

# Brackish Water Desalination Project PRE-BID MEETING



OCTOBER 13, 2020



## // Meeting Purpose

- Introduce Project Team
- Provide Overview of Project
- Review Specified Requirements
  - Milestones and Work Restrictions
  - SRF Loan and DWR Grant
  - Project Stabilization Agreement
- Review Logistics for Mandatory Pre-bid Site Inspections
- Answer Questions

**Note:** *Recording of this meeting will be posted on [www.Blueprintexpress.com/Antioch](http://www.Blueprintexpress.com/Antioch). Mandatory for bidders to attend this meeting or view the recording.*

## // Project Team

- City of Antioch
  - John Samuelson – Public Works Director
  - Scott Buening – Project Manager
  - Tim Coley – WTP Superintendent
  - Matt Taylor – WTP Supervisor
- Consultants
  - Design Engineer – Carollo Engineers
    - Scott Weddle – Project Manager
  - Construction Management – CDM-Smith
    - Rich Olsen – Construction Manager
    - Jeff Sellberg – Assistant Construction Manager

# PROJECT OVERVIEW



## // Project Objectives

- Improve water supply reliability and water quality
- Provide drought-proof water supply
- Reduce dependency on purchased water supplies
- Maximize the use of existing infrastructure
- Provide operational flexibility to allow the City to respond to changes in source water quality, emergencies, changes in climate and Delta conditions
- Preserve the use and value of the City's pre-1914 water rights



**Brine Disposal  
Facilities at  
Delta Diablo WWTP**

**River Intake Pump Station  
and Fish Screen**

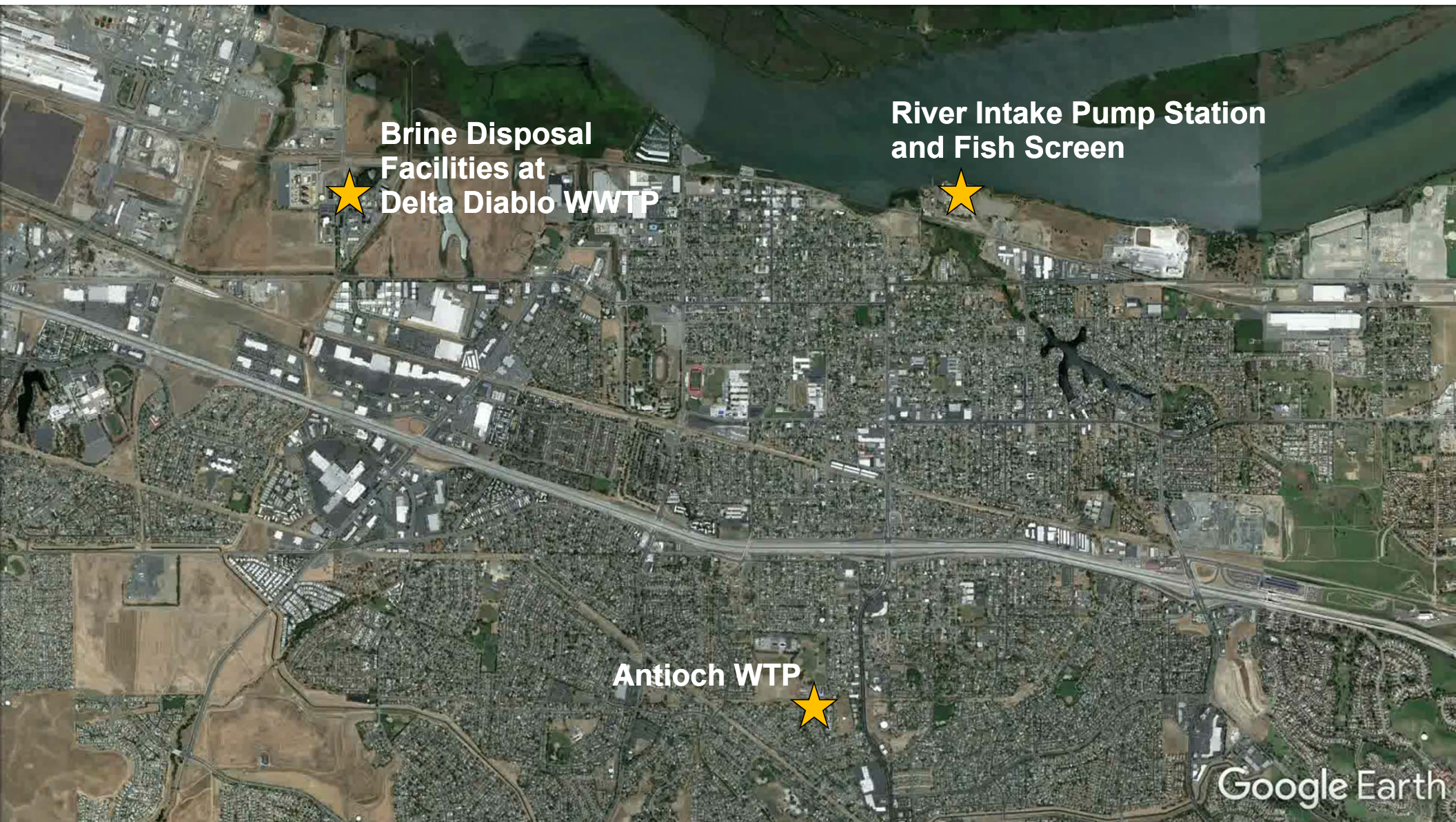
**City of Antioch**

**Antioch WTP**

Data CSUMB, SFML, CA OPC  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

**Google Earth**





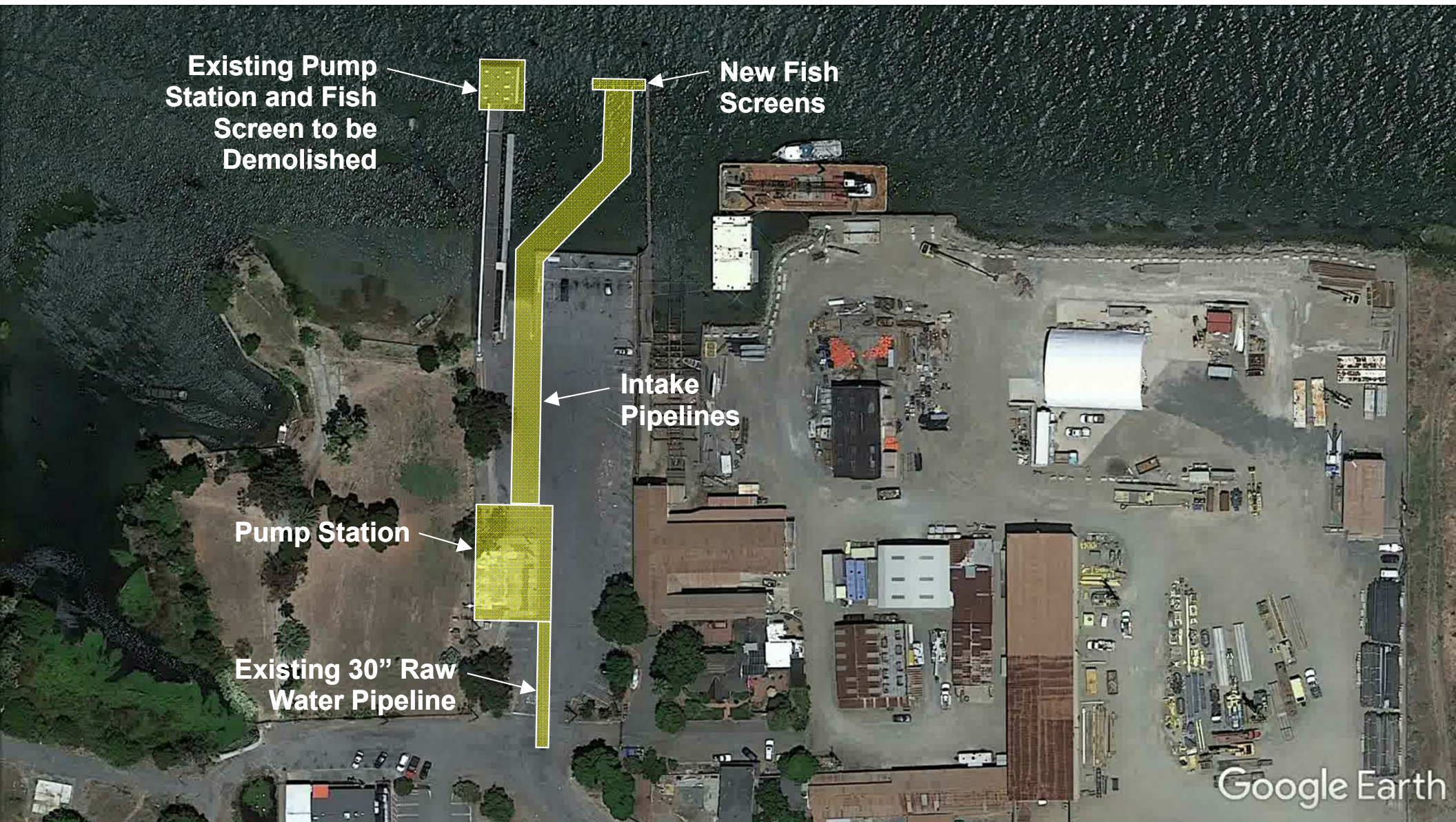
**Brine Disposal  
Facilities at  
Delta Diablo WWTP**

