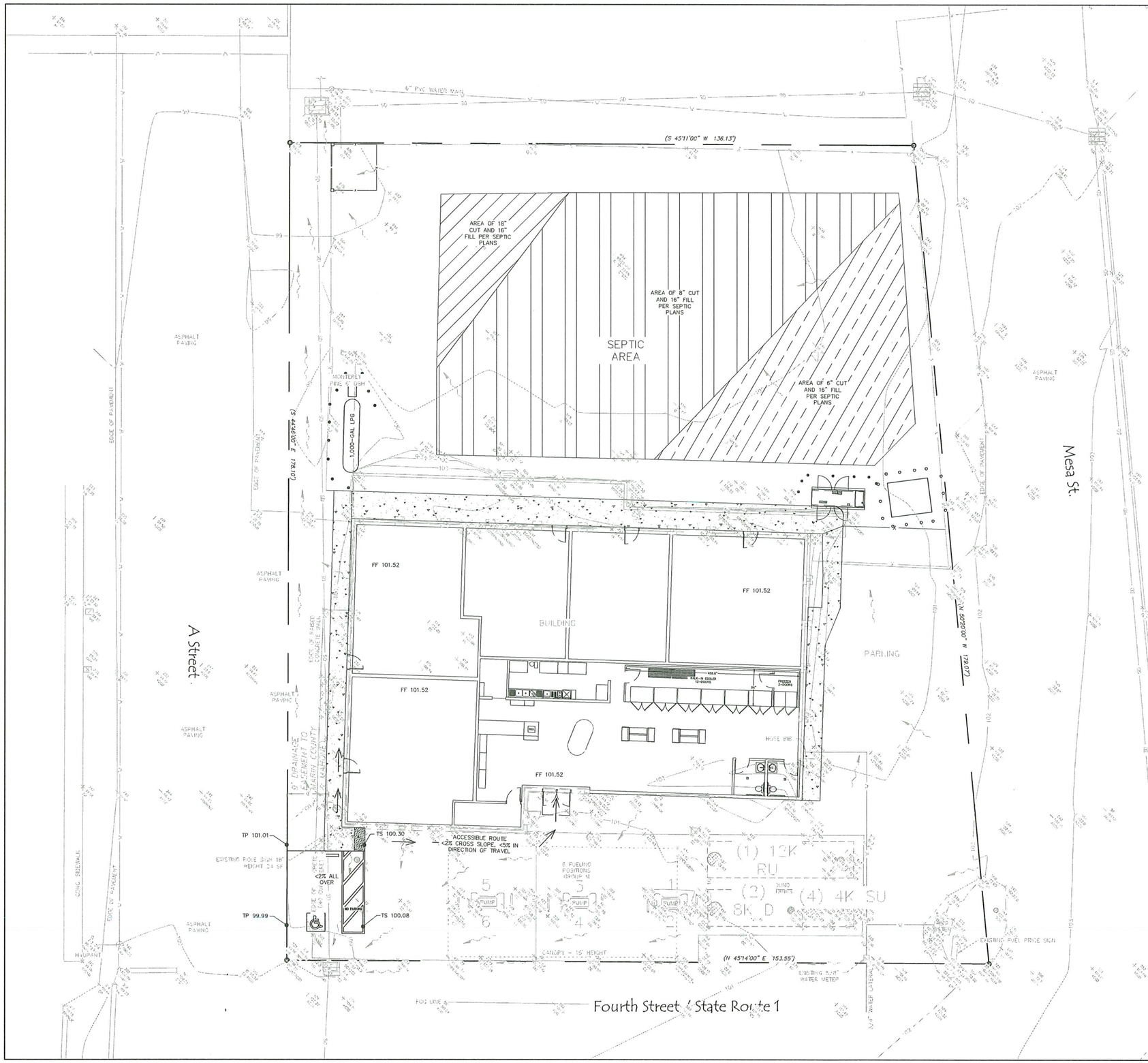
SHEET
L-1



CUT AND FILL TABLE

ALL GRADING for SEPTIC SYSTEM (SEE ATTACHED SEPTIC PLANS)

	AREA (SF)	CUT DEPTH (IN)	CUT VOL (CU YD)	FILL DEPTH (IN)	FILL VOL (CU YD)	NET VOL (CU YD)
18" CUT AREA	500	18	28	16	25	-3
8" CUT AREA	3800	8	94	16	188	94
6" CUT AREA	1600	6	30	16	79	49
					NET FILL:	140

LEGEND

EXISTING DIRECTION OF SURFACE DRAINAGE TO REMAIN UNDISTURBED AS PART OF THIS INTERIOR ALTERATION

EXISTING STORM DRAIN INLET

TP TOP OF PAVEMENT

TW TOP OF WALK

0 5' 10'

1" = 10'

N ACTUAL NORTH W E S

PLAN DIRECTIONS

GRADING PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

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JOB#: 2823.01

SHEET

C-1

APN 119-198-04

EXISTING DROP INLET (STORM DRAIN CATCH BASIN) IN "A" STREET RECEIVES DRAINAGE FROM REAR OF SUBJECT SITE TG 98.62

SURFACE DRAINAGE FROM REAR YARD AREA DRAINS OVERLAND TO THE CATCH BASIN IN A STREET

SYDRIEL LP
2018-0023543
APN 119-198-03

SEPTIC AREA

30" CMP

18" RCP

24" CMP

(S 45°11'00" W 136.13')

(S 44°46'00" E 178.10')

(N 45°14'00" E 153.55')

SEE 1" = 20' LAYOUT TO RIGHT

EXISTING DROP INLET (STORM DRAIN CATCH BASIN) RECEIVES SURFACE DRAINAGE FROM FRONT OF SUBJECT SITE TG 99.81

Fourth Street / State Route 1

Mesa St.

A Street

60' ROW SHOWN ON 10 S 49 NOT VERIFIED

0 5' 10'
1" = 10'

0 10' 20'
1" = 20'

LEGEND

EXISTING DIRECTION OF SURFACE DRAINAGE TO REMAIN UNDISTURBED AS PART OF THIS INTERIOR ALTERATION

UNDERGROUND DRAIN PIPE DIRECTION OF FLOW

STORM DRAIN INLET

N ACTUAL NORTH
W E
S
PLAN DIRECTIONS

DRAINAGE PLAN

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

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SHEET
C-2

SEPTIC AREA

6" PVC WATER MAIN

UNDERGROUND STORM DRAIN

UNDERGROUND STORM DRAIN

(S 45°11'00" W 136.13')

1,000-GAL LPG

(S 44°49'00" E 178.07')

NEW POWER POLE

100 KW GENERATOR LPG

PAD MOUNTED TRANSFORMER

AUTOMATIC TRANSFER SWITCH

OVERHEAD TELEPHONE

PROPOSED UNDERGROUND ELECTRICAL

MAIN SVC PANEL

ELECTRIC METERS LOCATION

(N 45°00'00" W 178.07')

Mesa St.

OVERHEAD TELEPHONE

A Street

UNDERGROUND BACKFLOW PREVENTER FOR SPRINKLERS

DCDA

SPRINKLER RISER

NEW 6" FIRE WATER LATERAL

PUMP

PUMP

PUMP

OVERHEAD TELEPHONE

(5) 5/8" METERS W/UNDERGROUND BFP FOR APARTMENTS

(1) 1" METER W/UNDERGROUND BFP FOR STORE

(N 45°14'00" E 153.55')

EXISTING 5/8" WATER METER

OVERHEAD TELEPHONE

Fourth Street / State Route 1

UNDERGROUND STORM DRAIN

2" WATER LATERAL

NEW 4" WATER SERVICE LATERAL

0 5' 10'
1" = 10'

N ACTUAL NORTH
W E
S
PLAN DIRECTIONS

UTILITY PLAN

REVISIONS			
NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY.

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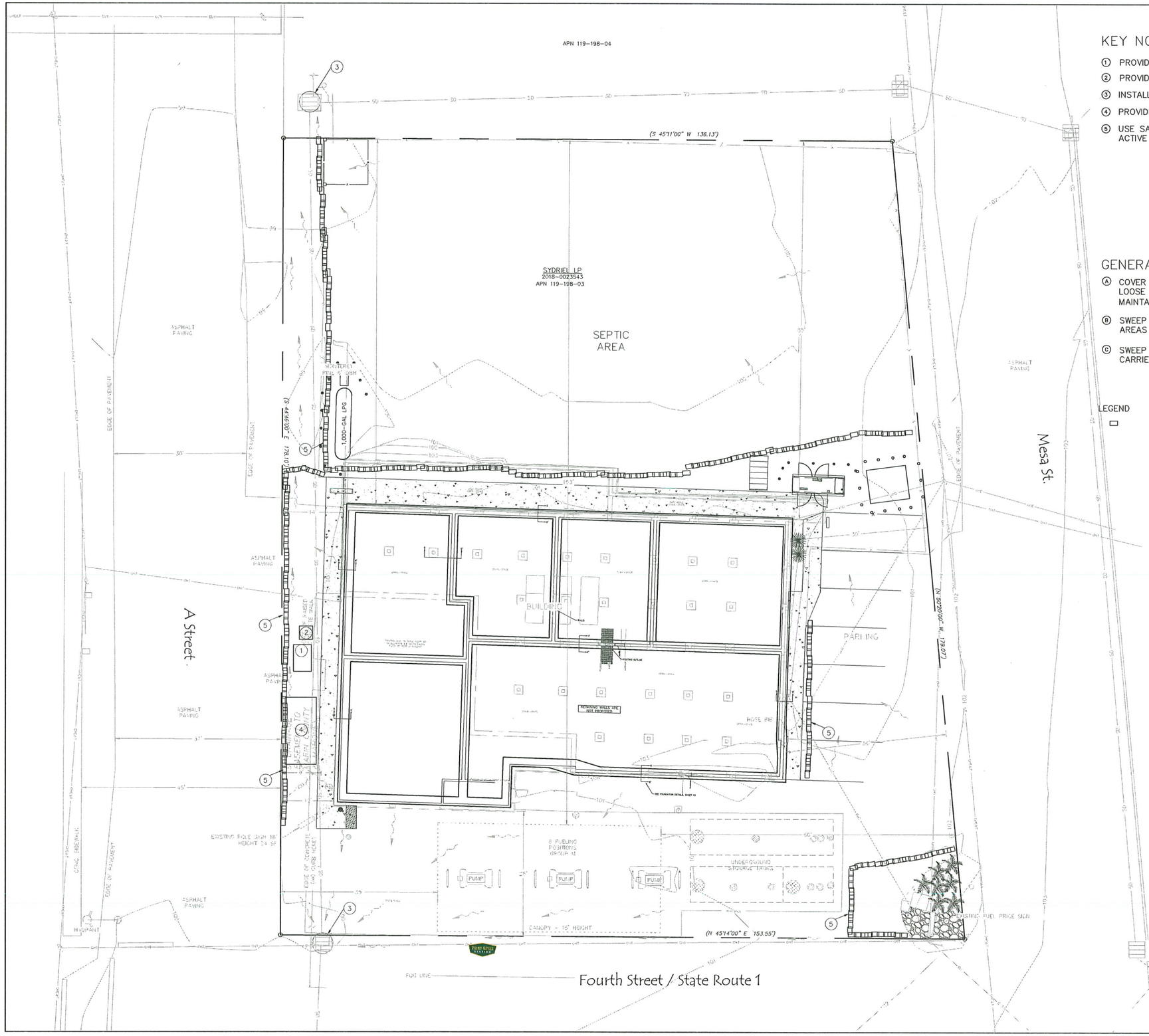
SHEET
C-3



KEY NOTES:

1. PROVIDE DEBRIS BINS FOR CONSTRUCTION WASTE.
2. PROVIDE PORTABLE TOILET.
3. INSTALL INLET GRAVEL FILTER PER DETAIL, SHEET C3
4. PROVIDE CONCRETE WASHOUT AREA PER DETAIL, SHEET C3
5. USE SANDBAGS TO DIRECT RUN-ON AROUND AND CONTAIN RUN-OFF FROM ACTIVE TRENCHING AREAS.

GENERAL NOTES:

A. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST 2' OF FREEBOARD.

B. SWEEP DAILY ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITE.

C. SWEEP STREETS DAILY IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.

LEGEND

▭ SANDBAG, PER DETAIL SHEET C2

NO.	DATE	DESCRIPTION	BY
		REVISIONS	MED

APPROVED BY.

