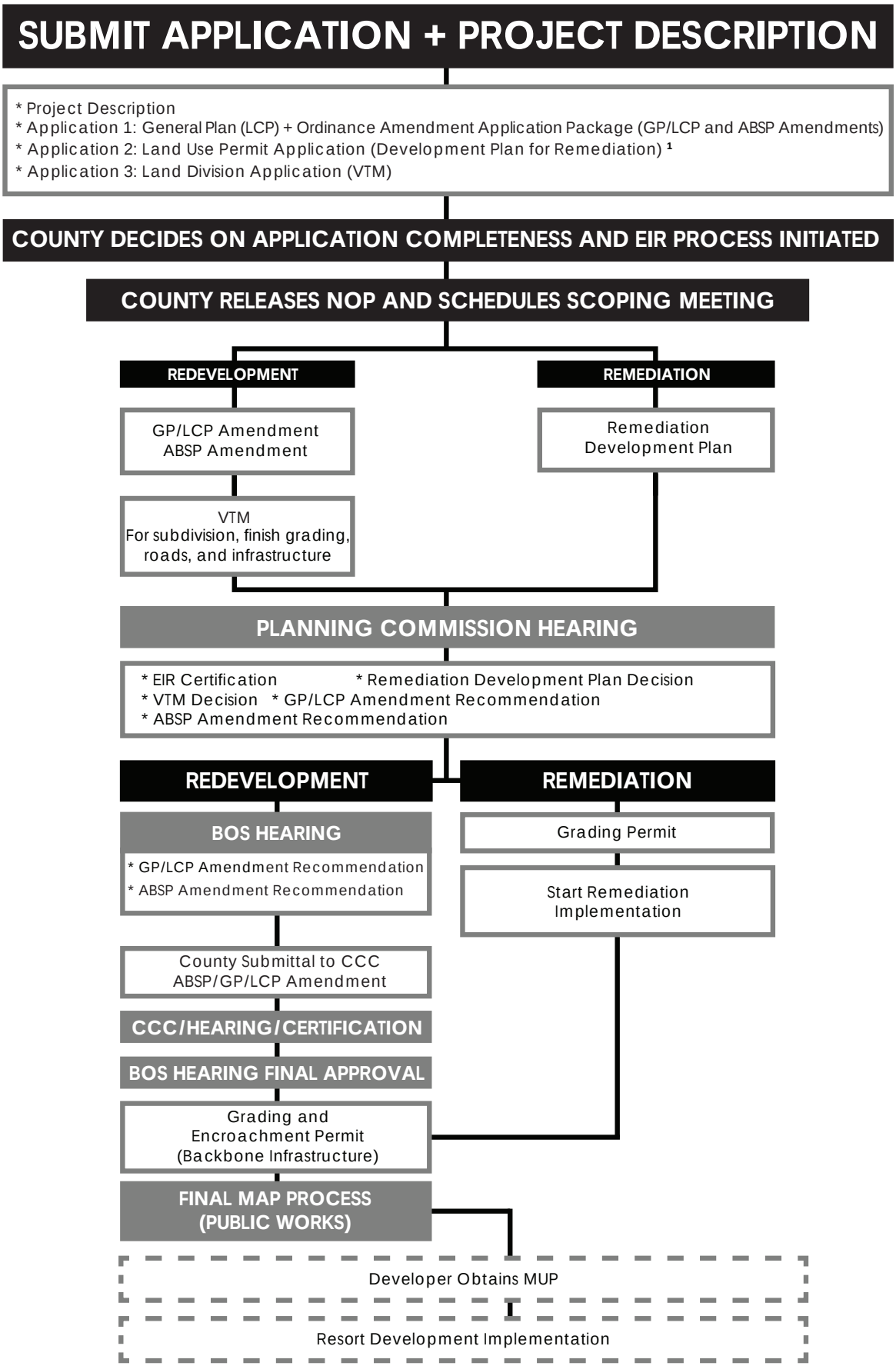
Project Area

Figure 1-1 Project Location Map

Figure 1-2 Regional Setting Map



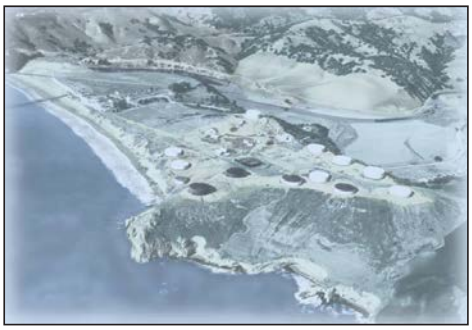
Glossary:
Avila Beach Specific Plan (ABSP), Board of Supervisors (BOS), California Coastal Commission (CCC), Environmental Impact Report (EIR), General Plan (GP), Local Coastal Program (LCP), Vesting Tentative Map (VTM), Notice of Preparation (NOP), Minor Use Permit (MUP).

Notes:
[1] Land use permits, building/grading permits, and any subsequent ministerial permits are also considered Coastal Development Permits (CDP) and would be issued by the County.

Figure 2-1 Avila Point Approval Process

Figure 3-1 Project Area Aerial

1940 AERIAL - UCSB DEPARTMENT OF GEOGRAPHY AERIAL PHOTOGRAPHIC COLLECTION



DECEMBER 17, 1931 - UCLA DEPARTMENT OF GEOGRAPHY FAIRCHILD COLLECTION

US GEOLOGICAL SURVEY MAP - 1895

Figure 3-2 Site History

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\012_1252.011_Distribution_naTPH_Soil_Bedrock.mxd\2/17/2015

EXPLANATION

- NESTED SOIL GAS PROBE
- NESTED SOIL GAS PROBE WITH SOIL SAMPLE COLLECTION TO 5'
- NESTED SOIL GAS PROBE WITH SOIL SAMPLE COLLECTION TO 10'
- BORING WITH SOIL SAMPLE COLLECTION TO 10'
- SAMPLES COLLECTED AND ANALYZED FOR ONE OR MORE COPCS AT DEPTHS OF ≤ 10 FT
- GROUNDWATER MONITORING WELL
- SOIL SAMPLE
- ASPHALT SAMPLE
- SOIL GAS MONITORING PROBE
- FORMER REFINERY
- DIESEL/GAS/CRUDE OIL PIPELINES
- naTPH CONCENTRATION > 10,000 MG/KG
- naTPH CONCENTRATION > 1,000 MG/KG
- naTPH CONCENTRATION > 100 MG/KG
- FORMER STORAGE TANKS / AREAS

NOTE: naTPH INCLUDES C10-C40 TPH AT ALL DEPTHS

0 150 300 600 FEET
SCALE

FIGURE 3-3

DISTRIBUTION OF naTPH IN SOIL AND BEDROCK

FORMER AVILA TERMINAL
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

N

EXPLANATION

- GROUNDWATER MONITORING WELL
- ABANDONED MONITORING WELL
- MONITORING WELL WITH MEASURABLE (≥ 0.1') LIGHT NONAQUEOUS PHASE LIQUID (LNAPL)
- FORMER REFINERY
- DIESEL/GAS/CRUDE OIL PIPELINES
- FORMER STORAGE TANKS / AREAS

NOTES:
BASED ON DATA COLLECTED FROM NOVEMBER 2011 THROUGH NOVEMBER 2013.

0 150 300 600 FEET
SCALE

FIGURE 3-4

WELLS WITH MEASURABLE LNAPL

FORMER AVILA TERMINAL
PROJECT DISCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR
CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\093_1252.011_Recent_LNAPL_Occurance_NOV2011-NOV2013.mxd\3/5/2015

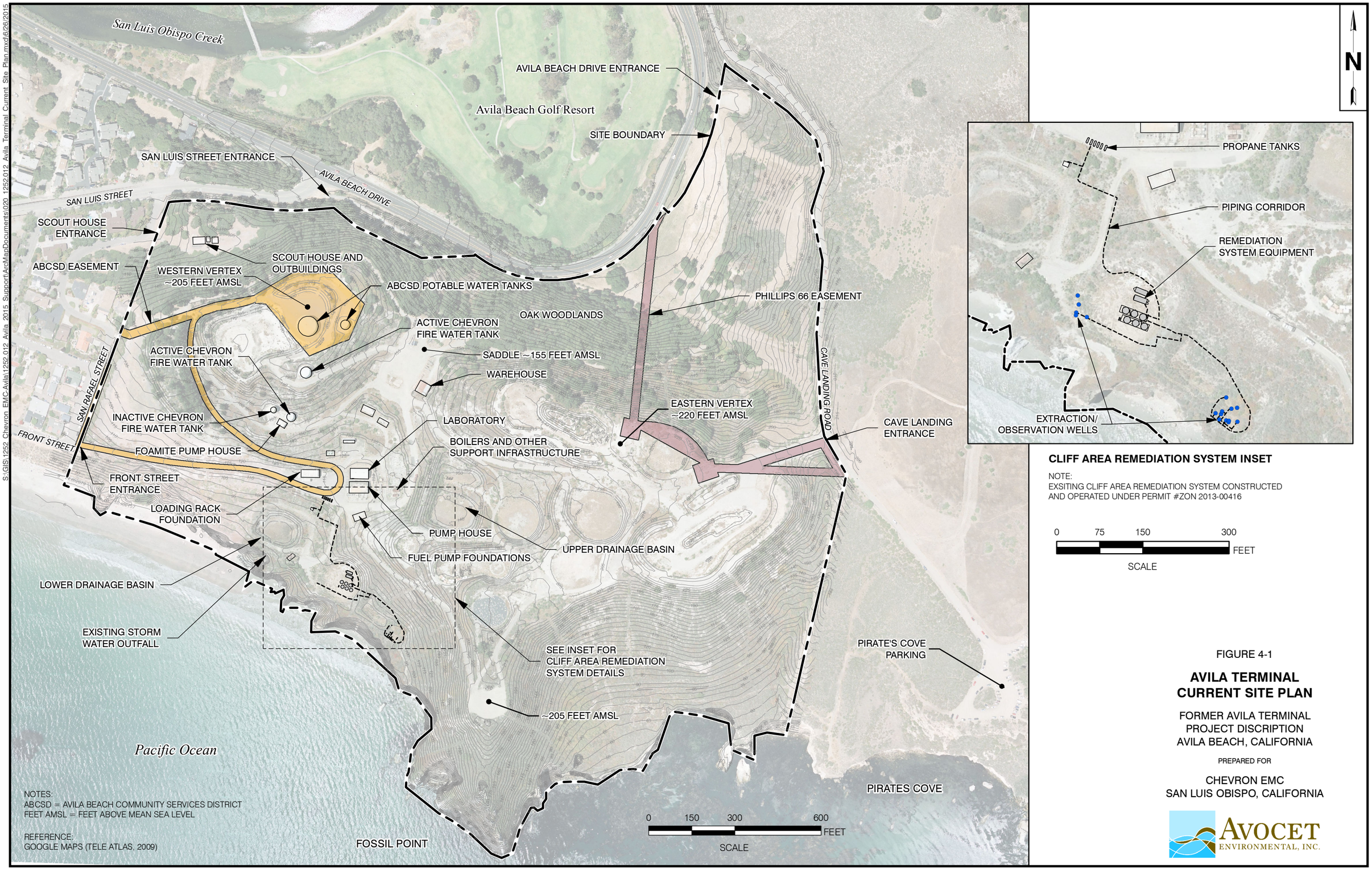


FIGURE 4-1

AVILA TERMINAL CURRENT SITE PLAN

FORMER AVILA TERMINAL
PROJECT DISCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

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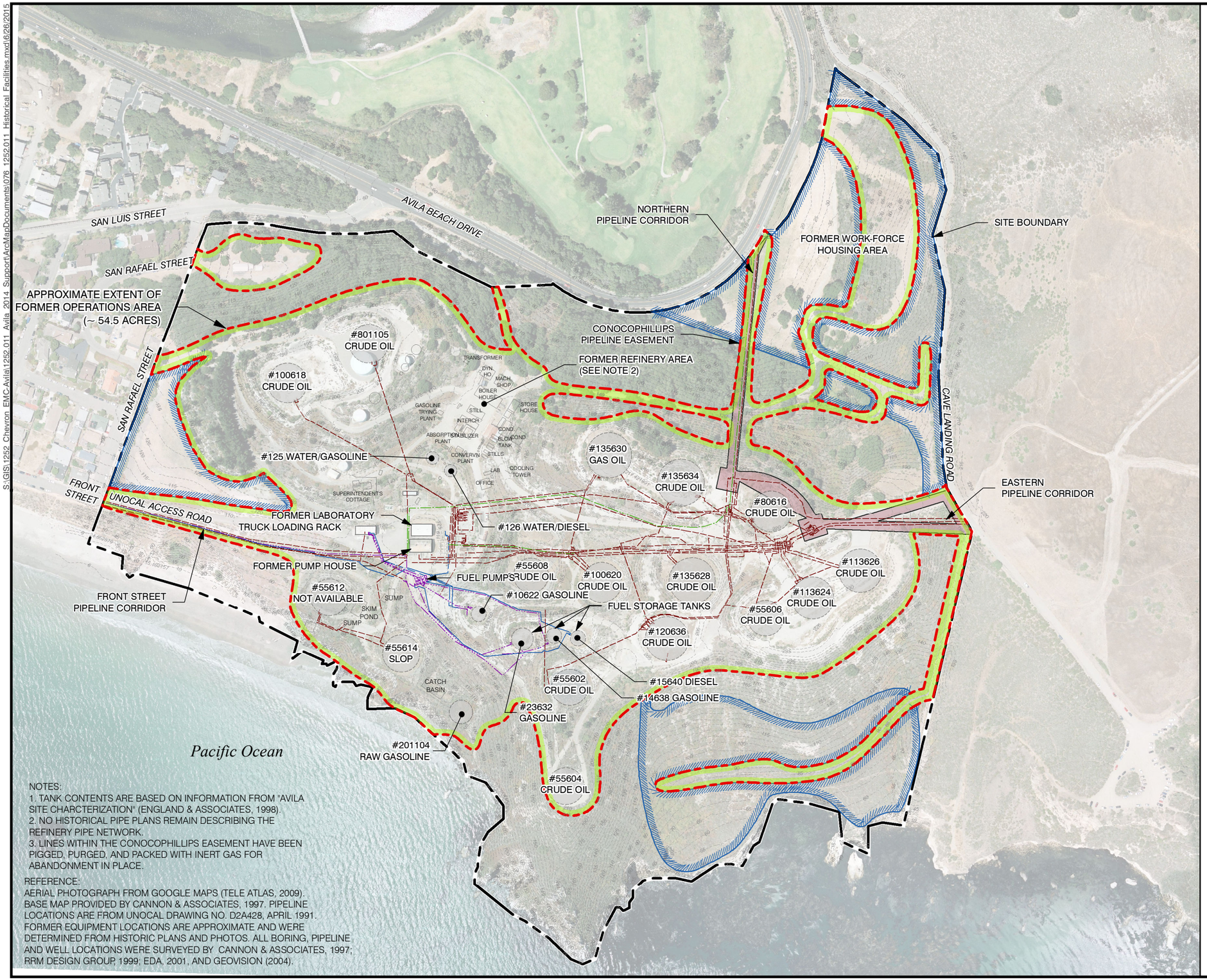


NOTES:
1. TANK CONTENTS ARE BASED ON INFORMATION FROM "AVILA SITE CHARCTERIZATION" (ENGLAND & ASSOCIATES, 1998).
2. NO HISTORICAL PIPE PLANS REMAIN DESCRIBING THE REFINERY PIPE NETWORK.
3. LINES WITHIN THE CONOCOPHILLIPS EASEMENT HAVE BEEN PIGGED, PURGED, AND PACKED WITH INERT GAS FOR ABANDONMENT IN PLACE.

REFERENCE:
AERIAL PHOTOGRAPH FROM GOOGLE MAPS (TELE ATLAS, 2009). BASE MAP PROVIDED BY CANNON & ASSOCIATES, 1997. PIPELINE LOCATIONS ARE FROM UNOCAL DRAWING NO. D2A428, APRIL 1991. FORMER EQUIPMENT LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM HISTORIC PLANS AND PHOTOS. ALL BORING, PIPELINE AND WELL LOCATIONS WERE SURVEYED BY CANNON & ASSOCIATES, 1997; RRM DESIGN GROUP, 1999; EDA, 2001, AND GEOVISION (2004).

N

EXPLANATION

- FORMER TANK AND CONTENTS
- FORMER REFINERY

PIPELINES

- CRUDE
- GASOLINE
- GAS-CRUDE
- DIESEL
- LIMITS OF FORMER OPERATIONS
- LIMITS OF FORMER DISTURBED NON OPERATIONS AREA

LIMITS	APPROXIMATE AREA (ACRES)
FORMER OPERATIONS	54.5
FORMER DISTURBED NON OPERATIONS	15.8

0 150 300 600 FEET

SCALE

FIGURE 4-2a

HISTORICAL FACILITIES

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\092_1252.011_Utilities_Service_Systems.mxd\7/20/2015

REFERENCE:
GOOGLE MAPS (TELE ATLAS, 2009)

N

EXPLANATION

- FIRE WATER PIPELINE
- GAS PIPELINE
- ACTIVE ELECTRICAL SERVICE
- ACTIVE PG&E ELECTRICAL SERVICE (PROTECT IN PLACE)
- INACTIVE ELECTRICAL SERVICE
- POWER POLE
- PG&E POWER POLE

NOTES:
1. THIS FIGURE HIGHLIGHTS THE MAIN UTILITIES AND SERVICE SYSTEMS.

