CALIFORNIA COASTAL COMMISSION
455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105-2219
FAX (415) 904-5400
Voice (415) 904-5200

F9b

9-22-0733 (City of Ventura)

May 12, 2023

EXHIBITS

Path: U:\GIS\GIS\Projects\16xxxx\D160685_Ventura_Pure_Water\03_MXDs_Projects\EIR\Fig1_Regional_Location.mxd, CKeen, 12/8/2021

SOURCE: ESRI

Exhibit 1
CDP Application No. 9-22-0733

Ventura Water Pure Ocean Outfall Project

Figure 1
Regional Location

ESA

Exhibit 2
CDP Application No. 9-22-0733

Figure 1-1
Vicinity Map

SOURCE: ESRI, 2018; County of Ventura, 2018; ESA, 2022.

Exhibit 3
CDP Application No. 9-22-0733

Ventura Water Pure Ocean Outfall Project

Figure 1
Ventura Water Pure Ocean Outfall Project Elements

ESA

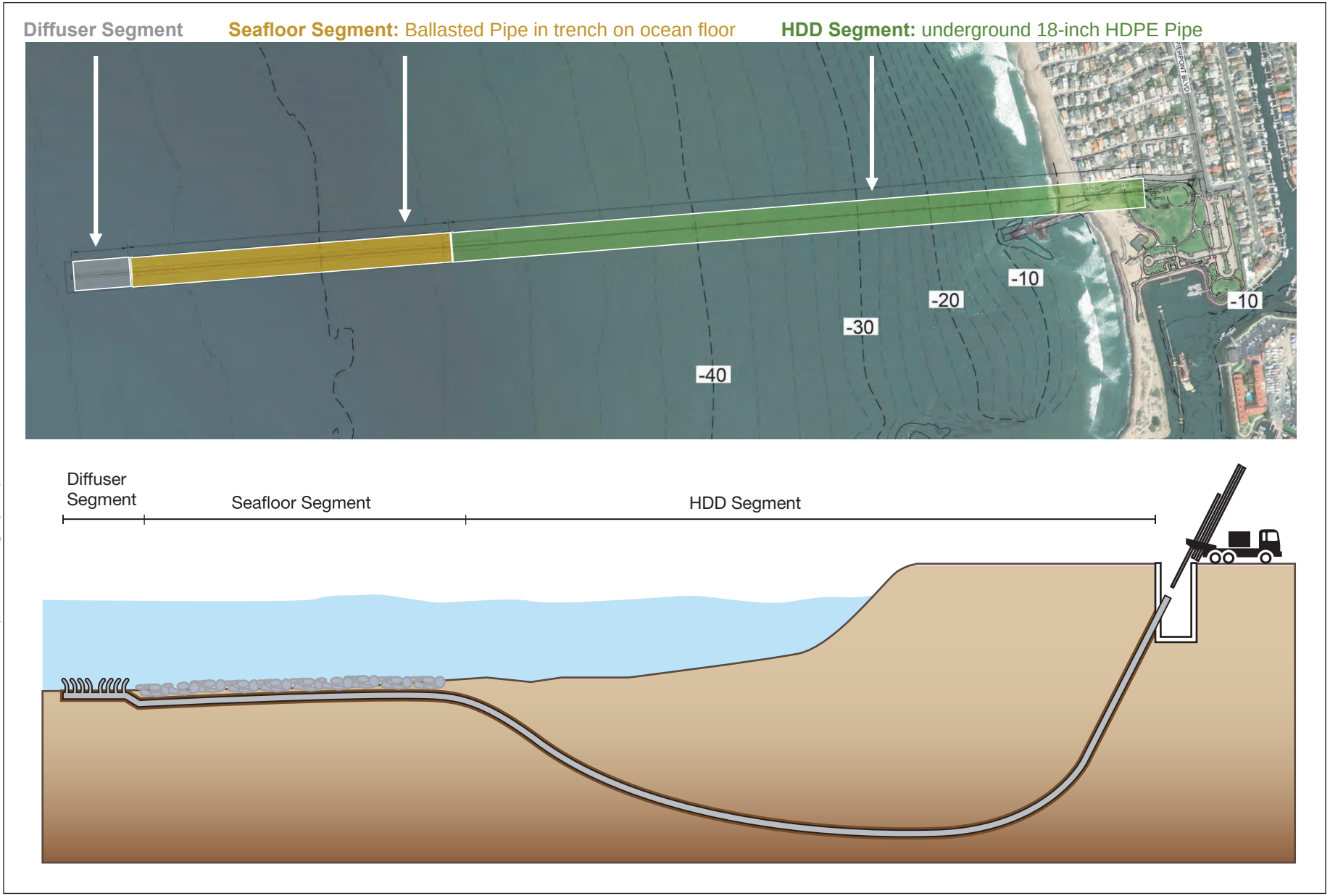
D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 2
Project Components and Worksites

ESA



D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Proj Description

SOURCE: HDR, 2022

Ventura Water Pure Ocean Outfall Project

Figure 3a
Ocean Outfall Project Elements

ESA

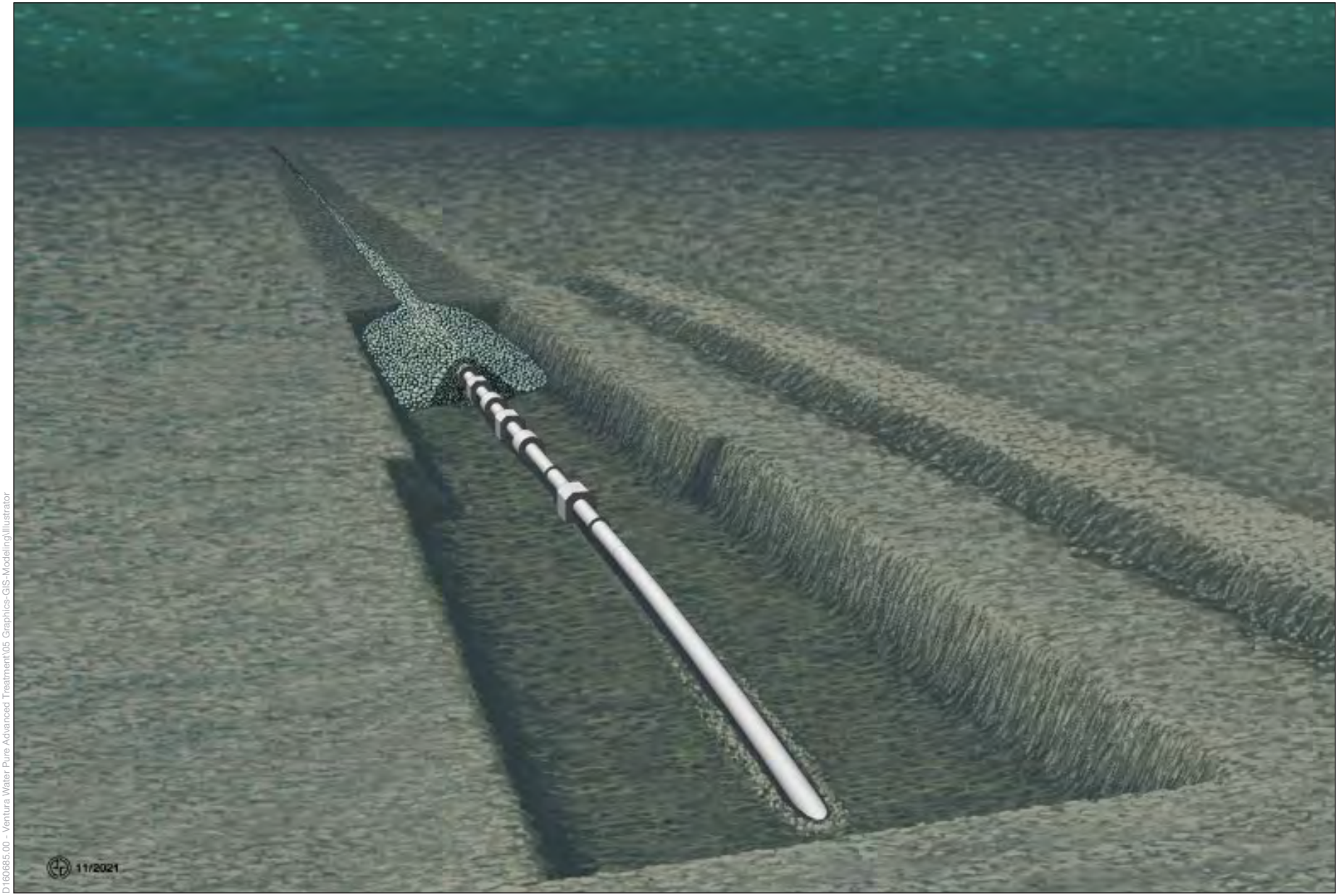
D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Padre Associates, Inc.

Ventura Water Pure Ocean Outfall Project

Figure 3b
Conceptual Drawing of HDD Segment

ESA



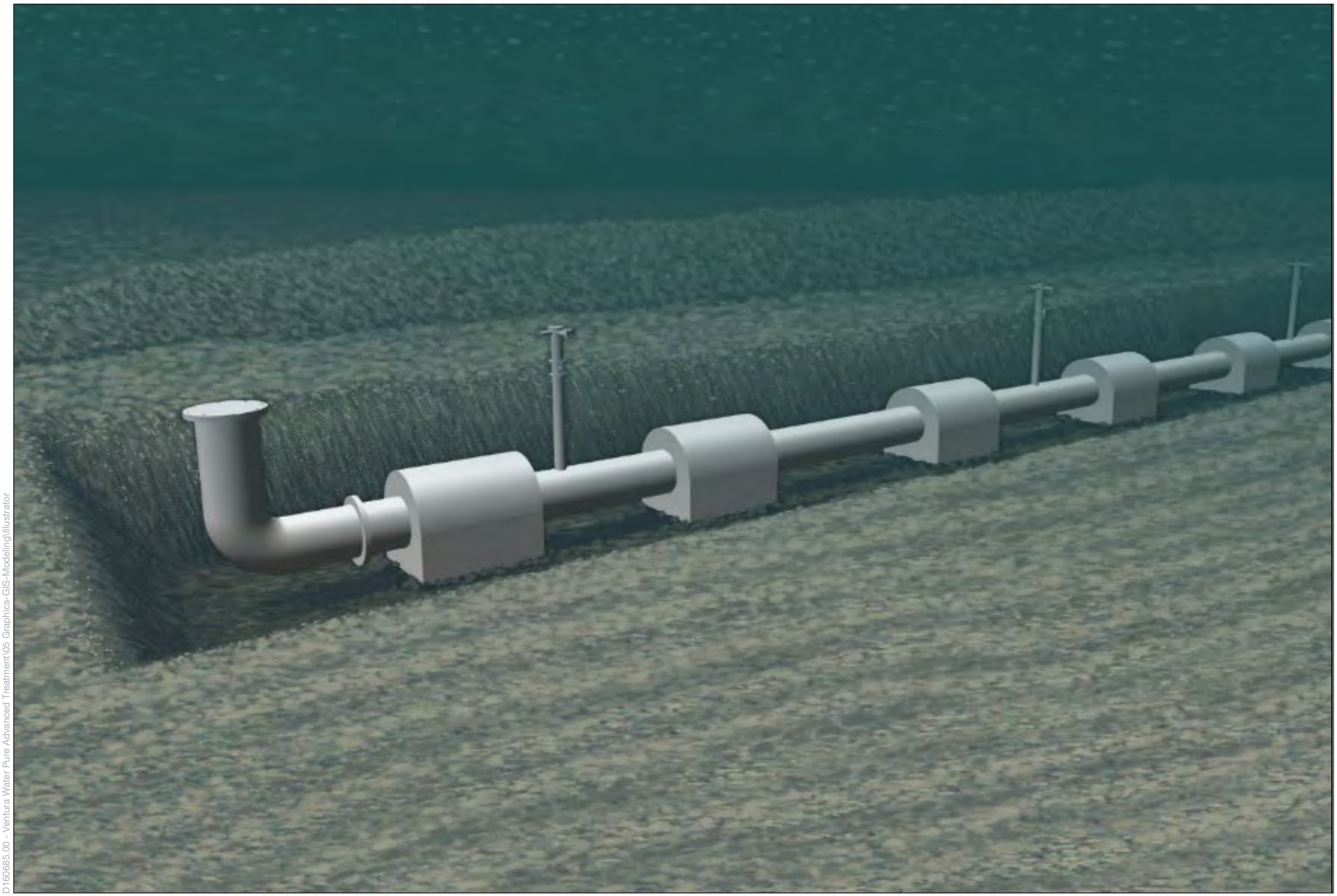
D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Padre Associates, Inc.

Ventura Water Pure Ocean Outfall Project

Figure 3c
Conceptual Drawing of Seafloor Segment

ESA



D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Padre Associates, Inc.

Ventura Water Pure Ocean Outfall Project

Figure 3d
Conceptual Drawing of Diffuser Segment

ESA

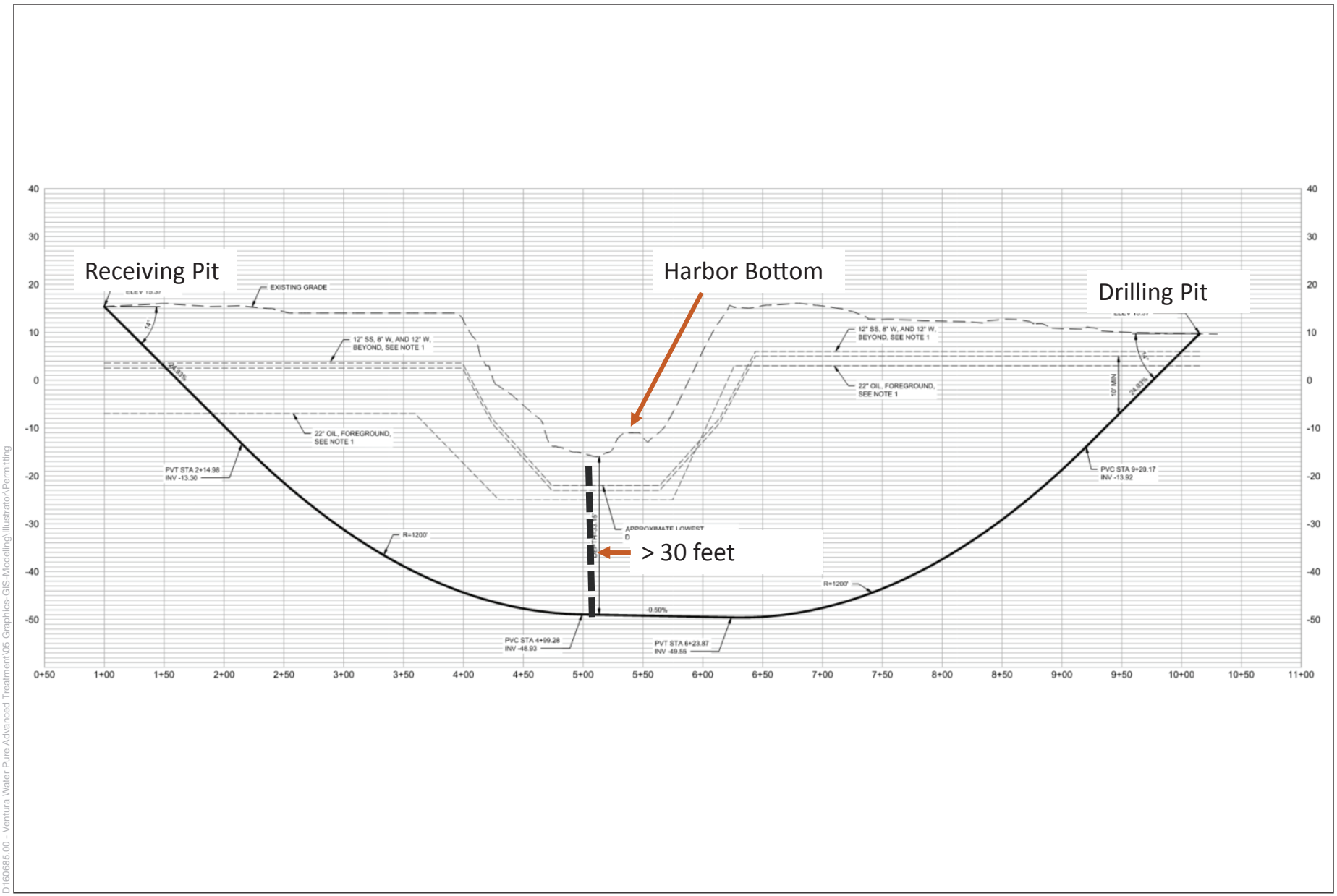
D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 4a
Harbor Crossing Project Elements

ESA



D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator\Permitting

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 4b
Conveyance Pipeline Cross-Section under Harbor

ESA

D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 5a
Marina Park Assembly and Launch Worksite

ESA

D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 5b
Marina Park HDD Worksite

ESA

D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 5c
Marina Park HDD Worksite Staging and Storage

ESA

D160685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 5d
Harbor Cove Worksite