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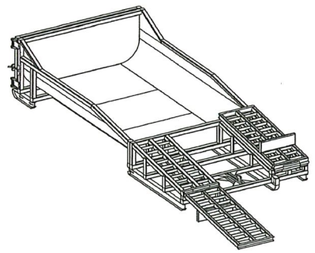
SHEET C-4

STORMWATER CONTROL PLAN

PORTABLE CONCRETE WASHOUT CONTAINER



CONCRETE WASHOUT SYSTEMS

PO Box 2604
Carmichael, CA. 95609
Phone: 1.877.292.7468
Fax: 1.916.244.0403
Info@concretewashout.com
www.concretewashout.com
Patent Pending

DESCRIPTION
A portable, self-contained and watertight container affixed with ramps that controls, captures and contains caustic concrete wastewater and washout material.

PURPOSE & OBJECTIVE
Allows trade personnel to easily washout concrete trucks, pumps and other equipment associated with cement on site and allows easy off site recycling of the same concrete materials and wastewater.

APPLICATION
Construction projects where concrete, stucco, mortar, grout and cement are used as a construction material or where cementitious wastewater is created.

MAINTENANCE
Inspect and clean out when ¾ full, not allowing the container to overflow.
Inspect wastewater level and request a vacuum if needed.
Inspect subcontractors to ensure that proper housekeeping measures are employed when washing out equipment.

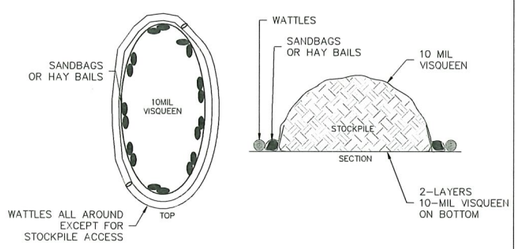
SPECIFICATIONS
The container must be portable and temporary, watertight, equipped with ramps and have a holding capacity to accept washout from approximately 350 yards of poured concrete. A vacuum service must accompany washout container and be used by site superintendent as needed. A rampless container may be used in conjunction with a ramped container or by itself if a concrete pump is not needed. The washwater must be disposed of or treated and recycled in an evironmentally safe maanner and in accordance with federal, state or local regulatory guidelines.

TARGETED POLLUTANTS
Caustic wastewater (high pH level near 12 units)
Suspended solids
Assorted Metals; Chromium VI, Nickel, Sulfate, Potassium, Magnesium and Calcium Compounds

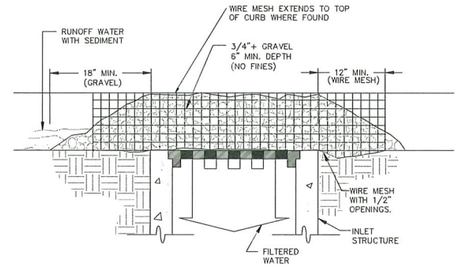
NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CONCRETE WASHOUT AREA
N.T.S



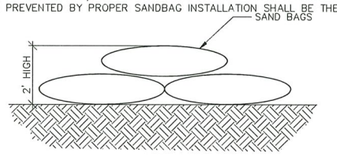
SOIL STOCKPILE
N.T.S.



INLET PROTECTION

SANDBAGS
(GRAVEL BAG)

1. GENERAL: SANDBAG SHALL INCLUDE PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT TO FABRICATE AND INSTALL SANDBAGS AS REQUIRED TO FACILITATE THE CONTROL OF EROSION.
2. LOCATION: SANDBAGS SHALL BE PLACED PER PLAN, AND IN LOCATIONS SPECIFIED BY THE COUNTY, AND IN LOCATIONS DEEMED NECESSARY BY THE CONTRACTOR.
3. FABRICATION: SANDBAGS SHALL BE FABRICATED USING FACTORY SEWN OR SEALED BAGS OF WOVEN POLYPROPYLENE, TREATED TO RESIST DEGRADATION BY ULTRAVIOLET LIGHT AND HAVING SUFFICIENT RESISTANCE TO TEARING TO ALLOW RELOCATION OF BAGS WITHIN SIX MONTHS OF INITIAL PLACEMENT WITH A LOSS OF NOT MORE THAN FIVE PERCENT OF THE BAGS. THE BAGS SHALL BE FILLED WITH SUBROUNDED TO ROUNDED GRAVEL LESS THAN 3/4-INCH IN DIAMETER, WITH LESS THAN FIVE PERCENT OF MATERIAL PASSING A NO. 30 SIEVE. THE FILLED BAGS SHALL HAVE THE OPEN ENDS SECURELY FASTENED PRIOR TO DELIVERY TO THE SITE.
4. INSTALLATION: SANDBAGS SHALL BE INSTALLED IN A MANNER TO ENTRAP SILT AND MUD, AND TO DIVERT THE FLOW OF WATER. NOTWITHSTANDING THE OTHER REQUIREMENTS OF THIS SPECIFICATION, FAILURE OF THE BAGS TO PERFORM THIS FUNCTION SHALL BE REASON TO REJECT THEIR INSTALLATION. SANDBAGS SHALL BE INSTALLED WITH THE WIDEST FACE AGAINST THE GROUND SURFACE OR THE UNDERLYING COURSE OF BAGS, AND PRESSED IN PLACE TO CONFORM TO THE UNDERLYING SURFACE. THE BAGS SHALL BE PLACED WITH THE TIED ENDS IN THE "UPHILL" OR "UPSTREAM" DIRECTION, BEGINNING AT THE LOWEST OR MOST DOWNSTREAM BAG, TIED ENDS WILL BE TUCKED UNDER BAG. SUBSEQUENT BAGS WITHIN ONE COURSE OF BAGS SHALL BE PLACED SO AS TO REST UPON THE TIED END OF THE PREVIOUSLY PLACED BAG, WITH NOT LESS THAN 10 PERCENT OF THE BAG IN CONTACT WITH THE PREVIOUS BAG, AND NOT MORE THAN 20 PERCENT IN CONTACT. SUBSEQUENT COURSES OF BAGS SHALL BE PLACED AS DESCRIBED PREVIOUSLY, WITH THE MID-POINT OF THE BAGS STRADDLING THE JOINTS OF BAGS IN THE UNDERLYING ROW. CONSTRUCTION OF A SANDBAG BERM PERPENDICULAR TO THE DIRECTION OF FLOW SHALL INCORPORATE BAGS PLACED IN A "PYRAMID" CONFIGURATION, WITH ALL INDIVIDUAL BAGS ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW. THE BERM SHALL BE CONSTRUCTED WITH A SPECIFIED NUMBER OF ROWS AT THE BOTTOM (IN CONTACT WITH THE GROUND), WITH SUCCESSIVELY FEWER ROWS IN EACH OVERLYING COURSE. THE UPSTREAM AND DOWNSTREAM FACES OF THE BERM SHALL BE NO STEEPER THAN 1 1/2 FEET HORIZONTAL TO 1 VERTICAL. DAMAGE WHICH COULD FORESEEABLY BE PREVENTED BY PROPER SANDBAG INSTALLATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.



SAND BAG (GRAVEL) INSTALLATION

N.T.S.

BEST MANAGEMENT PRACTICES

THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORMWATER QUALITY TASK FORCE 2009. OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY COUNTY INSPECTORS):

CA001 – DEWATERING OPERATIONS
CA002 – PAVING OPERATIONS
CA003 – STRUCTURE CONSTRUCTION AND PAINTING
CA010 – MATERIAL DELIVERY AND STORAGE
CA011 – MATERIAL USE
CA020 – SOLID WASTE MANAGEMENT
CA021 – HAZARDOUS WASTE MANAGEMENT
CA022 – CONTAMINATED SOILS MANAGEMENT
CA023 – CONCRETE WASTE MANAGEMENT
CA030 – VEHICLE AND EQUIPMENT CLEANING
CA031 – VEHICLE AND EQUIPMENT FUELING
CA032 – VEHICLE AND EQUIPMENT MAINTENANCE
CA040 – EMPLOYEE/SUBCONTRACTOR TRAINING
ESC01 – SCHEDULING
ESC02 – PRESERVATION OF EXISTING VEGETATION
ESC10 – SEEDING AND PLANTING
ESC11 – MULCHING
ESC20 – GEOTEXTILES AND MATS
ESC21 – DUST CONTROLS
ESC22 – TEMPORARY STREAM CROSSING
ESC23 – CONSTRUCTION ROAD STABILIZATION
ESC24 – STABILIZED CONSTRUCTION ENTRANCE
ESC30 – EARTH DIKE
ESC31 – TEMPORARY DRAINS AND SWALES
ESC32 – SLOPE DRAIN
ESC40 – OUTLET PROTECTION
ESC41 – CHECK DAMS
ESC42 – ROUGHENING/TERRACING SLOPE
ESC50 – SILT FENCE
ESC51 – STRAW BALE BARRIERS
ESC52 – SAND BAG BARRIER
ESC53 – BRUSH OR ROCK FILTER
ESC54 – STORM DRAIN INLET PROTECTION
ESC55 – SEDIMENT TRAP
ESC56 – SEDIMENT BASIN

IN CASE OF EMERGENCY CALL 911

A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT.

ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY.

AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM SANDBAGS.

ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION, ESPECIALLY DURING STORM CONDITIONS. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION.

STORMWATER CONTROL DETAILS

REVISIONS

NO.	DATE	DESCRIPTION	BY
			MED

APPROVED BY:

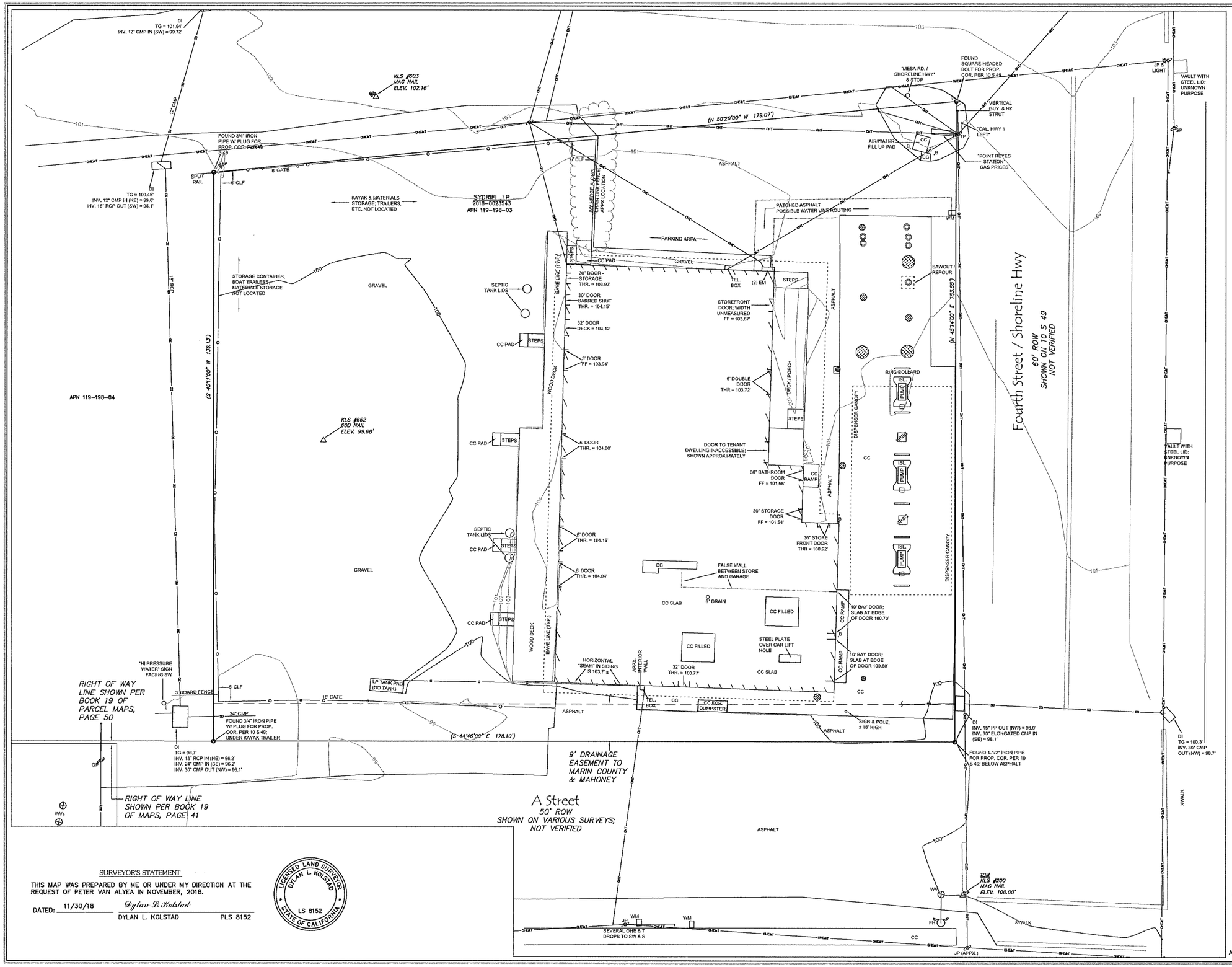
MATTHEW E. DONOHUE
R.C.E. 057219
mdonohue@transtechconsultants.com