NOTES:
ABCSD = AVILA BEACH COMMUNITY SERVICES DISTRICT
FEET AMSL = FEET ABOVE MEAN SEA LEVEL

0 150 300 600 FEET
SCALE

FIGURE 4-2b

UTILITIES AND SERVICE SYSTEMS

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

A. FORMER TANK SITE

B. EXISTING TANK RINGS AND STOCK PILE

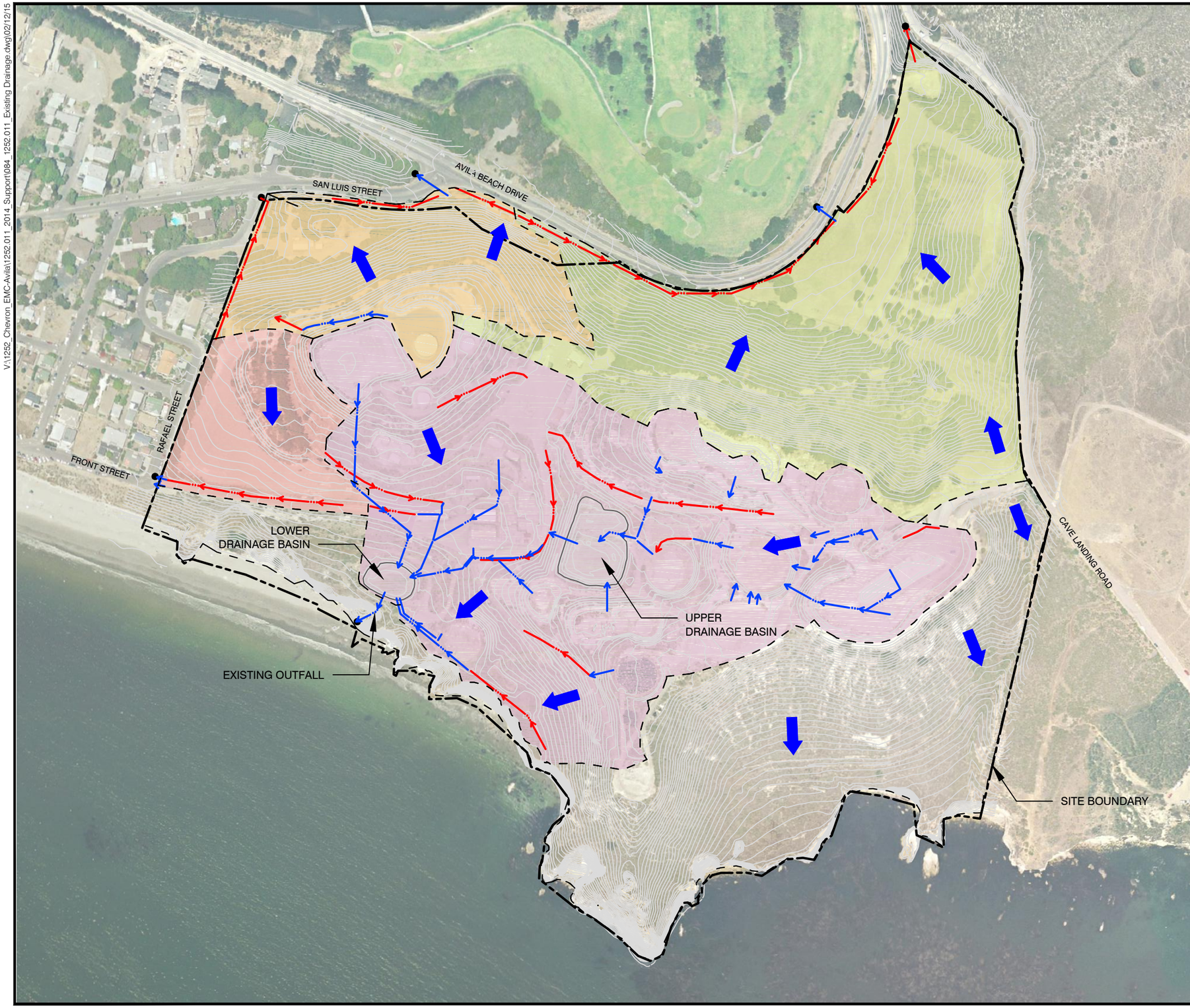
C. EXISTING ROAD THROUGH OAK WOODLANDS

D. COASTAL BLUFF WITH DECOMMISSIONED OIL FACILITIES BEHIND

E. AVILA POINT PROMONTORY

Figure 4-2c Views of Site

V:\1252_Chevron_EMC-Avila\1252.011_2014_Support\084_1252.011_Existing Drainage.dwg\02/12/15



N

EXPLANATION

- STORM DRAIN
- NATURAL DRAINAGE CHANNEL
- OUTFALL
- CATCHMENT AREA
- EXISTING FLOW

0 300 600 FEET

SCALE

FIGURE 4-2d

EXISTING DRAINAGE

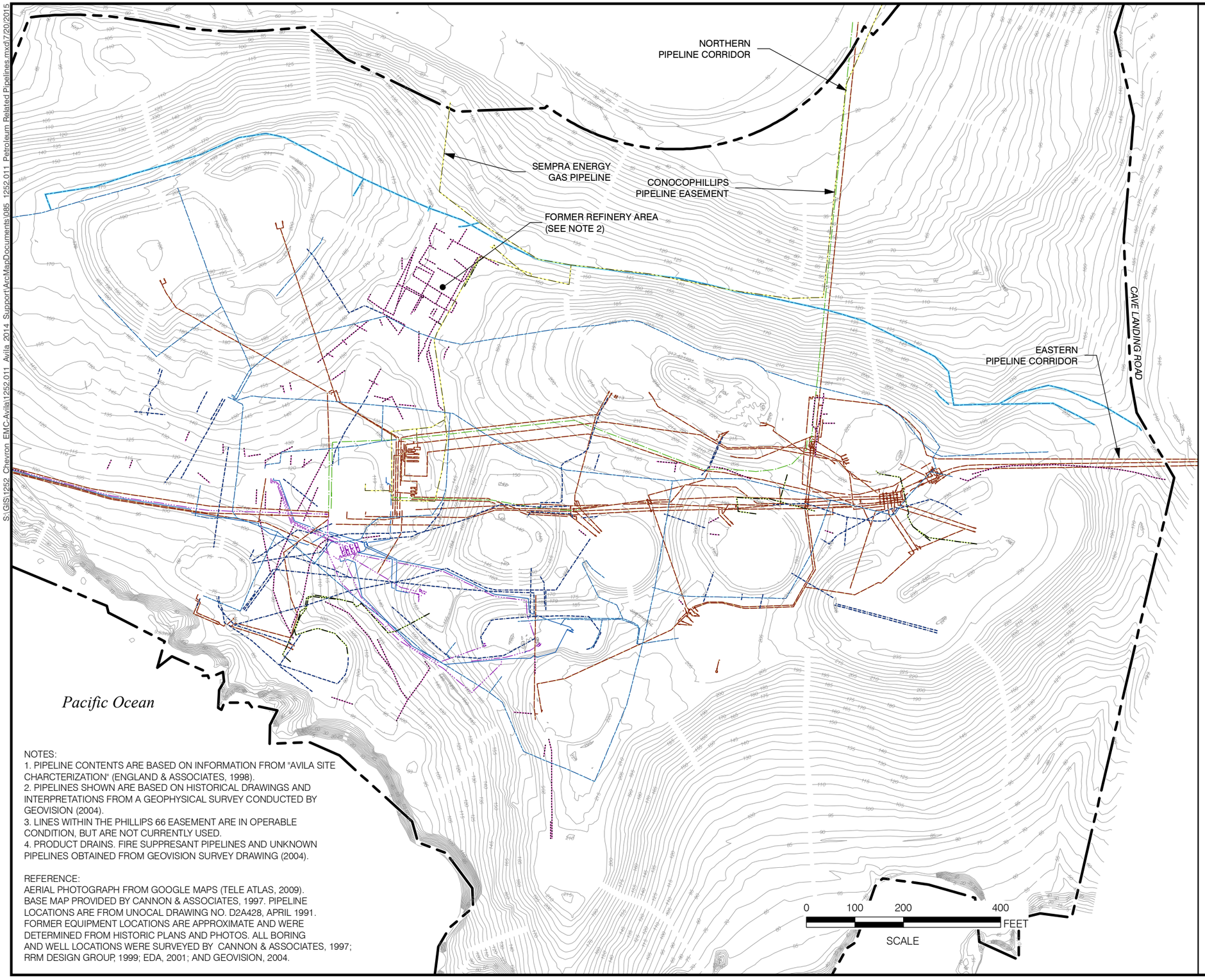
FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\085_1252.011_Petroleum Related Pipelines.mxd\7/20/2015



NOTES:
1. PIPELINE CONTENTS ARE BASED ON INFORMATION FROM "AVILA SITE CHARCTERIZATION" (ENGLAND & ASSOCIATES, 1998).
2. PIPELINES SHOWN ARE BASED ON HISTORICAL DRAWINGS AND INTERPRETATIONS FROM A GEOPHYSICAL SURVEY CONDUCTED BY GEOVISION (2004).
3. LINES WITHIN THE PHILLIPS 66 EASEMENT ARE IN OPERABLE CONDITION, BUT ARE NOT CURRENTLY USED.
4. PRODUCT DRAINS. FIRE SUPPRESANT PIPELINES AND UNKNOWN PIPELINES OBTAINED FROM GEOVISION SURVEY DRAWING (2004).

REFERENCE:
AERIAL PHOTOGRAPH FROM GOOGLE MAPS (TELE ATLAS, 2009). BASE MAP PROVIDED BY CANNON & ASSOCIATES, 1997. PIPELINE LOCATIONS ARE FROM UNOCAL DRAWING NO. D2A428, APRIL 1991. FORMER EQUIPMENT LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM HISTORIC PLANS AND PHOTOS. ALL BORING AND WELL LOCATIONS WERE SURVEYED BY CANNON & ASSOCIATES, 1997; RRM DESIGN GROUP, 1999; EDA, 2001; AND GEOVISION, 2004.

EXPLANATION

PIPELINES
- CRUDE
- GASOLINE
- GAS-CRUDE
- DIESEL
- UNKNOWN PIPELINE (INTERPRETED)
- FIRE SUPPRESSANT PIPELINE
- PRODUCT DRAIN PIPELINE
- FIRE WATER PIPELINE
- GAS PIPELINE

N

PETROLEUM PIPING

PIPING	All Pipelines Total
Hydrocarbon piping	50,145
Fire Suppressant piping (Geovision 2004)	1,500
Unknown piping (Geovision 2004)	6,750
Product drain piping (Geovision 2004)	8,000
Pipe racks	1,200
Front Street Pipelines	7,300
Total pipelines by size (lf)	74,895
Total weight (lbs)	2,619,420
Total weight (tons)	**1,310**

UTILITIES PIPING

PIPING	All Pipelines Total
Firewater piping	14,447
Steam/condensate piping	3,117
Electrical conduit	1,500
Total pipelines by size (lf)	19,064
Total weight (lbs)	340,980
Total weight (tons)	**170**

FIGURE 4-3

HISTORICAL PIPELINES

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\088_1252.011_Support_Facilities_Staging_Areas_Site_Access.mxd 6/30/2015

REFERENCE:
GOOGLE MAPS (TELE ATLAS, 2009)

N

EXPLANATION

- TEMPORARY ACCESS ROAD FOR REMEDIATION
- POTENTIAL JOB SHACK/ STAGING/STOCKPILING AREA
- POWER POLE
- POWER LINE

NOTES:
1. THE CAVE LANDING ENTRANCE WILL BE USED FOR SITE ACCESS OF ALL PERSONNEL MATERIAL DELIVERY TRANSPORT VEHICLES.
2. THE FRONT STREET ENTRANCE WILL BE USED IN CASE OF EMERBENCIES AND FOR FIRE-FIGHTING ACCESS.
3. ALL ROADS ARE EXISTING ROADS.
4. SUPPORT FACILITIES WILL BE LOCATED OUTSIDE SENSITIVE AREAS

NOTES:
ABCSD = AVILA BEACH COMMUNITY SERVICES DISTRICT
FEET AMSL = FEET ABOVE MEAN SEA LEVEL

0 150 300 600 FEET
SCALE

FIGURE 4-4

SUPPORT FACILITIES, STAGING AREAS, AND SITE ACCESS

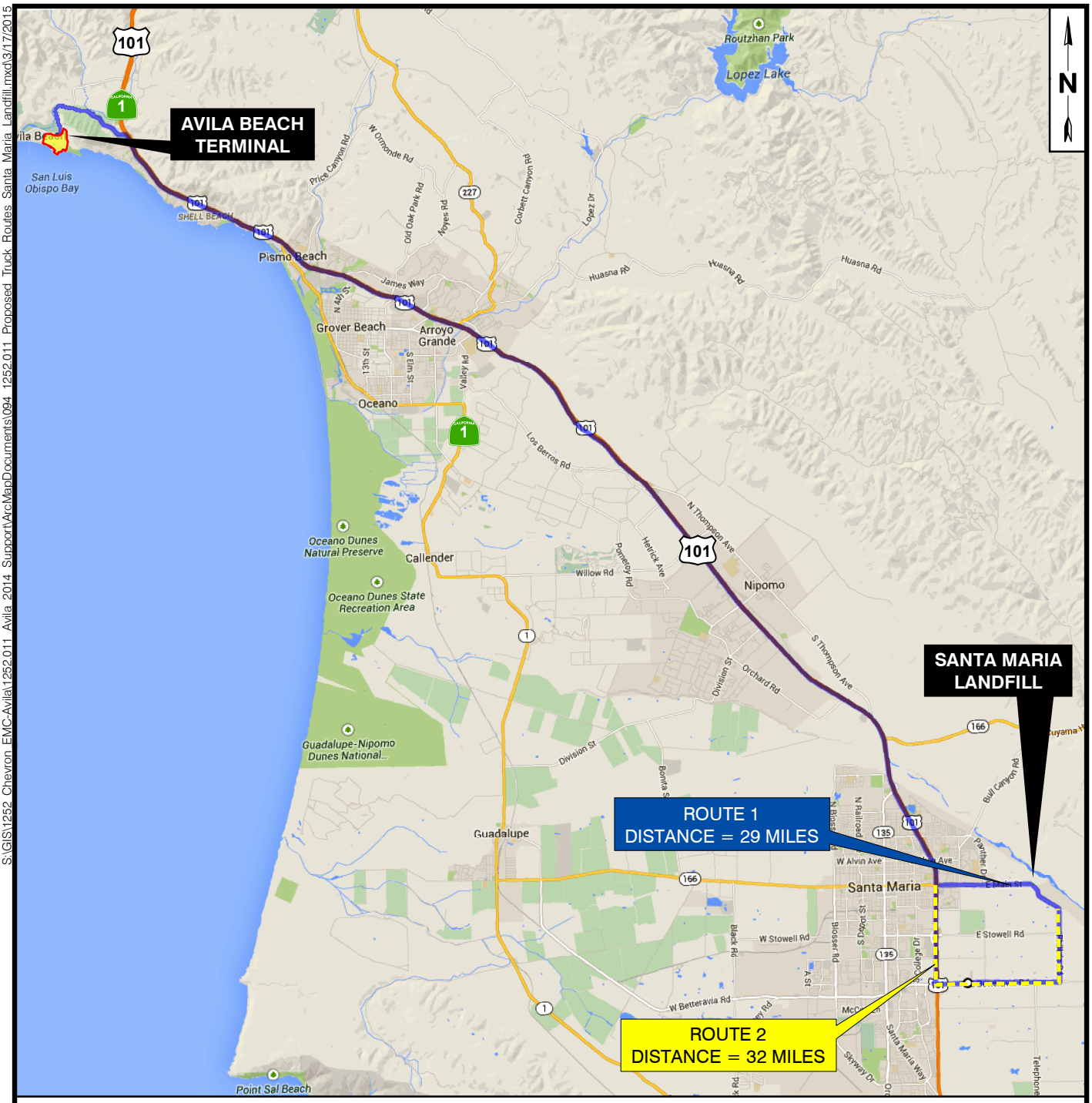
FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\094_1252.011_Proposed_Truck_Routes_Santa_Maria_Landfill.mxd\3/17/2015



0 1.5 3 6 MILES

FIGURE 4-5

PROPOSED TRUCK ROUTES TO SANTA MARIA LANDFILL

FORMER AVILA TERMINAL
AVILA BEACH, CALIFORNIA

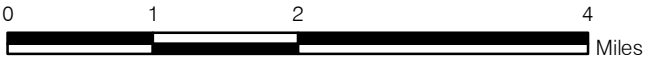
PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

REFERENCE:
ESRI USA DATA SET

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\097_1252.011_Proposed_Truck_Route_Cold_Canyon.mxd\4/1/2015



ROUTE 1
DISTANCE = 13 MILES

FIGURE 4-6

PROPOSED TRUCK ROUTES TO COLD CANYON LANDFILL

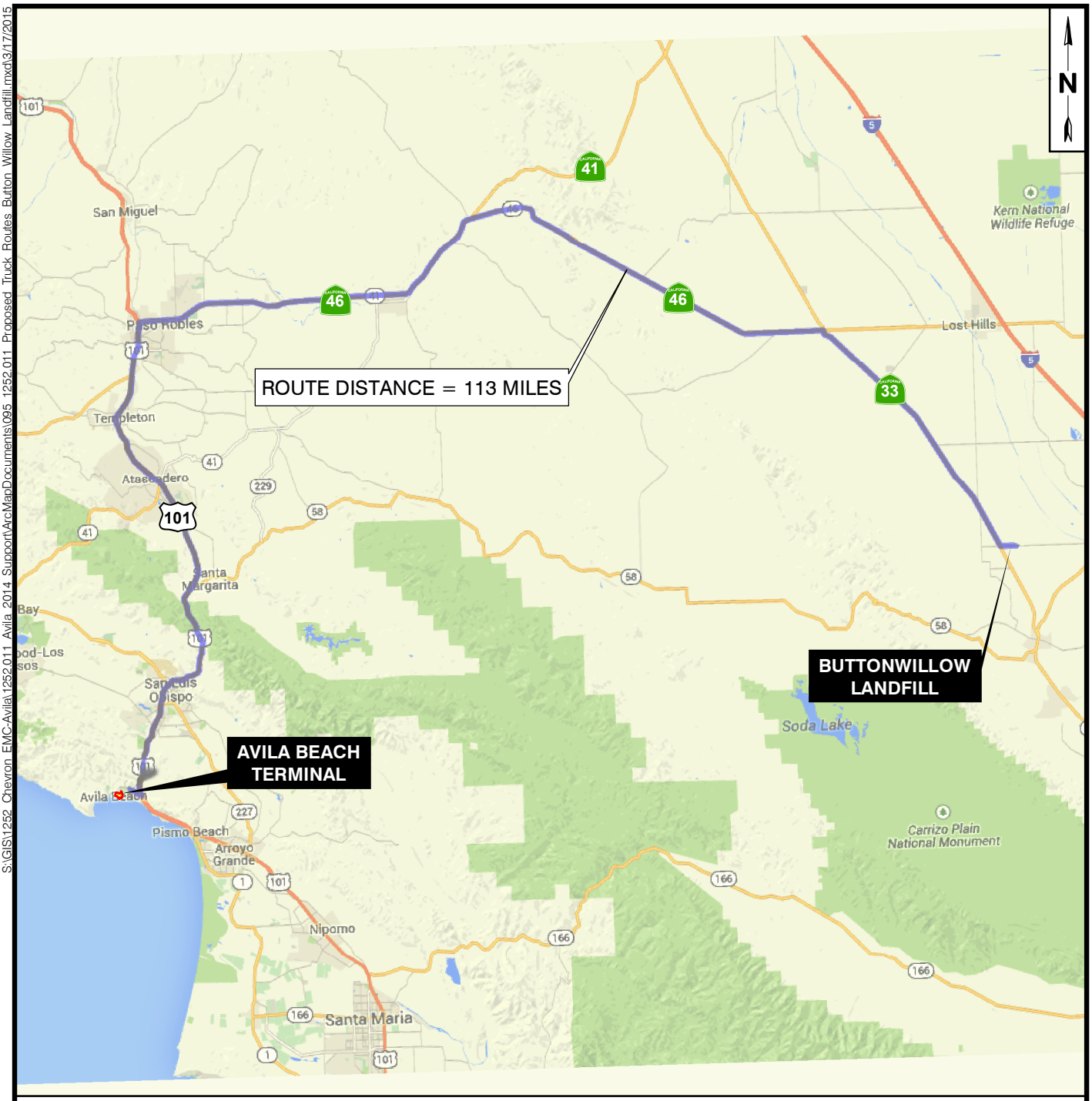
FORMER AVILA TERMINAL
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET
ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\095_1252.011_Proposed_Truck_Routes_Button_Willow_Landfill.mxd\3/17/2015