**River Intake Pump Station  
and Fish Screen**

**Antioch WTP**

Google Earth





Existing Pump  
Station and Fish  
Screen to be  
Demolished

New Fish  
Screens

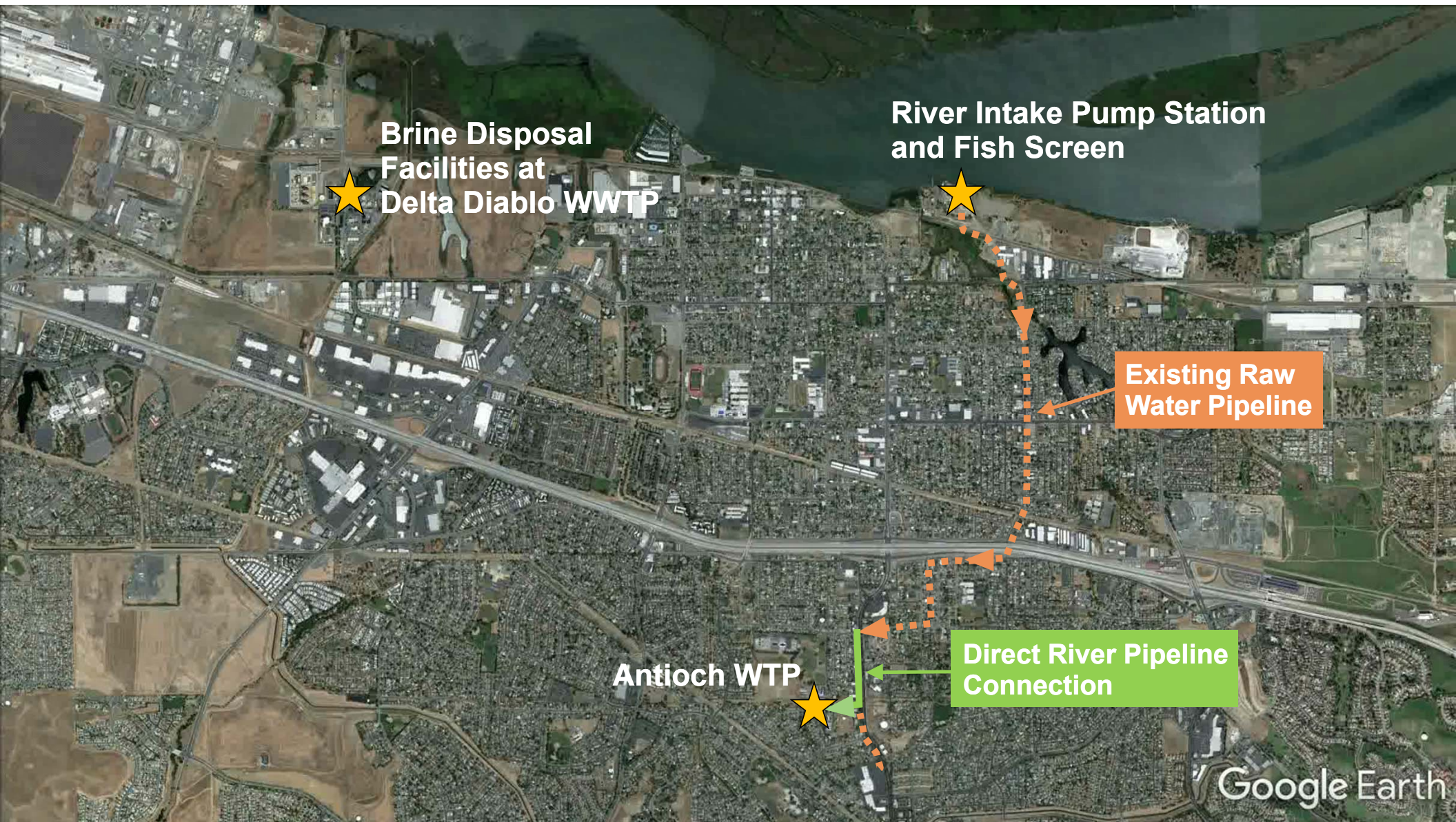
Intake  
Pipelines

Pump Station

Existing 30" Raw  
Water Pipeline

Google Earth





**Brine Disposal  
Facilities at  
Delta Diablo WWTP**

**River Intake Pump Station  
and Fish Screen**

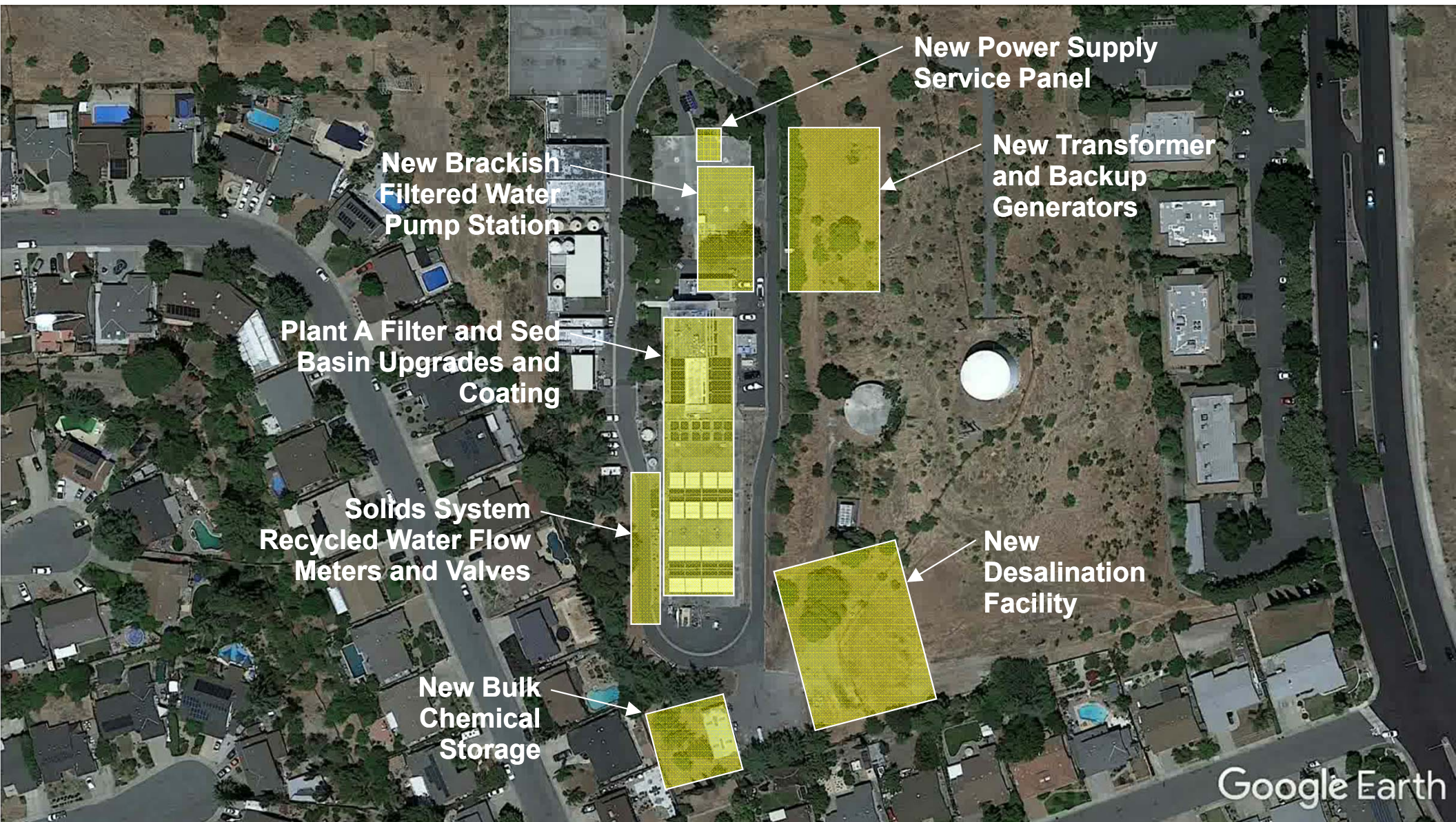
**Existing Raw  
Water Pipeline**

**Antioch WTP**

**Direct River Pipeline  
Connection**