ESA

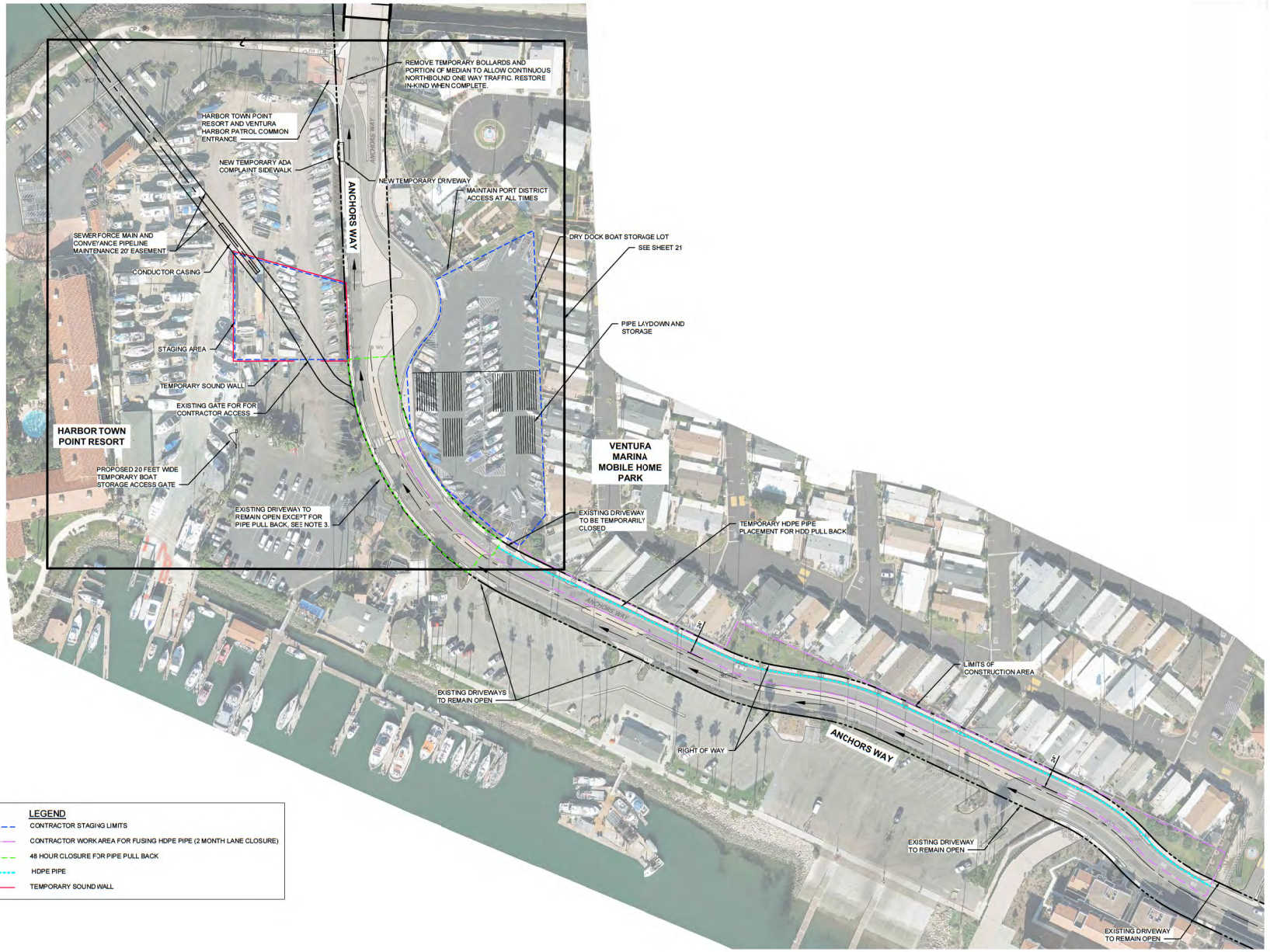
D1606685.00 - Ventura Water Pure Advanced Treatment\05 Graphics-GIS-Modeling\Illustrator

SOURCE: HDR

Ventura Water Pure Ocean Outfall Project

Figure 5e
Harbor Crossing HDD Pullback Worksite

ESA



PLAN VIEW
SCALE: 1" = 60'

GENERAL NOTES

1. CLOSURE OF NORTHBOUND ANCHORS WAY FROM VENTURA MARINA MOBILE HOME PARK TO HARBOR TOWN POINT RESORT AND VENTURA HARBOR PATROL COMMON ENTRANCE IS PROPOSED. NORTHBOUND TRAFFIC PATTERN TO USE EXISTING SOUTHBOUND ANCHORS WAY LANE (ONE WAY TRAFFIC ONLY). SOUTHBOUND TRAFFIC TEMPORARILY CLOSED FOR TWO MONTH DURATION.
2. MAINTAIN DRIVEWAY ACCESS ON ANCHORS WAY UNLESS SHOWN OTHERWISE.
3. CLOSURE OF ANCHORS WAY NORTH OF VENTURA HARBOR SPORTFISHING DRIVEWAY WITHIN LIMITS SHOWN LIMITED TO 48 HOUR CONTINUOUS PERIOD FOR PIPE PULLBACK.
4. SECURE ENCROACHMENT PERMIT FOR WORK IN PUBLIC RIGHT OF WAY. CONTACT CITY TRAFFIC DIVISION FOR ENCROACHMENT PERMIT APPLICATION.
5. TEMPORARY MEDIAN REMOVAL AND REPLACEMENT IN ANCHORS WAY IS REQUIRED. ALL REMOVALS TO BE RESTORED IN KIND BY CONTRACTOR.
6. SUBMIT TRAFFIC CONTROL PLAN TO CITY TRAFFIC DIVISION, ATTENTION JEFF HERFORD.

N

SCALE: 1"=60'
0 60 120 180

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURA WATERPURE OFFSHORE CONVEYANCE PIPELINE
SOUTH HDPE FUSING AREA

DRN. BY: DC	DES. BY: JC	CK'D. BY: DE
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 22 OF 41	DWG. NO.

60% SUBMITTAL

HDR Engineering Inc.
200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-5972
(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

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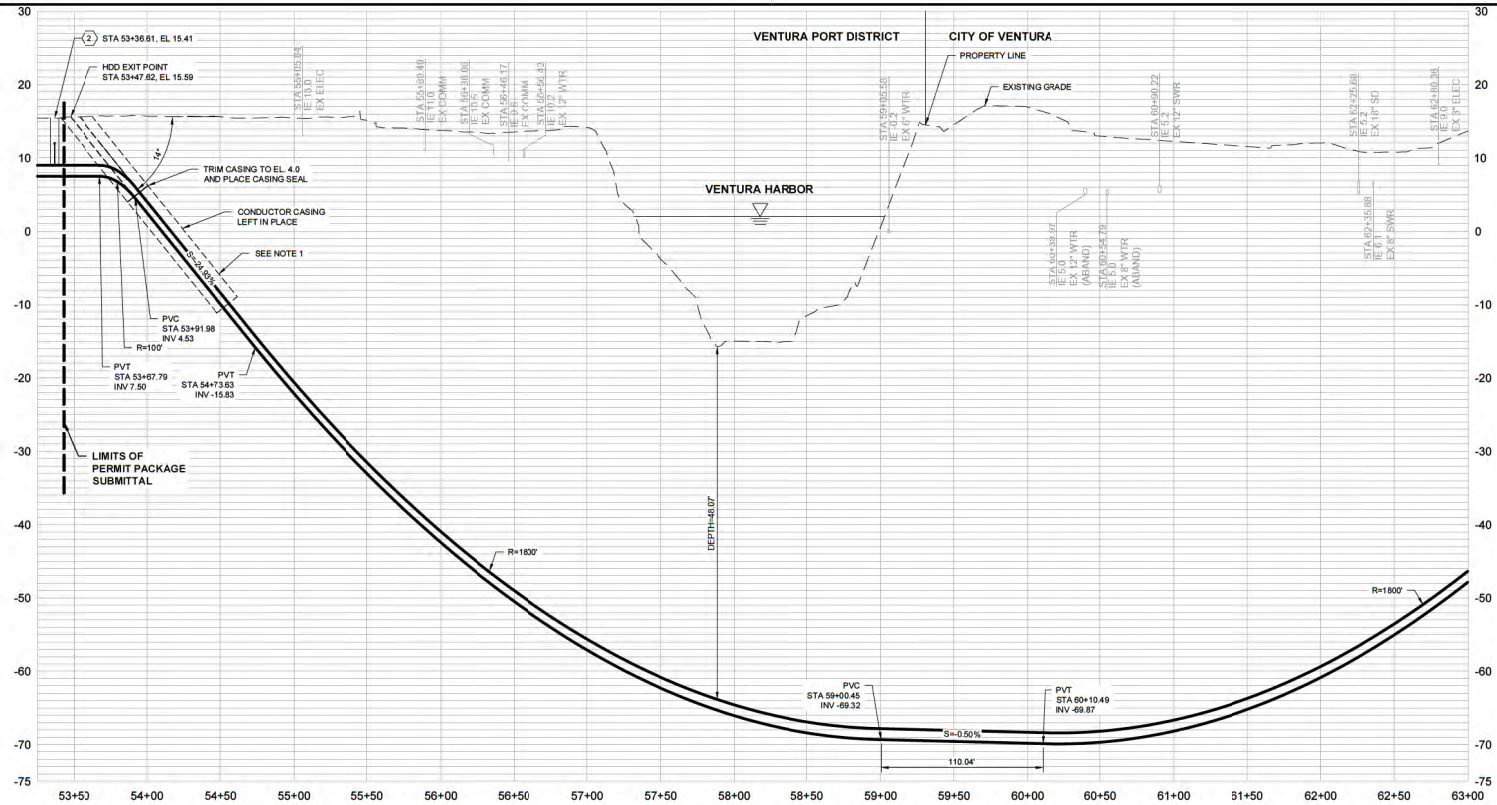
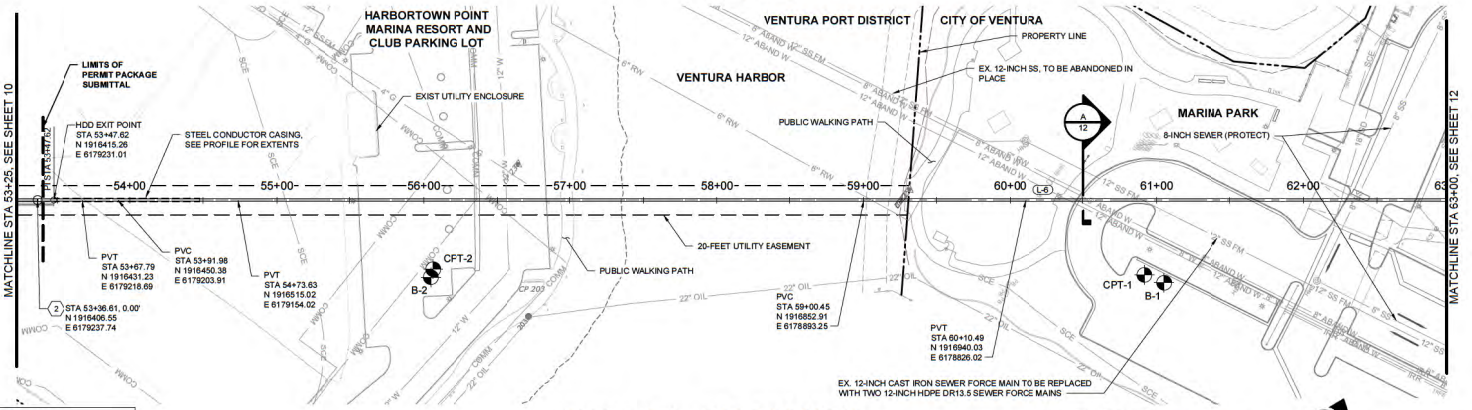
Exhibit 4
CDP Application No. 9-22-0733



PROFILE VIEW - HDD CROSSING

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=8'



PLAN VIEW - HDD CROSSING

SCALE: HORIZONTAL 1"=40'

ALIGNMENT LINE TABLE				
LINE NO.	LENGTH	DIRECTION	START POINT	END POINT
L-6	1469.66'	N37° 39' 34"W	N 1916368.07' E 6179267.43	N 1917531.54 E 6178369.52

CONSTRUCTION NOTES (X)

1. HDD INSTALLED 36" CASING PIPE WITH 2 X 8" SEWER FORCE MAIN & 18" CONVEYANCE PIPELINE. SEE PIPE SCHEDULE ON SHEET 3.
2. INSTALL PIG TRACKING MANHOLE WITH 2-INCH AIR AND VACUUM RELEASE ASSEMBLY, SEE (2/38)

GENERAL NOTES

1. STEEL CONDUCTOR CASING SIZE IS TO BE DETERMINED BY THE CONTRACTOR. REFER TO THE HDD SPECIFICATIONS FOR FURTHER REQUIREMENTS.

VERTICAL SCALE 1 INCH = 8 FEET
HORIZONTAL SCALE: 1 INCH = 20 FEET
GRAPHIC SCALE

SCALE: 1"=40'

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OFFSHORE CONVEYANCE PIPELINE

PLAN AND PROFILE STA 53+25 TO 63+00

DRN. BY: DC	DES. BY: JC	CK'D. BY: DE
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 11 OF 41	DWG. NO.

60% SUBMITTAL

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California Marine Project Planning, Permitting and Performance

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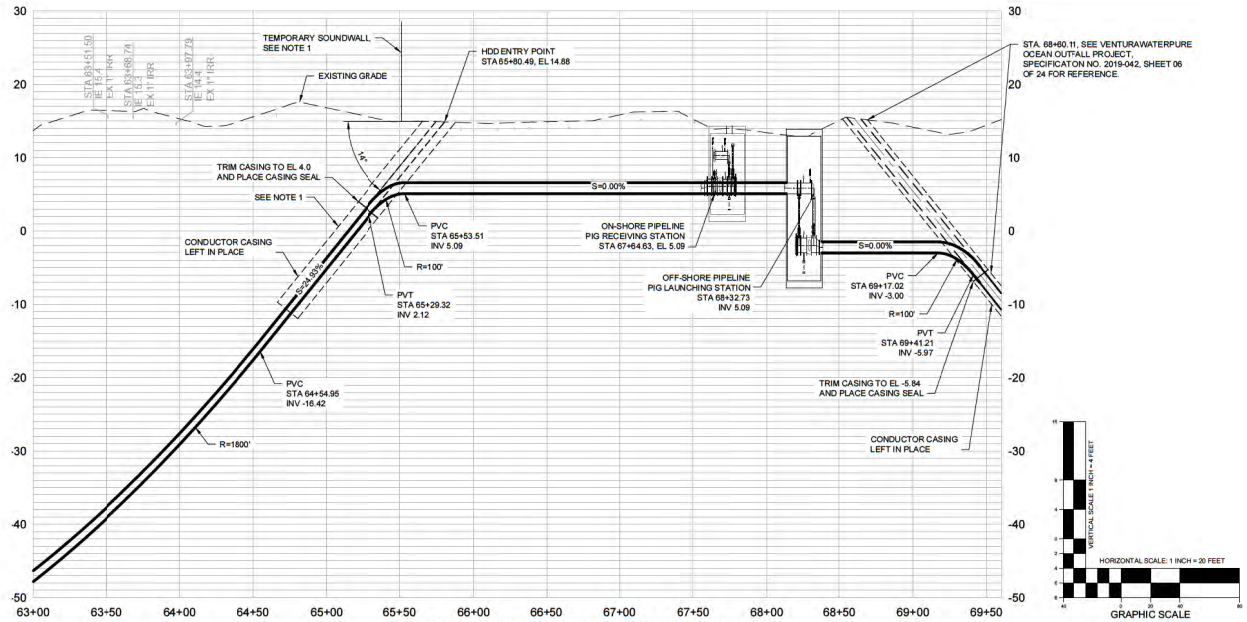
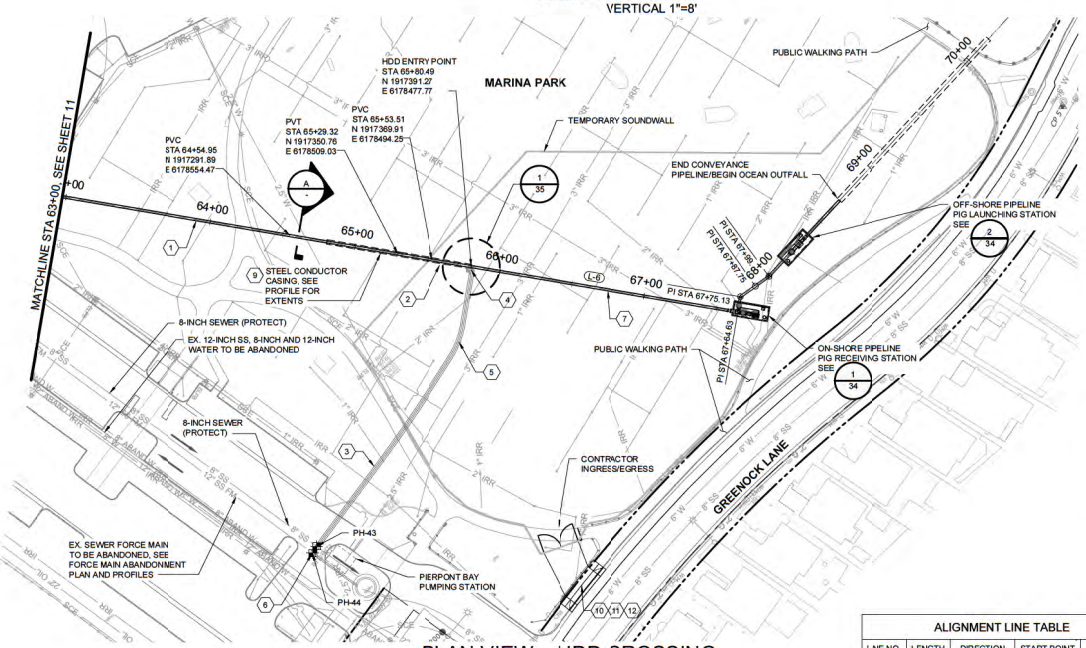


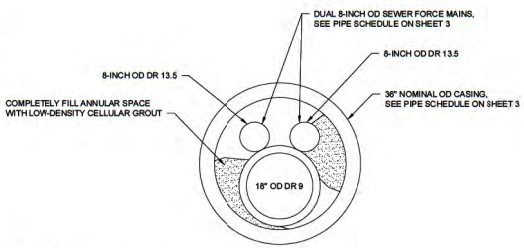
PROFILE VIEW - HDD CROSSING

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=8'



PLAN VIEW - HDD CROSSING

SCALE: HORIZONTAL 1"=40'



NOTES

1. TREMMIE PIPES NOT SHOWN.
2. FLL ANNULAR SPACE WITH LOW-DENSITY CELLULAR GROUT AFTER CARRIER PIPES INSTALLATION.
3. REMOVE INTERIOR WELD BEAD FROM HDPE CASING BEFORE PULLING PRODUCT PIPE.
4. REMOVE INTERIOR AND EXTERIOR WELD BEAD FROM ALL HDPE PRODUCT PIPES BEFORE PULLING PRODUCT PIPES INTO HDPE CASING.
5. REMOVE DRILLING MUD FROM PRODUCT PIPES AND FILL WITH WATER.