0 5 10 20 MILES

FIGURE 4-7

PROPOSED TRUCK ROUTE TO BUTTONWILLOW FACILITY

FORMER AVILA TERMINAL
AVILA BEACH, CALIFORNIA

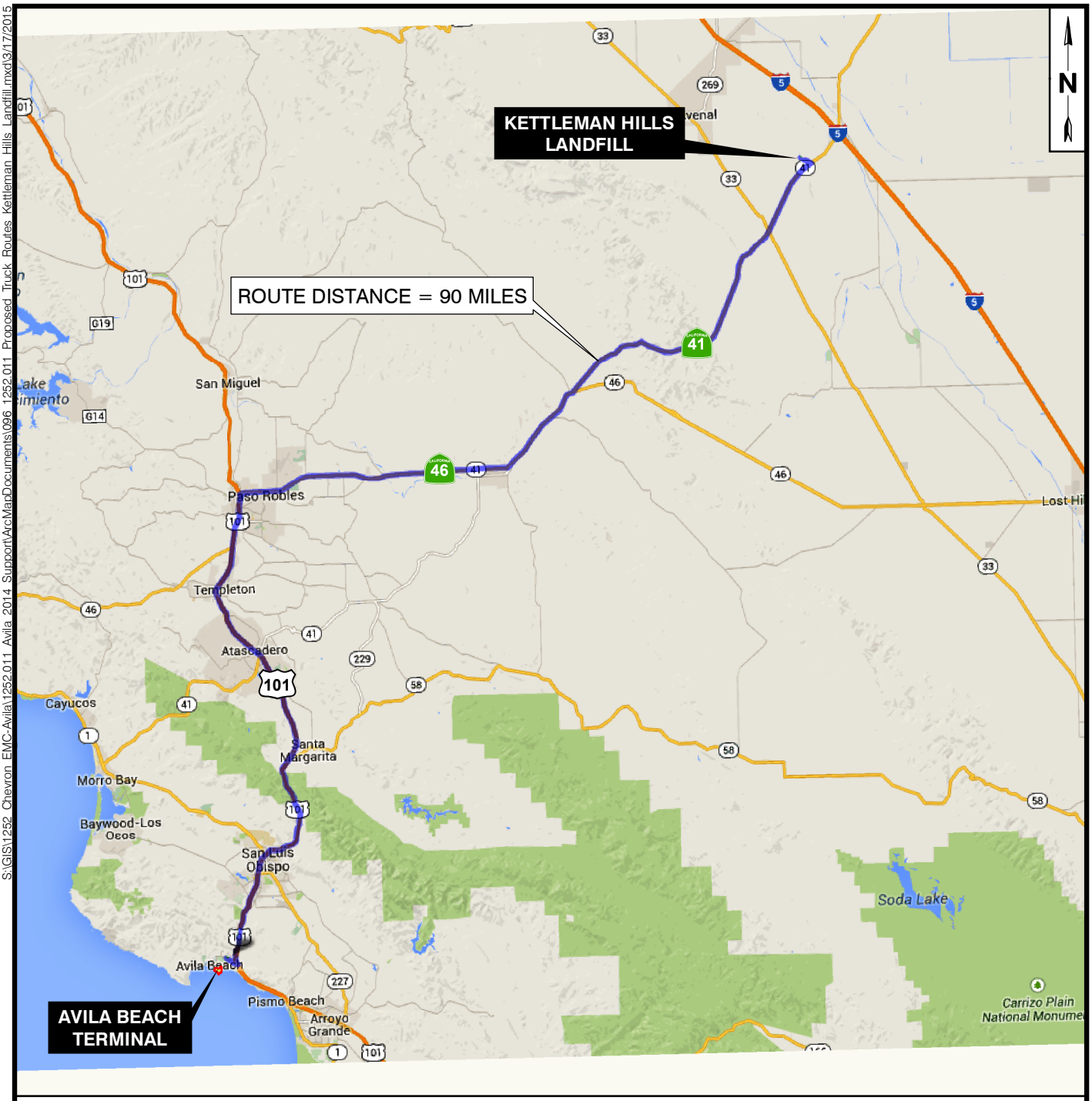
PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

REFERENCE:
ESRI USA DATA SET

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\096_1252.011_Proposed_Truck_Routes_Kettleman_Hills_Landfill.mxd\3/17/2015



0 10 20 MILES

FIGURE 4-8

PROPOSED TRUCK ROUTE TO KETTLEMAN HILLS LANDFILL

FORMER AVILA TERMINAL
AVILA BEACH, CALIFORNIA

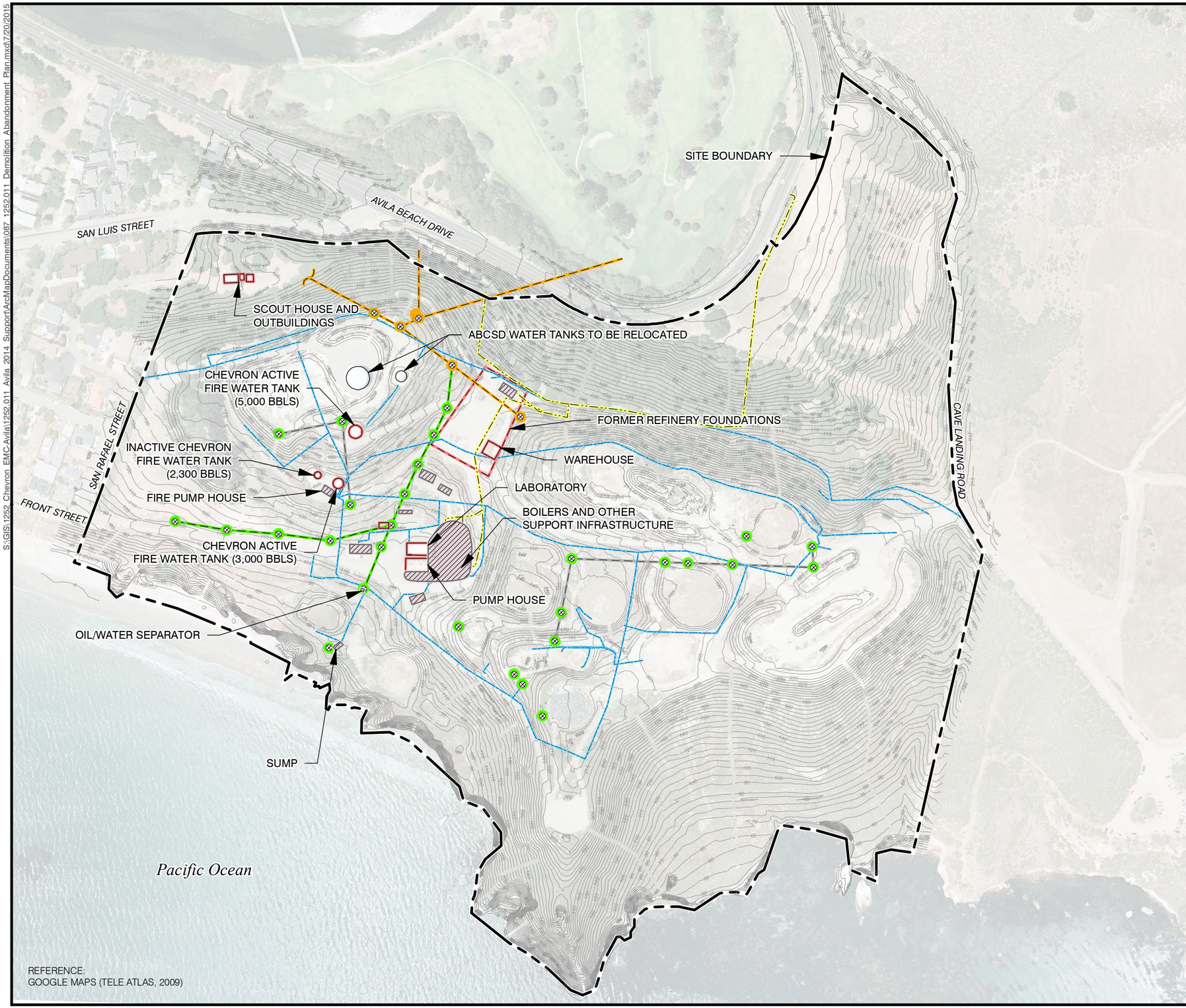
PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

REFERENCE:
ESRI USA DATA SET

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\087_1252.011_Demolition_Abandonment_Plan.mxd\7/20/2015



REFERENCE:
GOOGLE MAPS (TELE ATLAS, 2009)

N

EXPLANATION

- FIRE WATER PIPELINE
- GAS PIPELINE
- ACTIVE CHEVRON ELECTRICAL SERVICE
- ACTIVE PG&E ELECTRICAL SERVICE (PROTECT IN PLACE)
- INACTIVE ELECTRICAL SERVICE
- CHEVRON POWER POLE
- PG&E POWER POLE
- MAJOR CONCRETE FOUNDATION /PAD/VAULT
- ABOVE GROUND STRUCTURE

NOTES:
1. THIS FIGURE HIGHLIGHTS THE MAIN ABOVE GROUND STRUCTURES.
2. DEMOLITION WILL INCLUDE REMOVAL OF ABOVE GROUND PIPING, VAULTS, SUMPS, AND FOUNDATIONS, SOME OF WHICH CANNOT BE SEEN AT THE SCALE OF THIS FIGURE.
3. CHEVRON'S ACTIVE FIRE WATER TANKS WILL BE RETAINED FOR FIRE-FIGHTING AND CONSTRUCTION WATER STORAGE.

NOTES:
ABCSD = AVILA BEACH COMMUNITY SERVICES DISTRICT
FEET AMSL = FEET ABOVE MEAN SEA LEVEL

0 150 300 600 FEET
SCALE

FIGURE 4-9

INFRASTRUCTURE DEMOLITION AND ABANDONMENT PLAN

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

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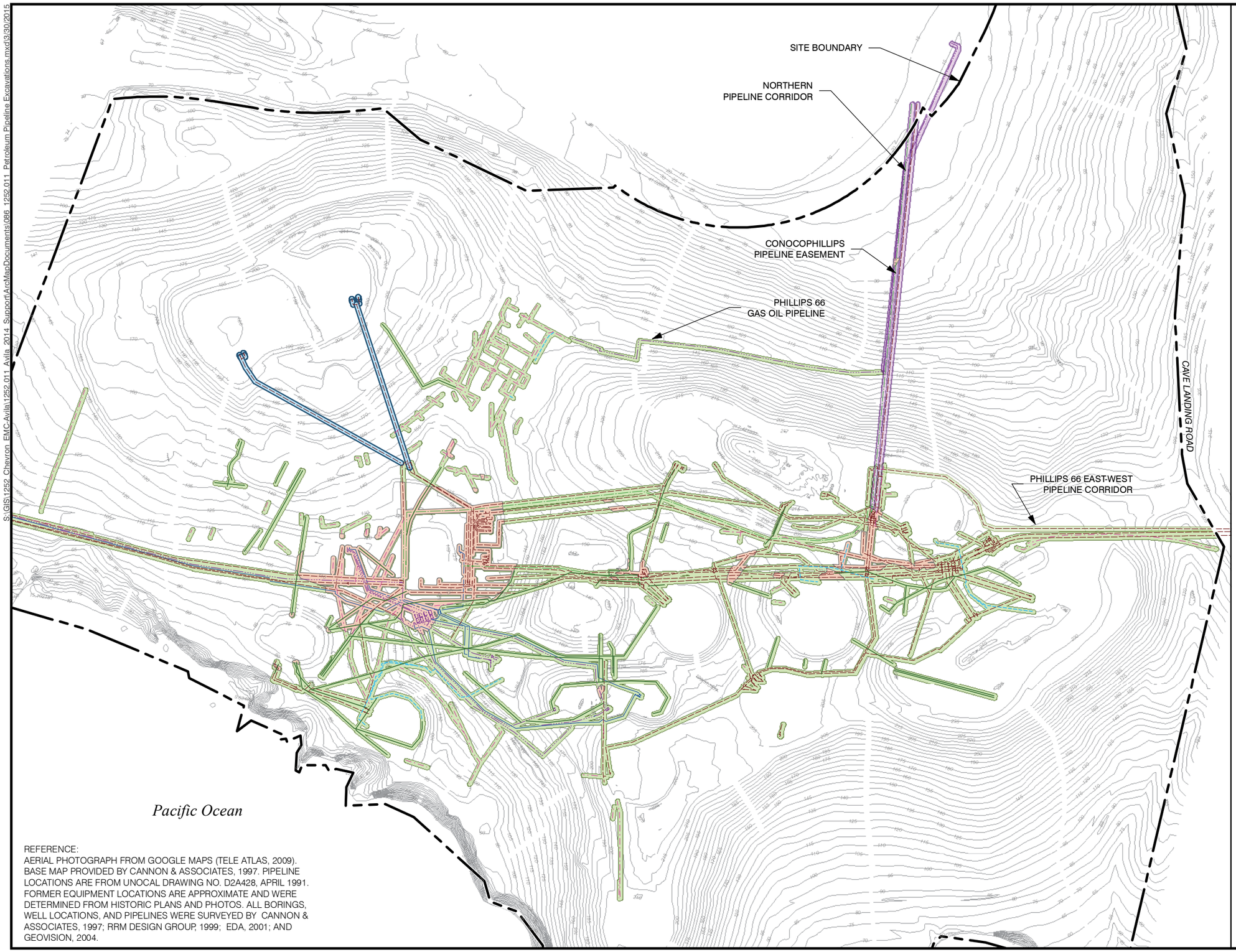

REFERENCE:
AERIAL PHOTOGRAPH FROM GOOGLE MAPS (TELE ATLAS, 2009). BASE MAP PROVIDED BY CANNON & ASSOCIATES, 1997. PIPELINE LOCATIONS ARE FROM UNOCAL DRAWING NO. D2A428, APRIL 1991. FORMER EQUIPMENT LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM HISTORIC PLANS AND PHOTOS. ALL BORINGS, WELL LOCATIONS, AND PIPELINES WERE SURVEYED BY CANNON & ASSOCIATES, 1997; RRM DESIGN GROUP, 1999; EDA, 2001; AND GEOVISION, 2004.

EXPLANATION

- FORMER PIPING-UNKNOWN
- FORMER PIPING-FIRE SUPPRESSANT
- FORMER PIPING-PRODUCT DRAIN

PIPELINES

- CRUDE
- GASOLINE
- GAS-CRUDE
- DIESEL
- PIPELINE REMOVAL WHERE EXCAVATED SOIL DISPOSED OFFSITE
- GROUTED PIPELINE
- PHILLIPS 66 PIPELINE TO BE ABANDONED IN PLACE
- PIPELINE REMOVAL WHERE EXCAVATED SOIL CAN BE REUSED ONSITE

NOTES:
1. PIPELINE CONTENTS ARE BASED ON THE "AVILA SITE CHARACTERIZATION" (ENGLAND & ASSOCIATES, 1998).
2. PIPELINE S IDENTIFIED ARE BASED ON HISTORICAL DOCUMENTS, INCLUDING THE GEOPHYSICAL SURVEY CONDUCTED BY GEOVISION IN 2004. THE PIPELINES WITH UNKNOWN CONTENTS WERE INTERPRETED BY GEOVISION IN THEIR SURVEY.
3. PIPELINES WITHIN ENVIRONMENTALLY SENSITIVE AREAS MAY NOT BE REMOVED BUT MAY BE ABANDONED OR GROUTED IN PLACE.
4. THIS FIGURE ALSO ILLUSTRATES THE ASSUMPTIONS USED TO CALCULATE VOLUMES OF SOIL TO BE EXCAVATED DURING PIPELINE REMOVAL AND ESTIMATES REGARDING SOIL THAT CAN BE REUSED ONSITE VERSUS WHAT WILL BE TRANSPORTED OFFSITE.