REGISTERED PROFESSIONAL ENGINEER MATTHEW E. DONOHUE NO. C57219 CIVIL STATE OF CALIFORNIA

TRANS TECH CONSULTANTS
930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-7334 FAX: 707-837-8408

COASTAL PERMIT AND USE PERMIT
POINT REYES STATION
11401 STATE ROUTE 1, POINT REYES STATION, CA 94956
APN: 119-198-03

DATE: 11/16/2023
DRAWN: MED
JOB#: 2823.01
SHEET
C-5



SURVEY NOTES:

1. THIS MAP WAS PREPARED BASED ON FIELD SURVEY BY THIS OFFICE IN JULY, 2018.
2. BOUNDARY LINES SHOWN ARE BASED ON FOUND MONUMENTS SHOWN ON BOOK 10 OF SURVEYS, PAGE 49, MARIN COUNTY RECORDS.
3. EASEMENTS OF RECORD ENCUMBERING THE PROPERTY ARE SHOWN, ONLY AS INDICATED BY PRELIMINARY TITLE REPORT PREPARED BY FIDELITY NATIONAL TITLE COMPANY, DATED APRIL 11, 2018, NUMBER FSNX-9041800045.
4. ELEVATIONS ARE ON AN ASSUMED ON-SITE DATUM, HOLDING AN ELEVATION OF 100.00' ON KLS CONTROL POINT #200 AS SHOWN.
5. 1-FOOT CONTOURS ARE SHOWN; IN SOME AREAS OF "STEPPED" VERTICAL IMPROVEMENTS, CONTOURS ARE A GENERAL REFERENCE ONLY.
6. ONLY ABOVE-GROUND EVIDENCE OF UTILITIES WAS SEARCHED FOR AND IS SHOWN. UNDERGROUND UTILITIES EXIST ON-SITE AND ARE NOT SHOWN.
7. MORE OFF-SITE FEATURES CAN BE FOUND IN THE DIGITAL VERSION OF THIS DRAWING

LEGEND

●	FOUND SURVEY MONUMENT SHOWN ON BOOK 10 OF SURVEYS, PAGE 49
(N 50°20'00" W 179.07')	RECORD DATA PER BOOK 10 OF SURVEYS, PAGE 49, AND/OR DEED
———	BOUNDARY LINES OF PROJECT PROPERTY
———	BOUNDARY LINES OF ADJACENT PROPERTIES
— — — —	SIDELINE OF EASEMENT AS IDENTIFIED
SYDRIEL LP 2018-0023543 APN 119-198-03	LAND OWNER, DEED REFERENCE AND APN
APN	ASSESSOR'S PARCEL NUMBER
C	SUPPORT COLUMN
CC	CONCRETE PAD OR SIDEWALK
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
DI	DRAIN INLET OR CATCHBASIN
EM	ELECTRIC METER
FF	FINISHED FLOOR ELEVATION AT DOORWAY
FH	FIRE HYDRANT
HCR	HANDICAP RAMP
RCP	REINFORCED CONCRETE PIPE
TBM	TEMPORARY / SITE BENCHMARK
TG	TOP OF GRATE OF DI
THR	THRESHHOLD ELEVATION AT DOORWAY
WM	WATER METER
WV	WATER VALVE
☼	STREET LIGHT
GP JP TP	GUY POLE, JOINT UTILITY POLE, OR TELEPHONE POLE
△	KOLSTAD CONTROL POINT # & ELEVATION
	STEEL ACCESS LID (TO SCALE)
	RAISED STEEL ACCESS LID (TO SCALE)

N

0 5' 10'

SCALE: 1" = 10'

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AT THE REQUEST OF PETER VAN ALYEA IN NOVEMBER, 2018.

DATED: 11/30/18 *Dylan L. Kolstad*

DYLAN L. KOLSTAD PLS 8152

LICENSED LAND SURVEYOR DYLAN L. KOLSTAD LS 8152 STATE OF CALIFORNIA

TOPOGRAPHIC SURVEY

OF THE LANDS OF SYDRIEL, LP, DESCRIBED BY INSTRUMENT NO. 2018-0023543, MARIN COUNTY RECORDS

UNINCORPORATED COMMUNITY OF POINT REYES STATION

COUNTY OF MARIN STATE OF CALIFORNIA

KOLSTAD LAND SURVEYORS

PO BOX 594 BAYSIDE, CA. 95524

VOICE (707) 822-2718 FAX (707) 822-5638

WWW.KOLSTADPLS.COM

APN 119-198-03 JULY, 2018 JOB No. 2018-041 SHEET 1 OF 1

LANDS OF REDWOOD OIL, INC.

SUBSURFACE DRIP SEWAGE DISPOSAL SYSTEM

11401 SHORELINE HIGHWAY, POINT REYES STATION

APN: 119-198-03

GENERAL NOTES

1. DRIP LINES SHALL FOLLOW THE NATURAL CONTOUR OF THE GROUND; TRENCH BOTTOMS SHALL BE LEVEL. THE MAXIMUM DEVIATION ALONG THE DOWNHILL SIDE OF THE TRENCH SHALL NOT VARY MORE THAN 0.25 FEET (THREE INCHES) VERTICALLY PER A 100 FOOT RUN. DISTRIBUTION TRENCHES SHALL BE ANGLED OR CURVED TO MEET THIS REQUIREMENT.
2. BACKFILL MATERIAL SHALL BE NATIVE TOP SOIL PLACE AT NATIVE COMPACTION AND MOUNDED FOR SETTLEMENT.
3. PLACE CLEANOUTS EVERY 100' ON GRAVITY MAIN FROM SERVICE CONNECTION TO TANK.
4. CONTACT HOGAN LAND SERVICES, INC. (707) 544-2104 AND MARIN COUNTY WITH A MINIMUM OF 48 HOURS BEFORE INITIATING CONSTRUCTION AND PRIOR TO ALL INSPECTION REQUESTS.
5. ALL TANKS SHALL BE SIZED ACCORDING TO PLAN AND IAPMO APPROVED. ALL NON-TRAFFIC RATED TANKS SHALL HAVE APPROVED RISERS THAT EXTEND 2" ABOVE SURROUNDING GRADE.
6. DURING THE DISPOSAL FIELD INSPECTION THE CONTRACTOR SHALL PERFORM A HYDRAULIC PUMP TEST ON BOTH THE AX100 UNIT AND DRIP FIELD.
7. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE MARIN COUNTY ENVIRONMENTAL HEALTH DEPARTMENT. ALL MECHANICAL, PLUMBING, AND ELECTRICAL WORK SHALL CONFORM TO THE APPROPRIATE CODES ADOPTED BY THE COUNTY OF MARIN.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND AVOIDING UTILITY LINES IN THE WORK AREA.
9. THE INSTALLATION OF THIS SEWAGE DISPOSAL SYSTEM MAY BE RESTRICTED TO CERTAIN TIMES OF THE YEAR BASED ON SEASONAL GROUNDWATER AND WEATHER CONDITIONS. CONTRACTOR TO VERIFY STARTING TIME WITH HOGAN LAND SERVICES, INC AND MARIN COUNTY ENVIRONMENTAL HEALTH DEPARTMENT.
10. QUESTIONS REGARDING THE SUITABILITY OF ANY MATERIALS OR CONSTRUCTION PROCEDURES USED IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS SHALL BE DIRECTED TO THE ENGINEER PRIOR TO CONSTRUCTION.
11. ALL SEPTIC TANK AND SUMP JOINTS TO BE WATERTIGHT; SEAL WITH RAMNEK JOINT COMPOUND OR EQUAL. SEAL PIPES EXTENDING THROUGH TANK WALLS WITH NON-SHRINK GROUT OVERLAID WITH XYPEX OR THOROSEAL OR PRECAST INTO SUMP. TANK AND RISER JOINT SHALL BE SEALED AND MADE WATER TIGHT WITH NO-SHRINK GROUT OVERLAID WITH XYPEX OR THOROSEAL.
12. ATU SERVICE PROVIDER SHALL BE ON SITE AT STARTUP INSPECTION. NOTE: SEPTIC ELECTRICAL SHALL BE APPROVED PRIOR TO SYSTEM FINAL (UNDER SEPARATE BUILDING PERMIT).

INSTALLATION GUIDELINES

ALL GEOFLOW DRIP SYSTEMS REQUIRE:
100 MICRON / 150 MESH FILTER, FILTER FLUSH VALVE, FIELD FLUSH VALVE AND AIR VENT IN EACH ZONE. ALL WASTEFLOW PC DRIP SYSTEMS REQUIRE PRESSURE REGULATION. SYSTEM TO BE INSTALLED BY LICENSED CONTRACTOR WITH AT LEAST 5 YEARS EXPERIENCE. HANDLE DRIPLINES AND COMPONENTS WITH CARE. ROOTGUARD IS TEMPERATURE SENSITIVE. TO ASSURE A LONG LIFE STORE THE DRIP LINE OUT OF DIRECT SUNLIGHT IN A COOL PLACE. THIS SHOULD BE A CONSIDERATION WHEN INSTALLING THE SYSTEM IN VERY HOT AND SUNNY AREAS.

A) ALL DRIPFIELD CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH LOCAL RULES AND REGULATIONS.

B) NO UTILITIES, CABLE WIRE, DRAINAGE LINES, ETC. SHALL BE LOCATED IN DRIPFIELD.

C) TAKE MEASURES TO PREVENT COMPACTION OF THE DRIP FIELD DURING AND AFTER CONSTRUCTION.

D) THE SYSTEM IS NOT TO BE INSTALLED WHEN GROUND IS WET OR FROZEN.

E) DIVERT ALL DOWNSPOUTS AND SURFACE WATERS AWAY FROM DRIPFIELD.

F) PLACEMENT OF FILL SOILS (IF APPLICABLE) SHOULD BE COMPLETED PRIOR TO INSTALLATION OF THE SUBSURFACE DRIP SYSTEM.

G) ALL MATERIALS REQUIRED FOR THE INSTALLATION SHOULD BE ON SITE PRIOR TO OPENING TRENCHES. PRE-ASSSEMBLE COMPONENTS AS PRACTICAL ABOVE GROUND AND IN A COMFORTABLE PLACE. COMPRESSION OR LOCKSLIP ADAPTERS SHOULD BE GLUED TO PVC TEES, RISER UNITS SHOULD BE PRE-ASSEMBLED, THE SUB-MAIN MANIFOLD WITH TEES CAN BE PRE-ASSEMBLED AND USED TO MARK THE BEGINNING AND END OF WASTEFLOW LINES.

H) THE SOIL SURFACE SHOULD BE DRY SO THAT THE INSTALLATION EQUIPMENT MAINTAINS TRACTION. PROPER PRECAUTION SHOULD BE TAKEN TO REDUCE SMEARING AND COMPACTION OF THE DRAINFIELD AND THE TRENCH SIDEWALLS.

I) MARK THE FOUR CORNERS OF THE FIELD. THE TOP TWO CORNERS SHOULD BE AT THE SAME ELEVATION AND THE BOTTOM TWO CORNERS SHOULD BE AT A LOWER ELEVATION. IN FREEZING CONDITIONS THE BOTTOM DRIPLINE MUST BE HIGHER THAN THE SUPPLY AND RETURN LINE ELEVATION AT THE DOSING TANK.

J) INSTALL THE DOSING TANK PER PLAN. IN FREEZING CONDITIONS THE DOSING TANK SHOULD BE AT THE LOWEST ELEVATION OF THE ENTIRE SYSTEM. INSTALL A WATERTIGHT RISER ON THE DOSING TANK.

K) DETERMINE THE PROPER SIZE FOR THE SUPPLY AND RETURN MANIFOLDS. SEE WORKSHEET & PLAN.

L) INSTALL THE PVC SUPPLY LINE FROM THE DOSING TANK TO THE TOP FEED MANIFOLD ON THE SUPPLY SIDE OF THE DISPERSION FIELD. 24" MINIMUM COVER FOR SUPPLY, RETURN AND PRESSURE MAINS.

M) PAINT A LINE BETWEEN THE TWO CORNER STAKES ON THE RETURN SIDE OF THE DISPERSION FIELD.