Google Earth





**New Brackish  
Filtered Water  
Pump Station**

**Plant A Filter and Sed  
Basin Upgrades and  
Coating**

**Solids System  
Recycled Water Flow  
Meters and Valves**

**New Bulk  
Chemical  
Storage**

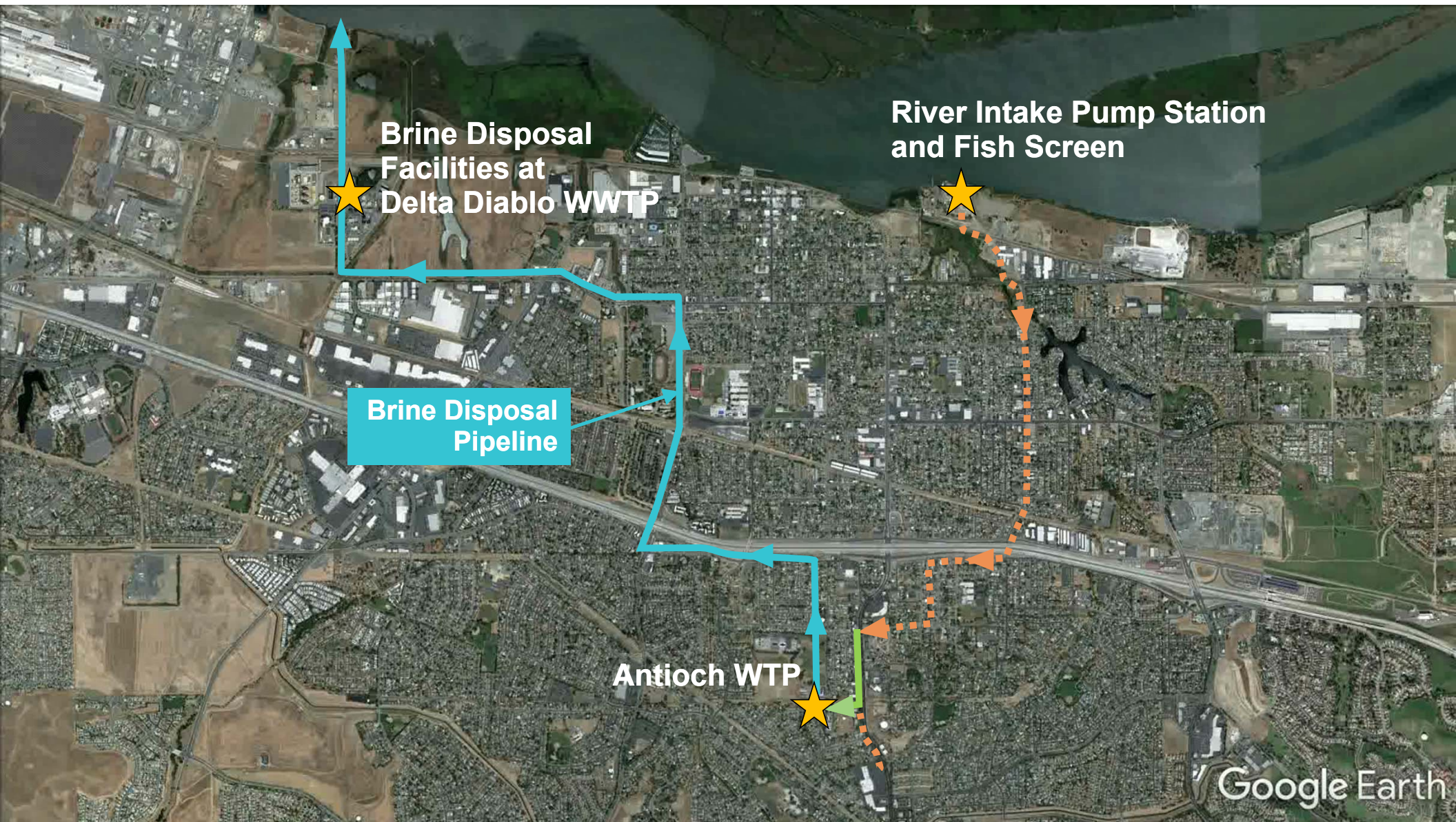
**New Power Supply  
Service Panel**

**New Transformer  
and Backup  
Generators**

**New  
Desalination  
Facility**

Google Earth





**Brine Disposal  
Facilities at  
Delta Diablo WWTP**

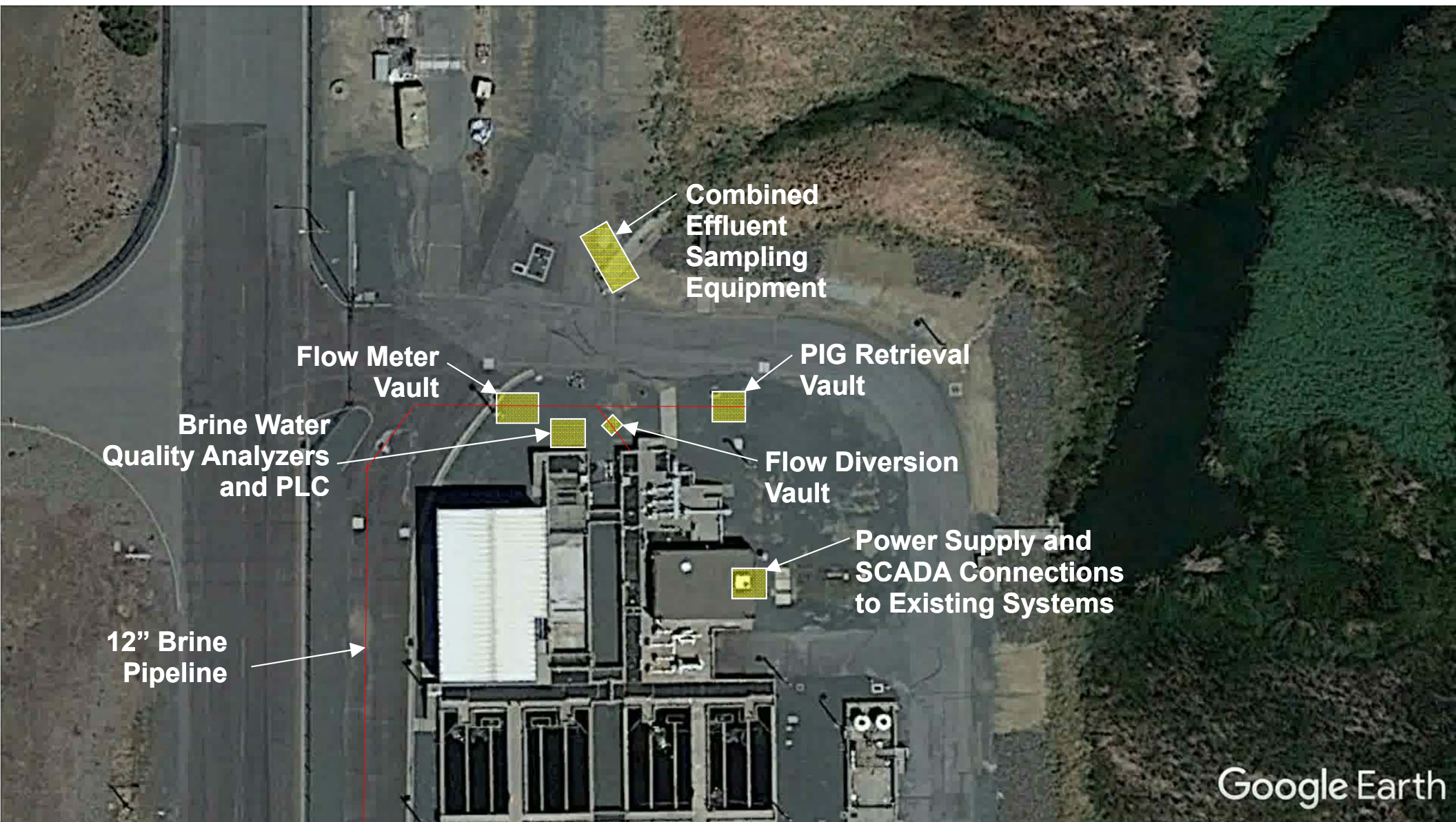
**River Intake Pump Station  
and Fish Screen**