0 100 200 400 FEET
SCALE

FIGURE 4-10

PETROLEUM PIPELINE REMOVAL/ABANDONMENT

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

EXPLANATION

- MONITORING WELL TO BE ABANDONED
- MONITORING WELL (OUTSIDE REMEDIATION AREAS)
- GRADING LIMITS

N

0 150 300 600 FEET

SCALE

FIGURE 4-11

MONITORING WELL LOCATIONS

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\084_1252.011_Existing_Monitoring_Well_Locations_Proposed_Post-Closure_Disposition.mxd\2/18/2015

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N

EXPLANATION

- OU #1 - FORMER LOADING RACK & PUMP HOUSE AREA
- OU #2 - FORMER OPERATIONS AREA
- OU #3 - NON-OPERATIONS AREA
- OU #5 - CLIFF AREA (BEING ADDRESSED SEPARATELY)
- DIESEL/GAS/CRUDE OIL PIPELINES
- FORMER ABOVEGROUND STORAGE TANK

AOC #	AOC Description
Operable Unit 1 - Loading Rack and Pump House Area	
1	naTPH in Soil, VOCs and Methane in Soil Gas, and LNAPL on Groundwater
Operable Unit 2 - Former Operations Area	
1	Refractory Glass in Near-Surface Soil
2	Lead in Near-Surface Soil at AST Rings
3	naTPH in Refinery Area Soil
4	VOCs in Refinery Area Soil Gas
5	naTPH in Soil along Pipeline Corridors
6	VOCs in Soil Gas at Former ASTs
Operable Unit 3 - Non-Operations Area	
1	Intact Asphaltic TPH Ground Cover (Not Shown)
Operable Unit 4 - Site-Wide Groundwater	
1	LNAPL on Water Table
2	Dissolved-Phase Hydrocarbons in Groundwater
3	Cliff Springs
Operable Unit 5 - Cliff Area (Being Addressed Separately)	

0 150 300 600 FEET

SCALE

FIGURE 4-12

OPERABLE UNITS AND AREAS OF CONCERN

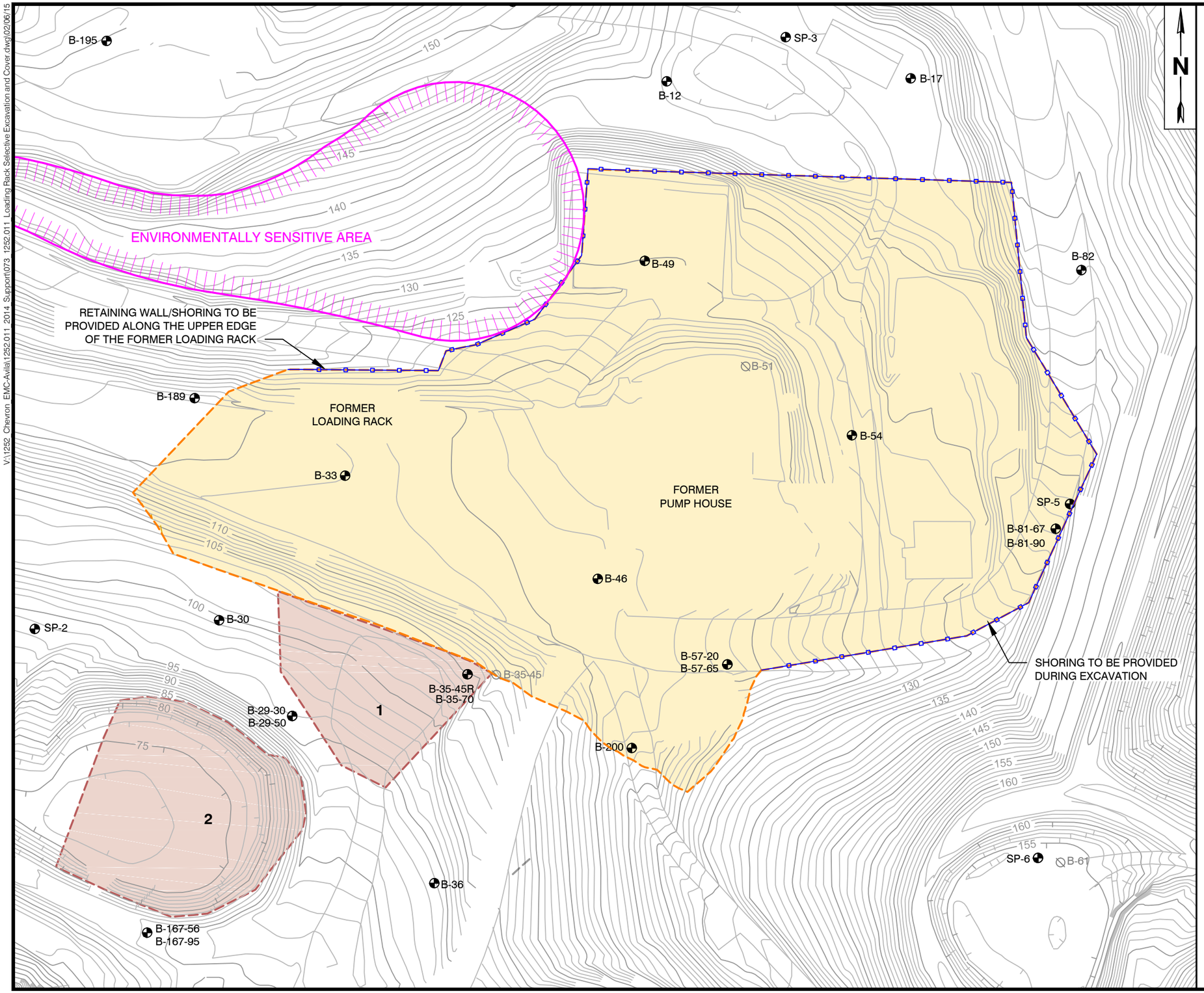
FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

V:\1252 Chevron EMC-Avila\1252.011 2014 Support\073 1252.011 Loading Rack Selective Excavation and Cover.dwg\02/06/15



EXPLANATION

- MAXIMUM EXTENT OF EXCAVATION IN PUMP HOUSE AND LOADING RACK AREA
- ADDITIONAL EXCAVATION TO PROVIDE 4' OF SEPARATION BETWEEN TPH-IMPACTED SPOIL AND GROUND SURFACE
- PERIMETER SHORING/RETAINING WALL
- ENVIRONMENTALLY SENSITIVE AREA
- GROUNDWATER MONITORING WELL

0 50 100 FEET

SCALE

FIGURE 4-13

SELECTIVE SOURCE REMOVAL AND SEPARATION PLAN, PUMP HOUSE AND LOADING RACK AREA

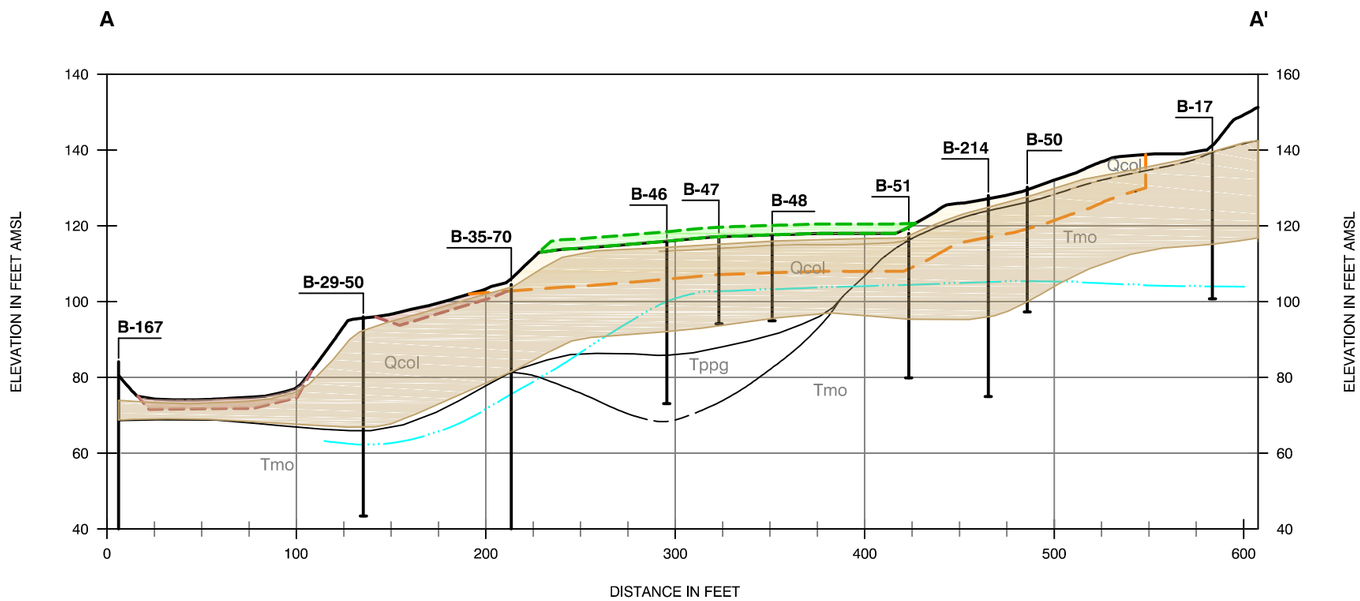
FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

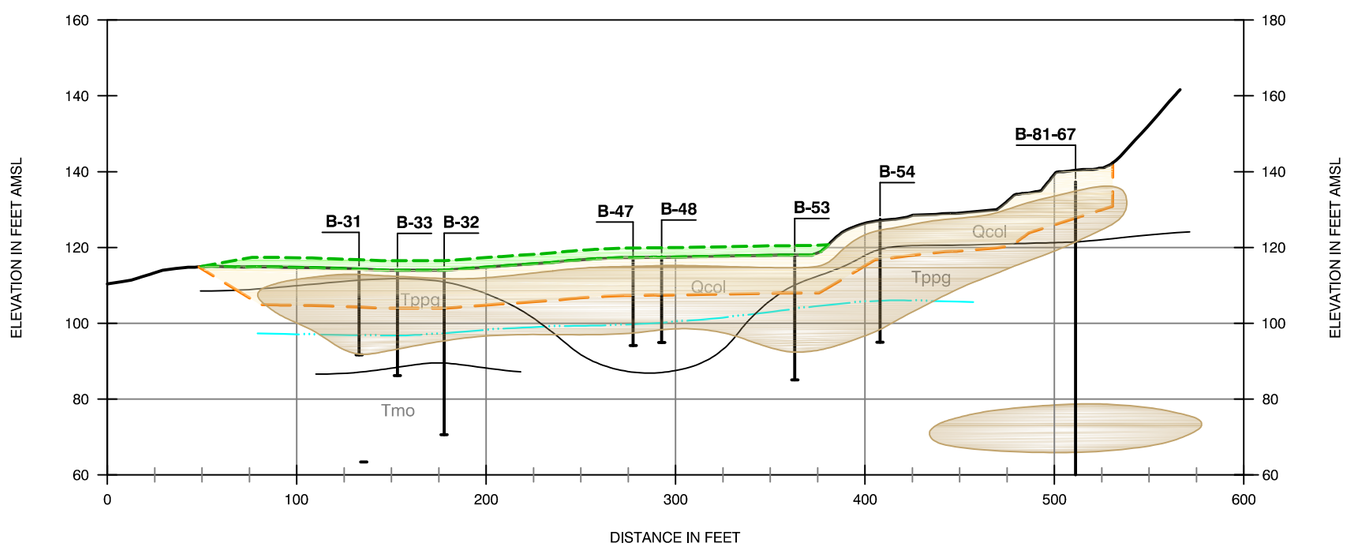
PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

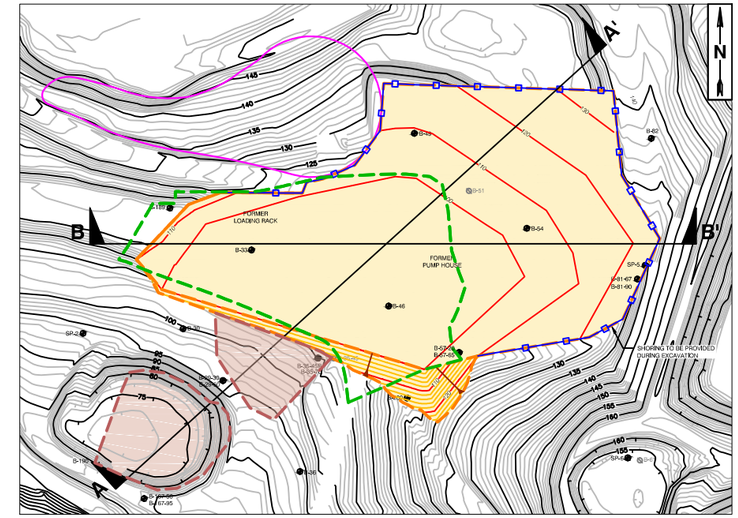
V:\1252 Chevron EMC-Avila\1252.011 2014 Support\020 1252.011 XSections AA BB Loading Rack PumpHouse Exc.dwg\02/13/15





0 80 160 FEET

HORIZONTAL AND VERTICAL SCALE



CROSSECTION LOCATIONS

LEGEND

- MAXIMUM EXTENT OF EXCAVATION IN PUMP HOUSE AND LOADING RACK AREA
- naTPH > 1,000 mg/kg
- RAISE GRADE BY 5' (AVERAGE)
- ADDITIONAL REMOVAL TO PROVIDE 4' OF SEPARATION BETWEEN TPH-IMPACTED SPOIL AND GROUND SURFACE
- ENVIRONMENTALLY SENSITIVE AREA
- B-54 — EXISTING GROUNDWATER MONITORING WELL LOCATION

FIGURE 4-14

PUMP HOUSE AREA EXCAVATIONS CROSS SECTIONS

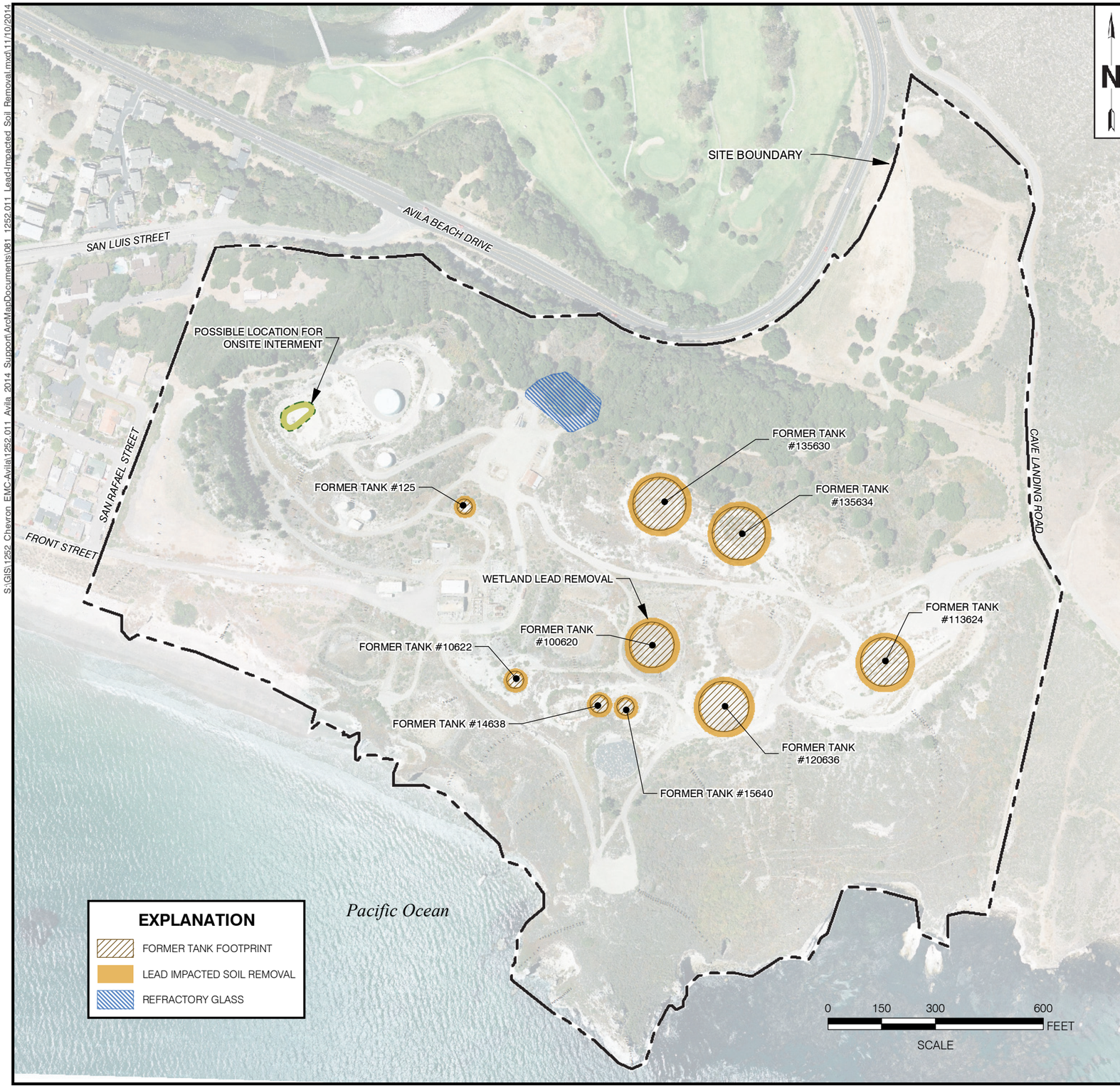
FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

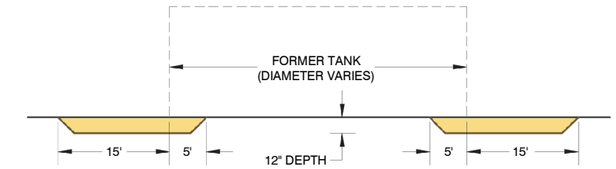
PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

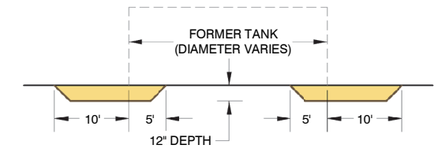
S:\GIS\1252 Chevron EMC-Avila\1252.011 Avila 2014 Support\ArcMapDocuments\081 1252.011 Lead-Impacted Soil Removal.mxd\11/10/2014





TYPICAL EXCAVATION AROUND LARGER TANKS

NOT TO SCALE



TYPICAL EXCAVATION AROUND SMALLER TANKS

NOT TO SCALE

LEAD REMOVAL VOLUMES

Tank IDs	Removal Area (sq. ft.)	Estimated Volume (cy)
125	1,417	52
10622	1,566	58
14638	1,566	58
15640	1,506	56
100620	4,785	177
113624	4,785	177
120636	5,238	194
135630	5,577	207
135634	5,577	207
	Total	1,186

ESTIMATED NOMINAL VOLUME OF REFRACTORY GLASS-CONTAINING SOIL = 2,800 CY

FIGURE 4-15

LEAD-IMPACTED AND REFRACTORY GLASS-CONTAINING SOIL REMOVAL

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\065_1252.011_naTPH_1000_4ft_Ground_Surface.mxd\2/6/2015

N

EXPLANATION

- naTPH > 1,000 mg/kg WITHIN 4-FEET OF SURFACE
- OU #1 - FORMER LOADING RACK & PUMP HOUSE AREA
- OU #2 - FORMER OPERATIONS AREA
- OU #3 - NON-OPERATIONS

NOTE: INDICATED naTPH >1,000 MG/KG
TO BE REMOVED OR COVERED WITH
A MINIMUM OF 4 FEET OF CLEAN SOIL

0 150 300 600 FEET
SCALE

FIGURE 4-16

naTPH >1,000 mg/kg WITHIN 4 FEET OF EXISTING GROUND SURFACE

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.011_Avila_2014_Support\ArcMapDocuments\083_1252.011_Approx_Extent_VOC-Impacted_Soil_Gas_Potential_HHR.mxd\11/7/2014

N

0 300 600 FEET

SCALE

FIGURE 4-17

APPROXIMATE EXTENT OF VOC-IMPACTED SOIL GAS POSING A POTENTIAL HUMAN HEALTH RISK

FORMER AVILA TANK FARM
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON, INC.
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

V:\1252_Chevron_EMC-Avila\1252.012_2015_Support\026_Avila Sprayed on Asphaltic TPH.dwg\06/26/15

N

EXPLANATION

- ASPHALTIC LAYER OVER FLAT GROUND
- PROMINENT LAYER OF ASPHALT OVER STEEP SLOPE
- ASPHALT (DISINTEGRATED) WITH SOME VEGETATION
- ASPHALT (DISINTEGRATED) WITH DENSE VEGETATION
- EXTENT OF PROPOSED SITE GRADING

NOTES:

- AREAS OF SPRAYED-ON ASPHALT IDENTIFIED BY VISUAL OBSERVATIONS BY AVOCET IN JUNE 2013. THE AREAS ARE APPROXIMATE AND SUBJECT TO CHANGE OVER TIME.
- ASPHALT CORRESPONDING TO PAVED ROADS HAS NOT BEEN HIGHLIGHTED.
- N.A. - NOT AVAILABLE. VISUAL OBSERVATIONS COULD NOT BE MADE DUE TO ACCESSIBILITY ISSUES AND PRESENCE OF DENSE VEGETATION.