N) INSTALL THE GEOFLOW WASTEFLOW DRIPLINE 2' ON CENTER IN 3" WIDE TRENCH FROM THE SUPPLY SIDE OF THE DISPERSION FIELD TO THE PAINTED LINE, 8" INTO NATIVE. UPON REACHING THE PAINTED LINE, PULL THE PLOW OUT OF THE GROUND AND CUT THE DRIPLINE ONE FOOT ABOVE THE GROUND. TAPE THE END OF THE DRIPLINE TO PREVENT DEBRIS FROM ENTERING. CONTINUE THIS PROCESS UNTIL THE REQUIRED FOOTAGE OF DRIP LINE IS INSTALLED. GEOFLOW DRIPLINE MUST BE SPACED ACCORDING TO SPECIFICATION (TWO FEET IS STANDARD). DEPTH OF BURIAL OF DRIPLINE MUST BE CONSISTENT THROUGHOUT THE FIELD. TAKE CARE NOT TO GET DIRT INTO THE LINES. SERPENTINE LINES MAY BE UTILIZED TO REDUCE THE NUMBER OF REQUIRED TEE'S.

O) INSTALL THE SUPPLY TOP FEED MANIFOLD. HOOK UP THE GEOFLOW LINES TO THE TOP FEED MANIFOLD PER DETAIL/PLAN. DO NOT GLUE WASTEFLOW DRIPLINE.

VALVE INSTALLATION AND OPERATION

A) HOLD THE FITTING IN ONE HAND AND POSITION THE TUBING WITH THE OTHER HAND.

B) MOVE THE SLEEVE BACK, AND PUSH THE TUBING ONTO THE EXPOSED STEM AS FAR AS POSSIBLE.

C) PUSH THE SLEEVE OUT OVER THE TUBING AND THREAD THE SLEEVE ONTO TUBING, AS THOUGH TIGHTENING A NUT TO A BOLT. HAND TIGHTEN. DO NOT USE TOOLS.

E) INSTALL THE BIODISC FILTER AND FILTER FLUSH VALVE, OR INSTALL THE PRE-ASSEMBLED HEADWORKS BETWEEN THE FIELD AND THE PUMP TANK ON THE SUPPLY LINE. *INSULATE THE BOX IN FREEZING CONDITIONS. INSTALL SUPPLY AND RETURN FLOW METERS IN CONCRETE OR PLASTIC BOX PER DETAIL.

F) INSTALL THE PRESSURE REGULATOR DOWNSTREAM OF THE FILTER OR HEADWORKS, JUST AHEAD OF THE DISPERSAL FIELD, ON THE SUPPLY LINE. INSTALL THE PRESSURE REGULATOR INSIDE A SMALL VALVE BOX FOR EASY ACCESS. *INSULATE THE BOX IN FREEZING CONDITIONS.

G) INSTALL THE FLOATS IN THE DOSING TANK AND WIRE TO THE TIMER CONTROL. THE TIMER CONTROL SHOULD BE SET TO PUMP NO MORE THAN THE DESIGN FLOW, DO NOT SET TO MATCH THE TREATMENT CAPACITY. 3 FLOAT SYSTEM REQUIRED FOR TIME DOSED SETUP.

H) INSTALL THE PUMP. FILL THE DOSING TANK WITH FRESH WATER AND TURN ON THE PUMP. CHECK FOR FLOW OUT THE ENDS OF ALL OF THE GEOFLOW LINES. LET THE PUMP RUN FOR ABOUT FIVE MINUTES TO FLUSH OUT ANY DIRT. SHUT OFF THE PUMP AND TAPE THE ENDS OF THE LINES.

I) DIG THE RETURN SIDE TOP FEED MANIFOLD DITCH ALONG THE LINE PAINTED ON THE GROUND AND BACK TO THE PRE-TREATMENT TANK. START THE RETURN HEADER AT THE FURTHEST END FROM THE DOSING TANK. THE RETURN LINE MUST HAVE SLOPE BACK TO THE TREATMENT TANK OR SEPTIC TANK.

J) INSTALL THE RETURN SIDE TOP FIELD MANIFOLD AND CONNECT ALL OF THE GEOFLOW LINES. CARE MUST BE TAKEN NOT TO KINK THE DRIPLINE.

K) INSTALL AIR VACUUM BREAKERS AT THE HIGHEST POINTS IN THE DISPERSAL FIELD. USE PIPE DOPE OR TEFLON TAPE AND HAND TIGHTEN.

L) CONNECT THE RETURN LINE BACK THROUGH THE HEADWORKS BOX & FIELD FLUSHING VALVE. OPEN THE FIELD FLUSH VALVE AND TURN ON THE PUMP TO FLUSH LINES THEN CLOSE THE VALVE AND CHECK THE FIELD AND ALL PIPING AND CONNECTIONS FOR LEAKS. TURN OFF THE SYSTEM.

M) TURN ON THE PUMP AND CHECK THE PRESSURE AT THE AIR VACUUM BREAKER(S). IT SHOULD BE BETWEEN 15 TO 45 PSI. CHECK THE PRESSURE IN THE WASTEFLOW HEADWORKS. IT SHOULD BE FIVE PSI OR HIGHER. IF USING A MANUAL VALVE FOR FIELD FLUSHING, CRACK IT OPEN UNTIL AT LEAST ONE PSI IS LOST OR DESIGN PRESSURE IS REACHED AND LEAVE IN THAT POSITION.

N) CHECK THE FILTER FOR CONSTRUCTION DEBRIS AND CLEAN.

O) PROVIDE OWNER WITH FINAL AS-BUILT DIAGRAMS, FLOW MEASUREMENTS AND PRESSURE READINGS AT STARTUP.

VALVE INSTALLATION AND OPERATION

A) WRAP MALE ADAPTERS WITH 2 WRAPS OF TEFLON TAPE AND THREAD THE ADAPTERS INTO THE VALVE INLET AND OUTLET 1 TURN PAST HAND TIGHT. CAUTION: OVER TIGHTENING MAY CAUSE DAMAGE TO THE VALVE. THE SOLENOID IS LOCATED ON THE DOWNSTREAM SIDE OF THE VALVE.

B) USING WATERTIGHT CONNECTORS, CONNECT THE VALVE COMMON AND AN INDIVIDUAL OUTPUT WIRE TO THE SOLENOID LEADS.

C) FLUSH THE LATERALS BY OPENING THE INTERNAL MANUAL BLEED LEVER ON THE DOWNSTREAM SIDE OF THE SOLENOID. TURN THE FLOW CONTROL STEM FULLY OPEN (COUNTERCLOCKWISE) FOR FLOW CONTROL MODELS.

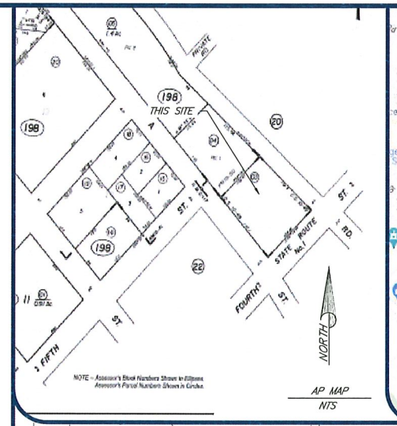
D) CLOSE THE INTERNAL MANUAL BLEED AFTER FLUSHING THE SYSTEM.

NOTES TO OWNER, CONTRACTOR, & OTHERS

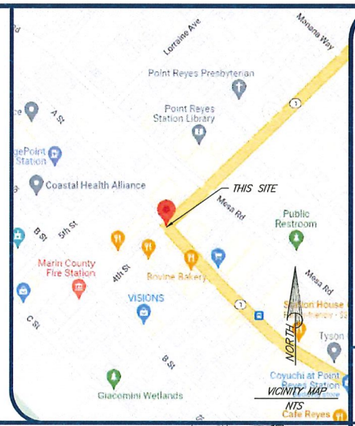
1. INSTALLATION OF THIS DESIGN WILL REQUIRE A MINIMUM OF ONE SITE REVIEW BY THE ENGINEER DURING CONSTRUCTION. ADDITIONAL REVIEWS MAY BE REQUIRED DEPENDING ON THE ABILITY OF THE CONTRACTOR TO COMPLETE THE SYSTEM IN A TIMELY MANNER AND PER PLAN. ALL FIELD REVIEWS WILL BE BILLED TO THE OWNER AT THE PRINCIPAL ENGINEER RATE SHOWN IN THE PROFESSIONAL SERVICE AGREEMENT.
2. MARIN REQUIRES A LETTER OF DESIGN CONFORMANCE ISSUED BY THE ENGINEER ASSESSING DESIGN COMPLIANCE. THIS LETTER IS PREPARED AND SENT UPON COMPLETION OF CONSTRUCTION AND SATISFACTION OF ALL OUTSTANDING INVOICES DUE TO THE ENGINEER.
3. SUBSURFACE CONDITIONS MAY BE COMPLEX AND MAY DIFFER FROM THOSE INDICATED BY SURFACE FEATURES OR AS ENCOUNTERED AT PERCOLATION TEST HOLE OR PROFILE TRENCH LOCATIONS. THEREFORE, ROCK OR OTHER VARIATIONS IN SUBSURFACE CONDITIONS NOT INDICATED IN REPORTS OR SHOWN ON THIS PLAN COULD BE ENCOUNTERED. HOGAN LAND SERVICES SHOULD BE NOTIFIED IMMEDIATELY IF ANY ADVERSE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION SO THAT TIMELY ACTION CAN BE TAKEN TO MODIFY THIS PLAN AND/OR THE SYSTEM HEREIN DESIGNED.
4. THIS PLAN AND DESIGN IS BASED ON CURRENT STANDARDS AND TECHNICAL DATA REQUIREMENTS OFMARIN COUNTY. COMPLIANCE WITH CURRENT COUNTY CODES, STANDARDS, AND REQUIREMENTS IS NOT A GUARANTEE OF WARRANTY, EITHER EXPRESSED OR IMPLIED, OF SEPTIC SYSTEM FUNCTION OR PERFORMANCE OF THE SYSTEM.
5. HOGAN LAND SERVICES, INC. WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USE OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY HOGAN LAND SERVICES. IN ADDITION, THE ENGINEER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR THE FUNCTION OF ANY OF THE SYSTEM COMPONENTS MANUFACTURED/DESIGNED BY OTHERS.
6. THE CONSTRUCTION CONTRACTOR AGREES IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THEY WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD DESIGN PROFESSIONAL EXEMPT FROM ANY AND ALL LIABILITY IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
7. PRINTS OF THESE PLANS USED IN CONSTRUCTION MUST HAVE A "WET" STAMP OF APPROVAL APPLIED BY MARIN COUNTY TO INDICATE THAT A PERMIT TO INSTALL THE SEPTIC SYSTEM HAS BEEN GRANTED. THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR CONSTRUCTION DONE WITHOUT PERMITS OR THE COUNTY APPROVED PLAN(S).
8. THE SITE EXHIBITS ASSOCIATED WITH THE PRODUCTION OF THESE PLANS DOES NOT REPRESENT A BOUNDARY DETERMINATION OR COMPLETE TOPOGRAPHIC SURVEY OF THE SITE. ONLY MAPPING WITHIN THE IMMEDIATE VICINITY OF THE PROPOSED SYSTEM HAS BEEN VERIFIED BY THIS OFFICE. PROPERTY LINES SHOWN IN THESE EXHIBITS ARE FOR GENERAL REFERENCE ONLY. ANY USE OF THESE PLANS OTHER THAN FOR INSTALLATION OF THE PROPOSED SEPTIC SYSTEM IS AT THE RISK OF THE DEVELOPER.
9. SHOULD TREE ROOT ZONE BE IMPACTED, IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONSULT WITH A QUALIFIED ARBORIST TO DETERMINE THE APPROPRIATE COURSE OF ACTION.