**Brine Disposal  
Pipeline**

**Antioch WTP**

Google Earth



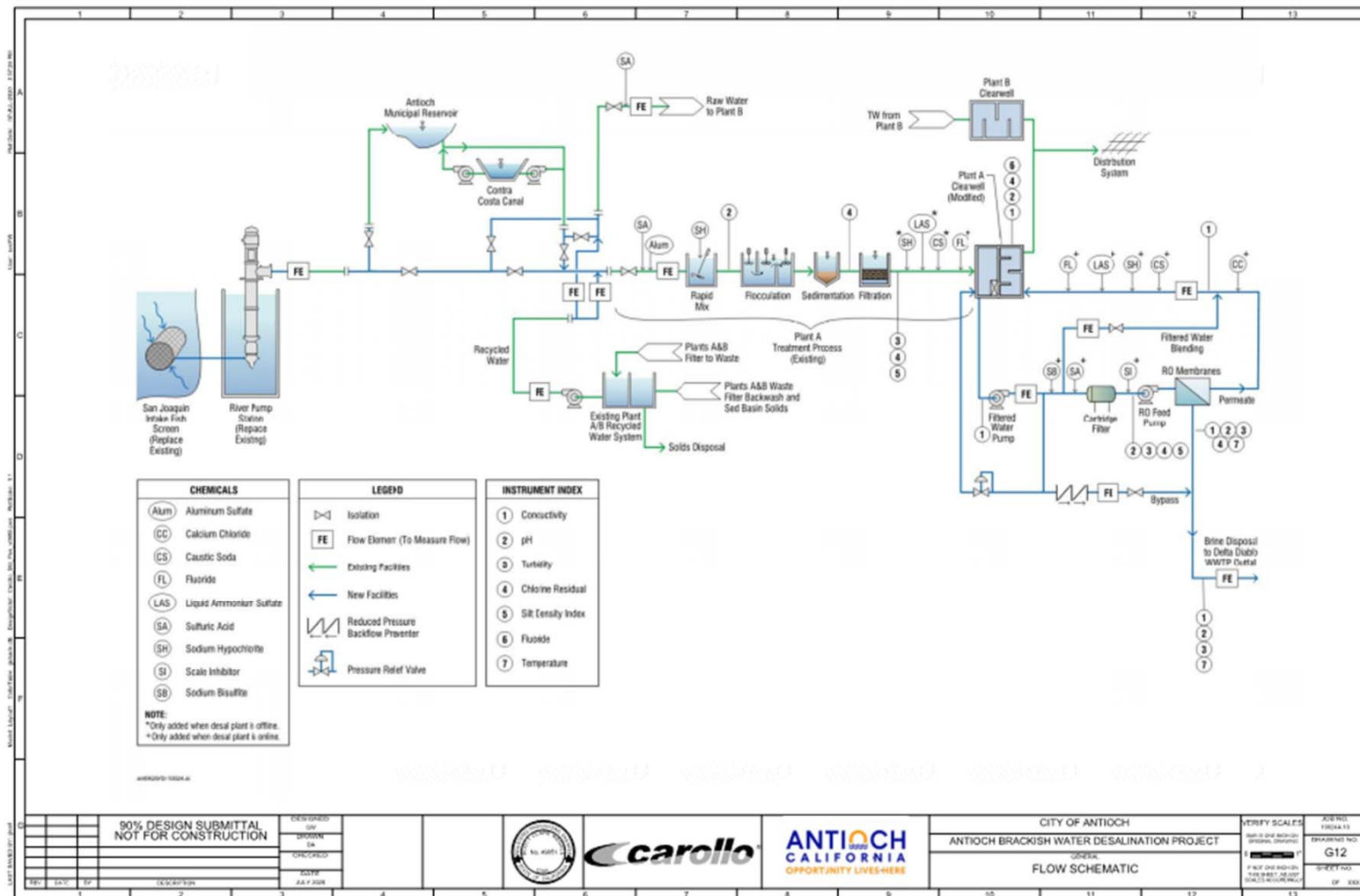


Google Earth



# OVERALL PROCESS FLOW DIAGRAM

# // Process Flow Diagram



# RIVER PUMP STATION AND FISH SCREEN

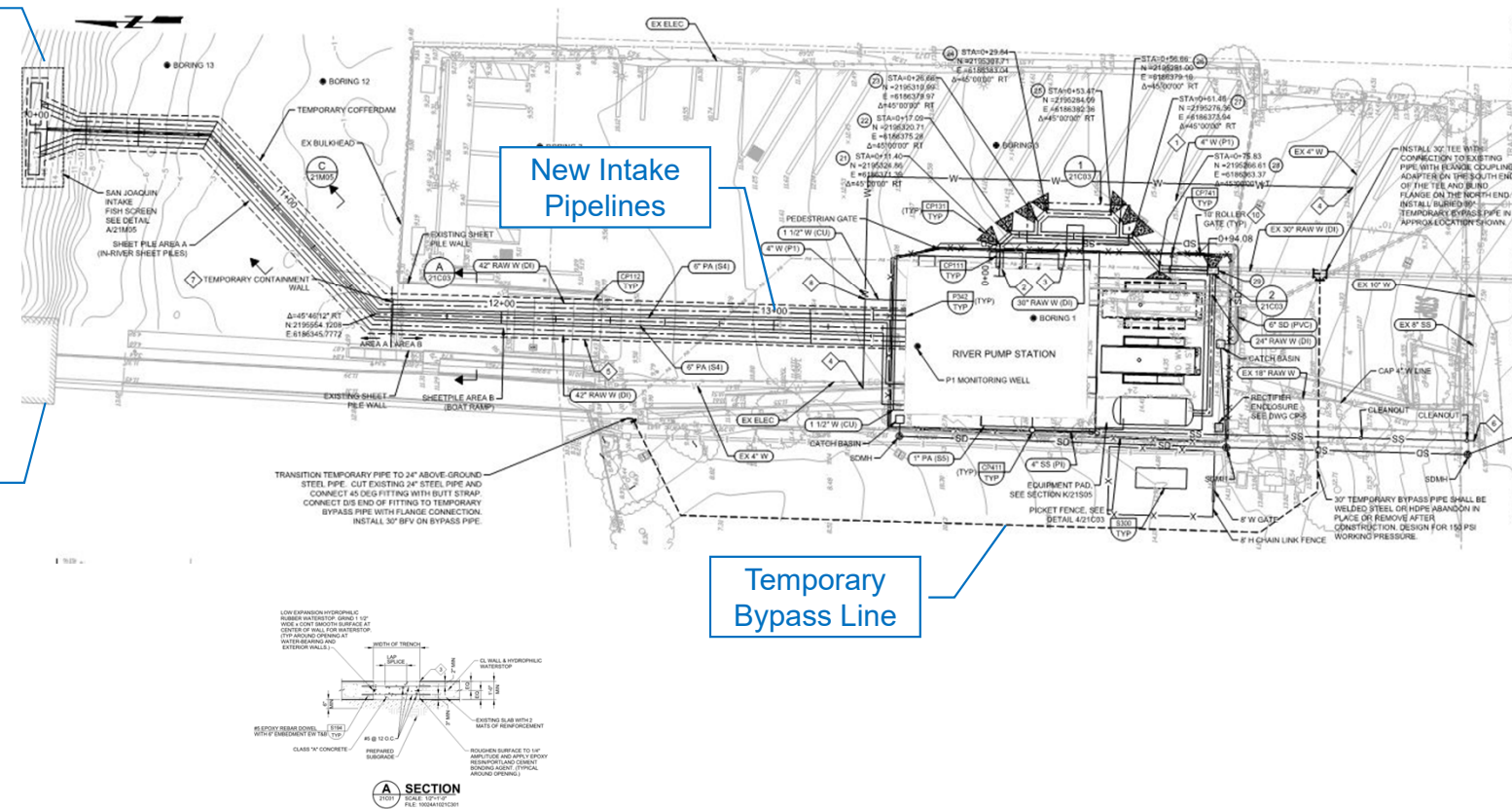
# // River Pump Station Site Plan

New Intake Fish Screens

New Intake Pipelines

Existing River Pump Station

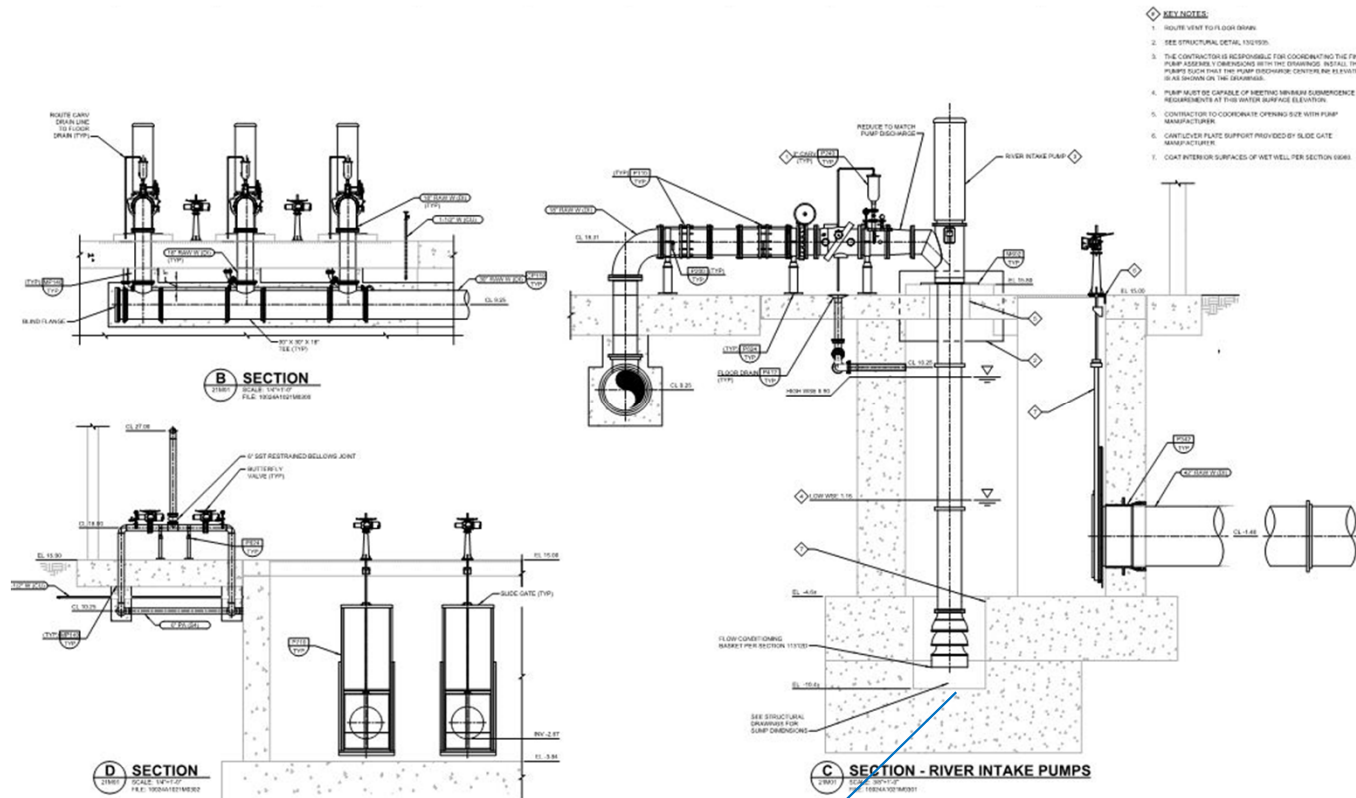
Temporary Bypass Line



## // 3D Isometric



# // River Pump Station Sections



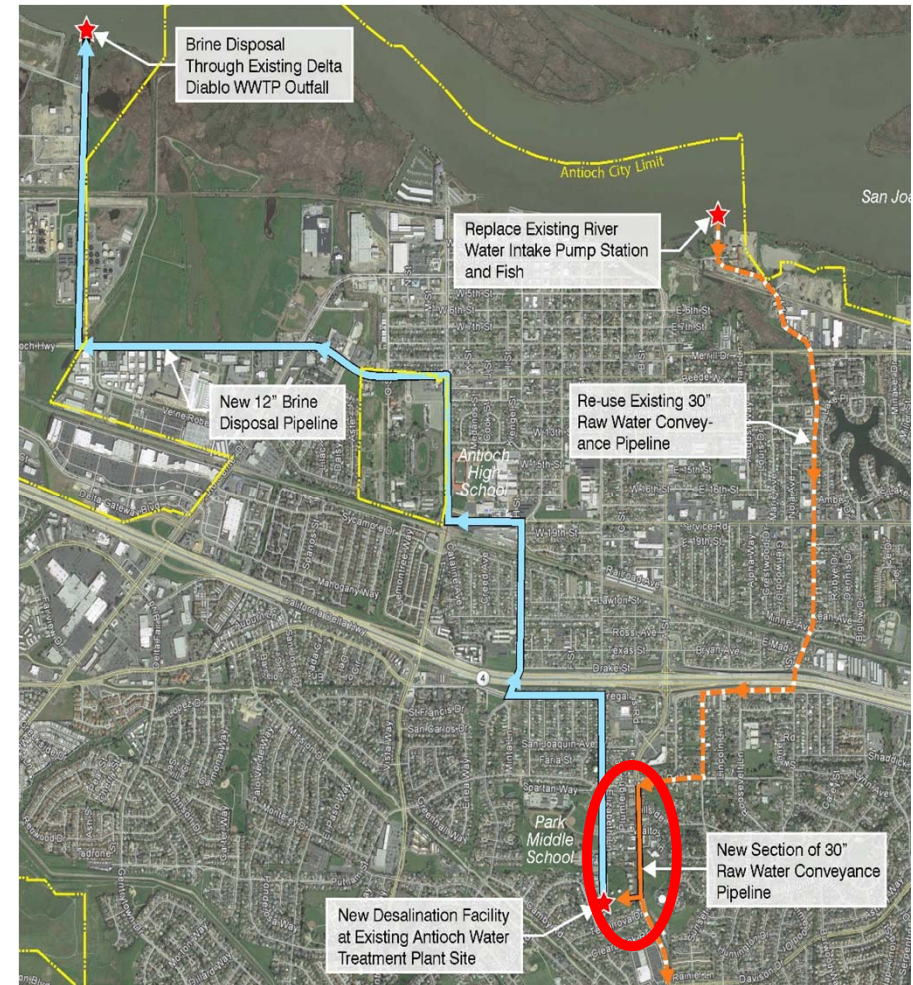