0 150 300 FEET

SCALE

FIGURE 4-18

SPRAYED-ON ASPHALTIC TPH AT GROUND SURFACE

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1252_Chevron_EMC-Avila\1252.012_Avila_2015_Support\ArcMapDocuments\019_1252.012_Areas_Dominated_by_Hydrophytic_Vegetation.mxd\6/5/2015

N

EXPLANATION

DELINEATED FEATURE - TOTAL AREA: 1.31 ACRES*

"THE AREAS SHOWN WERE DETERMINED TO BE DOMINATED BY HYDROPHYTIC VEGETATION DURING DELINEATION SURVEYS CONDUCTED BY PADRE ASSOCIATES IN 2012. A U.S. ARMY CORPS OF ENGINEERS REPRESENTATIVE CONDUCTED A FIELD VISIT 8/21/12 AND DETERMINED THAT THE AREAS WERE NON-JURISDICTIONAL. THE DELINEATION OF FEATURE 7 WAS UPDATED BY WRA ENVIRONMENTAL CONSULTANTS IN MAY 2015."

0 300 600 Feet

Scale

FIGURE 4-19a

AREAS DOMINATED BY HYDROPHYTIC VEGETATION

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

Figure 4-19b Potential Wetland Mitigation Location Map

Figure 4-19c Potential Wetland Mitigation Opportunity Area

Figure 4-20a Oak Woodlands

N

TREE SUMMARY

ALL TREES WITHIN THE LIMITS OF GRADING TO BE REMOVED UNLESS NOTED OTHERWISE.
PROTECT IN PLACE TREES OUTSIDE OF GRADING LIMITS.

TOTAL NUMBER OF TREES 8" OR LARGER:
(81) MONTEREY PINE
(11) COAST LIVE OAK
(4) MONTEREY CYPRESS
(0) TOYON
(1) BLACK WALNUT

EXPLANATION

- TREES TO REMOVE (≥8" DIA)
- PROPOSED EXTENT OF REMEDIATION GRADING

0 150 300 600 FEET
SCALE

FIGURE 4-20b

TREES TO BE REMOVED DURING REMEDIATION GRADING

FORMER AVILA TERMINAL
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

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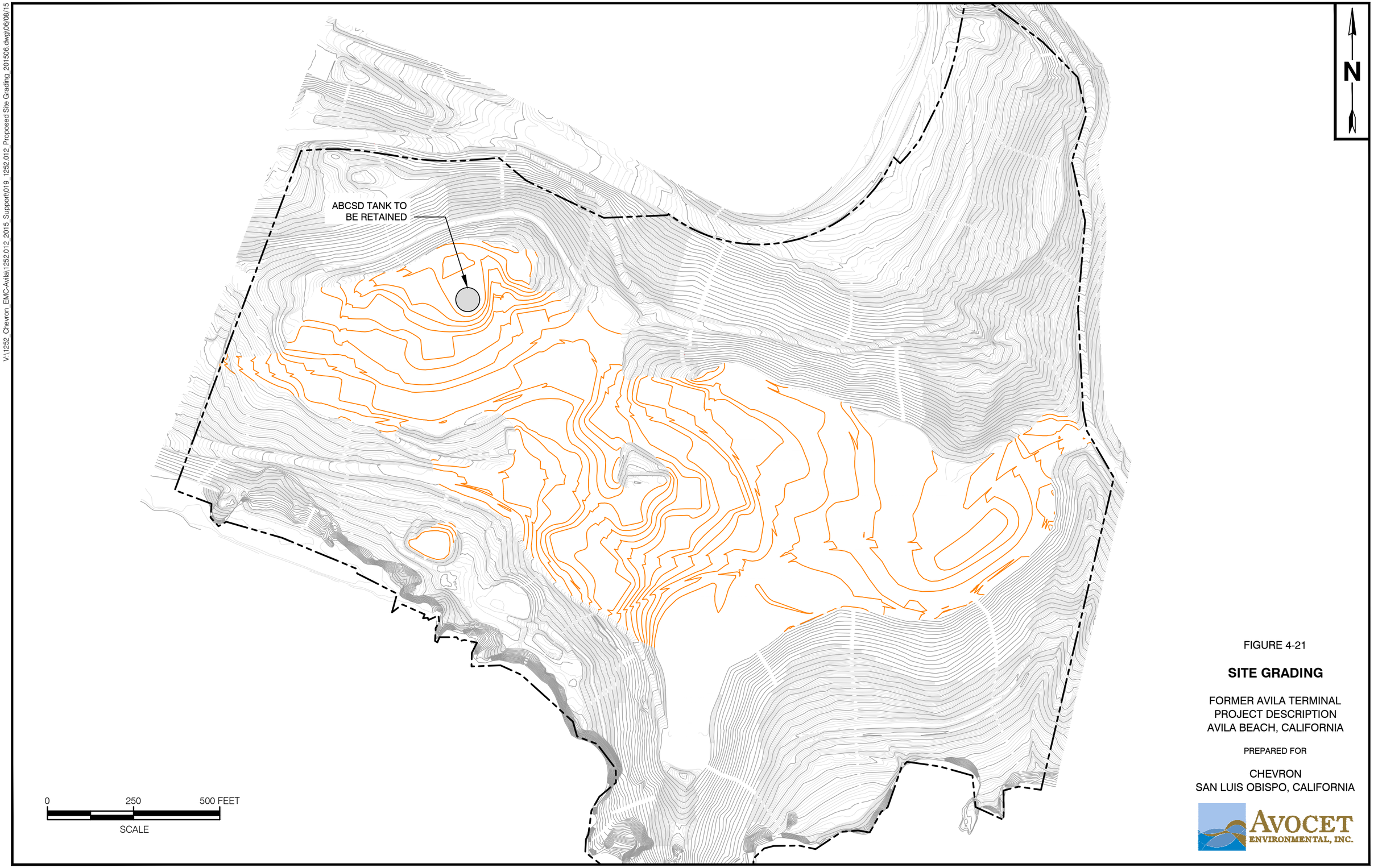


FIGURE 4-21

SITE GRADING

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON
SAN LUIS OBISPO, CALIFORNIA

AVOCET
ENVIRONMENTAL, INC.

V:\1252_Chevron_EMC-Avila\1252.012_2015_Support\011_1252.012_Post Remediation Drainage_201505.dwg\06/30/15

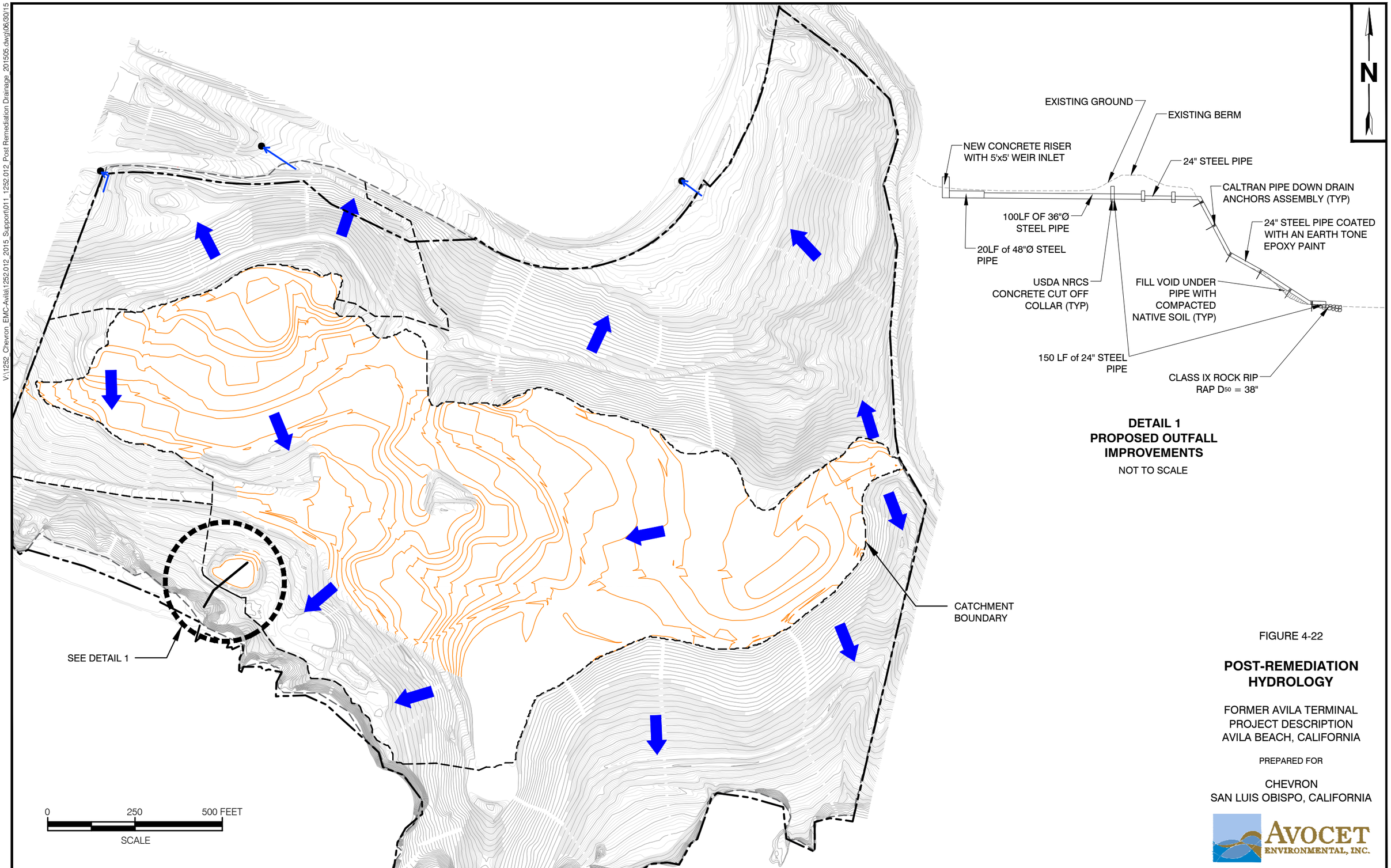


FIGURE 4-22

POST-REMEDIATION HYDROLOGY

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

Figure 5-1a Existing and Proposed Land Use

	Avila Point Site	RMF	Residential Multifamily
RR	Residential Rural	RS	Residential Single Family
OS	Open Space	CR	Commerical Retail
REC	Recreation		

Figure 5-1b Adjacent Land Use Map

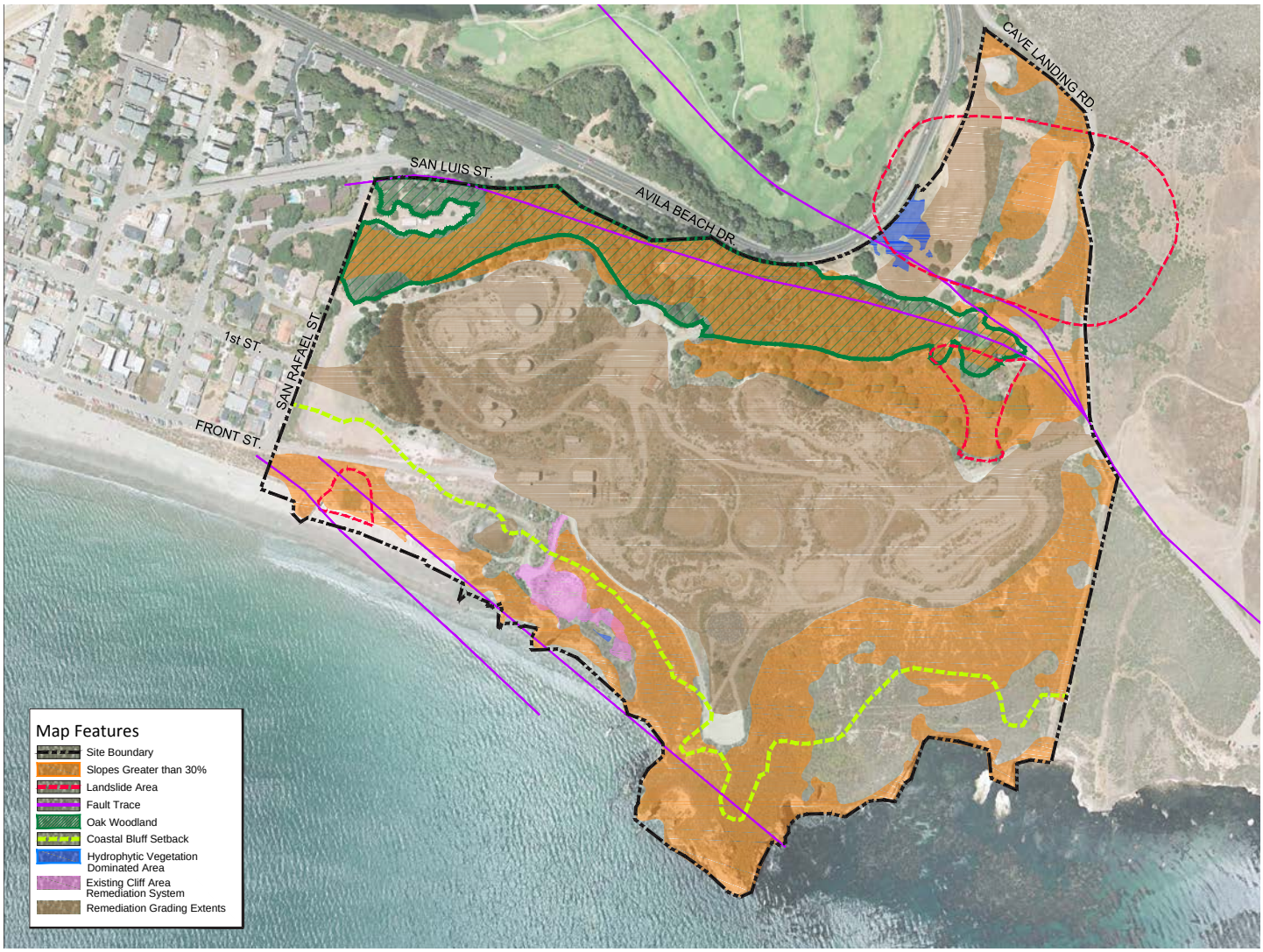


Figure 5-2 Post Remediation Development Considerations

EXISTING: *Previously Disturbed Areas Occupied Approximately 75% of the Site*

PROPOSED: *Project Will Enhance/Conserve Around 64% of Open Space*

Existing Site Condition

Previously Disturbed Industrial Areas	54.9 acres	58%
Previously Disturbed Non-Industrial Area	15.8 acres	17%
Undisturbed Area	24.2 acres	25%
TOTAL	**95 acres**	**100%**

Proposed Open Space and Developed Areas

Buildings, Roads, Coastal Trail, and Resort Landscaping	**34 acres**	**36%**
Buildings, Roads, Trail Subtotal	(17) acres	(18%)
Resort Landscaping Subtotal	(17) acres	(18%)
Open Space	**61 acres**	**64%**
Maintained Revegetated Open Space Subtotal	(7) acres	(7%)
Open Space/Bluff Open Space/Oak Woodland Subtotal	(54) acres	(57%)
TOTAL	**95 acres**	**100%**