SCALE:3/4"=1'

VENTURA HARBOR CROSSING HDD SECTION

SCALE: 3/4" = 1'-0"

CONSTRUCTION NOTES

1. HDD INSTALLED 36" CASING PIPE WITH 2 X 8" SEWER FORCE MAIN & 18" CONVEYANCE PIPELINE. SEE PIPE SCHEDULE ON SHEET 3
2. INSTALL DUAL, 8" SANITARY SEWER FORCE MAINS, SEE PIPE SCHEDULE ON SHEET 3.
3. INSTALL DUAL, 12" SANITARY SEWER FORCE MAINS SEE PIPE SCHEDULE ON SHEET3.
4. INSTALL TWO 12"x8" REDUCING DUCTILE IRON 90 DEG ELBOWS. SEE SPECIFICATION SECTION 40 05 19.
5. INSTALL TWO 12", DUCTILE IRON 22.5 DEG ELBOWS. SEE SPECIFICATION SECTION 40 05 19.
6. INSTALL 12" DUCTILE IRON WYE. SEE SPECIFICATION SECTION 40 05 19.
7. INSTALL 18" CONVEYANCE PIPE.JNE. SEE PIPE SCHEDULE ON SHEET 3. INSTALL CONVEYENACE PIPELINE PER CITY OF VENTURA STANDARD DETAIL NUMBER 112, SHEET 1 OF 5 (TRENCH BACKFILJAC REPAIR ON NON MORATORIUM STREETS). ADD TRACER WIRE PER DETAIL HEREON FOR ALL OPEN CUT SEGMENTS. PROVIDE TRENCH STABILIZATION WHERE OWNERS REPRESENTATIVE DE¯ERMINES ARE REQUIRED, REFER TO SPECIFICATIONS FOR TRENCH STABILIZATION.
8. INSTALL 2-INCH AIR AND VACUUM RELEASE ASSEMBLY, SEE 2/38
9. CONTRACTOR TO SUBMIT WORK AREA PLAN FOR CASING REMOVAL OUTSIDE LIMITS OF SOUNDWALL.
10. CONSTRUCT COMMERCIAL DRIVEWAY FOR CONTRACTOR ACCESS, PER CITY OF VENTURA STANDARD DETAIL NO. 104, W = 25 FEET, UPON COMPLETION OF BOTH HDD AND PARK RESTORATION, REMOVE DRIVEWAY PER CITY OF REQUIREMENTS.
11. CONSTRUCT SIDEWALK PER CITY OF VENTURA STANDARD DETAIL NO. 102.
12. CONSTRUCT CURB AND GUTTER PER CITY OF VENTURA STANDARD DETAIL N0. 107.

GENERAL NOTES

1. STEEL CONDUCTOR CASING SIZE IS TO BE DETERMINED BY THE CONTRACTOR. REFER TO THE HDD SPECIFICATIONS FOR FUR¯HER REQUIREMENTS.

SCALE: 1"=40'

ALIGNMENT LINE TABLE				
L.NE NO.	LENGTH	DIRECTION	START POINT	END POINT
L-6	1469.66'	N37° 39' 34"W	N 1916368.07 E 6179267.43	N 1917531.54 E 6178369.52

HDR Engineering Inc.
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Suite 220
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(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OFFSHORE CONVEYANCE PIPELINE

PLAN AND PROFILE STA 63+00 TO STA 69+60

DRN. BY: DC	DES. BY: JC	CK'D. BY: DE
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 12 OF 41	DWG. NO.

60% SUBMITTAL

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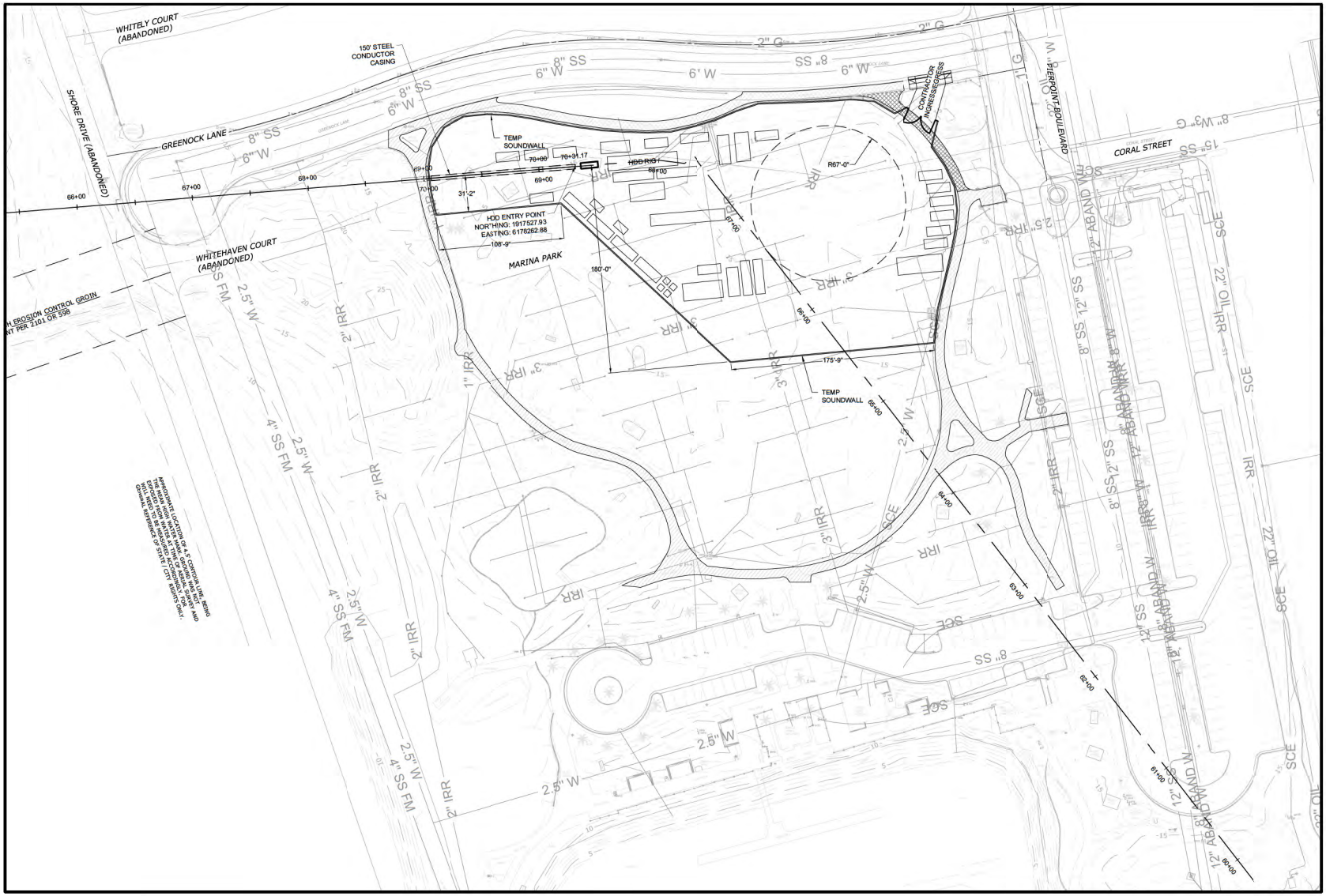

PLAN VIEW

SCALE: HORIZONTAL 1"=40'

HDR Engineering, Inc.
200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-2795
(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT

MARINA PARK HDD WORK SITE

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS	
SPEC. NUMBER 2022-0-020	PROJECT NO.		
August 4, 2022	SHEET 23 OF 41	DWG. NO.	

60% SUBMITTAL

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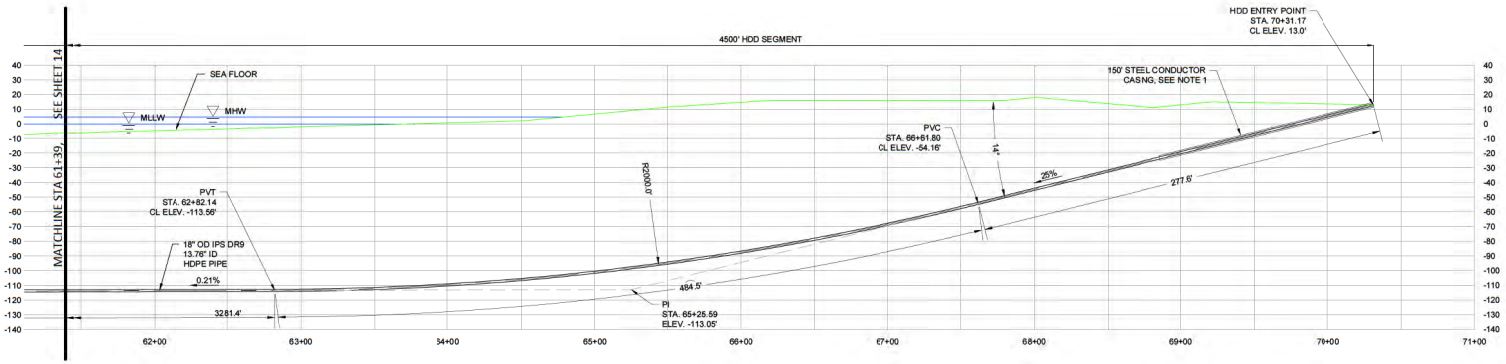
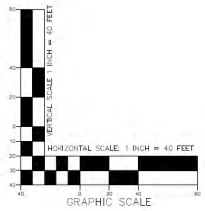
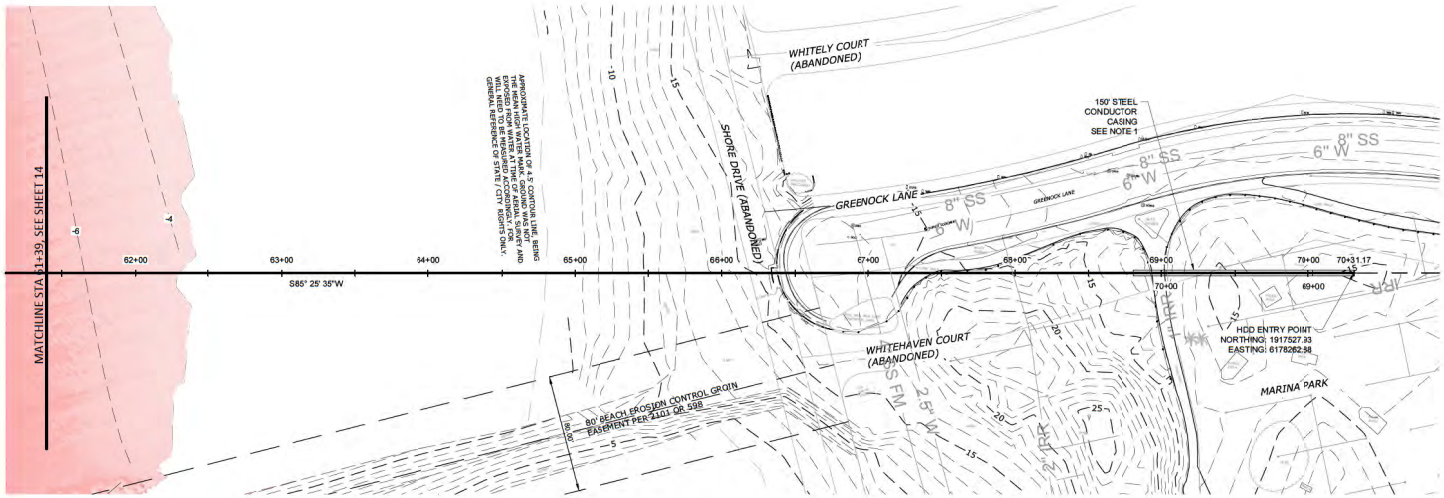


PROFILE VIEW

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=40'

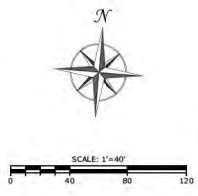


NOTE:
1. STEEL CONDUCTOR CASING SIZE IS TO BE DETERMINED BY THE CONTRACTOR. CEMENT GROUT THE UPPER TEN FEET ANNULUS BETWEEN THE CONDUCTOR CASING AND THE HDPE PIPE. REFER TO THE HDD SPECIFICATIONS FOR FURTHER REQUIREMENTS.



PLAN VIEW

SCALE: HORIZONTAL 1"=40'



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200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-2795
(805) 628-2001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT

PLAN & PROFILE STA 70+31TO STA 61+39

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 13 OF 41	DWG. NO.