Deep Excavation  
Below GW Table



# DIRECT RIVER CONNECTION TO WTP

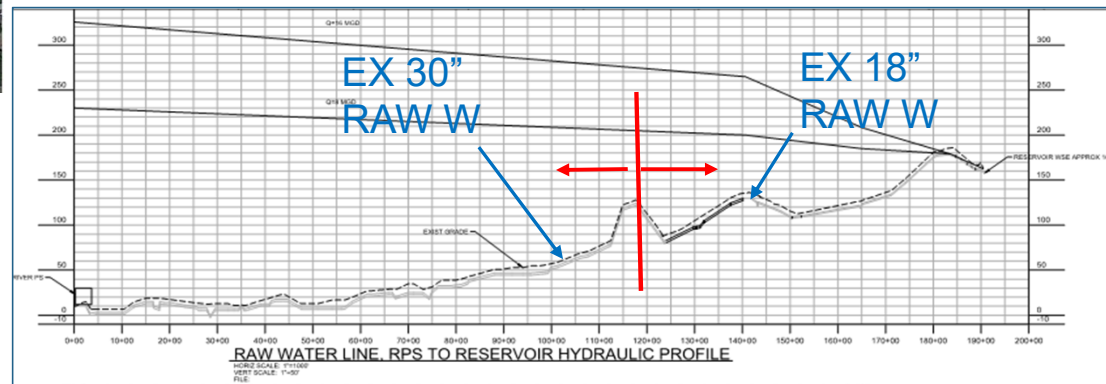
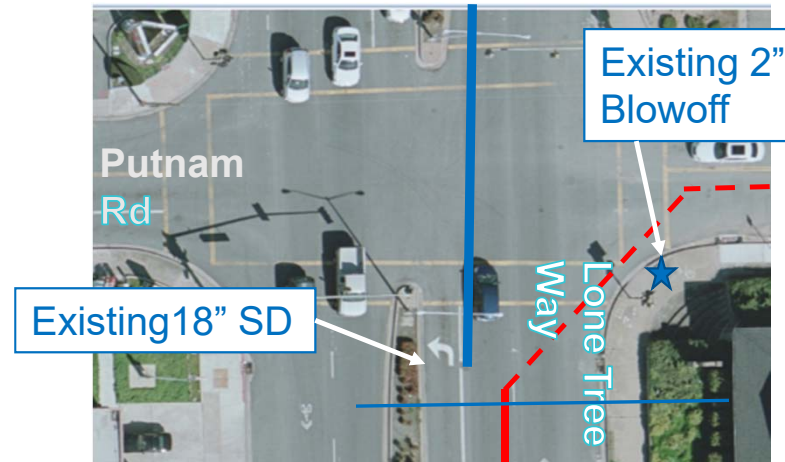
## // New 30" Direct River Pipeline

- Approx 3,00 LF from Worell/Lone Tree to WTP
- Connect to existing 30" RW DIP at Worell/Lone Tree and 18" CIP on Lone Tree
- Remote control valves in median on Lone Tree. Power and control ductbank from RO Bldg.
- Install pipe within new easement through business park. Temp Const easement terms included in appendix.