Figure 5-3a Development Footprint Comparison

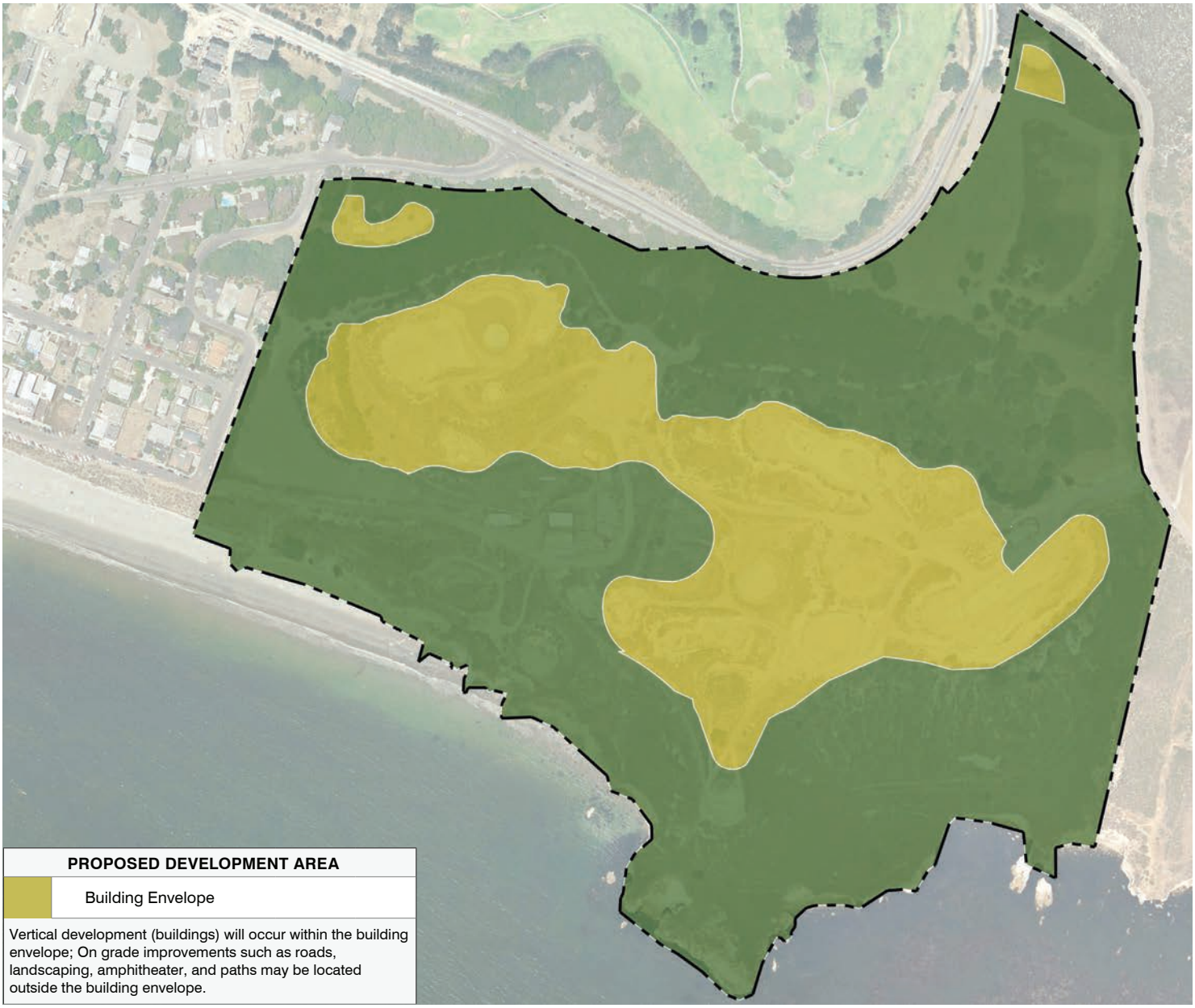
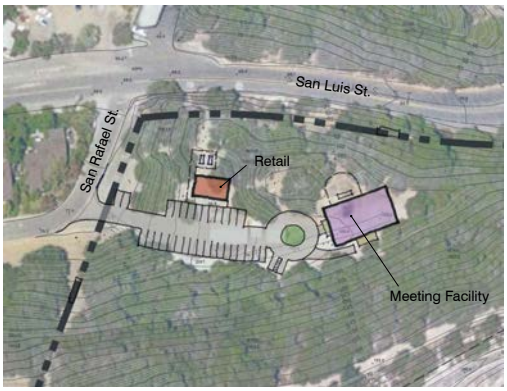


Figure 5-3b Building Envelopes

Figure 5-4a Proposed Land Use

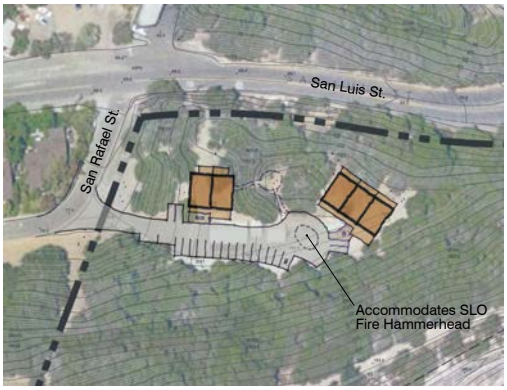
Figure 5-4b Redevelopment Site Plan

Office
- 7,000 square feet/2 story

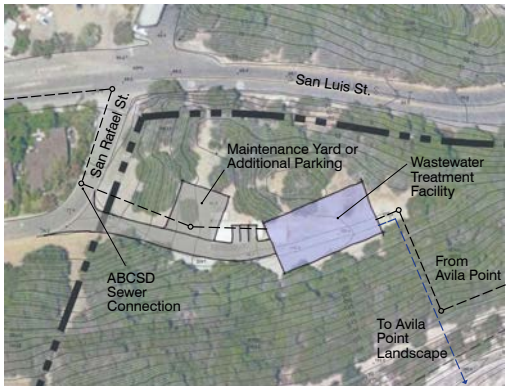


Meeting Space
- 3,500 gross sf/1 story
- 1,600 sf main event space

Retail
- 1,000 square feet/1 Story
- Outdoor dining area



Residential
- 10 - 1000 sf units/2 story
- Five 2 bedroom units/flr.