EROSION AND SEDIMENT CONTROL

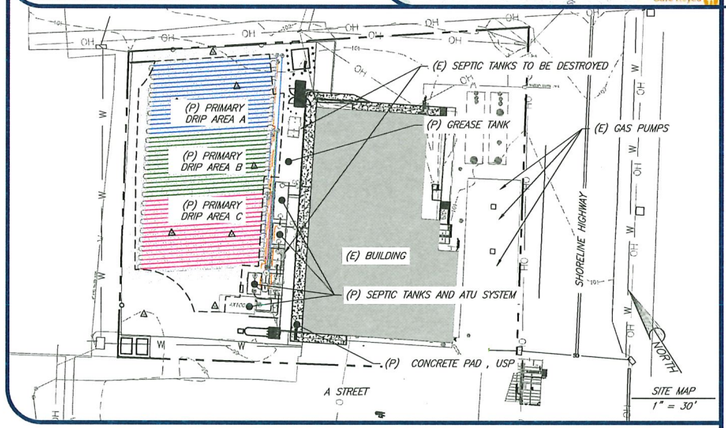
1. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF THE CBC AND THE SONOMA COUNTY CODE.
2. DURING THE RAINY SEASON, OCT. 1 TO APRIL 30, EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE.
3. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE.
4. THE OWNER IS RESPONSIBLE FOR PREVENTING STORM WATER POLLUTION GENERATED ON THE SITE. IF QUESTIONS REGARDING THE COUNTY SPECIFIED BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL CALL HOGAN LAND SERVICES, INC.
5. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE OWNER BEFORE AND AFTER STORM EVENTS.
6. CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MAY RESULT IN RESPONSE TO FIELD CONDITIONS.
7. ENTRANCES TO SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS OFFSITE. POTENTIAL POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY R.O.W. SHALL BE DISPOSED OF AS THEY OCCUR.
8. EXPOSED SLOPES SHALL BE PROTECTED BY USING EROSION PREVENTION MEASURES. FIBER ROLL SILT BARRIERS AND SILT FENCES SHALL BE KEYED INTO THE SOIL AND INSTALLED ON CONTOUR.
9. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICABLE AFTER GRADING. GROUND SHOULD BE COMPLETELY COVERED.
10. STORM DRAIN INLETS SHALL BE PROTECTED FROM POTENTIAL POLLUTANTS.
11. SOIL STOCKPILES SHALL BE PROPERLY PROTECTED TO MINIMIZE RUNOFF.
12. SOLID WASTE AND CONSTRUCTION MATERIALS SHALL BE PLACED IN DESIGNATED COLLECTION AREAS AND DISPOSED OF AT APPROVED DISPOSAL SITES.
13. ALL UNDERGROUND BOXES REQUIRE INSTALLATION OF GOPHER-RESISTANT BARRIERS.
14. NO FOUNDATION AND/OR DRIVEWAY CUTS AND NO SURFACE OR SUB-SURFACE DRAINS ARE TO BE LOCATED WITHIN 50 FT DOWN SLOPE OR LATERALLY OF THE PRIMARY OR RESERVE/REPAIR AREA OF ANY LEACH FIELD. DIRECT DOWN SPOUTS AWAY FROM LEACHFIELD.



AP MAP
NTS



VICINITY MAP
NTS



SITE MAP
1" = 30'

SYSTEM DESIGN CRITERIA

SYSTEM DESIGN CAPACITY: 1,500 GPD

PERC TEST: 09/28/22, P1664

SITE EVALUATION: 07/08/22, PP1 AND PP2

WET WEATHER GROUNDWATER TESTING: 1/11/22, 1/13/22, 1/24/22, 3/31/22

STAGES TO BE INSPECTED

CONTRACTOR IS REQUIRED TO HAVE ENGINEER AND/OR MARIN COUNTY REHS INSPECT THE CONSTRUCTION AT THE FOLLOWING STAGES. FAILURE TO REQUEST THESE INSPECTIONS WILL RESULT IN THE CONTRACTOR HAVING TO UN-EARTH AND RE-DO THE WORK. THE ENGINEER MUST ISSUE AN INSPECTION REPORT TO THE COUNTY PRIOR TO ACCEPTANCE OF THE SYSTEM BY THE COUNTY. THE CONTRACTOR SHALL GIVE 48-HOUR ADVANCE NOTICE TO THE ENGINEER FOR ANY OF THESE INSPECTIONS:

INSPECTIONS BY ENGINEER ONLY:

1. INSPECTION OF IMPORTED MATERIALS.
2. CHECKING OF LAYOUT, LINE AND GRADE, STAKES.

INSPECTIONS BY HOGAN LAND SERVICES, INC. AND MARIN COUNTY REHS:

3. SEPTIC & SUMP TANK WATER TIGHTNESS TEST.
4. INSPECTION OF HYDRAULIC (SQUIRT) TEST.
5. INSPECTION OF PRESSURE LINES PRIOR TO COVER.
6. FINAL INSPECTION, MONITORING WELL LOCATIONS.
7. THE ENGINEER, INSTALLER AND SERVICE PROVIDER WILL BE PRESENT WITH MARIN COUNTY REHS AT THE START UP INSPECTION.

PROJECT CONTACT INFORMATION

DESIGNER INFORMATION:
HOGAN LAND SERVICES INC.
4780 SONOMA HWY, SANTA ROSA
DANIEL BYRNE, RCE 80078
DBYRNE@HOGANLS.COM
(707)-544-2104

OWNER INFORMATION:
REDWOOD OIL, INC.
JULIE VANALYEA
JULIE@REDWOODOIL.NET
(415) 999-0650

LANDSCAPING

A. HOMEOWNERS AND CONTRACTORS ARE PROHIBITED FROM PLACING UNACCEPTABLE PLANTS, SHRUBS, TREES, ORNAMENTS, VEGETATIVE COVER, AND IRRIGATION SYSTEM OVER OR CLOSE TO A SUBSURFACE DRIP IRRIGATION (SDI) SYSTEM.

B. HOMEOWNERS WILL BE REQUIRED TO INSPECT THE SDI REGULARLY AS PART OF THE MONITORING PROGRAM. INSPECTIONS INCLUDE CHECKING FOR GOPHER STRIKES, DAMAGED OR TORN SDI LINES, AND DAMAGED EQUIPMENT. OWNERS SHALL HAVE A LICENSED AND EXPERIENCED PROFESSIONAL C-36, C-42, OR A LICENSED GENERAL ENGINEERING CONTRACTOR INSTALL AND/OR REPAIR DAMAGED SDI LINES AND EQUIPMENT.

SHEET INDEX

REGISTERED PROFESSIONAL ENGINEER DANIEL P. BYRNE No. 80078 CIVIL STATE OF CALIFORNIA

THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECTION AT THE REQUEST OF BY JULIE VANALYEA IN NOVEMBER, 2022.

DANIEL P. BYRNE III R.C.E. 80078

DRN:	CHK:	PM:	DATE:	JOB #:
FDT	LS	DBIII	3/30/23	4490

HOGAN LAND SERVICES
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LANDS OF REDWOOD OIL INC.

DRIP SYSTEM NOTES

11401 SHORELINE HIGHWAY
POINT REYES STATION, CA

APN:119-198-03

ELECTRICAL NOTES

I. REQUIRED ELECTRICAL FEATURES

A. ALL MATERIALS, CONNECTIONS, AND SPECIFICATIONS SHALL MEET THE CALIFORNIA ELECTRICAL CODE.
   1. IN ALL CASES IN WHICH A SUMP WITH A PUMP IS USED FOR A SEWAGE DISPOSAL SYSTEM, THE CONTRACTOR/OWNER SHALL OBTAIN AN ELECTRICAL PERMIT FROM PRMD OR CITY BUILDING DEPARTMENT HAVING JURISDICTION.
   2. THE BUILDING OFFICIAL SHALL BE RESPONSIBLE FOR INSPECTION AND APPROVAL OF ALL ELECTRICAL COMPONENTS.
   3. DISCONNECTING MEANS (CONTROL PANEL OR DISCONNECTING SWITCH) SHALL BE LOCATED IN SIGHT FROM THE PUMP LOCATION PER THE COUNTY ADOPTED ELECTRICAL CODE.

B. THE ALARM SHALL BE EQUIPPED WITH:
   1. A LOUD (87 DECIBELS AT A 10 FOOT MINIMUM HORIZONTAL DISTANCE FROM THE ALARM LOCATION) AUDIO ALARM OPERATED BY A FLOAT SWITCH(S) TO INDICATE AN "ALARM" CONDITION.
   2. A MINIMUM SIZED 7/8 INCH DIAMETER RED LIGHT SHALL BE MOUNTED ON THE FACE OF THE PANEL, WHICH SHALL GLOW AS LONG AS THE "ALARM" CONDITION EXISTS.
   3. A MOMENTARY "ALARM TEST/ALARM SILENCE" SWITCH TO TEST THE ALARM LIGHT AND HORN TO SIMULATE AN "ALARM" CONDITION AND TO SILENCE THE AUDIO ALARM HORN.

C. AN APPROVED LISTED MODEL OR TYPE OF FLOAT SWITCH SHALL BE USED TO ACTIVATE EACH PUMP. THE ALARM/CONTROL PANEL SHALL BE EQUIPPED WITH A MOTOR CONTACTOR FOR THE PUMP AND A PUMP HAND/OFF/AUTOMATIC SWITCH TO MANUALLY RUN THE PUMP BYPASSING THE CONTROL PANEL AUTOMATIC MODE AND TO TEST THE ALARM.

D. POWER SUPPLY TO EACH CIRCUIT BREAKER IN THE CONTROL PANEL SHALL BE FROM A SEPARATE DEDICATED CIRCUIT WITH CIRCUIT PROTECTION, OF EQUIVALENT OR HIGHER AMPERAGE RATING, AT THE POWER SUPPLY PANEL.
   1. THE ALARM/CONTROL PANEL SHALL BE EQUIPPED INTERNALLY WITH SEPARATE CIRCUIT PROTECTION FOR THE CONTROL AND PUMP CIRCUITRY.
      a. MULTIPLEX (MORE THAN ONE PUMP) SYSTEMS SHALL HAVE SEPARATE POWER SUPPLY CIRCUITS.
      b. SEPARATE CIRCUITS ARE REQUIRED FOR CONTROLS AND EACH PUMP.
      c. JOINT CIRCUITS MAY BE ACCEPTABLE FOR EXISTING SUMP/PUMP SYSTEMS THAT WERE INSTALLED PRIOR TO THE THIS REQUIREMENT IF FUSED PURSUANT TO THE CURRENT ELECTRICAL CODE.
   2. PUMP PROTECTION SHALL BE PROVIDED BY A THERMAL MAGNETIC CIRCUIT BREAKER FOR OVERLOAD PROTECTION.
      a. IF THE PUMP IS SINGLE-PHASE, THE MOTOR WINDINGS SHALL HAVE INTERNAL THERMAL OVERLOAD PROTECTION.
      b. IF THE PUMP IS THREE-PHASE, THE CIRCUIT PROTECTION IN THE ALARM/CONTROL BOX SHALL BE EQUIPPED WITH AN ADJUSTABLE THERMAL OVERLOAD PROTECTION.
   1. BELOW GRADE ELECTRICAL SPLICES SHALL BE PLACED IN A SONOMA COUNTY-APPROVED PULL BOX INSTALLATION OR A SONOMA COUNTY-APPROVED EXTERNAL SPLICE BOX WITH WATERPROOF SPLICE CONNECTORS. TRAFFIC- RATED PULL BOXES SHALL BE USED IN TRAFFIC AND ADJACENT AREAS.
   4. THE PUMP POWER LEAD AND THE FLOAT SWITCH CONTROL WIRES MAY RUN IN A COMMON CONDUIT. HIGH VOLTAGE AND LOW VOLTAGE CONDUCTORS SHALL BE RUN IN SEPARATE CONDUITS.
      a. ALL CORDS GOING INTO THE SUMP SHALL BE INDIVIDUALLY SEALED WITH NON-METALLIC GAS TIGHT FITTINGS IN EITHER THE RISER, JUNCTION BOX OR ALARM/CONTROL PANEL AS APPROPRIATE.
      b. METALLIC GAS TIGHT FITTINGS ARE NOT ALLOWED.
      c. ALL EXPOSED PVC CONDUIT SHALL BE SCHEDULE 80.

E. THE CONTROL PANEL AND ITS CONTENTS SHALL BE UL LISTED.
   1. THE CONTROL PANEL SHALL BE PLACED IN AN EASILY ACCESSIBLE LOCATION.
   2. A NON-RESETTABLE DOSE COUNTER SHALL BE INSTALLED IN CONTROL BOXES UTILIZED FOR NON-STANDARD SYSTEMS.
   3. IF A DOSE COUNTER IS NOT PROVIDED, A NON-RESETTABLE FLOW METER SHALL BE PROVIDED ON THE OUTGOING LINE TO THE DISPOSAL FIELD. ADDITIONALLY, SYSTEMS WITH FLUSH MODES SHALL BE EQUIPPED WITH A FLOW METER ON THE RETURN LINE. THE FLOW METER SHALL READ IN GALLONS PER MINUTE AND TOTAL GALLONS.
   4. THE CONTROL PANEL SHALL BE EQUIPPED SO SETTINGS CAN BE ADJUSTED MANUALLY ON-SITE.
   5. CONTROL BOXES THAT MUST BE OPENED TO VIEW THE DOSE COUNTER SHALL BE EQUIPPED WITH A CLEAR PLASTIC OR PYREX SAFETY SHIELD INSIDE THE CONTROL BOX.
   6. THE CONTROL BOX SHALL BE LABELED, "CAUTION-ELECTRICAL HAZARD".
   7. THE DOSE SETTINGS (TIME OR GALLONS), CALCULATED DOSE VOLUME AND FLOAT SETTINGS SHALL BE POSTED ON THE INSIDE OF THE PANEL.