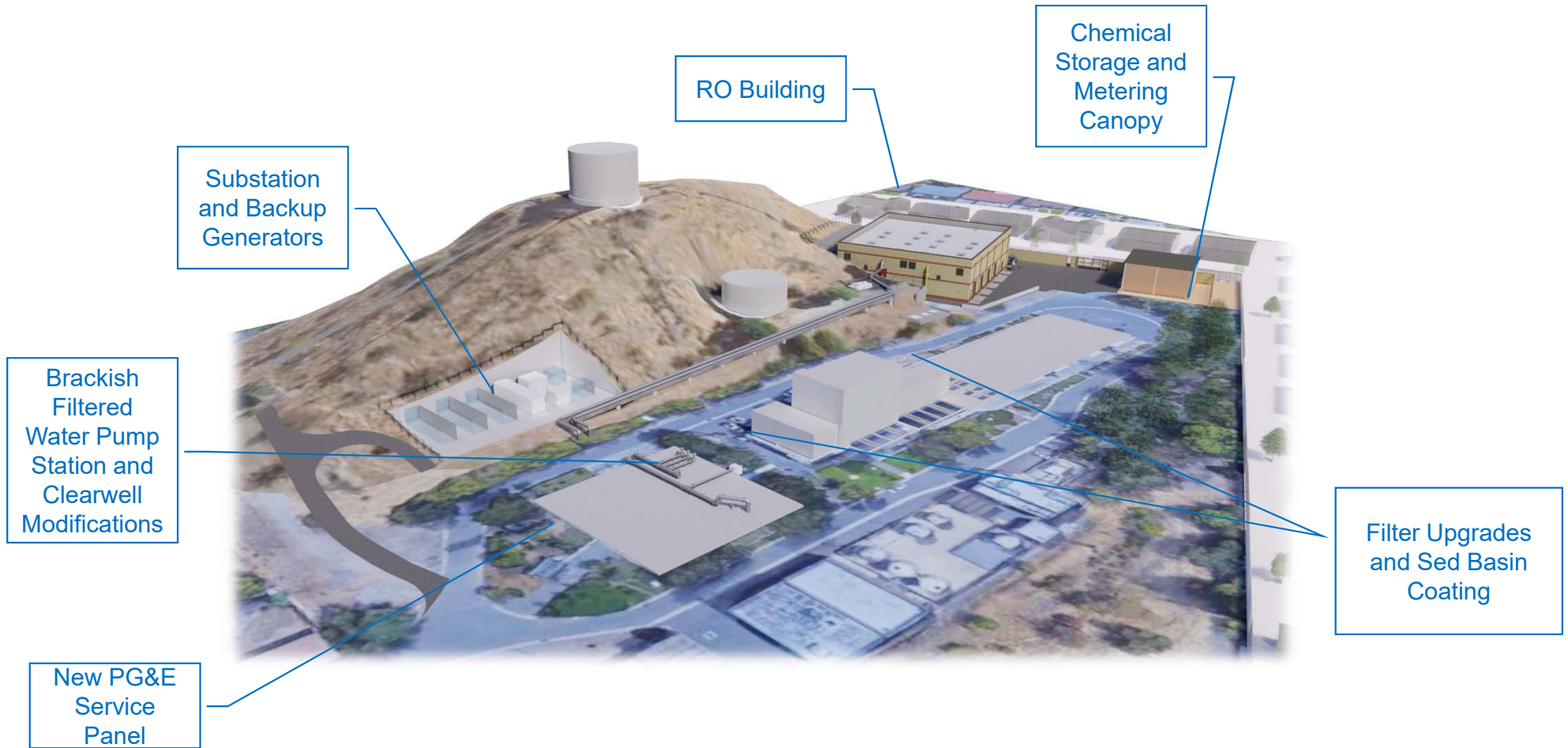


## // Existing Raw Water Pipe Drainage



# WTP SITE PLAN

## // New Site Facilities

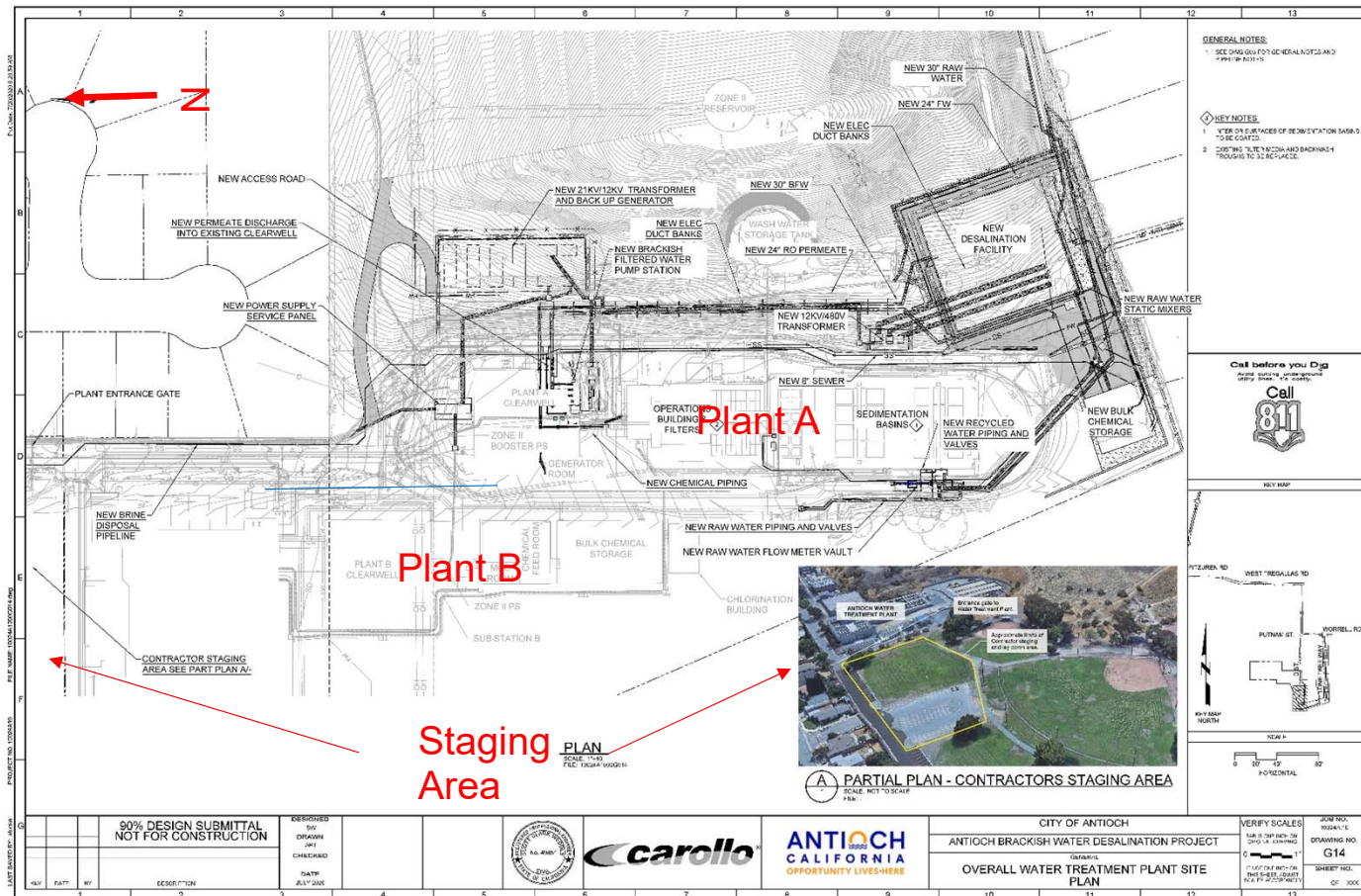