60% SUBMITTAL

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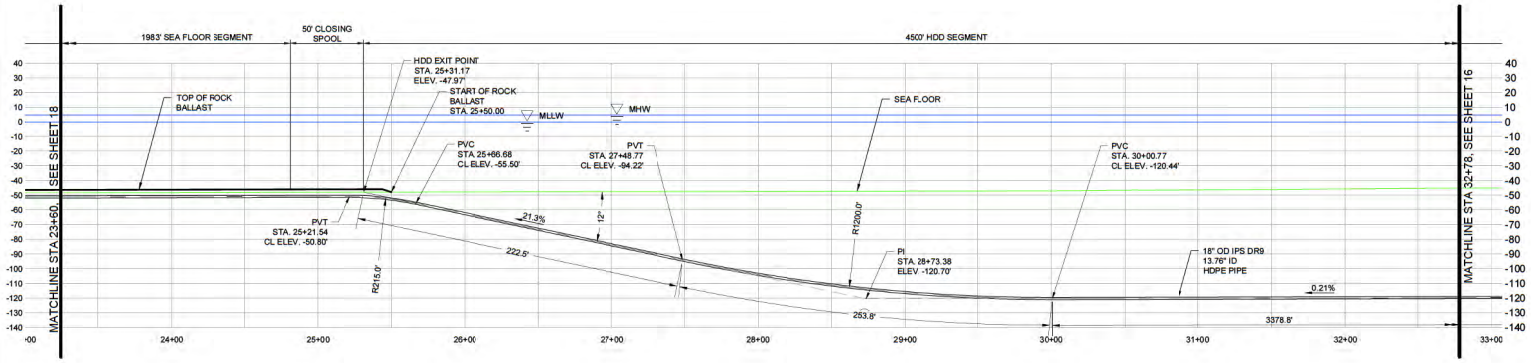
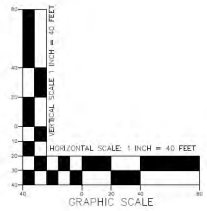
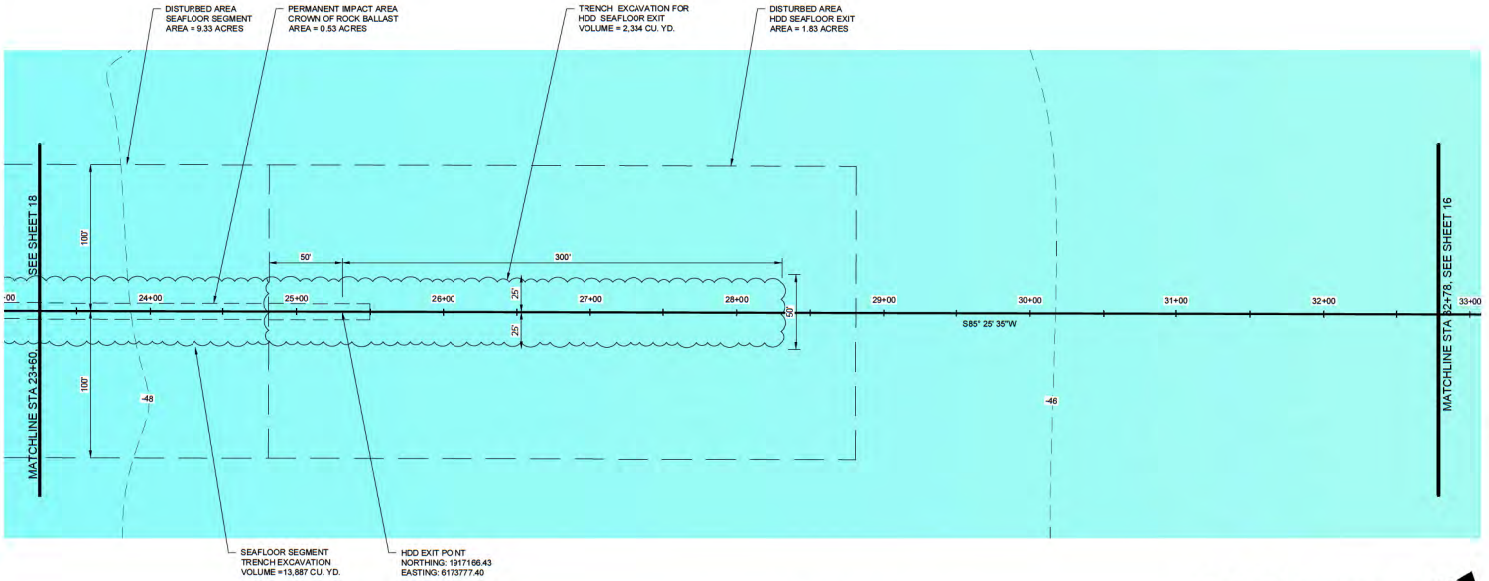


PROFILE VIEW

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=40'



NOTE:
1. HDD SEA FLOOR EXIT TRENCH SHALL BE EXCAVATED PRIOR TO HDD PILOT BORE DRILLING.



PLAN VIEW

SCALE: HORIZONTAL 1"=40'

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT
PLAN & PROFILE STA 32+78 TO STA 23+60

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 17 OF 41	DWG. NO.

60% SUBMITTAL

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200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-2795
(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REGISTERED PROFESSIONAL ENGINEER
MARK SEAN LARSEN
C 75576
EXP. 06/30/2024
CIVIL
STATE OF CALIFORNIA

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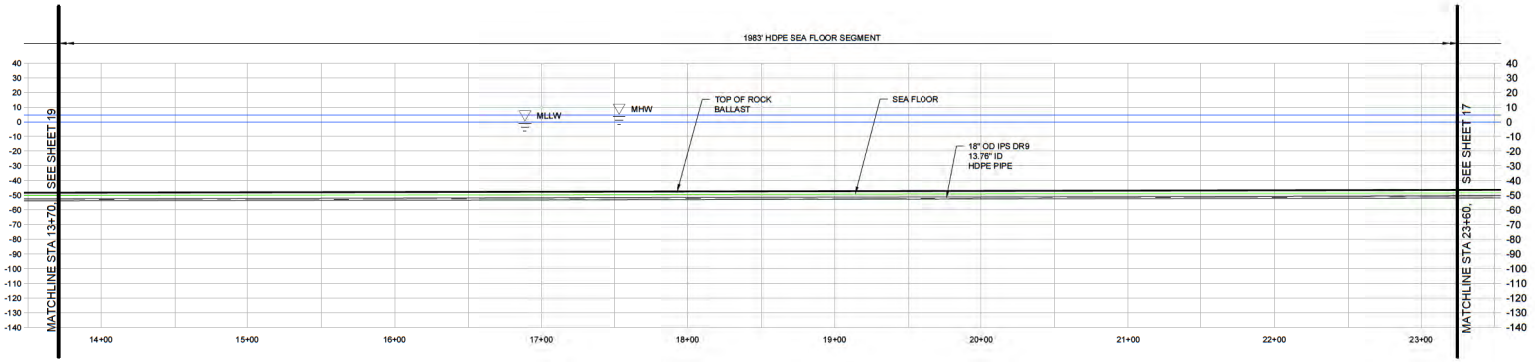
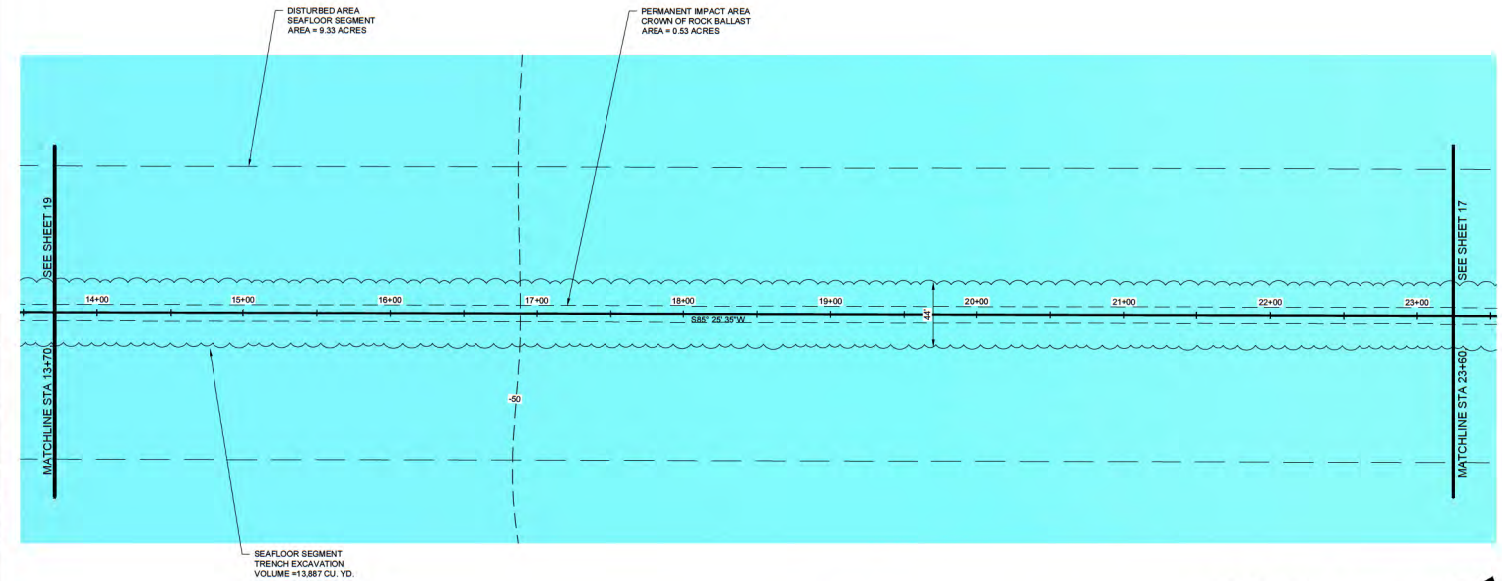


PROFILE VIEW

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=40'



PLAN VIEW

SCALE: HORIZONTAL 1"=40'

HDR Engineering, Inc.
200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-2795
(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT
PLAN & PROFILE STA 23+60 TO STA 13+70

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 18 OF 41	DWG. NO.

60% SUBMITTAL

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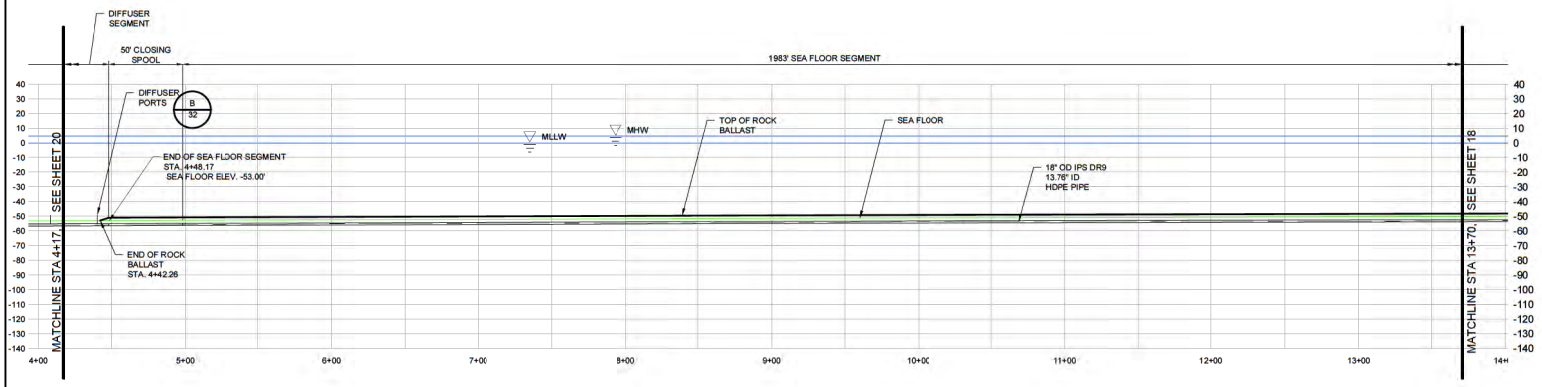
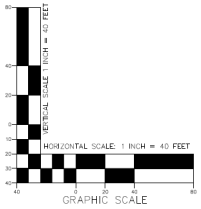
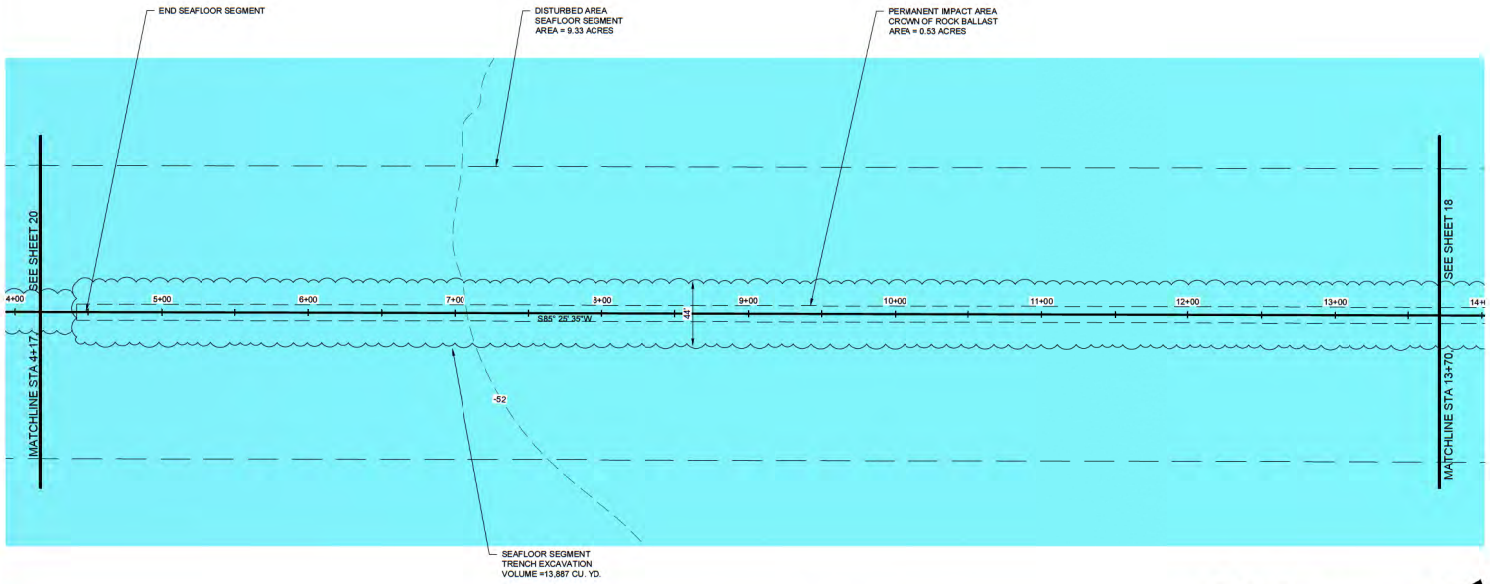
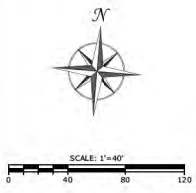




PROFILE VIEW

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=40'





PLAN VIEW

SCALE: HORIZONTAL 1"=40'

HDR Engineering, Inc.
200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-2795
(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION

CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT

PLAN & PROFILE STA 13+70 TO STA 4+17

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 19 OF 41	DWG. NO.

60% SUBMITTAL

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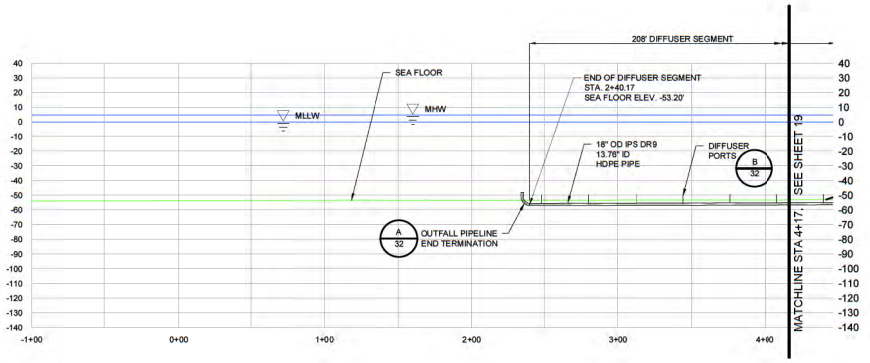
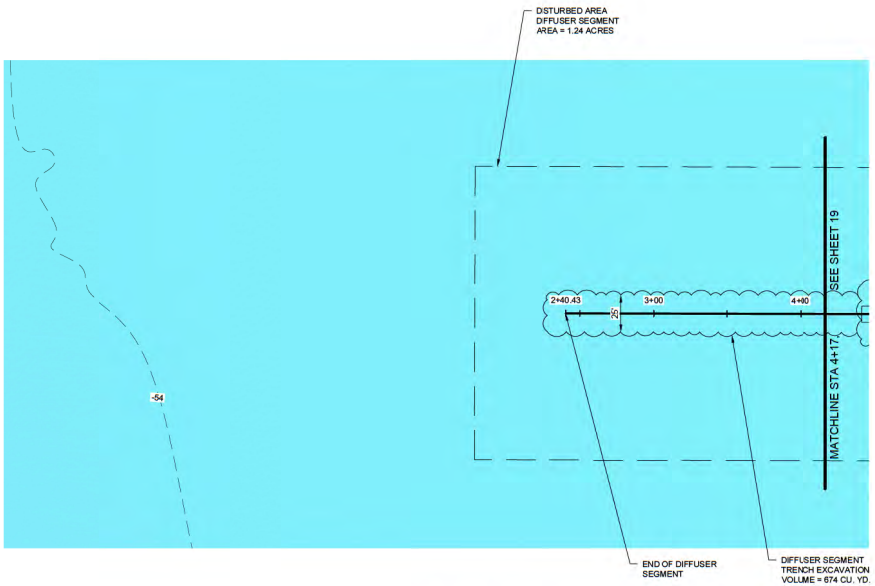


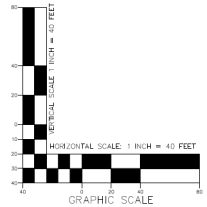
PROFILE VIEW

SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=40'



PLAN VIEW

SCALE: HORIZONTAL 1"=40'



SCALE: 1"=40'
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REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT

PLAN & PROFILE STA 4+17 TO STA 2+40

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 20 OF 41	DWG. NO.