F. ALL EXTERIOR MOUNTED ALARM AND CONTROLLER ENCLOSURE SHALL BE NEMA TYPE IF THE ALARM/CONTROLLER IS MOUNTED MORE THAN 75 FEET FROM ANY RESIDENCE SERVED BY THE SYSTEM, A SEPARATE AUDIBLE/VISIBLE ALARM SHALL BE PROVIDED AT EACH STRUCTURE CONNECTED TO THE SEPTIC SYSTEM. THE ENCLOSURE FOR THE REMOTE AND AUDIO/VISUAL ALARM SHALL BE NEMA TYPE 1 IF MOUNTED INDOORS.

DRIP FIELD PREP AND FILL NOTES

DRIP LINE TRENCHING SHALL OCCUR AFTER FILL PLACEMENT IS COMPLETE.

THE QUALITY OF ACCEPTABLE SOILS ABOVE THE DRIPLINE SHALL BE EQUAL TO THOSE BELOW THE DRIPLINE.

FILL MATERIAL SHALL BE CLASSIFIED AS A ZONE 2 AND APPROVED BY HOGAN LAND SERVICES INC. PRIOR TO DELIVERY TO THE SITE.

A GROUND COVER (TURF OR OTHER APPROPRIATE LANDSCAPING) OR NATIVE VEGETATION SHALL BE SEEDED AND MAINTAINED OVER THE DRIP FIELD AFTER INSTALLATION TO PROVIDE ADDITIONAL TREATMENT, PREVENT EROSION AND INCREASE WASTEWATER REUSE THROUGH VEGETATION UPTAKE.

FILL SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF THE DRIP TUBING. CONTRACTOR SHALL EMPLOY METHODS ENSURING THAT THE FILL IS UNIFORM IN DEPTH. DRIP TUBING SHALL BE INSTALLED THROUGH THE FILL TO THE DESIGNED EMBEDMENT DEPTH PER APPROVED PLAN.

SITE PREPARATION SHALL CONFORM TO THE FOLLOWING:

1. VEGETATION IS TO BE REMOVED AND SURFACE PREPARED PRIOR TO FILL PLACEMENT TO PERMIT GOOD MIXING OF THE NATIVE SOIL AND FILL MATERIAL ADDED.
2. EXISTING GROUND SURFACE SHALL BE STRIPPED OF VEGETATION AND ARTIFICIAL FILL PRIOR TO INITIAL RIP AND PLACEMENT OF FILL.
3. CUT AND REMOVE TREES WITHIN THE FILL ZONE, AVOID TREES BY GOING AROUND THEM. GRIND STUMPS TO GROUND LEVEL OR TO A MAXIMUM DEPTH OF 12 INCHES BELOW GRADE.
4. ROTOTILLING TO PREPARE THE SITE FOR FILL IS PROHIBITED.

REMOVE EXISTING FILL:

1. THE PRIMARY AND RESERVE DRIP FIELD AREAS SHALL HAVE ARTIFICIAL FILL LAYER (8"+/-) REMOVED DOWN TO THE NATIVE SOIL INTERFACE.

FILL PLACEMENT SHALL CONFORM TO THE FOLLOWING:

1. PLACE INITIAL SIX INCHES OF FILL. FILL MATERIAL FOR DRIP SYSTEMS SHALL BE PLACED IN LIFTS NOT EXCEEDING SIX-INCH LAYERS.

   AFTER THE INITIAL 6" LIFT, AN INITIAL SINGLE PASS 8" RIP, (APPROXIMATELY 2" INTO NATIVE) SHALL OCCUR TO PROMOTE MIXTURE OF THE NEW FILL WITH THE NATIVE SOILS.

2. FILL LIFTS SHALL BE MOISTURE CONDITIONED TO OPTIMUM AND TRACK ROLLED TO ACHIEVE COMPACTION APPROXIMATELY THE SAME RELATIVE COMPACTION AS THE UPPER NATIVE SOIL HORIZON.
3. THE FULL DEPTH FILL IS TO BE OF UNIFORM DEPTH EXTENDING TO A DISTANCE AT LEAST TWO FEET FROM THE CENTER OF ANY DRIP LINE.
4. THE FILL SHALL BE TAPERED AT A FIVE TO ONE RATIO MINIMUM TO EXISTING GROUND SURFACE.
5. SHOULD ADDITIONAL LIFTS OF FILL BE REQUIRED, THEY SHALL BE PLACED IN ACCORDANCE WITH ABOVE. A SINGLE PASS RIP AT 12 INCH DEPTH SHALL BE PERFORMED AFTER SUBSEQUENT LIFTS TO INCORPORATE THE LOWER FILL LAYERS.
6. PLACE THE REMAINING FILL LAYER IN THE SAME MANNER UNTIL THE UNIFORM FINISH GRADE IS ACHIEVED.
7. SOIL SHOULD NOT BE COMPACTED DUE TO FILL PLACEMENT ACTIVITIES. NO WHEELED VEHICLES SHALL ENTER THE FILL AREA.

GEOFLOW
SUBSURFACE DRIP

Updated Mar 2015

FIELD FLOW

Job Description:	*1401 Shoreline Hwy, Point Reyes Station 94956*
Contact:	*Julie VanAlyea*
Prepared by:	*HOGAN LAND SERVICES INC. D. BYRNE RCE 80078*
Date:	*01/04/202*

Worksheet 1- Field Flow

Total field

Total Quantity of effluent to be disposed per day	1,500	gallons / day	note
Hydraulic loading rate	0.6	gallons / sq.ft. / day	note
Minimum Dispersal Field Area	2,500	square ft.	note
Total Dispersal Field Area	2,500	square ft.	note

Flow per zone

Number of Zones	3	zone(s)	note
Dispersal area per zone	1,667	square ft.	note
Choose line spacing between WASTEFLOW lines	2	ft.	note
Choose emitter spacing between WASTEFLOW em	2	ft.	note
Total linear ft per zone (minimum required)	833	ft. per zone	note
Total number of emitters per zone	417	emitters per zone	note
Select Wasteflow dripline (16mm)	Wasteflow PC - 1 gph	dripline	note
Pressure at the beginning of the dripfield	25	psi	note
Feet of Head at the beginning of the dripfield	57.75	ft.	note
What is the flow rate per emitter in gph?	1.02	gph	note
Dose flow per zone	7.08	gpm	note

Note: A few States or Counties require additional flow for flushing. Please check your local regulations.
Flush velocity calculation below is for PC dripline. Classic dripline requires less flow to flush than PC.
Please refer to Geoflow's spreadsheet "Design Flow and Flush Curves" at www.geoflow.com or call 800-828-3388.

If required, choose flush velocity	2	ft/sec	note
How many lines of WASTEFLOW per zone?	8	lines	note
Fill in the *actual* length of longest dripline lateral	110	ft.	note
Flush flow required at the end of each dripline	1.48	gpm	note
Total Flow required to achieve flushing velocity	11.84	gpm	note
Total Flow per zone- worst case scenario	18.92	gpm	note

Select Filters and zone valves

Select Filter Type	BioDisc Filter		note
Recommended Filter (item no.)	BioDisc Filter-150	1.5in < 30 gpm	note
Select Zone Valve Type	Hydraulic	-	note
Recommended Zone Valve (item no.)	HT-4403	valve 1.25x1.25", 25-7 OR ORENCO EQUIVALENT	

Note minimum pressure of 25 psi required for Hydraulic valves.Check pressure in Cell D28 above.

Dosing

Number of doses per day / zone:	8	doses	note
Timer ON Pump run time per dose/zone:	8.49	mins:secs	8.82
Timer OFF, Pump off time between doses	2:51	hrs:mins	2.85
Per Zone - Pump run time per day/zone:	1:10	hrs:mins	1.18
All Zones - Number of doses per day / all zones	24	doses / day	
Allow time for field to pressurize	0:00:30	hrs:mins:secs	0.500
Filter flush timer	0:00:20	hrs:mins:secs	0.333 note
Drain timer	0:05:00	hrs:mins:secs	5.000 note
Field flush timer	0:01:00	hrs:mins:secs	1.000 note
Field flush counter	8	cycles	note
Time required to complete all functions per da	6:18	hrs:mins	6.262746 0
Dose volume per zone	63	gallons per dose	note

Allow time in the day for controller to have pressurization and drainage time.

PUMP SIZING

Job Description:	*1401 Shoreline Hwy, Point Reyes Station 94956*
Contact:	*Julie VanAlyea*
Prepared by:	*HOGAN LAND SERVICES INC. D. BYRNE RCE 80078*
Date:	*01/04/202*

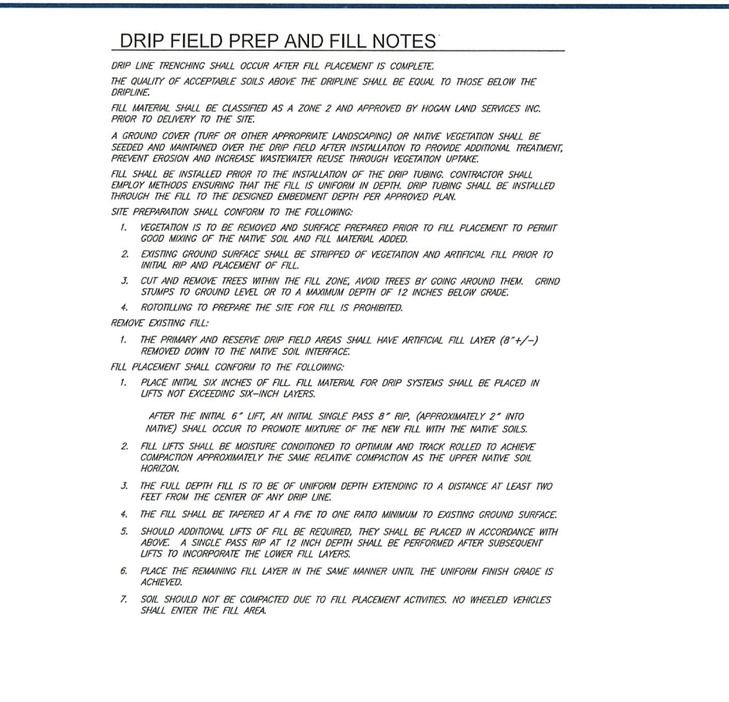
Worksheet - Pump Sizing

Section 1 - Summary from Worksheet 1

Flow required to dose field	7.08	gpm
Flow required to flush field	11.84	gpm
Flow required to dose & flush field	18.92	gpm
Filter	BioDisc Filter-150	
No. of Zones	3	zones
Zone valve	HT-4403	
Dripline	Wasteflow PC - 1 gph	
Dripline longest lateral	110.00	ft.