Waste Water Treatment Facility
- Area: 7,800 sf

Figure 5-4c Redevelopment Options for Scout House

Figure 5-5 Circulation and Access

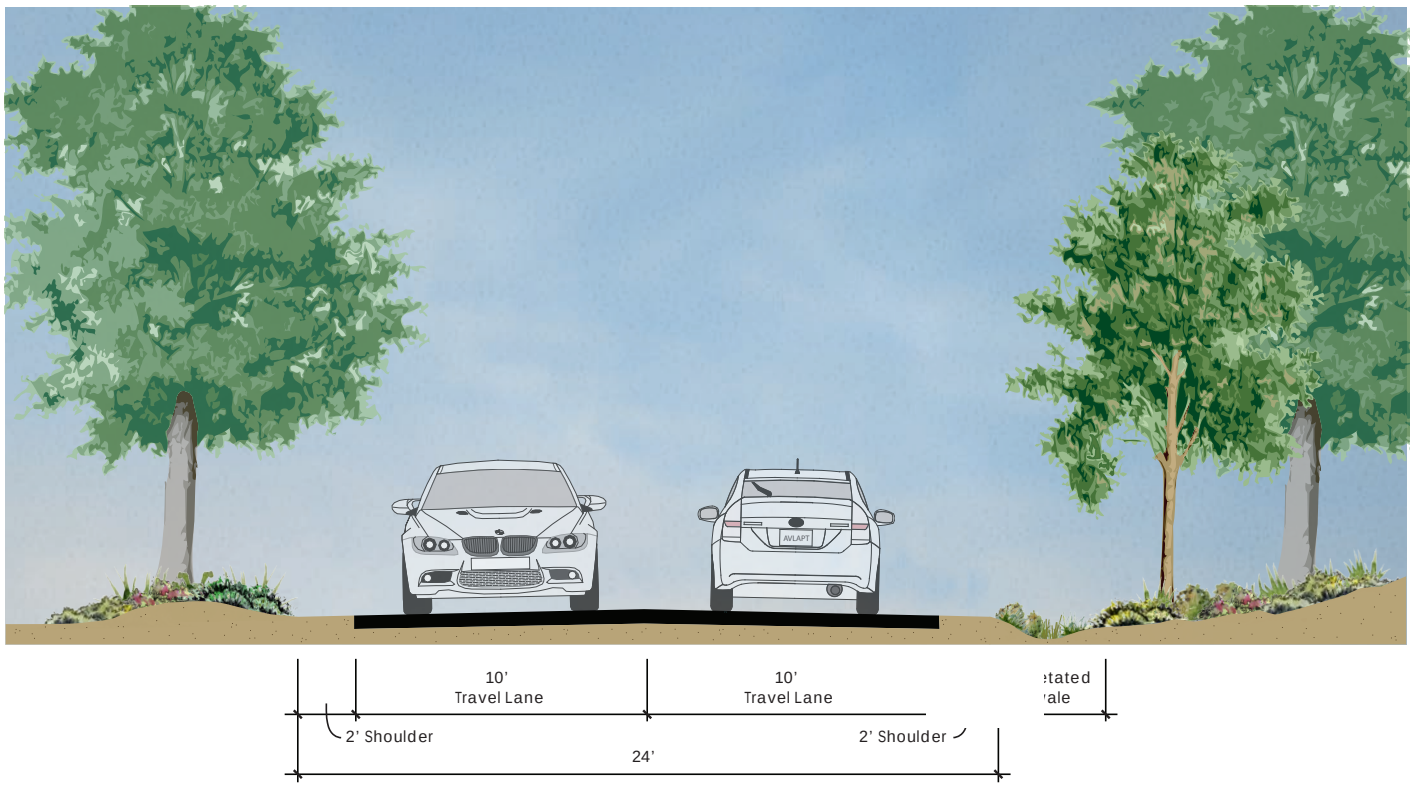


Figure 5-6 Resort Center Access (1-1), VTM Road A

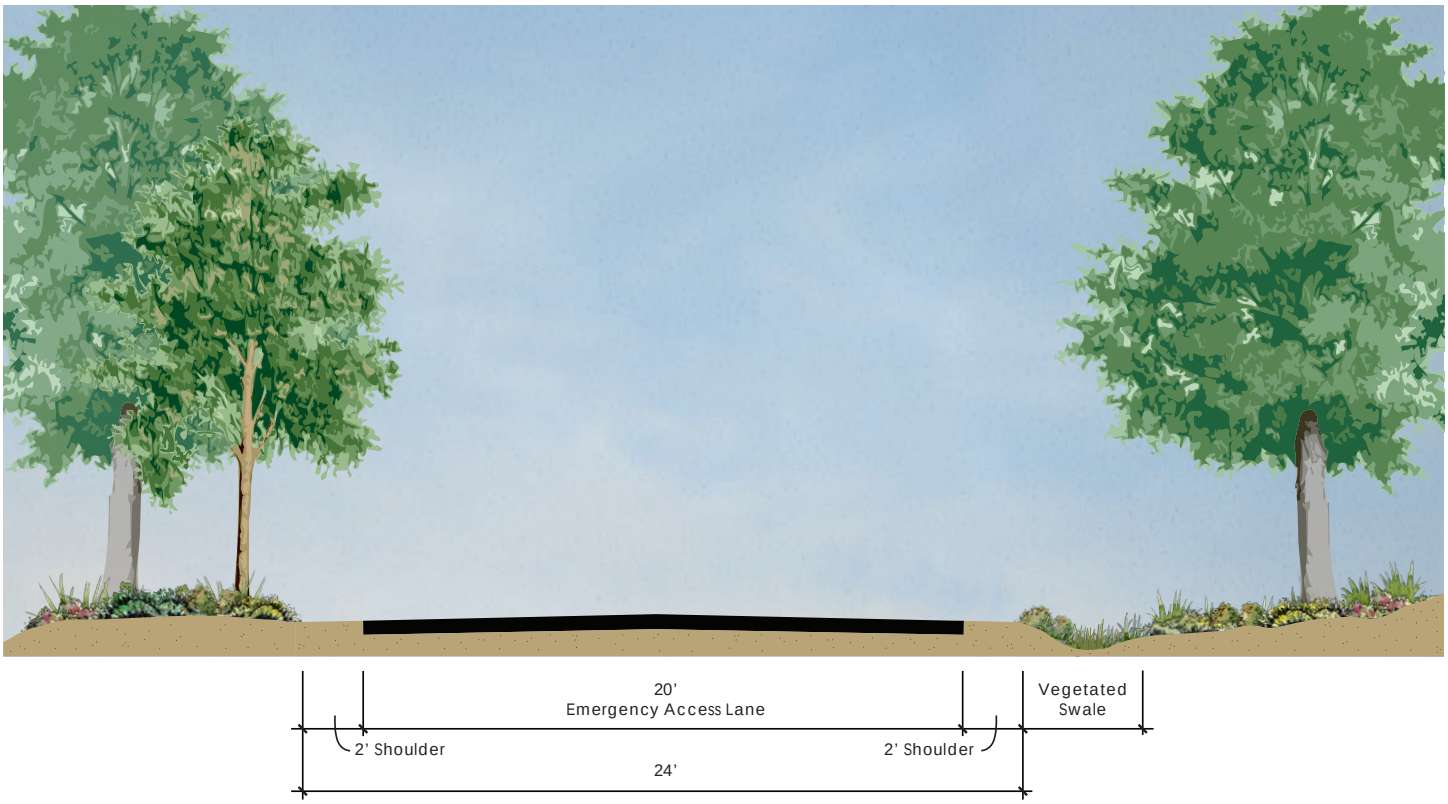


Figure 5-7 1st Street Emergency Access (2-2), VTM Road B

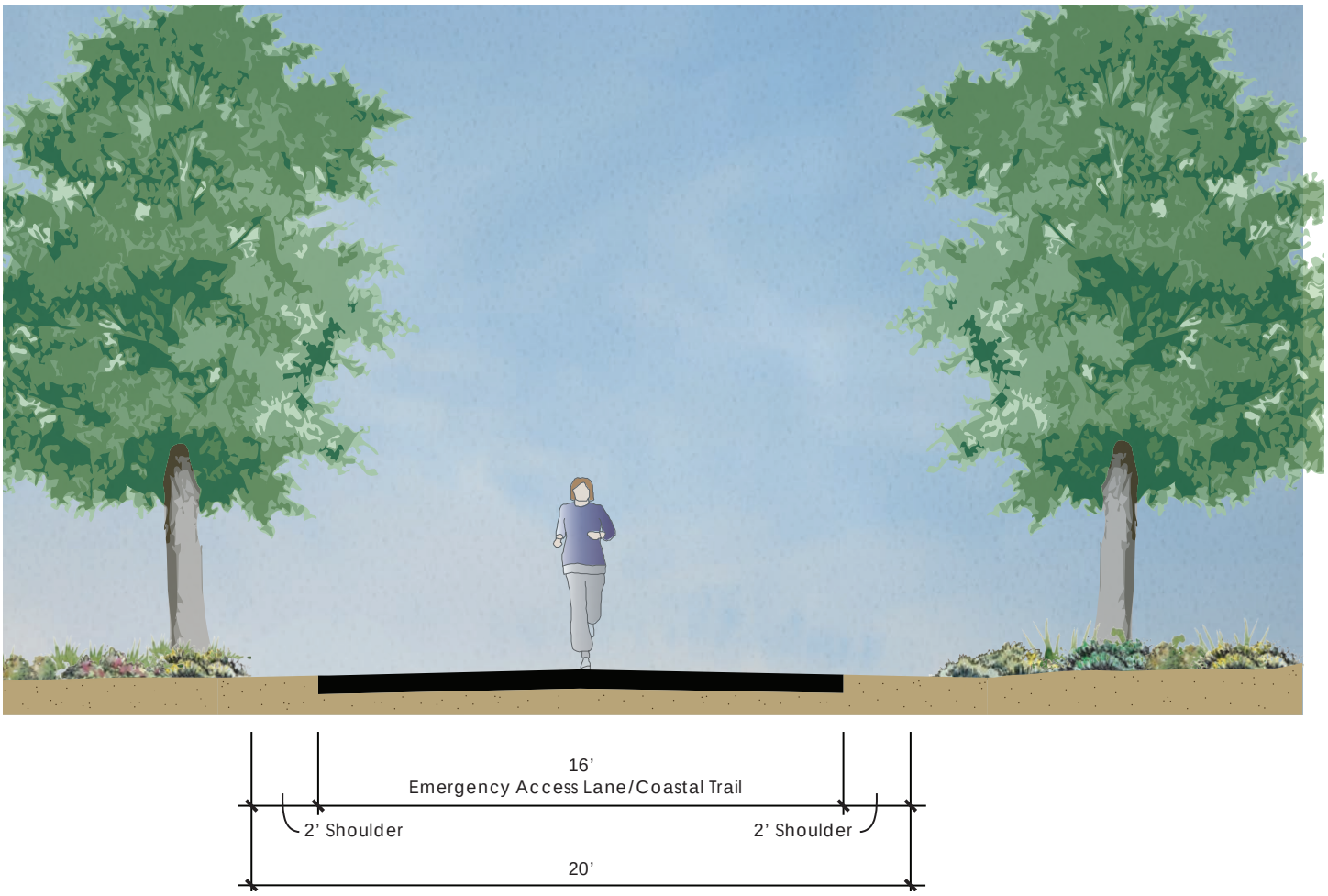


Figure 5-8 Front Street Emergency Access (3-3), VTM Road C

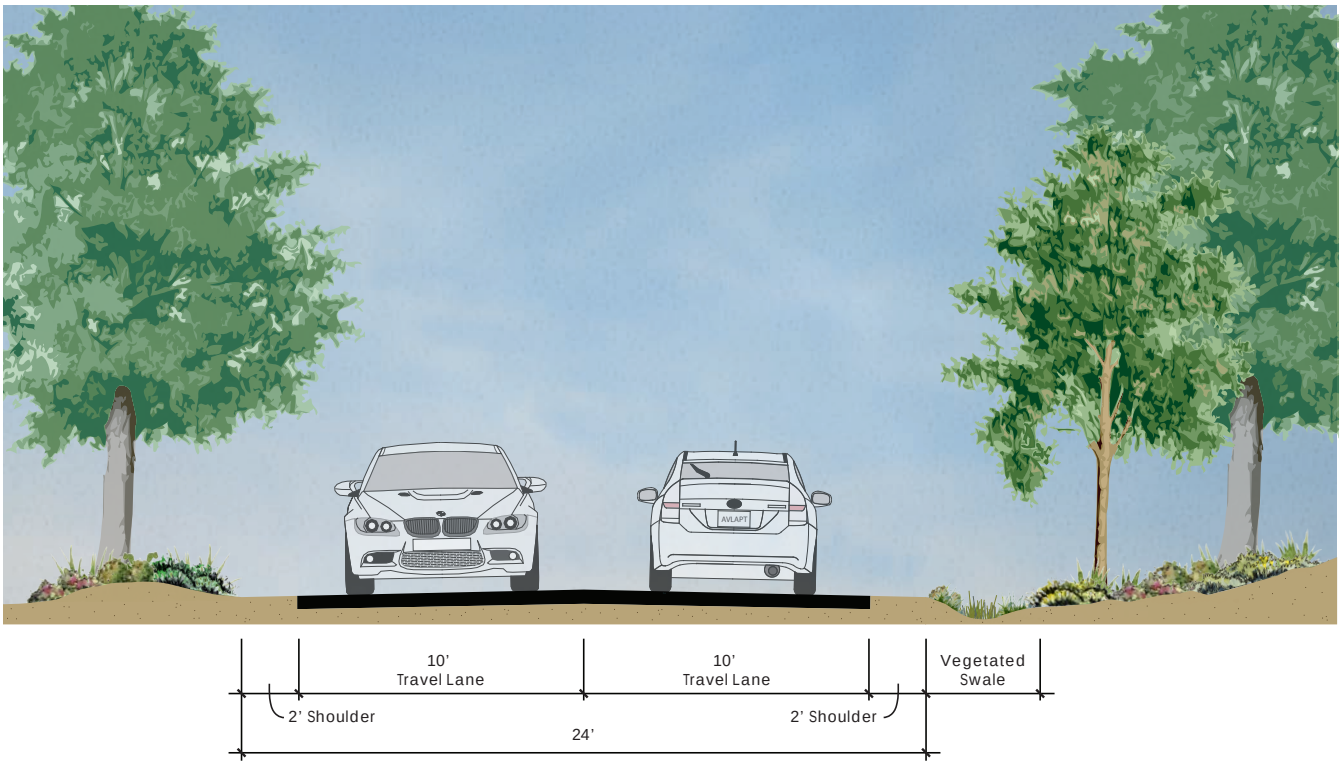


Figure 5-9 Secondary Access A (4-4), VTM Road B

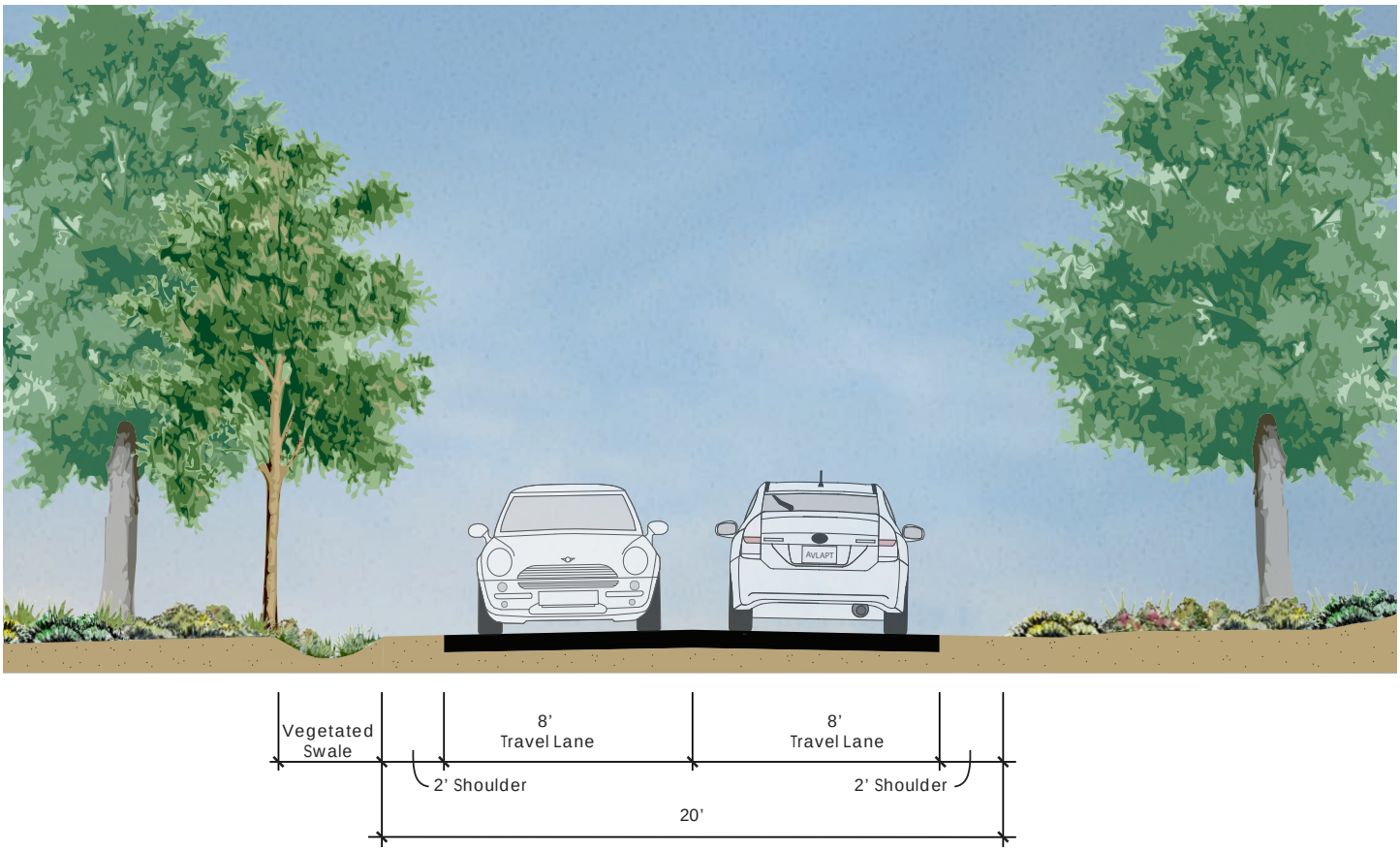


Figure 5-10 Secondary Access B (5-5), VTM Road C

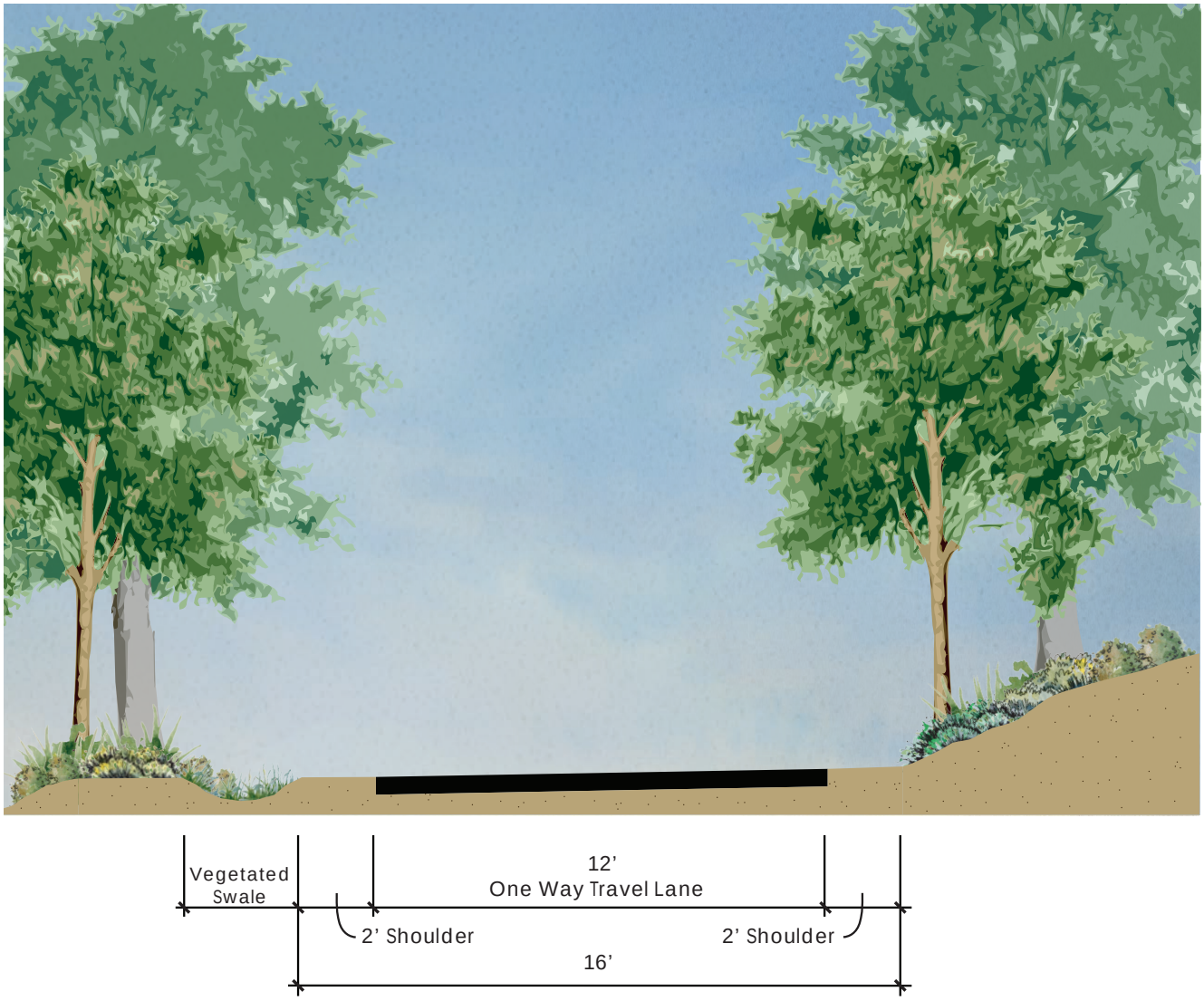


Figure 5-11 East Loop Road (6-6), VTM Road E

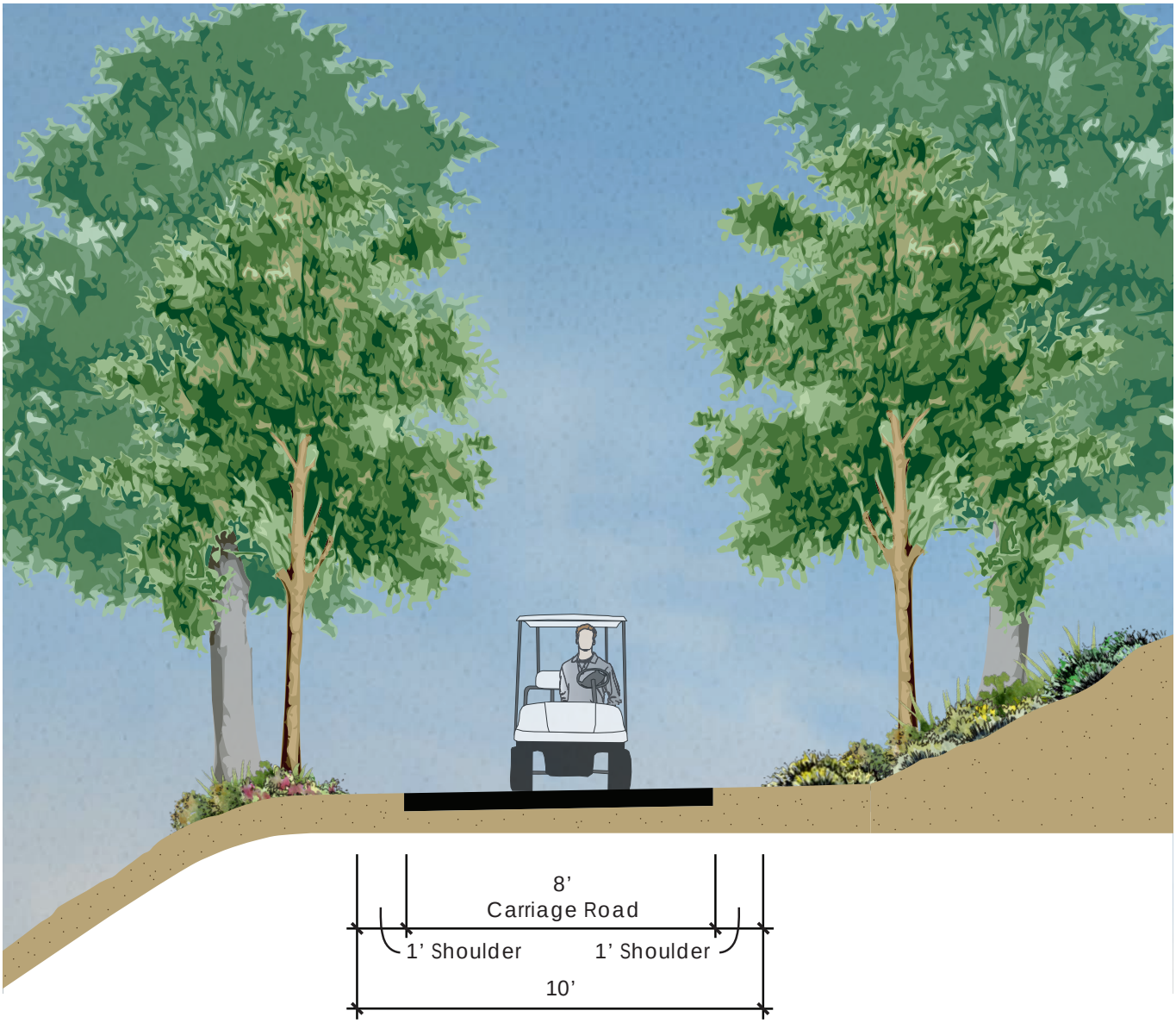
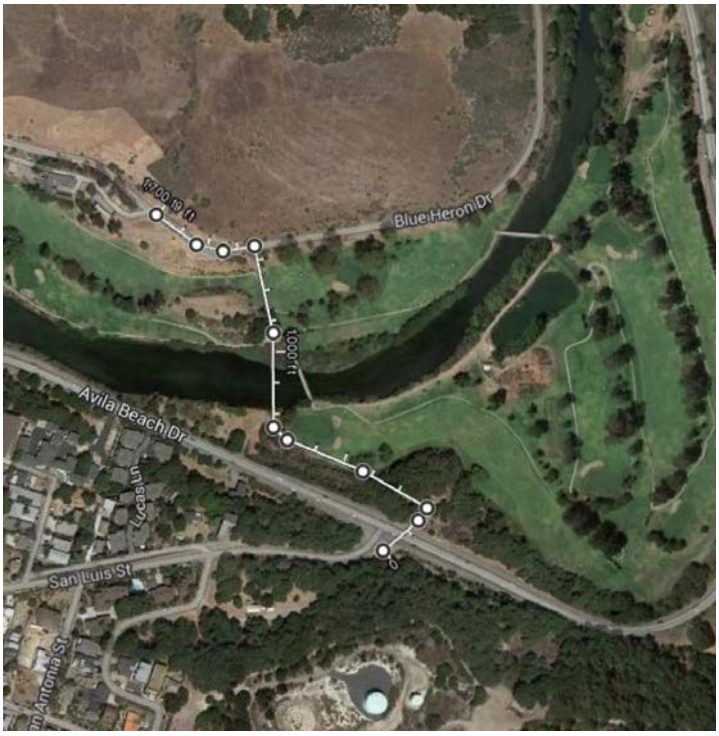


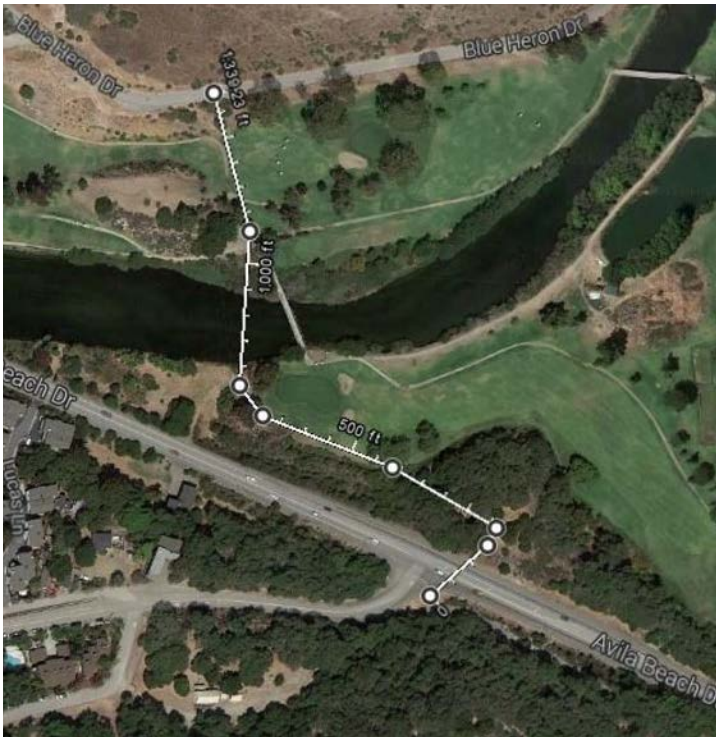
Figure 5-12 Oak Woodland Carriage Road (7-7), VTM Road F

Figure 5-13 Coastal Trail (8-8)



San Miguelito Water Alignment Option "1A"

San Miguelito Water Alignment Option "1B"



San Miguelito Wastewater Alignment Option "2A"

San Miguelito Wastewater Alignment Option "2B"