60% SUBMITTAL

HDR Engineering, Inc.
200 E. Santa Clara Street
Suite 220
Ventura, CA 93001-2795
(805) 628-3001

LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REGISTERED PROFESSIONAL ENGINEER
MARK SEAN LARSEN
C 75576
EXP. 06/30/2024
CIVIL
STATE OF CALIFORNIA

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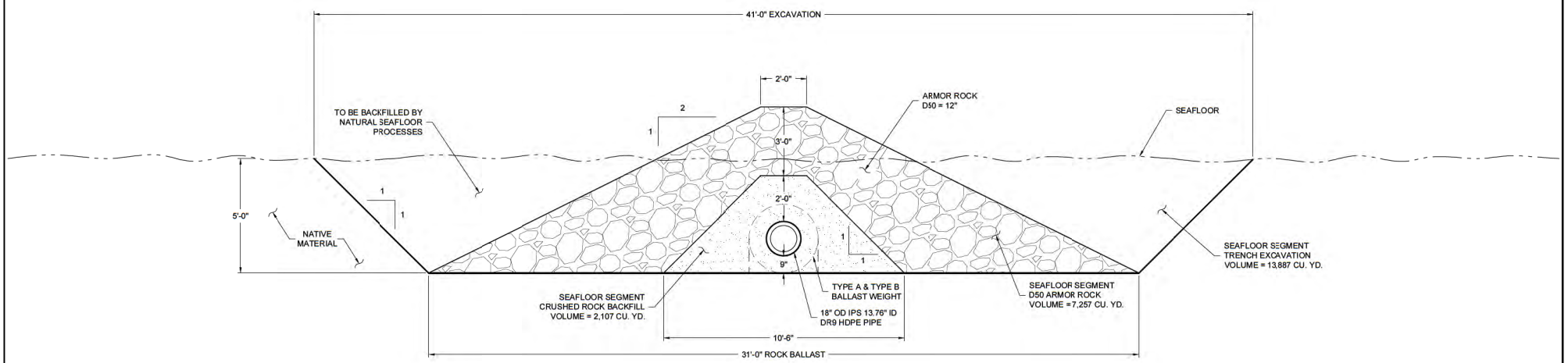
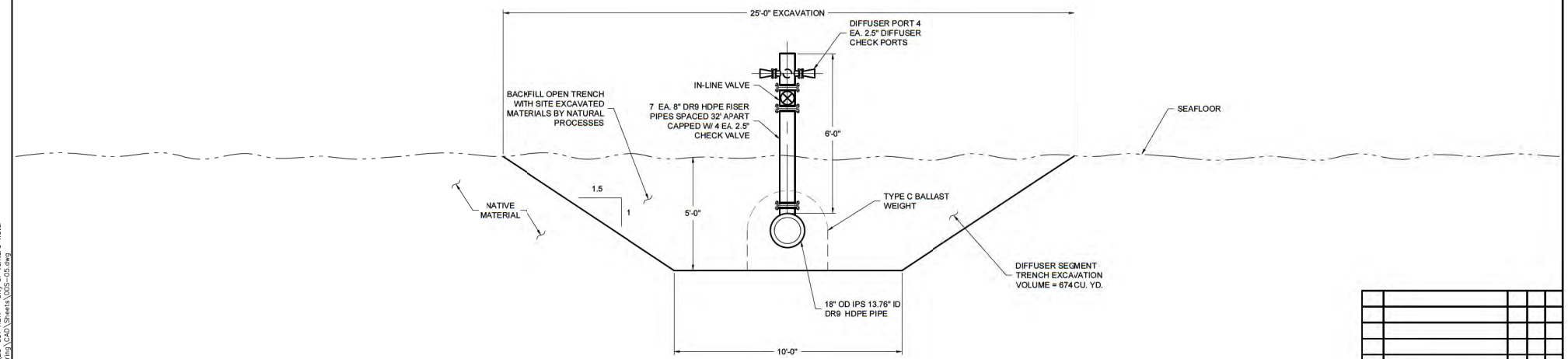


SECTION A / 27
SCALE: 1/2" = 1'-0"

SEAFLOOR SEGMENT TRENCH AND BACKFILL
STA. 25+21.54 TO STA. 4+48.17



SECTION B / 27
SCALE: 1/2" = 1'-0"

DIFFUSER SEGMENT TRENCH AND BACKFILL
STA. 4+48.17 TO 2+40.17

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LONGITUDE 123, INC.
California Marine Project Planning, Permitting and Performance

REV.	DESCRIPTION	CK'D	APP	DATE

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION
CITY OF SAN BUENAVENTURA

VENTURAWATERPURE OCEAN OUTFALL PROJECT

TRENCH & BACKFILL DETAILS

DRN. BY: ER	DES. BY: HL	CK'D. BY: MS
SPEC. NUMBER 2022-D-020	PROJECT NO.	
August 4, 2022	SHEET 31 OF 41	DWG. NO.

60% SUBMITTAL

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MITIGATION MONITORING AND REPORTING PROGRAM SUMMARY FOR THE VENTURA WATER SUPPLY PROJECTS

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
Aesthetics						
AES 3.1-3: The proposed projects could result in a significant impact if they would substantially degrade the existing visual character or quality of the sites and their surroundings.	**AES-1:** Prior to the start of construction, the city of Ventura shall prepare a Construction Management Plan. The Construction Management Plan shall, at a minimum, indicate the equipment and vehicle staging areas, areas for stockpiling of materials, temporary opaque fencing material, and haul route(s). Staging areas shall be sited and/or screened to minimize public views to the maximum extent practicable.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure AES-1 in the Construction Contract Specifications. – City shall approve plan. – Construction Contractor shall implement plan – City shall monitor compliance with plan during construction		
	AES-2: Aboveground buildings/structures shall be designed to have color palettes and vegetation screening as necessary to blend with the surrounding character of the site and to minimize contrasting features in the visual landscape.	• Advanced Water Purification Facility • Groundwater Wells	Developed Prior to Construction, Implemented During Construction	– Include Mitigation Measure AES-2 in the Construction Contract Specifications. – City shall review final designs – Construction Contractor –shall implement design – City shall inspect designs to ensure compliance		
AES 3.1-4: The proposed projects could result in a significant impact if they would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	**AES-3:** Lighting used during temporary nighttime construction or for permanent security purposes shall be shielded and directed downward or pointed away from surrounding light-sensitive land uses.	• Advanced Water Purification Facility • Groundwater Wells • Conveyance Pipeline	Plans Confirmed Prior to Construction Implemented During Construction and Operation	– Include Mitigation Measure AES-3 in the Construction Contract Specifications – City shall inspect designs to ensure compliance		

Exhibit 5
CDP Application No. 9-22-0733

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
Air Quality						
AQ 3.3-2: The proposed projects could have a significant impact if they would violate any air quality standard or contribute substantially to an existing or projected air quality violation.	**AQ-1:** The following control measures provided in the VCAPCD Ventura County Air Quality Assessment Guidelines to minimize the generation of fugitive dust (PM10 and PM2.5), ROC, and NOX during construction activities shall be implemented during construction: • The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. • Pre-grading/excavation activities shall include watering the areas to be graded or excavated before grading or excavation operations commences. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. • Fugitive dust produced during grading excavation and construction activities shall be controlled by the following activities: a) All trucks shall be required to cover their loads as required by California Vehicles Code Section 23114. b) All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization material, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure AQ-1 in the Construction Contract Specifications – Construction Contractor shall implement measures – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	water shall be used whenever possible. • Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally safe dust suppressants to prevent excessive fugitive dust. • Signs limiting traffic to 15 miles per hour or less shall be posted on-site. • During periods of winds 25 miles per hour or greater (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties) or at the direction of the City, all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off site or onsite. The site superintendent/supervisor shall use discretion in conjunction with the VCAPCD in determining when winds are excessive. • Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day if visible soil material is carried over to adjacent streets and roads. • Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.					

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	AQ-2: During construction contractors shall comply with the following measures, as feasible, to reduce NOX and ROC from heavy equipment as recommended by the VCAPCD in its Ventura County Air Quality Assessment Guidelines: • All construction equipment shall meet or exceed Environmental Protection Agency Tier 3 certification requirements. The contractor shall be required to document the use of Tier 3 equipment or better. • HDD drilling motors will comply with Tier 3 standards or greater and have particulate filters installed or the contractor shall provide justification to the City that the equipment is not available. • The City shall establish a barrier around the HDD drilling site to minimize site lines, air emissions, and noise from the drilling activities. • For pipeline installation work within 300 feet of sensitive receptors such as schools and health care facilities, the City shall coordinate with the school or health care facility to schedule construction activities during periods that minimize disruption to receptors when feasible. • Minimize equipment idling time. • Maintain equipment engines in good condition and in proper tune as per manufacturer's specifications. • Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure AQ-2 in the Construction Contract Specifications – Construction Contractor shall implement measures – City shall inspect to ensure compliance		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	• Use alternatively fueled construction equipment, such as compressed natural `gas (CNG), liquefied natural gas (LNG), or electric, if feasible.					
Biological Resources						
BIO 3.4-1: The projects could have a significant impact if they would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or USFWS.	**BIO-1:** Prior to the start of construction in areas that could encounter sensitive species, a qualified biologist shall provide Worker Environmental Awareness Program (WEAP) training to all construction workers onsite. The training shall include materials to aid workers in identifying sensitive habitats, plants, and wildlife that should be avoided; applicable laws and regulations protecting such resources; and proper avoidance and communication procedures to protect sensitive biological resources, as well as common wildlife whenever possible.	• Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction During Construction.	– Include Mitigation Measure BIO-1 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
	BIO-2: Prior to construction activities within 50 feet of sensitive habitat, a qualified biologist shall survey a 500-foot radius for the presence of sensitive species that could be affected by construction noise and disruption. If construction activities could generate noise in excess of 65 dBA for prolonged periods (averaged over an 8-hour day) in areas where the ambient noise level is less than 65 dBA and sensitive species are present, the construction contractor shall install noise barriers between the construction activity and the sensitive resource to reduce noise impacts on biological resources.	• Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction During Construction	– Include Mitigation Measure BIO-2 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
	BIO-3: If nighttime construction is required, lighting shall be kept to the minimum necessary to safely conduct the work. All lighting shall be focused on the construction area and avoid spilling onto habitat areas.	• Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge	During Construction	– Include Mitigation Measure BIO-3 in the Construction Contract Specifications – Construction Contractor shall implement measure		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
		Facility • Ocean Desalination Facility		– City shall inspect to ensure compliance		
	BIO-4: If the nesting season cannot be avoided and construction or vegetation removal occurs between March 1 to September 15 (January 1 to July 31 for raptors), the project shall do the following to avoid and minimize impacts to nesting birds and raptors: • During the avian breeding season, a qualified biologist shall conduct a preconstruction avian nesting survey no more than 7 days prior to vegetation disturbance or site clearing. If construction begins in the non-breeding season and proceeds continuously into the breeding season, no surveys are required. However, if there is a break of 7 days or more in cleanup activities during the breeding season, a new nesting bird survey shall be conducted before construction begins again. • The preconstruction survey shall cover all reasonably potential nesting locations on and within 300 feet of the proposed removal areas, and areas that would be occupied by ground-nesting species such as killdeer. A 500-foot radius shall be surveyed in areas containing suitable habitat for nesting raptors, such as trees, utility poles, rock crevices, and cliffs. • If an active nest is found during the preconstruction avian nesting survey, a qualified biologist shall implement a 300-foot minimum avoidance buffer for all passerine birds and 500-foot minimum avoidance buffer for all raptor species. The nest site area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be	• Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction During Construction	– Include Mitigation Measure BIO-4 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	impacted by the project. Buffer areas may be increased if any endangered, threatened, CDFW fully protected, or CDFW species of special concern are identified during protocol or preconstruction surveys, based on consultation with USFWS or CDFW. • If a nest is found in an area where ground disturbance is scheduled to occur, the project operator shall avoid the area either by delaying ground disturbance in the area until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, or by relocating the project component(s) to avoid the area.					
	BIO-5: The City shall prepare and implement a Pre-Construction Santa Clara River Estuary (SCRE) Monitoring Program that will confirm and update the existing baseline hydrological, chemical and biological conditions of the SCRE for a period of 3 years. The City shall coordinate preparation of the monitoring program with the RWQCB, USFWS, NMFS, and CDFW. The purpose of the program shall be to collect specific ecological monitoring data. This data will be used to inform the development of the Post-Construction Monitoring, Assessment, and Adaptive Management Plan, which shall identify action criteria and management measures that will guide and confirm that the implementation of Phase 1b reductions in discharges (to an average annual of 0 to 0.5 MGD in closed-berm conditions) avoids and minimizes significant adverse environmental impacts.	• Phase 1a Components	Prior to Construction of Phase 1a;	– City shall prepare and implement BIO-5		
	BIO-6: The City shall prepare and implement a Post Construction Santa Clara River Estuary (SCRE) Monitoring, Assessment, and Adaptive Management Program (MAAMP) that will continue data collection in the SCRE and will evaluate and confirm post-discharge	• Phase 1b Components	Following construction of Phase 1a and Prior to Construction of Phase 1b	– City shall prepare and implement BIO-6		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	diversion SCRE habitat values and conditions for SCRE listed species. The SCRE MAAMP will consist of the following core elements at a minimum: • Water depth measurements; • Aquatic species surveys within the SCRE to document occurrence and abundance of tidewater goby and juvenile steelhead; • Bird and nesting surveys to document the occurrence and abundance of snowy plover and California least tern using or occupying, or foraging of nesting within the SCRE and its vicinity; • Acreage and qualitative evaluation of vegetation associations (habitat types) within the SCRE and its vicinity; • SCRE receiving water quality monitoring including regular measurements for temperature, salinity, dissolved oxygen, and nutrients collected vertically and horizontally to inform stratification and spatial patterns understanding; • Documentation of eutrophication episodes within the SCRE; • SCRE berm condition monitoring including berm heights and breaching events; and • Continuous VWRF discharge flow data, and instantaneous VWRF discharge water quality data. The monitoring effort will be initiated following implementation of Phase 1a when discharges have been reduced to a CDL of 1.9 MGD. The City shall submit annual monitoring reports to the CDFW, USFWS, and NMFS that compile the data collected for a period of 5 years. The City shall consult with CDFW, USFWS, and NMFS to evaluate the data and trends shown in the monitoring data. In the event					