Section 2	Ft of head	Pressure
A. Flush line - Losses through return line		
Select Pipe from dropdown menu	PVC schedule 40	
Select Flush Line Diameter	3/4" inch	
Length of return line	116 ft.	
Equivalent length of fittings	29 ft.	
Elevation change. (if downhill enter 0)	0 ft.	
Pressure loss in 100 ft of pipe	27.87 ft.	12.06 psi
Total pressure loss from end of dripline to return lar	*40.4 ft.*	17.49 psi
B. Dripline - Losses through Wasteflow dripline		
Length of longest dripline lateral	110 ft.	
Minimum dosing pressure required at end of dripline	40.40 ft.	17.49 psi
Loss through dripline during flushing	4.13 ft.	1.79 psi
Total minimum required dripline pressure	*44.54 ft.*	19.28 *psi*
A+B. Minimum Pressure required at beginning of dripfield		
CALCULATED pressure required at beginning of dr	*84.94 ft.*	36.77 *psi*
SPECIFIED pressure at beginning of dripfield (from	57.8 ft.	25.00 *psi*
!!! Urgent revision required SPECIFIED pressure must be greater than CALCULATED pressure and lower thar		
C. Drip components - Losses through headworks		
Filter	11.6 ft.	5.00 psi
Zone valve pressure loss (not in diagram)	6.93 ft.	3.00 psi
Flow meter pressure loss (not in diagram)	10.00 ft.	4.33 psi
Other pressure losses	10.00 ft.	4.33 psi
Total loss through drip components	38.48 ft.	16.66 psi
D. Supply line - Minimum Pressure head required to get from pump tank to top of dripfield		
Select Pipe from dropdown menu	PVC schedule 40	
Select Supply line diameter	3/4" inch	
Length of supply line	95 ft.	
Equivalent length of fittings	23.75 ft.	
Height from pump to tank outlet	5 ft.	
Elevation change. (if downhill enter 0)	2 ft.	
Pressure loss/gain in 100 ft. of pipe	66.40 ft.	28.75 psi
Total gain or loss from pump to field	*85.9 ft.*	37.17 psi
Total dynamic head	**182.1 ft.**	78.82 *psi*
Pump capacity * - Field Flush Flow	18.9 gpm	78.82 *psi*
- Field Dose Flow	7.1 gpm	
- Filter Flush Flow	- gpm	- *psi*
Pump Model Number	PF2010	
Voltz / Hp / phase	230v / .5 HP / SINGLE	

GEOFLOW DRIP CALCULATIONS



PUMP CURVE

HOGAN LAND SERVICES
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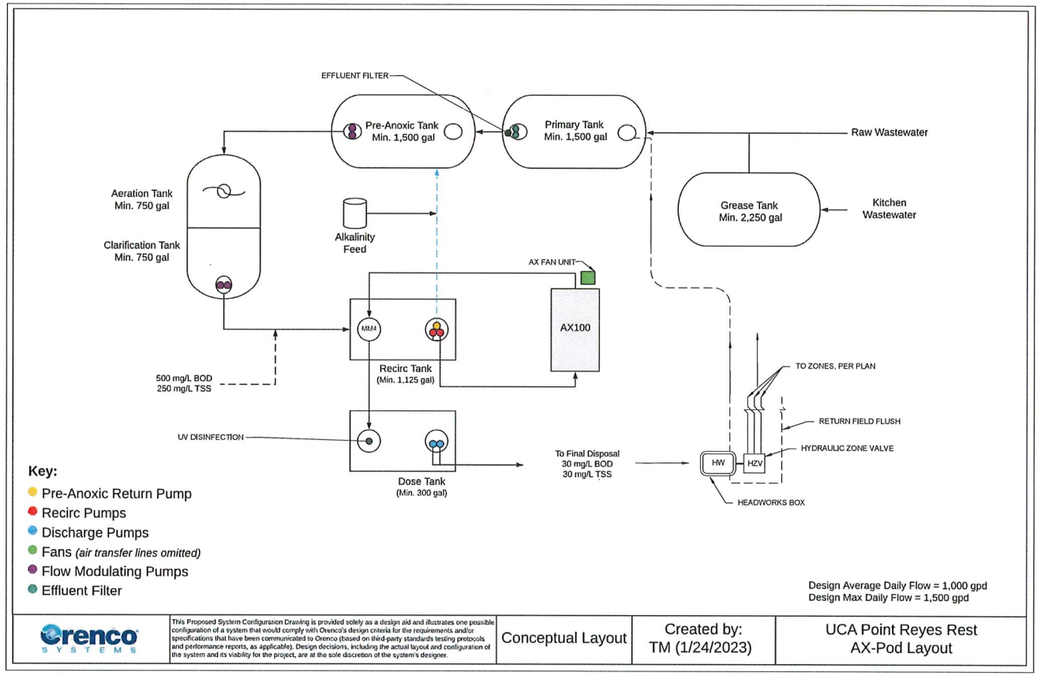
LANDS OF REDWOOD OIL INC.

DRIP SYSTEM NOTE & CALCS

11401 SHORELINE HIGHWAY
POINT REYES STATION, CA

APN:119-198-03

DRIP - SYSTEM PLAN

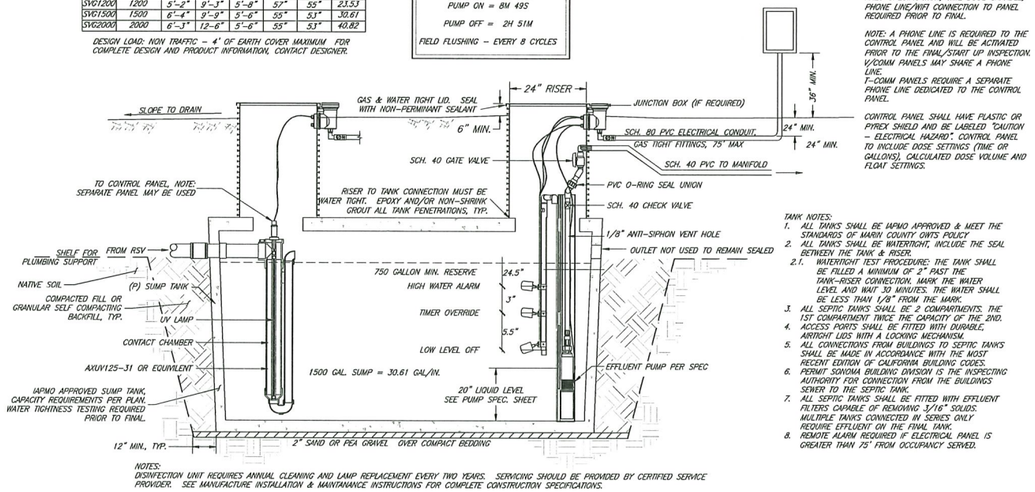


1 ADVANTEX AX-100 PRE-TREATMENT SCHEMATIC DETAIL
PLAN REVIEW LETTER AND PRE CONSTRUCTION MEETING WITH ATU MANUFACTURER REP. REQUIRED — NO SCALE

MODEL NUMBER	LIQUID CAPACITY (GALLONS)	WIDTH DIM A	LENGTH DIM B	HEIGHT DIM C	INLET DIM D	OUTLET DIM E	GAL/IN
SVG810	810	4'-4"	8'-8"	5'-6"	55"	53"	16.53
SVG1200	1200	5'-2"	9'-3"	5'-8"	57"	55"	23.53
SVG1500	1500	6'-4"	9'-9"	5'-8"	55"	53"	30.61
SVG2000	2000	6'-3"	12'-6"	5'-6"	55"	53"	40.82

DESIGN LOAD: NON TRAFFIC – 4' OF EARTH COVER MAXIMUM FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT DESIGNER.

TIME DOSE SETTINGS:
DOSE PER DAY/ FIELD = 24
PUMP ON = 8M 49S
PUMP OFF = 2H 51M
FIELD FLUSHING – EVERY 8 CYCLES



UL LISTED CONTROL/ALARM PANEL IN NEMA TYPE 4 OR BETTER BOX. SEE ORENCO AX20 SPECIFICATION. TIME DOSE CAPABLE. PHONE LINE/WIFI CONNECTION TO PANEL REQUIRED PRIOR TO FINAL.

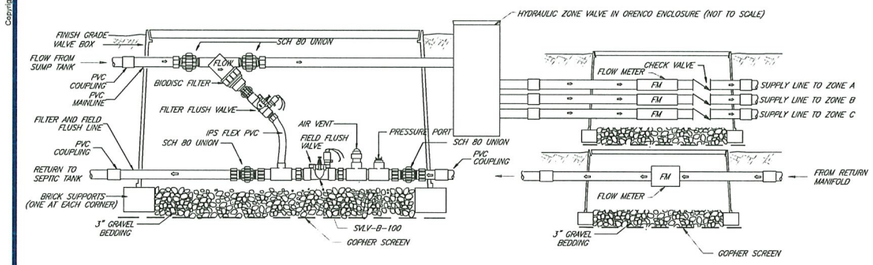
NOTE: A PHONE LINE IS REQUIRED TO THE CONTROL PANEL AND WILL BE ACTIVATED PRIOR TO THE FINAL/START UP INSPECTION. V/COMM PANELS MAY SHARE A PHONE LINE. T-COMM PANELS REQUIRE A SEPARATE PHONE LINE DEDICATED TO THE CONTROL PANEL.

CONTROL PANEL SHALL HAVE PLASTIC OR PYREX SHIELD AND BE LABELED "CAUTION – ELECTRICAL HAZARD". CONTROL PANEL TO INCLUDE DOSE SETTINGS (TIME OR GALLONS), CALCULATED DOSE VOLUME AND FLOAT SETTINGS.

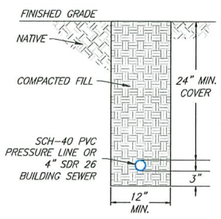
TANK NOTES:
1. ALL TANKS SHALL BE IAPMO APPROVED & MEET THE STANDARDS OF MARIN COUNTY OWTS POLICY
2. ALL TANKS SHALL BE WATERTIGHT, INCLUDE THE SEAL BETWEEN THE TANK & RISER.
2.1. WATERTIGHT TEST PROCEDURE: THE TANK SHALL BE FILLED A MINIMUM OF 2" PAST THE TANK–RISER CONNECTION. MARK THE WATER LEVEL AND WAIT 30 MINUTES. THE WATER SHALL BE LESS THAN 1/8" FROM THE MARK.
3. ALL SEPTIC TANKS SHALL BE 2 COMPARTMENTS. THE 1ST COMPARTMENT TWICE THE CAPACITY OF THE 2ND.
4. ACCESS PORTS SHALL BE FITTED WITH DURABLE, AIRTIGHT LIDS WITH A LOCKING MECHANISM.
5. ALL CONNECTIONS FROM BUILDINGS TO SEPTIC TANKS SHALL BE MADE IN ACCORDANCE WITH THE MOST RECENT EDITION OF CALIFORNIA BUILDING CODES.
6. PERMIT SONOMA BUILDING DIVISION IS THE INSPECTING AUTHORITY FOR CONNECTION FROM THE BUILDINGS SEWER TO THE SEPTIC TANK.
7. ALL SEPTIC TANKS SHALL BE FITTED WITH EFFLUENT FILTERS CAPABLE OF REMOVING 1/16" SOLIDS. MULTIPLE TANKS CONNECTED IN SERIES ONLY REQUIRE EFFLUENT ON THE FINAL TANK.
8. REMOTE ALARM REQUIRED IF ELECTRICAL PANEL IS GREATER THAN 75' FROM OCCUPANCY SERVED.

NOTES:
DISINFECTION UNIT REQUIRES ANNUAL CLEANING AND LAMP REPLACEMENT EVERY TWO YEARS. SERVICING SHOULD BE PROVIDED BY CERTIFIED SERVICE PROVIDER. SEE MANUFACTURE INSTALLATION & MAINTANANCE INSTRUCTIONS FOR COMPLETE CONSTRUCTION SPECIFICATIONS.