## // New Site Facilities



*Architectural Renderings*

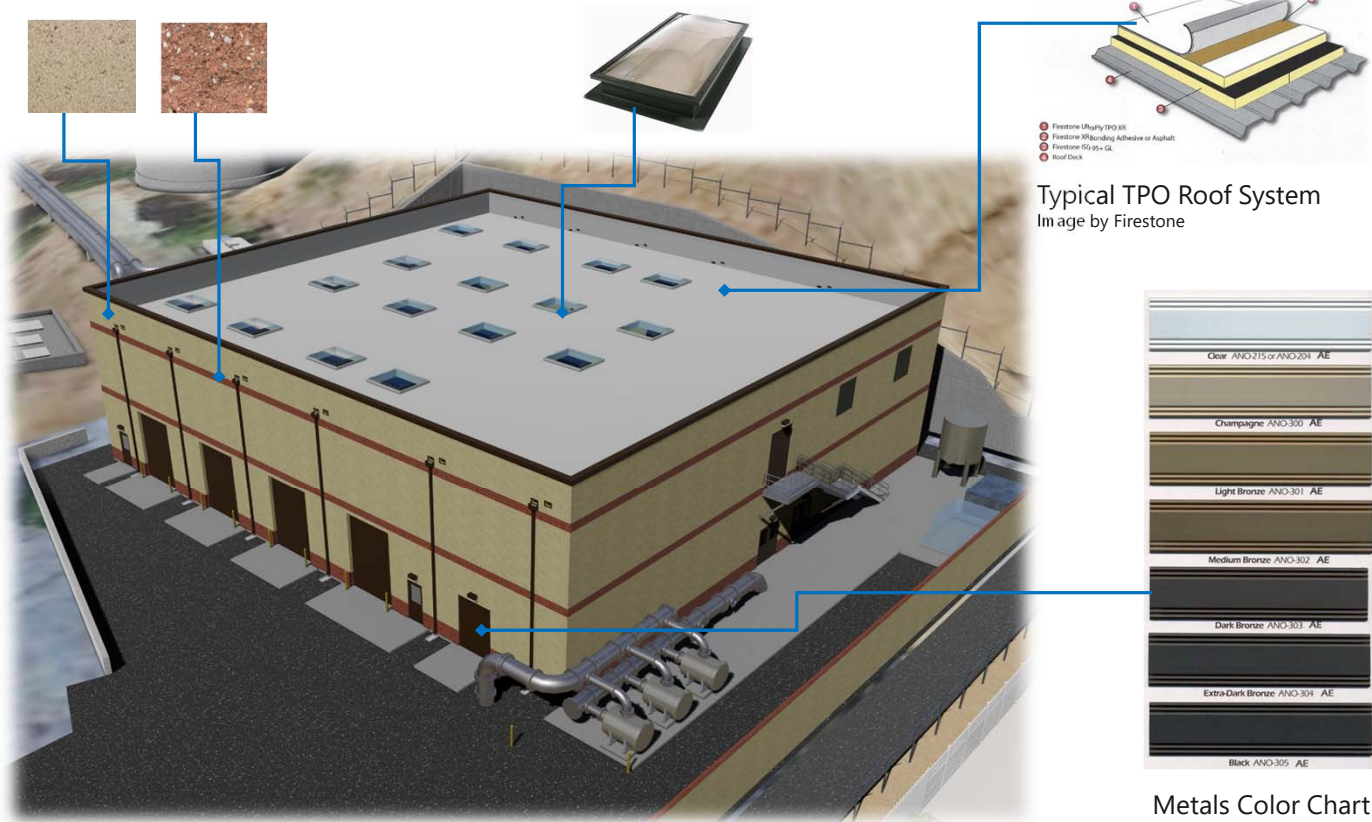




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# DESALINATION FACILITY