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	that based on the information and analysis provided by the MAAMP, NMFS,USFWS, and or CDFW notifies the RWQCB and the City in writing that reducing the average annual discharge flows below 1.9 MGD in closed-berm conditions would result in an unauthorized "take" (as defined in the state or federal Endangered Species Act, as applicable) of one or more listed species contrary to the permits or authorizations those agencies have issued, then the actions specified in the MAAMP shall be implemented to further avoid and minimize adverse impacts to, and take of listed species within the SCRE resulting from Phase 1b reductions, until and unless and until the Regional Board and the wildlife agency with jurisdiction authorize lower discharge.					
	BIO-7: Prior to initiating any directional drilling activities, the City shall prepare a Drilling Fluid Mitigation and Response Plan that identifies measures to reduce risks to water quality from accidental release of drilling fluids into surface water. Measures include best practices to employ to minimize the risk of releases. The plan will identify spill containment equipment, monitoring and reporting roles and responsibilities, and implementation procedures sufficient to contain any release of drilling fluids.	• Water Conveyance System • Concentrate Discharge Facility • Ocean Desalination Facility	Plan: Prior to Construction Implementation: During Construction	– Include Mitigation Measure BIO-7 in the Construction Contract Specifications – City shall approve plan – Construction Contractor shall implement plan – City shall inspect to ensure compliance		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
BIO 3.4-2: The proposed projects could have a significant impact if they would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or USFWS.	**Implement BIO-7**	• Concentrate Discharge Facility	Plan: Prior to Construction Implementation: During Construction	– City shall implement measures		
BIO 3.4-3: The proposed projects could have a significant impact if they would have a substantial	**Implement BIO-5, BIO-6 and BIO-7**	• AWPF • Concentrate Discharge Facility	Plan: Prior to Construction	– City shall implement measures		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.			Implementation: During Construction			
Cultural Resources						
CUL 3.5-1: The proposed projects could result in a significant impact if they would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	**CUL-1:** Prior to the start of any ground disturbing activity**,** a Qualified Archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior 2008) shall be retained by the City to carry out all mitigation measures related to archaeological resources.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure CUL-1 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
	CUL-2: Cultural resources survey shall be conducted prior to any ground disturbing activities associated with unsurveyed portions of the project area. The portions of the area of the proposed projects not surveyed include the Harbor Boulevard, Transport Street and Portola Road AWPF sites, the parcels within which groundwater Well Sites 2 and 3 would be located, and the portions of the proposed water conveyance pipeline located on private lands. Any resources identified during the survey that would be impacted as a result of the proposed projects should be evaluated for listing in the NRHP and CRHR. Avoidance and preservation in place shall be the preferred manner of mitigating impacts to historical resources under CEQA.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction During Construction	– Include Mitigation Measure CUL-2 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	CUL-3: Prior to any ground disturbing activities associated with the project, the Qualified Archaeologist should conduct cultural resources sensitivity training for all construction personnel. Construction personnel should be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The City should ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure CUL-3 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
	CUL-4: Prior to the start of ground-disturbing activities associated with the proposed projects, including development, preparation and implementation of project related geophysical surveys and other offshore data collection and construction activities, an archaeological monitor working under the supervision of the Qualified Archaeologist and a Native American monitor associated with the Barbareño/Ventureño Band of Mission Indians, or other locally affiliated tribe, shall monitor all project-related ground-disturbing activities within previously undeveloped project parcels, offshore areas, all jack-and-bore receiving pits, and all pot-holing activities within existing road rights-of-way. Previously undeveloped parcels requiring monitoring include the Harbor Boulevard, Transport Street, offshore areas, and Portola Road AWPF sites, as well as the new treatment wetlands parcel, and groundwater Well Sites 1, 2, and 3. For the pipeline alignments to be installed within existing road rights-of-way, a monitoring plan shall be prepared by the Qualified Archaeologist outlining the locations and timing of monitoring based on level of disturbance identified during pot-hole monitoring, as well as any geotechnical report to be prepared as part of project	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure CUL-4 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	implementation. Prior to implementing offshore geophysical surveys, the City shall provide the survey methods and plans to the Barbareño/Ventureño Band of Mission Indians for their information as part of the consultation. Based on observations of subsurface soil stratigraphy or other factors during initial ground-disturbing activities across the project area, and in consultation with the City and Native American monitor, the Qualified Archaeologist may reduce or discontinue monitoring as warranted if the Qualified Archaeologist determines that the possibility of encountering archaeological deposits is low in a given area or during a given activity. Archaeological monitors shall maintain daily logs documenting their observations. Monitoring activities shall be documented in a Monitoring Report to be prepared by the Qualified Archaeologist at the completion of construction and shall be provided to the City and filed with the SCCIC within 6 months of construction completion.					
	CUL-5: In the event of the unanticipated discovery of archaeological materials during implementation activities associated with the proposed projects, including offshore data collection and construction activities, all work shall immediately cease in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. In the event that cultural resources are discovered on state lands, including discoveries made during any offshore activities, the California State Lands Commission shall also be notified. Construction shall not resume until the qualified archaeologist and, for offshore activities, the California State Lands Commission, has conferred with the City on the significance of the resource.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction; During Construction	– Include Mitigation Measure CUL-5 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	If it is determined that the discovered archaeological or cultural resource constitutes a significant resource, avoidance and preservation in place is the preferred manner of mitigation. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Cultural Resources Treatment Plan shall be prepared and implemented by the qualified archaeologist in consultation with City and Barbareño/Ventureño Band of Mission Indians, or other locally affiliated tribe, that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource.					
	CUL-6: Prior to development of the new outfall and the Phase 2 Ocean Desalination ocean intake system, the City should retain a qualified archaeologist, defined as meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (U.S. Department of the Interior 2008), to conduct a cultural resources assessment of the ocean intake system that includes: a records search at the South Central Coastal Information Center; a Sacred Lands File search at the California Native American Heritage Commission; a desktop geoarchaeological review of onshore and offshore components; a shipwrecks database review for offshore components; a paleontological resources records check conducted by the Los Angeles County Natural History Museum, a pedestrian field survey for onshore components; recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms; and preparation of	• Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure CUL-6 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	a technical report documenting the methods and results of the study. All identified cultural resources should be assessed for the ocean intake system's potential to result in direct and/or indirect effects to those resources. Cultural resources that will be directly and/or indirectly affected and cannot be avoided should be evaluated for their potential significance prior to the City's approval of the ocean intake system plans and publication of subsequent CEQA documents. The qualified archaeologist should provide recommendations regarding archaeological and Native American monitoring, protection of avoided resources, and/or recommendations for additional work or treatment of significant resources (i.e., resources that qualify as historical resources or unique archaeological resources under CEQA or resources that qualify as historic properties pursuant to Section 106 of the NHPA) that will be affected by construction of the ocean intake system.					
CUL 3.5-2: The proposed projects could result in a significant impact if they would cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5**.**	**Implement Mitigations Measure CUL-1 through CUL-6.**	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction; During Construction	– City shall implement measures		
CUL 3.5-3: The proposed project could result in a significant impact if they would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature**.**	**CUL-7:** Prior to the start of project-related ground-disturbing activities, the City shall retain a qualified paleontologist meeting the Society for Vertebrate Paleontology's professional standards (2010) to carry out all mitigation measures related to paleontological resources.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge	Prior to Construction	– Include Mitigation Measure CUL-7 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
		Facility • Ocean Desalination Facility				
	CUL-8: Prior to the start of project-related ground-disturbing activities, the qualified paleontologist shall conduct a paleontological resources sensitivity training for all construction personnel working on the project. This may be conducted in conjunction with the archaeological resources training required by Mitigation Measure CUL-2. The training shall include an overview of potential paleontological resources that could be encountered during ground-disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the qualified paleontologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of paleontological resources. The City shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction During Construction	– Include Mitigation Measure CUL-8 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
	Implement Mitigation Measure CUL-6. **CUL-9:** The qualified paleontologist, or a paleontological monitor working under the direct supervision of the qualified professional paleontologist, shall spot check open and visible excavations and/or spoil piles originating from construction activities exceeding depths of 20 feet. The qualified paleontologist shall review engineering plans to determine where ground disturbing activities will exceed 20 feet deep, and will coordinate with construction staff to determine the scheduling of spot checks. In the event that sensitive Quaternary older alluvial deposits are observed during spot check monitoring, the qualified paleontologist may make recommendations to modify the spot check protocols. Likewise, if monitoring observations suggest no potential for	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure CUL-9 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	paleontological materials, the paleontologist may recommend to reduce or to discontinue the spot checks. The paleontological monitor shall prepare daily logs. After construction has been completed, a report that details the results of the spot check monitoring will be prepared and submitted to the City.					
	CUL-10: In the event of the unanticipated discovery of paleontological resources during project implementation, all work shall immediately cease in the area (within approximately 100 feet) of the discovery until it can be evaluated by a qualified paleontologist. The qualified paleontologist shall evaluate the significance of the resources and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository. Construction shall not resume until the qualified paleontologist has conferred with the City on the significance of the resource.	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure CUL-10 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
CUL 3.5-4: The proposed projects could result in a significant impact if they would disturb any human remains, including those interred outside of formal cemeteries.	**Implement Mitigation Measures CUL-6 through CUL-10** **CUL-11:** If human skeletal remains are uncovered during project construction, all work within 100 feet of the find shall be immediately halted, and the Ventura County coroner shall be contacted to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure CUL-11 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	American, the City shall contact the NAHC, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC 5097.98 (as amended by AB 2641). The NAHC shall then identify a Most Likely Descendant (MLD) of the deceased Native American, who shall then help determine what course of action should be taken in the disposition of the remains. Per PRC 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.					
GEO 3.6-3: The proposed projects could result in a significant impact if they would expose people or structures to the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	**GEO-1:** A soils report and geotechnical investigation report shall be prepared by a California licensed geotechnical engineer for all facilities with potential to encounter shallow groundwater or expansive soils. These reports shall evaluate various geotechnical characteristics including existing liquefaction risk, expansive soils, and soil stability, and whether the operation of the proposed projects would exacerbate an existing risk of liquefaction or soil instability or create a new risk. The reports shall provide recommendations for facility design per these findings; these recommendations shall be incorporated into facility design.	All Components	Prior to Construction	– City shall contract with a qualified geotechnical engineer to prepare report – City shall approve the report – City shall include recommendations of report into project designs – City shall review designs to ensure compliance		
GEO 3.6-5: The proposed projects could result in a significant impact if they would result in substantial soil erosion or the loss of topsoil.	**GEO-2:** For construction sites less than 1 acre, the following types of BMPs shall be implemented during construction: (1) preservation of existing vegetation to the maximum extent practicable, (2) implementation of erosion control and	• Groundwater Wells • VWRF Treatment Upgrades • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure GEO-2 in the Construction Contract Specifications – Construction Contractor shall implement measure		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	sediment control best management practices, (3) implementation of waste management best management practices, and (4) good housekeeping. The California Stormwater Quality Association Best Management Practices Handbook shall be consulted for implementation instructions for the aforementioned BMPs. The contractor shall identify a construction monitor prior to construction. The construction monitor shall inspect the installation and ongoing maintenance of the BMPs for the duration of the construction activities.			– City shall inspect to ensure compliance		
GEO 3.6-7: The proposed projects could result in a significant impact if they would be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	**Implement Mitigation Measure GEO-1.**	• All Components	Prior to Operation; During Operation	– City shall implement measure		
HAZ 3.8-2: The proposed projects could result in a significant impact if they would create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment.	**HAZ-1:** The City of Ventura shall prepare an Anchoring Plan that applies to all ships, barges, and other ocean-going vessels and describes procedures for deploying, using, and recovering anchorages. The City shall submit this plan to the California Coastal Commission Executive Director for review and approval prior to initiation of offshore activities. The Anchoring Plan shall include, but not be limited to, the following elements: • Training for the project manager for marine activities, vessel operators, field supervisors, and environmental monitors	• Concentrate Discharge Facility	Prior to Construction	– Include Mitigation Measure HAZ-1 in the Construction Contract Specifications – City shall approve the plan – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	to ensure familiarity with the Anchoring Plan. • A brief overview of the project objectives. • Description of anchor set and anchor leg (wires, winches, and other support equipment). • Description of vessels to be anchored and support tugs to be used. • Description and delineation of safety zone and anchor zone, including identification and mapping all areas of kelp, seagrasses, and hard substrate found within the work area. • Identification of Contractor Vessels and Buoys, including daylight and nighttime marking schemes. • Anchoring procedures in compliance with Coast Guard Navigation Standards Manual. • Local notice to U.S. Coast Guard and mariners. All elements of the Anchoring Plan shall be in compliance with U.S. Coast Guard regulations.					
	HAZ-2: Prior to any offshore construction, the contractor shall prepare a Marine Safety Plan. The Marine Safety Plan would apply to all marine construction activities that would take place for the construction of the concentrate discharge pipes. The purpose would be to provide a precise set of procedures and protocols that shall be used by the marine contractors during the marine portions of the construction work, with a focus on personal, environmental, and vessel safety. The Marine Safety Plan shall include, but not be limited to, the following elements: • A brief overview of the project objectives.	• Concentrate Discharge Facility	Prior to Construction	– Include Mitigation Measure HAZ-2 in the Construction Contract Specifications – City shall approve the plan – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	• Distribution of Marine Safety Plan, which shall include the U.S. Coast Guard, each vessel involved in the marine activities, all environmental monitors, and all support radio operators. • Training for the project manager for marine activities, vessel operators, field supervisors, and environmental monitors to ensure familiarity with the Marine Safety Plan. • Description and maps depicting the marine project location. • Description of marine operations protocols. • Description of critical operations and curtailment plan, including offshore fueling procedures and storm procedures. • Marine communications plan. • Marine transportation plan for barges, tugboats, crew boats, and other vessels. • Navigational marking and lighting plan.					
HAZ 3.8-6: The proposed projects could result in a significant impact if they would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**Implement Mitigation Measure TRAF-1.**	• All Components	Prior to Construction	– City shall implement the measure		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
Marine Biology						
MARINE 3.11-1: The projects could have a significant impact, either directly or through habitat modifications, if they would cause direct disturbance, removal, filling, hydrological interruption, or discharge, on any species, natural community, or habitat, including candidate, sensitive, or special-status species identified in local or regional plans, policies, regulations or conservation plans (including protected wetlands or waters, critical habitat, EFH) or as identified by the CDFW, USFWS, or NMFS.	**Implement Mitigation Measure HAZ-1.** **MARINE-1:** The City of Ventura shall prepare a Marine Oil Spill Response Plan that would apply to all powered vessels used in support of the concentrate discharge construction activities. The purpose would be to provide a precise set of procedures and protocols that would be utilized in the event of an offshore fuel, oil, or hazardous materials spill resulting from construction activities (e.g., marine fuel and oil). The Marine Oil Spill Response Plan shall include but not be limited to the following elements: • A brief overview of the project objectives. • Definition of major and minor spills. • Description of spill sources. • Description of spill response team and equipment. • Agreements with Spill Response Organizations. • Notification requirements, including names and phone numbers of agencies to be notified, along with an information checklist of the incident. • Description of marine spill scenarios and response procedures. All elements of the Oil Spill Response Plan shall be in compliance with U.S. Coast Guard regulations, and the City shall implement the Oil Spill Response Plan through the required NPDES General Permit for Vessel Incidental Discharges discussed in Section 3.9.2.	• Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure MARINE-1 in the Construction Contract Specifications – City shall approve the plan – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

	MARINE-2: Prior to the initiation of any offshore pile driving activities for the project, the City of Ventura shall prepare a Construction Plan that outlines the details of the piling installation approach. The information provided in this plan shall include, but not be limited to: • The type of piling and piling size to be used. • The method of pile installation to be used. • Noise levels for the type of piling to be used and the method of pile driving (vibratory or impact). • Calculation of potential underwater noise levels that could be generated during pile driving using methodologies outlined in Caltrans 2015 and NOAA 2016b. • A schedule of when pile-driving would occur. If calculated noise levels are > 183 dB at ≤ 10 meters or >120 dB at a distance of ≤ 500 meters, the City of Ventura shall develop a NMFS-approved sound attenuation reduction and monitoring plan. This plan shall detail the sound attenuation system, detail methods used to monitor and verify sound levels during pile-placement activities, and describe all BMPs undertaken to reduce impact hammer pile-driving sound in the marine environment to an intensity level of less than 183 and 120 dB at distances of 10 meters and less, and 500 meters and less, respectively. These performance standards assure compliance with NMFS cumulative SEL and peak SPL acoustic metrics. The sound-monitoring results shall be made available to NMFS. The Construction Plan shall be presented to the NMFS Environmental Review Officer prior to commencement of construction for review and approval. The plan shall incorporate, but not be limited to the following BMPs, which have been shown to reduce underwater noise levels and possible impacts to fish and marine mammals:	• Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure MARINE-2 in the Construction Contract Specifications – City shall approve the plan – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

	• Pile -driving shall be conducted only between June and November to avoid gray whale migration, unless NMFS in their Section 7 consultation with the USACE determines that the potential effect to marine mammals is less than significant. • At least 1,600-foot (500-meter) safety zone (or as otherwise required by NMFS) shall be established and visually monitoring around the sound source for the protection of marine mammals and sea turtles in the event that construction sound levels are predicted to be harmful to marine mammals: - A NMFS-approved biological monitor will conduct daily surveys before and during impact hammer pile driving to inspect the work zone and adjacent waters for marine mammals. The monitor will be present as specified by NMFS Fisheries during the pile-driving phases of construction. - Work activities shall be halted when the biological monitor observes that a marine mammal or sea turtle enters the established safety zone and shall cease until the mammal has been gone from the area for a minimum of 15 minutes. - A "soft start" technique shall be used in all impact hammer sourced pile driving, giving marine mammals an opportunity to vacate the area. Other BMPs will be implemented if the biological monitor determines they are necessary, such as bubble curtains or an air barrier, to reduce underwater noise levels to the performance standards applicable pursuant to Table 311-5A, or at those more					

	stringent thresholds established by NMFS for acute and chronic levels 10 meters and 500 meters, or such other more stringent distances as may be established by NMFS. Alternatively, to meet these noise criteria, the City of Ventura may consult with NMFS directly and submit evidence to the satisfaction of the Environmental Review Officer. In such case, City of Ventura shall comply with NMFS recommendations and/or requirements to meet the noise criteria. The BMPs listed above provide examples of measures that are normally used to reduce noise impacts to below the noise criteria.					