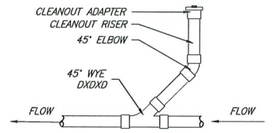
2 SUMP TANK WITH CONTROL PANEL AND UV LIGHT DEATIL
NO SCALE



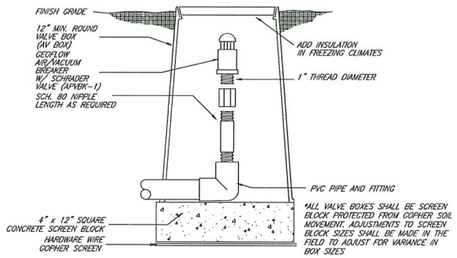
3 HEADWORKS BOX & FLOW METERS DETAIL
NO SCALE



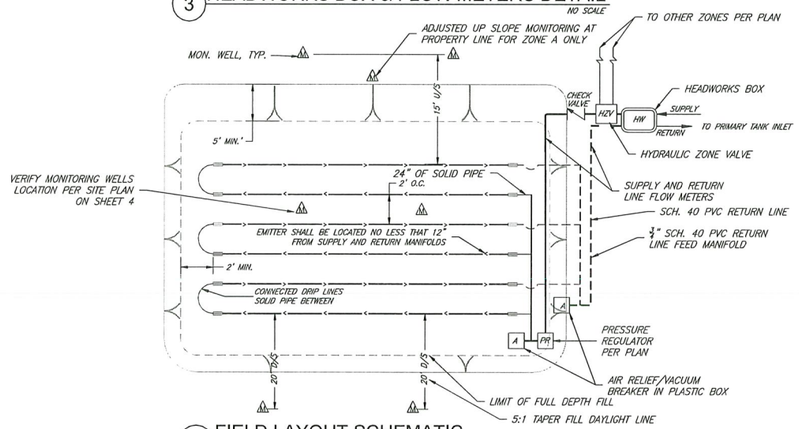
4 TRENCH DETAIL
NO SCALE



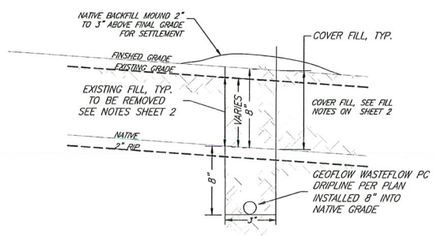
5 STANDARD CLEANOUT DETAIL
INSTALL CLEANOUTS BEFORE SEPTIC TANK — NO SCALE



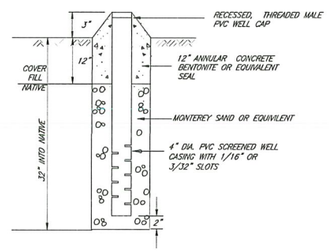
6 1" AIR RELIEF VALVE
NO SCALE



7 FIELD LAYOUT SCHEMATIC
SINGLE ZONE SHOWN MULTI ZONE SIMILAR — NO SCALE



8 DRIP LINE TRENCH DETAIL
NO SCALE



9 MONITORING WELL DETAIL
NO SCALE

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LANDS OF REDWOOD OIL INC.
DRIP SYSTEM DETAILS
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INSTALLATION NOTES

1. INSTALL 2250 GALLON SINGLE COMPARTMENT GREASE TANK, A 1500 GALLON SINGLE COMPARTMENT PRIMARY TANK WITH SANITARY-TEE AT INLET AND EFFLUENT FILTER AT OUTLET, A 1500 GALLON PRE-ANOXIC TANK, AND 1500 AERATION AND CLARIFICATION TANK. SEE TYPICAL SEPTIC TANK INSTALLATION AND MANUFACTURES ATU INSTALLATION SCHEMATIC DETAIL 1 ON SHEET 3. REFER TO COMPLETE ATU MANUFACTURER INSTALLATION INSTRUCTIONS.
2. INSTALL 1200 GAL. MINIMUM IAPMO APPROVED SINGLE COMPARTMENT RE-CIRCULATION TANK WITH ADVANTEX AX DOSING PUMP, RBV (MM4), ALKALINITY FEED WITH PRE-ANOXIC RETURN PUMP TO PRE-ANOXIC TANK PER MANUFACTURES SPECIFICATION. INSTALL AX 100 PRETREATMENT FILTRATION POD. SEE DETAIL 1 ON SHEET 3. REFER TO COMPLETE MANUFACTURER'S SPECIFICATIONS FOR COMPRENSIVE INSTALLATIONS INSTRUCTIONS. FINAL LOCATION SHALL BE DETERMINED AT TIME OF CONSTRUCTION. ALTERNATE TANK LOCATION TO BE CONFIRMED WITH HLS, INC. PRIOR TO CONSTRUCTION.
3. INSTALL 1500 GAL. IAPMO APPROVED SUMP TANK PER DETAIL 2 ON SHEET 3 WITH ORENCO UV-125/31-UVIB-25 DISINFECTION UNIT PER DETAIL AND MANUFACTURER'S SPECIFICATIONS. INSTALL ORENCO PF2010 SUMP PUMP OR EQUIVALENT, AND CONTROL PANEL.
4.1. INSTALL MULTI-ZONE HEADWORKS WASTEFLOW BOX WITH FLUSH VALVE AND VORTEX FILTER. INSTALL CHECK VALVE ON SUPPLY LINE PRIOR TO DRIP FIELD PER DETAIL. SEE DETAIL AND MANUFACTURER SPECIFICATIONS. INSTALL FLOW METERS IN APPROVED PLASTIC ENCLOSURE FOR ALL THREE SUPPLY LINES AND FOR THE SINGLE RETURN LINE.
4.2. INSTALL HYDRAULIC ZONING VALVE.
5. CONNECT TO BUILDING SEWER CLEANOUT WITH 4" SDR-26 @ 2%, SEE PLUMBING PLAN.
6. INSTALL 3/4" SCH 40 PVC SUPPLY AND RETURN LINE TO EACH FIELD. INSTALL 35 PSI PRESSURE REGULATOR ON SUPPLY LINE PER PLAN. INSTALL AIR RELIEF VALVE AT TOP FEED MANIFOLD HIGH POINT ON BOTH SUPPLY AND RETURN LINES.
7. PRIOR TO DRIP LINE INSTALLATION, INSTALL COVER FILL PER DETAILS AND SPECS ON SHEET 2. UPON COMPLETION OF FILL, INSTALL PRIMARY DRIP ZONES A, B, & C 833 L.F. MIN. EACH WITH MANIFOLD AND 35 PSI PRESSURE REGULATOR. INSTALL AIR RELIEF VALVE ON SUPPLY/RETURN LINE ENDS. ALL VALVES & FITTINGS TO BE SIZED ACCORDING TO SUPPLY/RETURN LINE SIZING.
8. INSTALL 9 MONITORING WELLS PRIOR TO DRIP LINE INSTALLATION PER SITE PLAN.
9. ABANDON EXISTING SEPTIC TANKS (2), PER NOTES ON THIS SHEET.

9 TANK ABANDONMENT NOTES

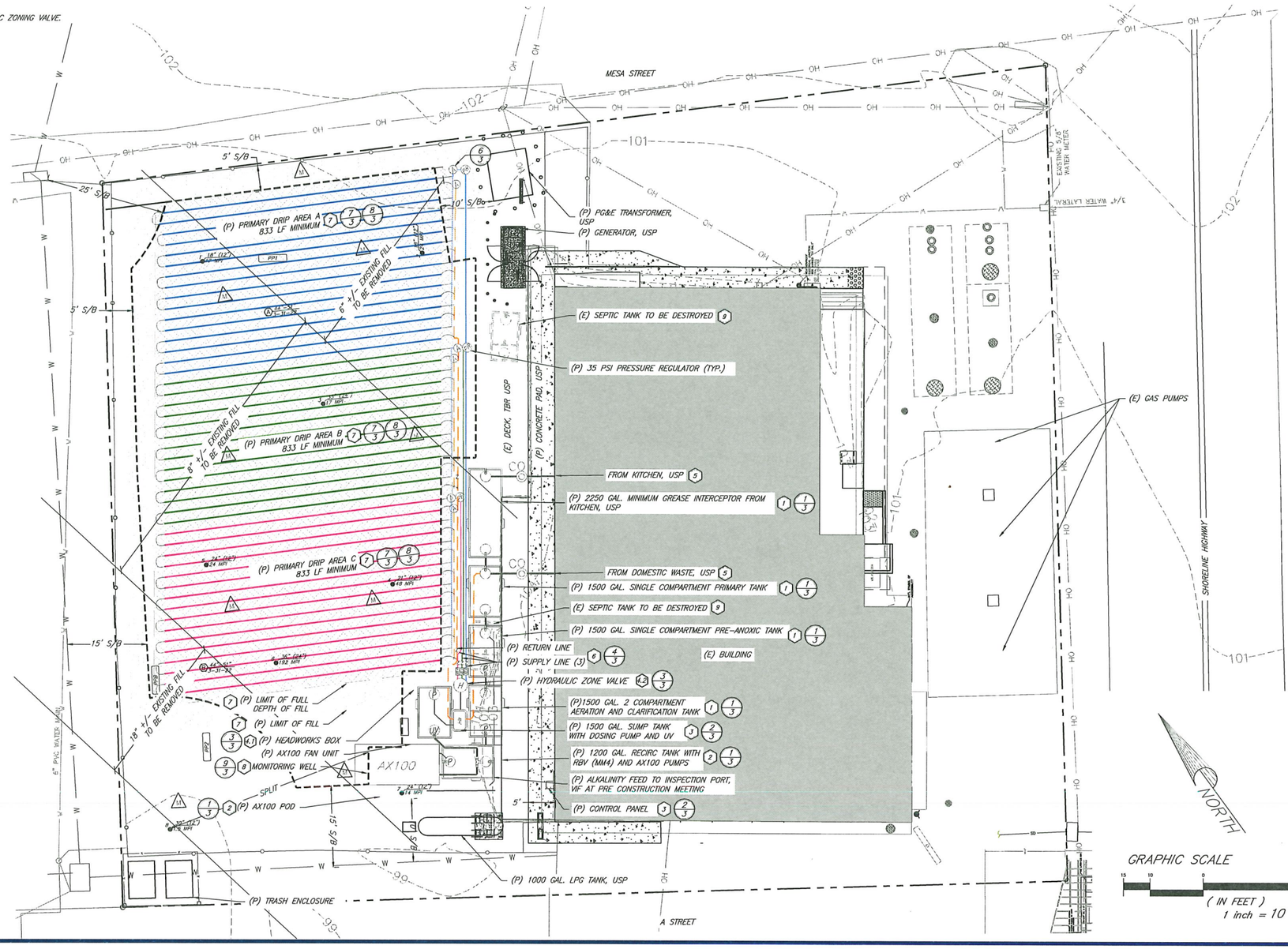
A. SEPTIC TANKS MAY BE ABANDONED IN PLACE OR COMPLETELY REMOVED.

B. HAVE THE TANK PUMPED AND RINSED BY A LICENSED TANK PUMPER. THE RECEIPT IS REQUIRED PRIOR TO FINALIZING THE PERMIT.

WHEN ABANDONING IN PLACE:

1. REMOVE THE RISERS AND LIDS FROM THE EXISTING TANK.
2. EXCAVATE THE ENTIRE TOP OF THE TANK FOR EASY ACCESS. REMOVE/BREAK TANK LID TO ACCESS TANK BOTTOM. PUNCH HOLES IN BOTTOM OF BOTH TANK COMPARTMENTS. CALL FOR TANK DESTRUCTION INSPECTION, IT CAN CORRESPOND WITH SYSTEM FINAL INSPECTION.
3. ONCE THE COUNTY AND ENGINEER HAS APPROVED THE TANK HOLES, BACKFILL THE TANK WITH EARTH, SAND, OR GRAVEL MATERIAL TO DEPTH OF APPROXIMATELY 1' BELOW FINISHED GRADE. THE TANK LID CAN BE BROKEN INTO SMALL PIECES AND ADDED TO THE BACK FILL CAREFULLY AS TO NOT CREATE ANY LARGE VOIDS.
4. FILL THE REST OF THE TANK AREA TO MATCH EXISTING GRADE AND GRADE TO PROPERLY DRAIN. EROSION CONTROL MEASURES SHOULD BE PROVIDED IN ALL DISTURBED AREAS. THE PERMIT WILL NOT BE FINALED UNTIL ENGINEER HAS OBSERVED PROPER EROSION CONTROL.
5. AS AN ALTERNATIVE OPTION, THE TANK CAN BE PUMPED, REMOVED, AND HAULED TO A DISPOSAL SITE. CALL FOR AN INSPECTION PRIOR TO BACKFILLING EXCAVATION. BACKFILL WITH SOIL, SAND, GRAVEL, CONCRETE OR OTHER MATERIAL APPROVED ADMINISTRAITVE AUTHORITY.

A COPY OF THE DISPOSAL RECEIPT SHALL BE MADE UPON REQUEST.



LEGEND

- RECORD BOUNDARY LINE
- EDGE OF CONCRETE
- FENCE
- SDS PRIMARY FIELD A
- SDS PRIMARY FIELD B
- SDS PRIMARY FIELD C
- RETURN LINE
- SANITARY SEWER
- SDS SETBACK LINE
- PERC HOLE W/DEPTH & MINUTES PER INCH
- SOILS PROFILE PIT W/DEPTH
- WELL
- MONITORING WELL
- CLEANOUT
- U/S UP SLOPE
- D/S DOWN SLOPE
- S/B SETBACK
- USP UNDER SEPARATE PERMIT
- VIF VERIFY IN FIELD
- TBR TO BE REMOVED
- PRESSURE REGULATOR
- AIR RELIEF VALVE
- CHECK VALVE
- FLOW METER
- HEADWORKS BOX
- AX20 PRETREATMENT POD
- INSTAL KEY NOTE
- DETAIL
- SHEET

THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECTION AT THE REQUEST OF BY JULIE VANALTA IN NOVEMBER, 2022

DANIEL P. BYRNE III R.C.E. 80078

DRN:	FDT
CHK:	LS
PM:	DBIII
DATE:	3/30/23
JOB #:	4490

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LANDS OF REDWOOD OIL INC.

DRIP SYSTEM PLAN

11401 SHORELINE HIGHWAY
POINT REYES STATION, CA

APN:119-198-03

4 OF 4

DRIP - SYSTEM PLAN

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