Figure 5-14 Water and Wastewater Routing Alternatives

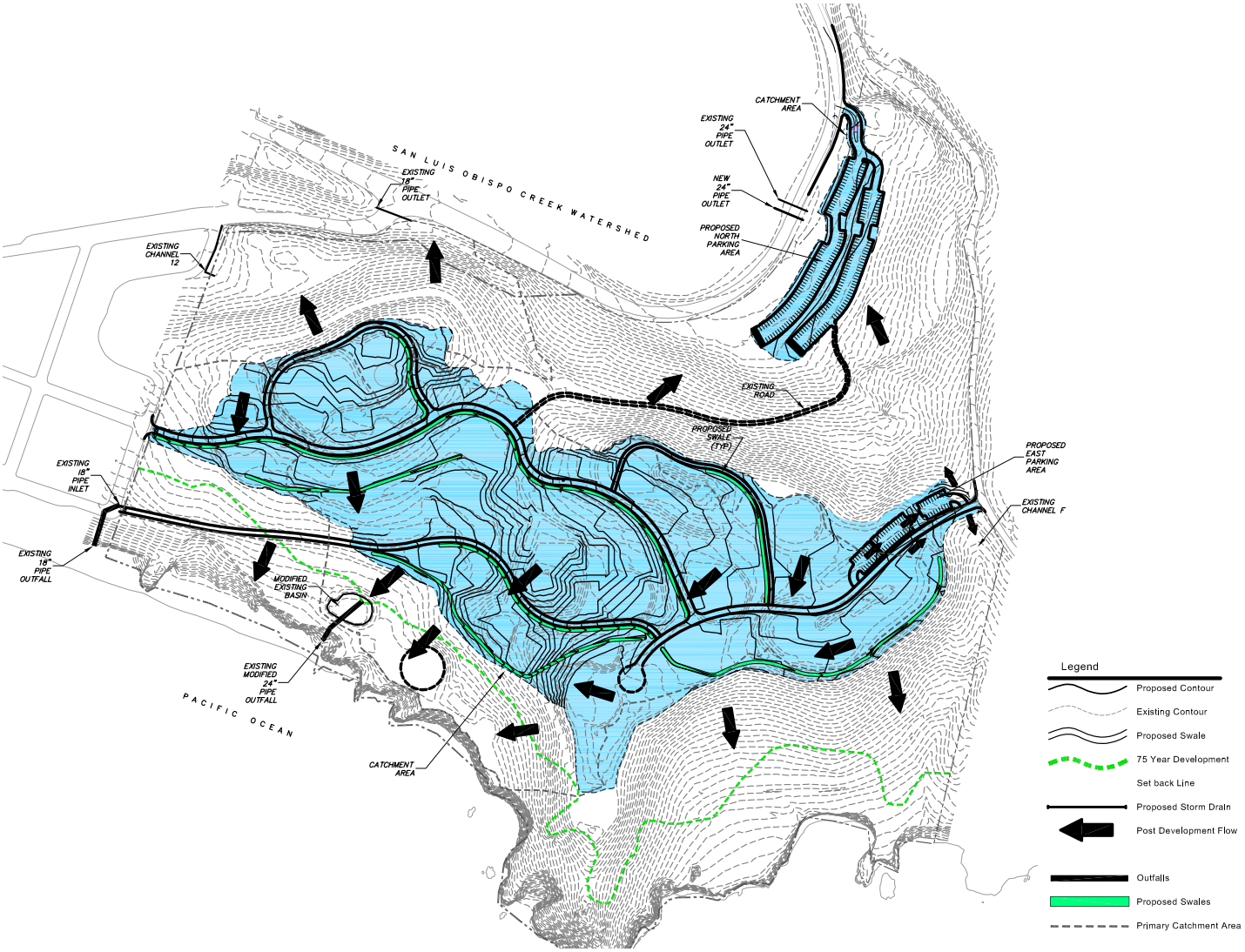
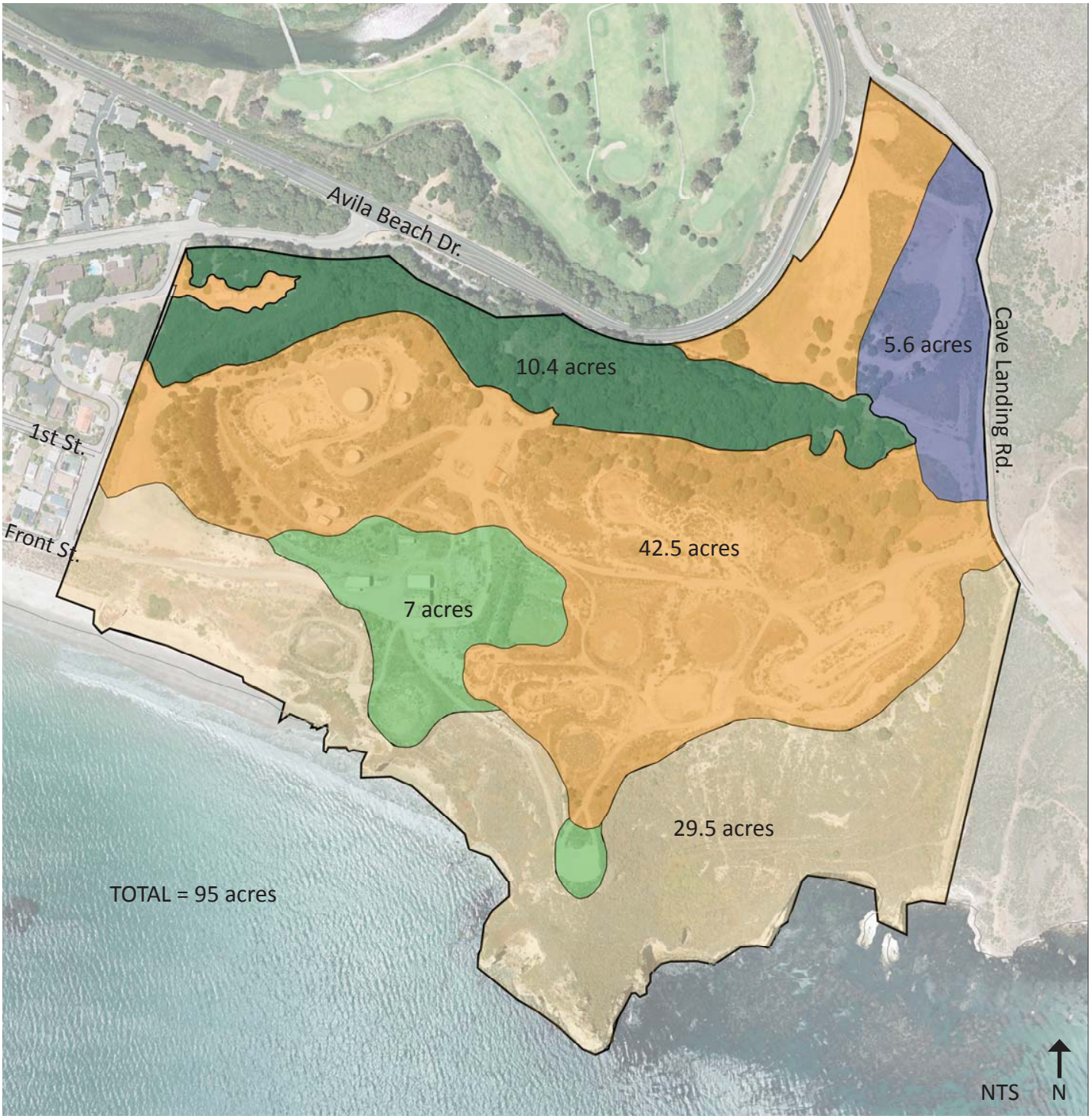


Figure 5-15 Post Development Hydrology



LEGEND

- Resort Landscaping Zone
- Resort Maintained Revegetated Open Space Zone
- Natural Open Space Zone
- Woodland Zone
- Bluff Open Space Zone

Figure 5-16a Landscaping and Revegetation Zones

LEGEND

Potential Tree Mitigation Area

Figure 5-16b Potential Tree Mitigation Areas

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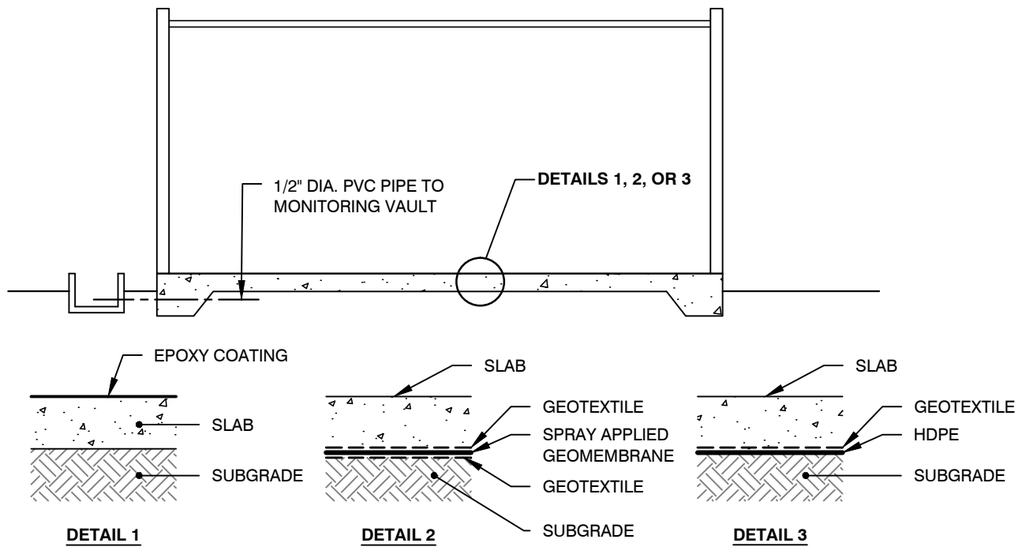
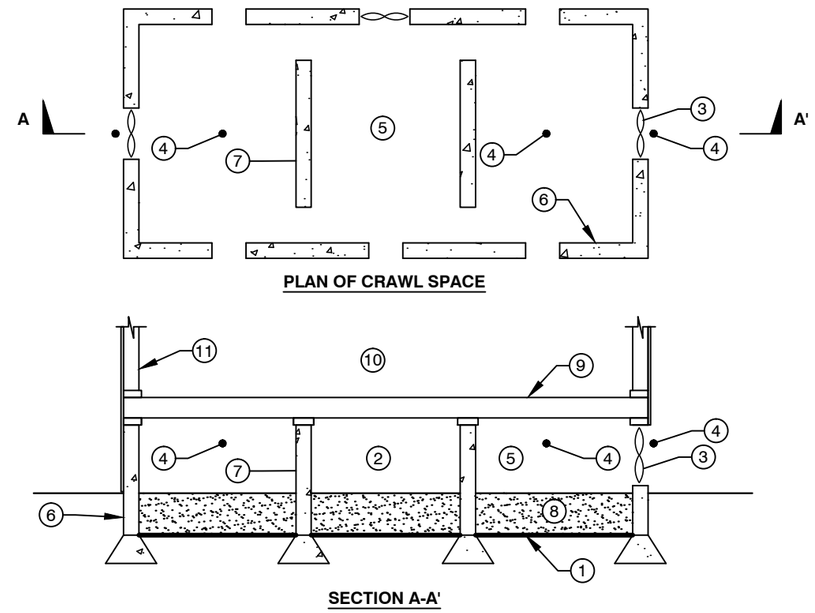


GAS CONTROL SYSTEM WITH BARRIERS



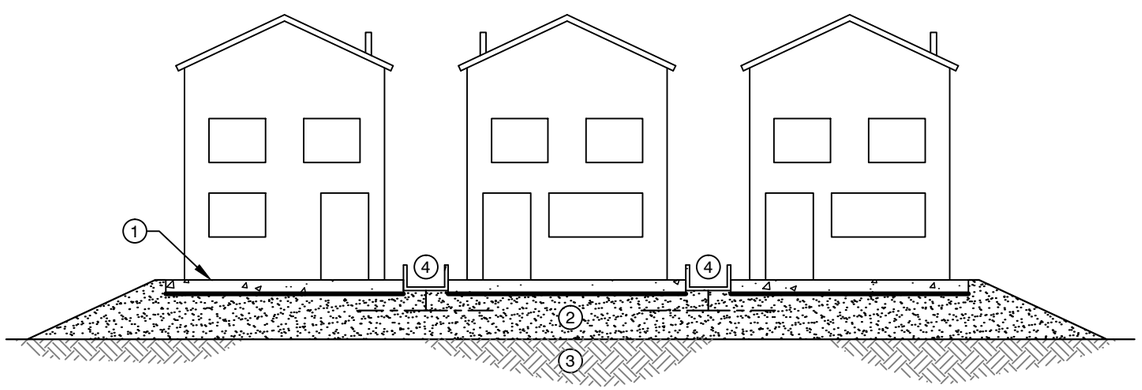
CRAWL SPACE OPEN AIR GAS EXTRACTION

GAS CONTROL SYSTEM

1. GAS BARRIER - GEOMEMBRANE
2. GAS EXTRACTION - OPEN FIRST FLOOR
3. MONITORING - INSTRUMENTS AND ALARMS

STRUCTURE

4. OPEN SPACE FLOOR SLAB
5. 3-STORY STRUCTURE
6. FLATWORK
7. LIVING SPACE
8. OPEN SPACE (PARKING)
9. WALLS AND WINDOWS
10. COLUMNS



PASSIVE GAS CONTROL SYSTEM ON SAND PLATFORM

GAS BARRIER SYSTEM

1. GAS BARRIER - SLAB GEOMEMBRANE
2. PASSIVE GAS EXTRACTION - COMPACTED SAND PLATFORM

OTHER

3. NATURAL GRADE - NATIVE SITE SOIL
4. 1/2" DIA. PVC PIPE TO MONITORING VAULT

NOT TO SCALE

FIGURE 5-17a

VAPOR BARRIER ENGINEERING EXAMPLES

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

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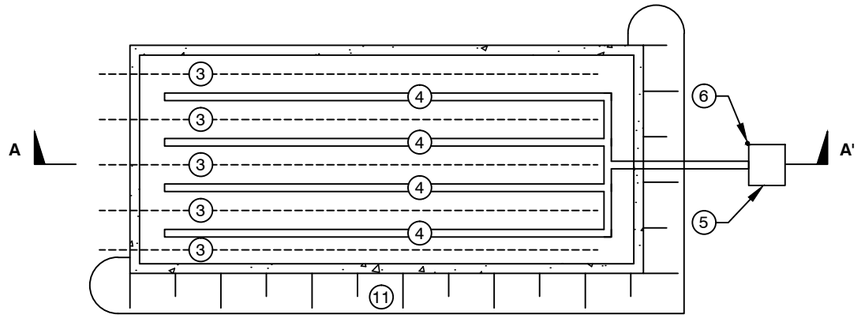
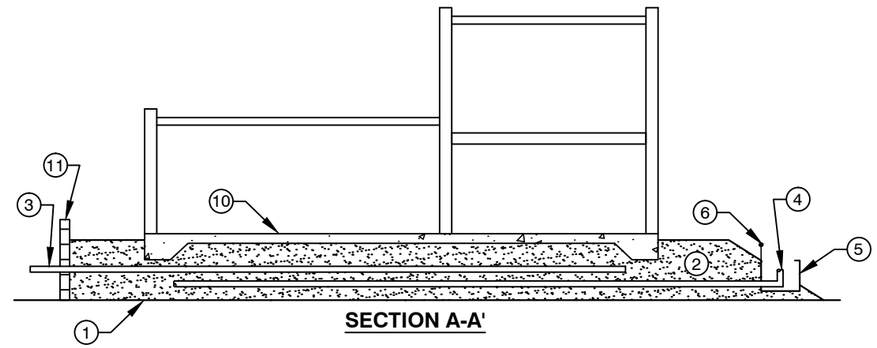


PLAN OF SOIL PLATFORM



SECTION A-A'

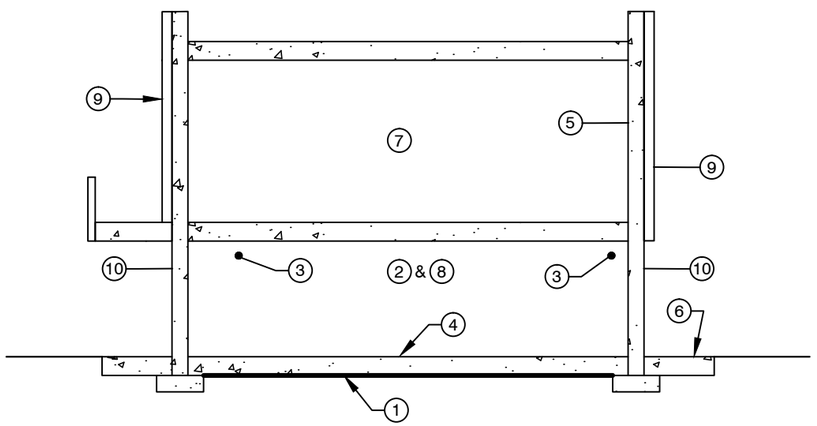
STRUCTURE ON SAND PLATFORM WITH ACTIVE GAS EXTRACTION COMPONENTS

GAS CONTROL SYSTEM

1. GAS BARRIER - GEOMEMBRANE BENEATH GEOTEXTILE
2. GAS COLLECTION - SAND PLATFORM
3. GAS EXTRACTION - AIR INLET PIPES
4. GAS EXTRACTION - AIR REMOVAL PIPES
5. GAS EXTRACTION - PUMP AND EXIT PORT BOX
6. MONITORING - INSTRUMENTS AND ALARMS

STRUCTURE

10. OPEN SPACE FLOOR SLAB
11. PERIMETER WALL OR SLOPE



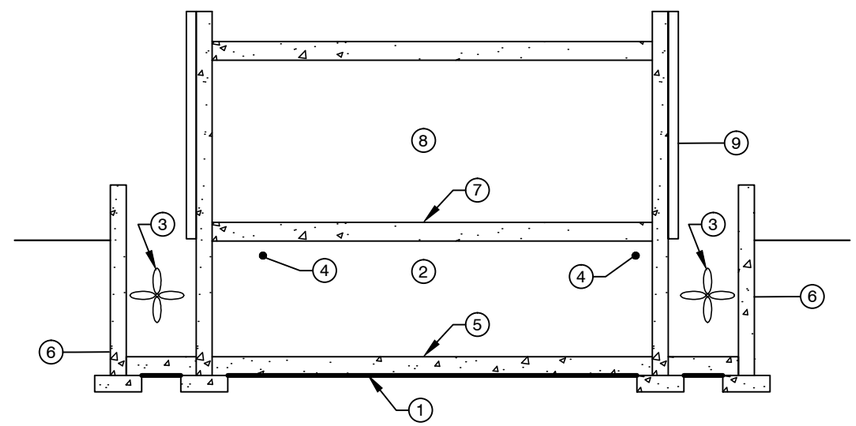
MULTI-STORY STRUCTURE WITH OPEN SPACE FLOOR AND PASSIVE GAS EXTRACTION

GAS CONTROL SYSTEM

1. GAS BARRIER - GEOMEMBRANE
2. GAS EXTRACTION - OPEN FIRST FLOOR
3. MONITORING - INSTRUMENTS AND ALARMS

STRUCTURE

4. OPEN SPACE FLOOR SLAB
5. 3-STORY STRUCTURE
6. FLATWORK
7. LIVING SPACE
8. OPEN SPACE (PARKING)
9. WALLS AND WINDOWS
10. COLUMNS



MULTI-STORY STRUCTURE WITH OPEN SPACE FLOOR AND ACTIVE GAS EXTRACTION

GAS CONTROL SYSTEM

1. GAS BARRIER - GEOMEMBRANE
2. GAS EXTRACTION - CRAWL SPACE
3. GAS EXTRACTION - FAN
4. MONITORING - INSTRUMENTS AND ALARMS

STRUCTURE

5. FLOOR SLAB
6. RETAINING WALL (ALTERNATIVELY - SLOPE EXCAVATION)
7. MAIN LIVING SPACE STRUCTURE ON COLUMNS
8. LIVING SPACE
9. WALLS AND WINDOWS

NOT TO SCALE

FIGURE 5-17b

VAPOR BARRIER ENGINEERING EXAMPLES

FORMER AVILA TERMINAL
PROJECT DESCRIPTION
AVILA BEACH, CALIFORNIA

PREPARED FOR

CHEVRON EMC
SAN LUIS OBISPO, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.