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	MARINE-3: Entrainment of fish and invertebrate larvae resulting from outfall discharge turbulence, regardless of magnitude, will result in some loss of marine ecosystem productivity, species diversity, and trophic level energy transfer. As part of, and in support of, the Water Code Section 13142.5(b) determination process with the RWQCB, the City will work with the RWQCB to calculate APF estimates for the Phase 2 project discharge if it includes ocean desalination. This loss will be compensated for by either direct or indirect habitat restoration consistent with California Ocean Plan Chapter III.M.2.e.(3) or by providing monetary payments to an appropriate State-approved fee-based mitigation program consistent with California Ocean Plan Chapter III.M.2.e.(4), or a combination of the two. If elected by the project, habitat restoration will occur at a location of sufficient marine acreage or alternative coastal lagoon/estuary acreage, and in a manner acceptable to the RWQCB as part of the Project's permitting process. Final determination of the appropriate mitigation shall be determined by the RWQCB with consideration for: (1) existing level of wetland function at the site prior to mitigation; (2) resulting level of wetland function expected at the mitigation site after the project is fully successful; (3) length of time before the mitigation is expected to be fully successful; (4) risk that the mitigation project may not succeed; and (5) differences in the location of the lost wetland and the mitigation wetland that affect the services and values they have the capacity and opportunity to generate, consistent with the OPA. If the RWQCB determines that an appropriate fee-based	• Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– City of Ventura		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	mitigation program has been established by a public agency, however, and if that payment of a fee to the mitigation program will result in the creation and ongoing implementation of a mitigation project that meets the requirements of California Ocean Plan Chapter III.M.2.e.(3), the City shall pay a fee to the mitigation program in lieu of completing a mitigation project as an alternative.					
MARINE 3.11-4: The projects could have a significant impact if they would introduce or spread an invasive non-native species.	**MARINE-4**: All project barges shall have underwater surfaces cleaned before entering Southern California waters and immediately prior to transiting to the project offshore construction area. Additionally, and regardless of vessel size, ballast water for all project vessels must be managed consistent with California State Lands Commission (CSLC) ballast management regulations, and Biofouling Removal and Hull Husbandry Reporting Forms shall be submitted to CSLC staff.	• Concentrate Discharge Facility • Ocean Desalination Facility	During Construction	– Include Mitigation Measure MARINE-4 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
Noise						
NOISE 3.13-1: The proposed projects could result in a significant impact if they would expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**NOISE-1:** Prior to construction, the City of Ventura shall ensure that the contractor specifications stipulate that: • All construction equipment, fixed or mobile, is equipped with properly operating and maintained mufflers and other state-required noise attenuation devices. • When feasible, construction haul routes shall avoid noise-sensitive uses (e.g., residences, convalescent homes). • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from the nearest noise-sensitive receptors.	• Advanced Water Purification Facility • Conveyance Pipeline • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction	– Include Mitigation Measure NOISE-1 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	• The project shall provide noise blanket/temporary noise barriers between the active areas and residential buildings					
	NOISE-2: Throughout project construction and operation, the City of Ventura shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints as soon as possible. • The City shall establish and disseminate a 24/7 hotline telephone number for use by the public to report any undesirable project noise conditions. If the telephone number is not staffed 24 hours per day, the City shall include an automatic answering feature with date and time stamp recording to answer calls when the phone is unattended. • The City shall designate a Noise Disturbance Coordinator during construction and permanently once the facility is operational. The Noise Disturbance Coordinator shall assist in resolving noise complaints to minimize impacts while maintaining the objectives of the construction and operation of the facility. The Noise Disturbance Coordinator shall report all noise complaints to the City program manager. • For construction noise complaints received outside of the construction hours and days allowed (Monday through Friday, between the hours of 7:00 a.m. and 8:00 p.m.), the Noise Disturbance Coordinator shall take immediate steps to determine whether project construction is causing the noise and, if so, to reduce the noise level of that activity or take other appropriate action to remedy the complaint as quickly as possible. • For construction activities near local residences, the Noise Disturbance Coordinator shall have the authority to	• Advanced Water Purification Facility • Conveyance Pipeline • Concentrate Discharge Facility • Ocean Desalination Facility	During Construction During Operation	– Include Mitigation Measure NOISE-2 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
	require the installation of a temporary noise barrier to reduce noise impacts to the closest sensitive receptors. The noise barriers shall be tall enough to effectively block sight-lines of the construction to the closest residences. The contractor shall install noise barriers as directed by the Noise Disturbance Coordinator to minimize construction noise and resolve noise complaints. Deliveries to the site normally shall not occur before 7:00 a.m. or after 10:00 p.m. on weekdays or between 9:00 a.m. and 6:00 p.m. on Saturdays, and are not allowed on Sundays. Oversized loads and other heavy-duty vehicles would primarily get to and from the site using main traffic conduits. If for reasons of critical operational needs these hours must be violated, the City shall notify adjacent residences of the unusual circumstance at least 2 days in advance.					
	NOISE-3: Residents of properties shall be offered noise mitigation measures (e.g., hearing protection, sound proofing, white noise machines, etc.) acceptable to the residents or relocation for the duration of nearby HDD drilling for new outfall construction, which would generate construction noise levels at their property in excess of 45 dBA, L_{eq} during nightime hours, for the duration of time that 24-hour activity occurs. Based on the analyses presented in this EIR, this shall apply to residences located within the first two rows of homes to the north and/or south and within approximately ,200 feet of the outfall drilling activity (i.e. homes along Greenock Lane and Nathan Lane).	• Concentrate Discharge Facility • Ocean Desalination Facility	Prior to and during Construction	– Include Mitigation Measure NOISE-3 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	NOISE-4: The project shall provide noise attenuation housings rated for up to a 10 dBA reduction for generator sets operating near sensitive receptors during new outfall HDD drilling operations.	• Concentrate Discharge Facility • Ocean Desalination Facility	Prior to and During Construction	– Include Mitigation Measure NOISE-4 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
NOISE 3.13-2: The proposed projects could result in a significant impact if they would expose persons to or generate excessive groundborne vibration or groundborne noise levels.	**NOISE-5**: The operation of construction equipment that generates high levels of vibration, such as large bulldozers and loaded trucks, shall be prohibited within 45 feet of existing residential structures. Instead, small construction equipment such as small rubber-tired bulldozers, small rubber-tired excavator, etc., not exceeding 150 horsepower shall be used within this area during demolition, grading, and excavation operations.	• All Components	During Construction	– Include Mitigation Measure NOISE-5 in the Construction Contract Specifications – Construction Contractor shall implement measure – City shall inspect to ensure compliance		
Transportation and Traffic						
TRAF 3.17-1: The proposed projects could result in a significant impact if they would conflict with an applicable plan, ordinances or policy establishing measures of effectiveness for the performance of the circulation system, taking	**TRAF-1:** Prior to the start of construction facilities that would occur within a roadway right-of-way, the City of Ventura shall require the construction contractor to prepare a Traffic Control Plan. The Traffic Control Plan will show all signage, striping, delineated detours, flagging operations, and any other devices that will be used during construction to guide motorists, bicyclists, and pedestrians safely through the construction area and allow	• Advanced Water Purification Facility • Water Conveyance System • Groundwater Wells • Wildlife/Treatment Wetlands • Concentrate Discharge Facility • Ocean Desalination Facility	Prior to Construction; During Construction	– Include Mitigation Measure TRAF-1 in the Construction Contract Specifications – City shall approve the plan – Construction Contractor shall implement measure – City shall inspect to ensure compliance		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	for adequate access and circulation to the satisfaction of the City's Public Works Director and Fire and Police Chiefs. The Traffic Control Plan shall be provided to the County Transportation Department for review prior to commencement of construction. When construction activities disrupt travel on major collectors or arterials, electronic signs shall be used to provide the public, on all transportation modes, with current construction information and the availability of alternate travel routes. The Traffic Control Plan shall be prepared in accordance with the City of Ventura's traffic control guidelines and will be prepared to ensure that access will be maintained to individual properties and that emergency access will not be restricted. Additionally, the Traffic Control Plan shall also include a scheduling plan showing the hours of operation to minimize congestion during the peak hours and special events. Haul routes will be identified based on County-approved truck routes. The scheduling plan will ensure that congestion and traffic delay are not substantially increased as a result of the construction activities. Further, the Traffic Control Plan will include detours or alternative routes for bicyclists using on-street bicycle lanes as well as for pedestrians using adjacent sidewalks. In addition, the City shall provide written notice at least 2 weeks prior to the start of construction to owners/occupants along streets to be affected during construction. During construction, the City will maintain continuous vehicular and pedestrian access to any affected residential driveways from the public street to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. Access will be reestablished at the end of the workday. If a					

Environmental Impact	Mitigation Measure	Project Components	Timing	Implementing Party Responsibilities	Verification of Compliance: Date	Verification of Compliance: Signature Name Title
	driveway needs to be closed or interfered with as described above, the City shall notify the owner or occupant of the closure of the driveway at least 5 working days prior to the closure. The Traffic Control Plan shall include provisions to ensure that the construction of the proposed projects do not interfere unnecessarily with the work of other agencies such as mail delivery, school buses, and municipal waste services. The Traffic Control Plan shall identify that damage to the condition of the roadways due to the use of construction related vehicles including soil haul trucks be repaired pursuant to County Transportation Department standards. The City shall also notify local emergency responders of any planned partial or full lane closures or blocked access to roadways or driveways required for construction of the proposed project facilities. Emergency responders include fire departments, police departments, and ambulances that have jurisdiction within the proposed project area. Written notification and disclosure of lane closure location must be provided at least 30 days prior to the planned closure to allow for emergency response providers adequate time to prepare for lane closures.					
TRAF 3.17-5: The proposed projects could have a significant impact if they would result in inadequate emergency access.	**Implement Mitigation Measure TRAF-1.**	• All Components	Prior to Construction; During Construction	– Oversight: – City of Ventura – Implementation: – City of Ventura – Construction Contractor		
TRAF 3.17-6: The proposed projects could result in a significant impact if they would conflict with adopted policies, plans, or programs regarding public	**Implement Mitigation Measure TRAF-1**	• All Components	Prior to Construction; During Construction	– City shall implement measure		

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.						
Tribal Cultural Resources						
CUL 3.18-1: The proposed projects could result in a significant impact if they would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Section 5020.1(k), or b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1,	**Implement Mitigation Measures CUL 4 and CUL-5**	• All Components	Prior to Construction	City shall implement measure		
	Implement Mitigation Measure CUL 6	• Concentrate Discharge Facility • Ocean Desalination Facility				

					Verification of Compliance	
Environmental Impact	**Mitigation Measure**	**Project Components**	**Timing**	**Implementing Party Responsibilities**	**Date**	**Signature Name Title**
the lead agency shall consider the significance of the resource to a California Native American tribe.						

CHAPTER 5
Monitoring, Assessment, and Adaptive Management Plan

5.1 Background

5.1.1 Purpose of the Monitoring, Assessment, and Adaptive Management Plan

The Ventura Water Supply Projects EIR included a mitigation measure (BIO-6) requiring implementation of a Monitoring Assessment and Adaptive Management Plan (MAAMP) to document and evaluate ecosystem conditions within the SCRE following the implementation of Phase 1a, which reduces VWRF discharges to an annual average CDL of 1.9 mgd. The MAAMP mandated by the CEQA commitments in the MMRP as well as in NPDES requirements, and supports the City's Section 7, CESA and Porter-Cologne Section 1211 consultations.

The purpose of the MAAMP is to provide a framework for evaluating the potential effects of further reduction of VWRF discharges proposed under Phase 1b of the VenturaWaterPure project. The data collection initiated in the PCAP will continue following implementation of Phase 1a discharge reductions associated with the VenturaWaterPure project under the guidance of the MAAMP. The MAAMP will evaluate the data collected to better understand the stressors exhibited in the SCRE and their sources. The MAAMP will identify action criteria and management measures as appropriate that will guide implementation of Phase 1b reductions in discharges (to an average annual of 0–0.5 mgd) if the data demonstrate that further discharge reductions would not result in the unauthorized "take" of sensitive species in the SCRE. The MAAMP does not impose any habitat management obligations onto the City. Rather the MAAMP provides a data collection and evaluation mechanism to ensure Phase 1b would not result in take of species. The premise of Phase 1b is that, as concluded by expert studies, returning to a more natural condition of reduced wastewater discharges into the SCRE would benefit habitat conditions. The City is not responsible for managing the SCRE as a natural resource, but is obligated to avoid and minimize adverse effects of wastewater discharges on the SCRE and its listed species.

The City will submit annual monitoring reports under the MAAMP to CDFW, USFWS and NMFS, with copies to Ventura Coaskeeper and Heal the Bay, for a period of five years. If, based on the information and analysis provided by the MAAMP, any of these agencies notify the RWQCB and the City that further reduction in VWRF discharges would result in an unauthorized "take" of one or more listed species, then further reductions proposed under Phase 1b would not

occur and the MAAMP and data collection activities associated with the MAAMP and PCAP would be terminated. The MAAMP is designed to facilitate the following actions:

- Continue the monitoring initiated in the PCAP (pre-Phase 1a) for a period of five years after Phase 1a discharge reductions are implemented to evaluate whether "take" would occur as a result of further reductions.
- Prepare annual data reports to assist in the evaluation of whether implementation of Phase 1b discharge reductions would result in "take."
- Characterize the effects of reduced discharges, and the return to a more natural hydrology, on designated critical habitat.
- Provide data to support analyses and conclusions as to whether monitored changes in conditions within the SCRE likely result from reduced discharges or climate, changing hydrology, groundwater pumping, or other outside influences over which the City has no control.
- Provide for adaptations of the data collection methods to best serve the MAAMP objectives.
- Establish a scientific data-driven decision mechanism to support the wildlife agencies in determining whether Phase 1b would result in "take."
- Outline management actions to avoid and minimize adverse impacts of any parameter if Phase 1b is implemented.

5.1.2 Monitoring and Adaptive Management Approach

Monitoring and adaptive management is an iterative approach that uses regular monitoring and assessments to evaluate progress towards project objectives. Adaptive management acknowledges that uncertainties exist in predicting how project implementation affects important resources, and provides a scientific and institutional framework for adjusting future management decisions as understanding of the ecosystem improves (Williams et al. 2009; Williams and Brown 2012).

The steps in the adaptive management process for the SCRE are as follows:

1. **Plan:** Define the problem, identify goals and objectives, identify expected outcomes (indicators), identify habitat parameters, and identify questions for assessment in Phase 1a, based on information from previous studies (Phase 3) and PCAP monitoring.
2. **Implement:** Implement the Phase 1a VWRF operations to reduce average annual discharge to 1.9 mgd, and conduct monitoring as per the MAAMP to determine if additional Phase 1b discharge reductions as recommended by the SRP should be implemented..
3. **Evaluate and Respond:** Analyze, synthesize, and manage data annually to document status and trends in the SCRE parameters and special-status species in response to Phase 1a discharges, relative to baseline conditions documented during PCAP monitoring. Communicate findings to decision-makers and managers annually to determine if and when to adjust management actions and/or monitoring to improve project performance and inform future actions. Following Phase 1a discharge reduction implementation, evaluate data and trends to determine whether reducing discharge below 1.9 mgd would avoid unauthorized take and significant adverse effects to listed species consistent with the EIR. If so, then move forward with Phase 1b to phase out discharges to the SCRE consistent with the SRP recommendations, the NPDES permit, and the *Water Quality*

Control Plan for Enclosed Bays and Estuaries adopted by the State Water Resources Control Board.

5.2 Indicators to be Considered in the Monitoring, Assessment, and Adaptive Management Plan

The reduction of VWRF discharge is expected to improve SCRE water quality and ecosystem health and maintain or enhance habitat for the four special-status species by reducing stressors and maintaining beneficial drivers (Revell et al. 2018). The underlying basis for this expectation assumes the SCRE would return to a more natural condition resulting from the discharge reductions. The objective of the MAAMP is to collect data that lead to a determination of whether Phase 1b would avoid unauthorized take of listed species and phase out closed-berm discharges to the SCRE in compliance with the SRP recommendations, the NPDES permit, and the *Water Quality Control Plan for Enclosed Bays and Estuaries* adopted by the State Water Resources Control Board, including the following:

1. Reduction of unseasonal breaching due to VWRF discharge
2. Enhancement of water quality for fish due to VWRF discharge
3. Maintenance of habitat suitability to support focal species
4. Reduction of non-native fish and amphibian assemblage

Table 8 provides a framework to evaluate these key indicators. The MAAMP data collection program supports this framework. Recommendations for future reductions in flow should be based on these indicators, focusing on the potential for "take."

5.2.1 Reduction of Unseasonal Breaching

Unseasonal breaching (i.e., June through October) represents the greatest threat to the SCRE ecosystem, including listed species. Unseasonal breaching can strand tidewater goby (eggs in burrows as well as juveniles and adults) and steelhead, and can transport fish out of the estuary into the ocean. Furthermore, unseasonal breaching can rapidly increase salinity in the estuary when juvenile steelhead and tidewater goby are unable to tolerate rapid salinity change (Revell et al. 2018). Unseasonal breaching can also affect breeding success of western snowy plover and California least terns that may be nesting on the berm and may eliminate foraging during summer time open berm conditions. Annual reports provided under the PCAP and continued under the MAAMP will record the frequency and timing of sand berm breaches along with any known causes. These may be compared with historical data to determine whether the discharge reductions have decreased unseasonal breaching or what other causal relationships. The data regarding berm height and water elevation will assist in understanding the berm breaching dynamics and timing when returning to a more natural condition. The berm height data will assist in estimating the potential for unseasonal breaching if further reductions are enacted. The reduction in unseasonal breaching will also be evaluated with increasing stability of foraging habitat during breeding and fledging periods.

5.2.2 Enhancement of Water Quality for Fish

Nutrient loading contributed by VWRF discharges has been a primary concern due to the effect on stimulating algal growth (both phytoplankton and macroalgae), which contributes to low oxygen that is harmful to fishes. Phase 1a will substantially reduce the contribution of nutrients from the VWRF into the SCRE. Uncertainties exist regarding other nutrient inputs to the SCRE. Measuring nutrient levels in the discharge, estuary, groundwater and river will provide additional information on the relative impact of the VWRF discharges on nutrient loading in the SCRE compared to other factors in the watershed.

Water quality, particularly salinity and dissolved oxygen, is important to the distribution and abundance of many organisms in the SCRE. Salinity should increase in the fall, after juvenile steelhead and goby attain sufficient growth to withstand greater salinities, particularly in response to wave overwash to deter invasive species populations and to support various tidewater goby life stages (Revell et al. 2018). Avoiding unseasonal breaches will also minimize sudden increases in salinity during the spring and summer, which are not tolerated by juvenile goby and steelhead (Revell et al. 2018) and can result in population crash of invertebrate communities (Netto et al. 2012).

Low oxygen conditions in the SCRE are primarily associated with nutrient enrichment and algal blooms. Steelhead may be adversely affected by the low DO (<4 mg/L) that occurs at times in some places of the estuary, most notably in the reaches near the VWRF discharge during the warm summer months in pre-dawn hours where respiring algal biomass robs the water column of oxygen (Revell et al. 2018). Thus, reduction of nutrient loads is expected to enhance water quality, returning the SCRE to a more natural condition. However, low oxygen conditions could also occur in response to nutrients in other inflows to the SCRE, and if estuary waters are significantly stratified for extended periods of time. Monitoring will examine spatial, vertical, and diurnal patterns of DO.

The SRP Final Report described that increased nutrients may contribute to an increase in toxicity within the receiving water (Revell et al. 2018). Reducing discharge volumes would reduce this potential toxic effect of nutrient loading. As a result, nutrient concentration monitoring will be helpful in assessing the potential for reduced toxicity in the SCRE caused by nutrient load reduction in accordance with the species lifestage model developed by the SRP.

TABLE 8
INDICATORS EVALUATED IN THE MONITORING, ASSESSMENT, AND ADAPTIVE MANAGEMENT PLAN

Parameter	Monitoring Category	Negative Stressor[1]	Positive Drivers[1]	Relevant Indicators
1. Habitat for tidewater goby	Physical Processes and Hydrology Water Quality Habitat Fish Presence	1) Unseasonal breaching 2) Low DO 3) Toxics 4) Rapid salinity change 5) High velocity 6) Predation/competition by nonnative species	1) Stable estuary water surface elevation (WSE) 2) Substrate suitable for burrows 3) Water Quality; • Low salinities (0–15 ppt) • High DO • Low nutrient related toxicity 4) Low velocity 5) Submerged and emergent vegetation 6) Tolerant of high salinity	Reduction of Unseasonal Breaching Maintenance of Suitable Habitat: Enhancement of Water Quality Reduction in Invasive Species
2. Rearing habitat for out-migrating juvenile Southern California steelhead	Physical Processes and Hydrology Water Quality Habitat Fish Presence	1) Unseasonal breaching 2) Shallow water <1 m/lack of deep water cover 3) Water quality: • Low DO (<4 mg/L) • Unsuitable temperature conditions (<25ºC), • High salinity when not acclimated (>28 ppt) 4) Toxics 5) Closed mouth/berm during kelt downstream migration (kelts cannot return to the ocean) 6) Lack of connected flow to spawning habitat when berm open	1) Stable Estuary WSE 2) Deep water/cover habitat >1 m 3) Water quality: • Non-lethal temperature (<25ºC), • High DO (>4 mg/L), • Lower salinities (0–15 ppt) • Low nutrient related toxicity 4) Open mouth/berm during kelt downstream migration (kelts can return to the ocean) 5) Connected flow to spawning habitat	Reduction of Unseasonal Breaching Maintenance of Suitable Habitat: Enhancement of Water Quality
3. Foraging, breeding, and roosting habitats for snowy plover	Habitat Bird Presence	1) Unseasonal breaching can scour nests on the beach berm 2) Extensive vegetation 3) Lack of food resources	1) Stable estuary WSE 2) Seasonal breaching in winter can scour vegetation	Reduction of Unseasonal Breaching Maintenance of Suitable Habitat

TABLE 8
INDICATORS EVALUATED IN THE MONITORING, ASSESSMENT, AND ADAPTIVE MANAGEMENT PLAN

Parameter	Monitoring Category	Negative Stressor[1]	Positive Drivers[1]	Relevant Indicators
4. Foraging, breeding, and roosting habitats for California least tern	Habitat Bird Presence	1) Unseasonal breaching can scour nests on the beach berm 2) Toxics	1) Stable estuary WSE 2) Forage in top 1 m of water column, more forage area/higher water surface elevation 3) Water Quality • High DO (to reduce algal blooms boost availability of food resources) • Low nutrient related toxicity	Reduction of Unseasonal Breaching Maintenance of Suitable Habitat
5. Maintenance or improvement of water quality in SCRE	Water Quality	1) Nutrient Loading 2) Low DO/Nutrient related toxicity 3) High water temperature	1) Seasonal breaching to reset nutrient load 2) Reduced Nutrient Loading 3) Salinity Variations that Favor Native Fish	Reduction of Unseasonal Breaching Enhancement of Water Quality
6. Maintenance or improvement of SCRE habitats and designated critical habitats	Habitat/Vegetation Fish Presence Bird Presence	1) Unseasonal breaching 2) Low DO 3) Toxics 4) Rapid salinity change 5) High velocity 6) Predation/competition by nonnative species	1) Stable estuary water surface elevation (WSE) 2) Substrate suitable for burrows 3) Low nutrient related toxicity 4) Low salinities (0–15 ppt) 5) Low velocity 6) Submerged and emergent vegetation 7) Salinity Variations that Favor Native Fish	Reduction of Unseasonal Breaching Enhancement of Water Quality Maintenance of Suitable Habitat Reduction in Invasive Species

NOTES:

[1] Stressors and drivers from Revell et al. (2018).

5.2.3 Maintenance of Physical Habitat Suitabilty

Physical habitat suitability will be evaluated based on the requirements and stressors for tidewater goby, steelhead, snowy plover and California least tern as recommended by the SRP. Parameters for aquatic habitats types include:

- water depth,
- presence of submerged vegetation,
- presence of open water and aquatic habitat,
- water quality including DO, salinity, and temperature,
- presence of food sources for birds, and
- substrate.

Parameters for avian habitats include:

- presence of open water suitable for foraging,
- presence of physical and biological features within critical habitats, and
- reduction of unseasonal breaching that may result in nest inundation.

5.2.4 Non-native Fish and Amphibian Assemblage

Non-native fishes currently dominate the fish assemblage in the SCRE. Some invasive species (e.g., green sunfish) prey on tidewater goby and potentially steelhead juveniles. Other species may be competitors for invertebrate food resources. Common carp also degrade benthic habitat as they forage on the bottom, disturbing sediments and uprooting vegetation (Fofonoff et al. 2018). The fish assemblage composition is expected to change in response to VWRF reductions that alter the salinity regime in the estuary. It is unlikely, however, that non-native fishes will be eradicated in the SCRE since they are replenished from outside sources -.

5.3 Modifications to the Pre-construction Assessment Program and Monitoring, Assessment, and Adaptive Management Plan

The objective of the MAAMP is to collect data that lead to a determination of whether Phase 1b would avoid “take” of listed species that rely on the SCRE. The City maintains the responsibility to determine what data are necessary to assess site conditions and the ecological response to management actions. It is anticipated that, through the data collection activities implemented under the PCAP and continued under the MAAMP, lessons will be learned regarding data collection methods, locations, and frequency of sampling. In addition, the value of certain data may be evaluated over time.

The MAAMP is meant to be adaptive to lessons learned and is not meant to impose a rigid, unchangeable data collection program. Rather, the MAAMP has been prepared to accommodate changes to future monitoring activities. Adjustments may include type of parameters, sampling frequencies, sampling locations, and/or methods. Any changes made to the data collection activities will be reported in the Annual Report with accompanying rationale for the adjustment. Any adjustment would be made in the interest of maintaining a sustainable, efficient and informative monitoring protocols serving the objective of ensuring that "take" of listed species will not occur. In this sense the term "Adaptive Management" applies to collecting and assessing data to determine the potential for Phase 1b discharge reductions to result in unauthorized "take" of listed species in light of uncertainty identified by CDFW surrounding the predicted effects of discharge reductions that result in a Continued Discharge Level that is less than an average annual level of less than 1.9 mgd during closed berm conditions. The action triggered by the evaluation of data would be to either approve Phase 1b reduced discharges or not.

5.4 Data Evaluation and Assessment of Phase 1a

The City will provide annual reports of MAAMP monitoring results to CDFW, USFWS, NMFS, and RWQCB, with copies to Ventura Coastkeeper and Heal the Bay. The City will meet with the agencies and other interested parties as needed to review the data and work toward a mutual understanding of the habitat conditions within the SCRE. Annual reports prepared by the City will include recommendations for further discussion or data collection modifications. The data will be presented to the wildlife agencies to answer following questions:

Q1. Have any of the stressor conditions listed below changed since implementation of Phase 1a, compared to pre-Phase 1a conditions?

- Frequency of unseasonal breaches related to the discharge from VWRF
- Frequency and duration of low dissolved oxygen conditions (less than 4 mg/L) associated with VWRF discharge
- Frequency and duration of stressful temperature conditions (greater than 25ºC)
- Suitability of aquatic habitat (salinity, substrate, cover, depth) for focal fish species
- Distribution and/or relative abundance of non-native fish and amphibian species that negatively impact focal fish species (i.e., predators or habitat disruptors such as green sunfish, carp, African clawed frog) which may be related to reduction in VWRF discharge
- Suitability of foraging, breeding, and roosting habitat for focal avian species

Q2. If a stressor condition has changed, is it reasonable to infer that reduced VWRF discharges have contributed to the change?

Q3. If reduced discharges have maintained or improved conditions within the SCRE, is it reasonable to expect that further VWRF discharges reductions would maintain or further improve conditions?

Q4. If a stressor has not been reduced, what factors may have contributed to the conditions observed and are those related to Phase 1a reduction in discharge?

This question series is designed to create a decision tree to guide City and agency staff in effectuating the MAAMP. The MAAMP provides for the organized evaluation of water quality and habitat suitability data designed to answer a specific question of whether Phase 1b discharge reductions would avoid "take." The question series may be modified as needed, but is designed to support a decision process made by regulators.

5.5 Decision-Making Process

Consistent with the *Water Quality Control Plan for Enclosed Bays and Estuaries* adopted by the State Water Resources Control Board, discharge of treated wastewater into an estuary is prohibited unless the discharge is proven to provide enhancement to the ecological conditions within the estuary. The NPDES permit for the Project (CA0053651) provides that the Phase 1b discharge reduction must not result in "take" of species occupying the SCRE that are listed for protection under the FESA or California Endangered Species Act. As a result, implementation of Phase 1b would be delayed only if the data indicate (and wildlife agencies concur) that the 1.9 mgd of discharge provided by Phase 1a enhances or maintains habitat values as compared to Phase 1b reduced discharges, and materially avoids "take" that would otherwise occur as a result of lower discharge volumes.

The City, the RWQCB, and wildlife agencies (NMFS, USFWS, and CDFW) will review the answers to the questions posed in Section 5.4 as appropriate. The City will request in writing that the regulatory agencies review the responses to the questions posed above, and the wildlife agencies would provide a response in writing concluding whether (after review of the data collected during the PCAP and MAAMP monitoring period) the proposed implementation of Phase 1b would result in "take" of a listed species. If the wildlife agencies conclude that "take" is likely to occur, then the City will, in consultation with the RWQCB, either implement measures to avoid "take," or terminate the monitoring program and not implement Phase 1b.

If the wildlife agencies concur that Phase 1b is not likely to adversely affect listed species, then the City may submit to the RWQCB an updated Report of Waste Discharge reflecting modifications to the NPDES discharge permit providing for implementation of Phase 1b.

Addendum to the Monitoring, Assessment, and Adaptive Management Plan for the Ventura Water Supply Projects (VenturaWaterPure)

WORKING DRAFT: Santa Clara River Estuary Adaptive Management Actions Matrix[1]

Indicators	Triggers (condition due to reduction in discharge)	Quantifiable Action Triggers	Adaptive Management Actions	Quantifiable Compensation/Consultation Thresholds	Compensation/Consultation Options
Reduction of Unseasonal Breaching	Non-seasonal breaching increases in frequency	• Over 9 anthropogenic breaches over a two-year period (which occurred during Phase 3 Study period Dec 2014-Nov 2016)	Implement breach reduction program at beach: • Increased signage • Evaluate other measures (e.g., anti-breaching campaign, enhanced surveillance, or enforcement options)	• Breach reduction measures are unsuccessful and anthropogenic breaches are consistently greater than five times per year as result of reduced discharge	If breach threshold is met: • Fund anti-breaching awareness campaign • Partner with State Parks to enact enforcement actions
Maintenance of Suitable Habitat	Suitable habitat is unavailable to support focal species (tidewater goby, steelhead, and forage fishes)	• Water Depth: < 3.5 feet maximum depth at equilibrium stage throughout estuary (i.e., all areas are shallower than 3.5 feet) as result of reduced discharge • Estuary Size: < 10 acres at equilibrium stage[2] as result of reduced discharge • Habitat Complexity, at equilibrium stage, as result of reduced discharge: ○ > 75% of edge survey quadrats without submerged, overhanging, or emergent vegetation; or ○ > 50% of edge survey quadrats with no tidewater goby burrow substrate (e.g., silt and/or sand)	Implement habitat enhancement actions if habitat maintenance triggers occur: • Convene a meeting with MAAMP stakeholders including NMFS, USFWS, CDFW, LARWQCB, and the consent decree parties to discuss if discharge of up to 0.5 MGD[3] or a temporary additional discharge of VWRF tertiary-treated effluent during emergency period would enhance quality of habitat for listed species (based on best available science and considering nutrient load, salinity drop, presence of sensitive species, functionality of AWPF, and other factors) • If depth <3.5 feet, enact more frequent water quality monitoring (e.g., weekly downloads) • If estuary size <10 acres at equilibrium stage, repeat satellite tasking and open water mapping monthly to determine if < 5 acres threshold is reached • If habitat complexity trigger is met, install refugia for fishes to enhance habitat complexity (i.e., large woody debris, shoreline enhancement, etc.)	• Water Depth: < 3 feet maximum depth at equilibrium stage throughout estuary (i.e., all areas are shallower than 3 feet) as result of reduced discharge • Estuary Size: < 5 acres at equilibrium stage[2] (smaller than large estuary size category) as result of reduced discharge • Habitat Complexity, at equilibrium stage, as result of reduced discharge: ○ Lack of submerged, overhanging, or emergent vegetation in edge survey quadrats; or ○ Lack of tidewater goby burrow substrate (e.g., silt and/or sand) in edge survey quadrats	If water depth or estuary size is below the threshold, conditions are likely to recur or persist multiple seasons, and take is likely to occur: • Consult with CDFW, USFWS, NMFS, and LARWQCB

[1] This adaptive management matrix will be implemented for the duration of the MAAMP, which is defined in NPDES Permit No. CA0053651 (at page 17): through Phase 1a diversions to attain the CDL of 1.9 MGD, and then continuing for at least five years after implementation of the Phase 1b diversions necessary to attain the final CDL of 0.0 MGD to 0.5 MGD.
[2] Open water acreage of SCRE; does not include the ponds.
[3] The Continued Discharge Level under Phase 1b allows for up to 0.5 MGD average annual discharge during closed-berm conditions.

Enhancement of Water Quality	Suitable water quality is unavailable for target fishes during critical life cycle periods	• Water temperature > 27°C at all sonde sites for 24-hours or more[4] as result of reduced discharge • Dissolved oxygen concentration < 3 mg/L at all sonde sites for 24-hours or more[4] as result of reduced discharge	If water temperature trigger is met: • Enact acute emergency shade enhancement actions (e.g., deploy temporary shelter or shading structures) If dissolved oxygen concentration trigger is met: • Enact acute emergency DO concentration relief measures (e.g., deploy temporary bubblers) • Conduct nutrient source study • Continue groundwater quality monitoring If water temperature and dissolved oxygen concentration triggers are met: • Convene a meeting with MAAMP stakeholders including NMFS, USFWS, CDFW, LARWQCB, and the consent decree parties to discuss if discharge of up to 0.5 MGD[3] or a temporary additional discharge of VWRF tertiary-treated effluent during emergency period would enhance quality of habitat for listed species (based on best available science and considering nutrient load, salinity drop, presence of sensitive species, functionality of AWPF, and other factors)	• Water temperature ≥ 30°C at all sonde sites for 24-hours or more[4] as result of reduced discharge • Dissolved oxygen concentration ≤ 1 mg/L at all sonde sites for 24-hours or more[4] as result of reduced discharge	If water temperature is above the threshold or dissolved oxygen is below the threshold, conditions are likely to recur or persist multiple seasons, and take is likely to occur: • Consult with CDFW, USFWS, NMFS, and LARWQCB If dissolved oxygen concentration is below the threshold: • Work with other jurisdictions, agencies, etc. to fund and implement groundwater monitoring
Reduction in Invasive Aquatic and Plant Species	Invasive fish, amphibian, or plant species increase	• Increased abundance of non-native species compared to PCAP baseline conditions as result of reduced discharge	Conduct a study to determine the reason why nonnative species have expanded. Implement non-native species reduction measures in SCRE annually if needed during MAAMP: • Arundo and tamarisk removal in the vegetative transition area (e.g., areas that are no longer submerged at equilibrium stage) • Other invasive plant species removal in the vegetative transition area • Opportunistic non-native fishes and non-native amphibian removals (e.g., under open-berm conditions, potentially in combination with biannual beach seining surveys, and with necessary permits)	• Increased abundance of non-native species compared to PCAP baseline conditions despite reduction measures and as result of reduced discharge	If non-native species threshold is met: • Implement additional Arundo, tamarisk, and other invasive plant species removal program for up to 5-years (assuming estuary bathymetry will reset over time)

[4] If water quality triggers or thresholds are met in baseline data collected during PCAP period, trigger or threshold values for temperature and dissolved oxygen concentration would need revised.