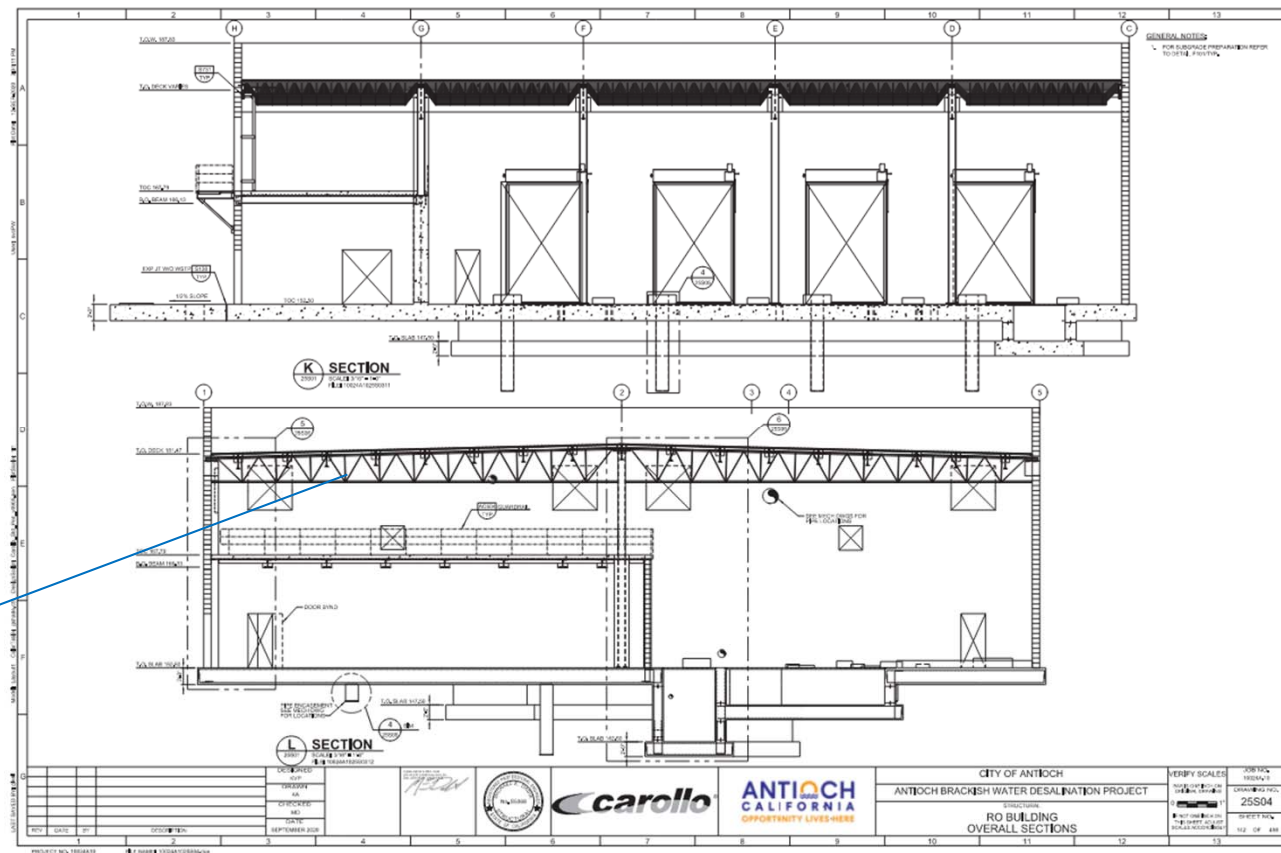
# // RO Building Architectural Design



*Architectural Rendering and Finishes*

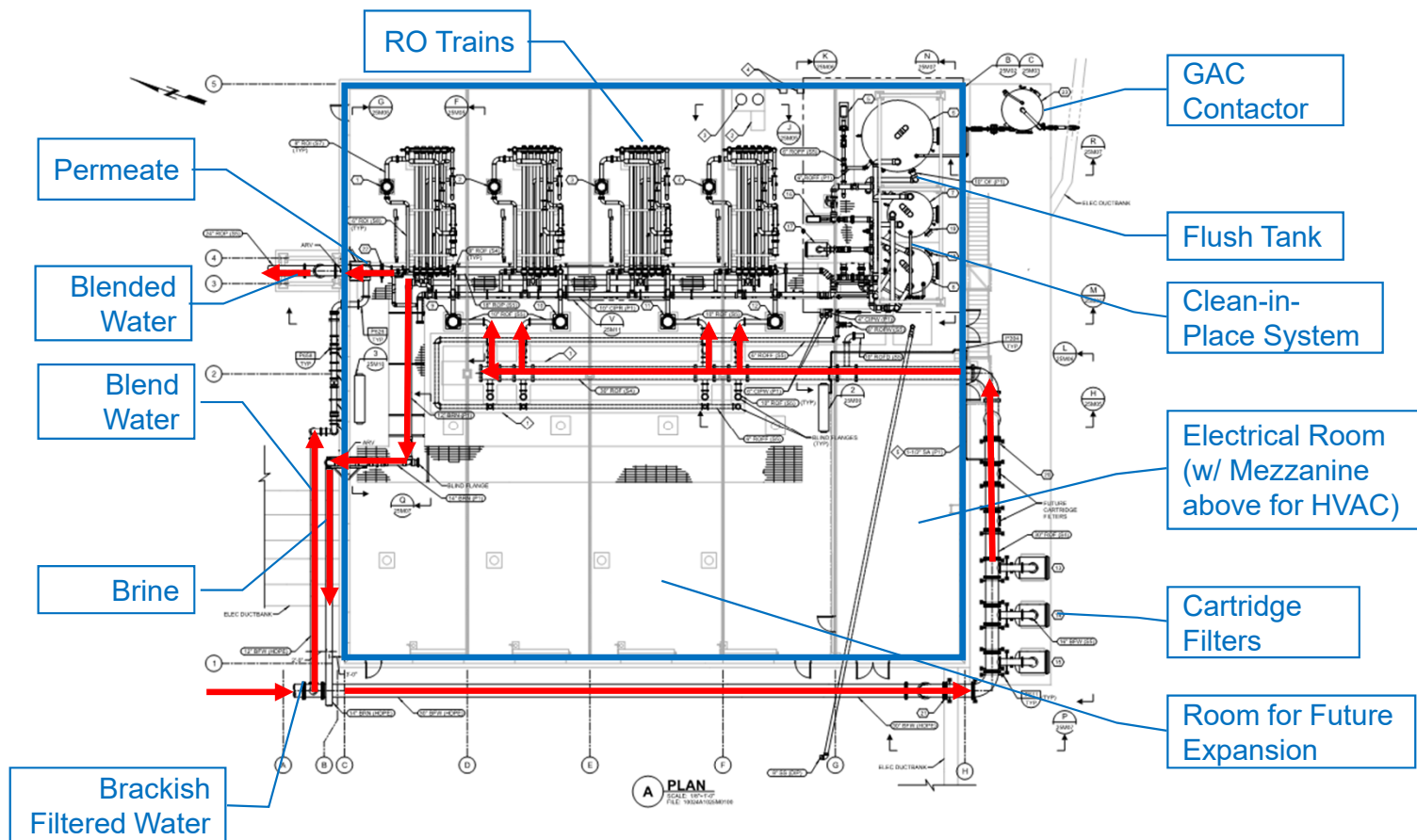


## // RO Building Structural Design

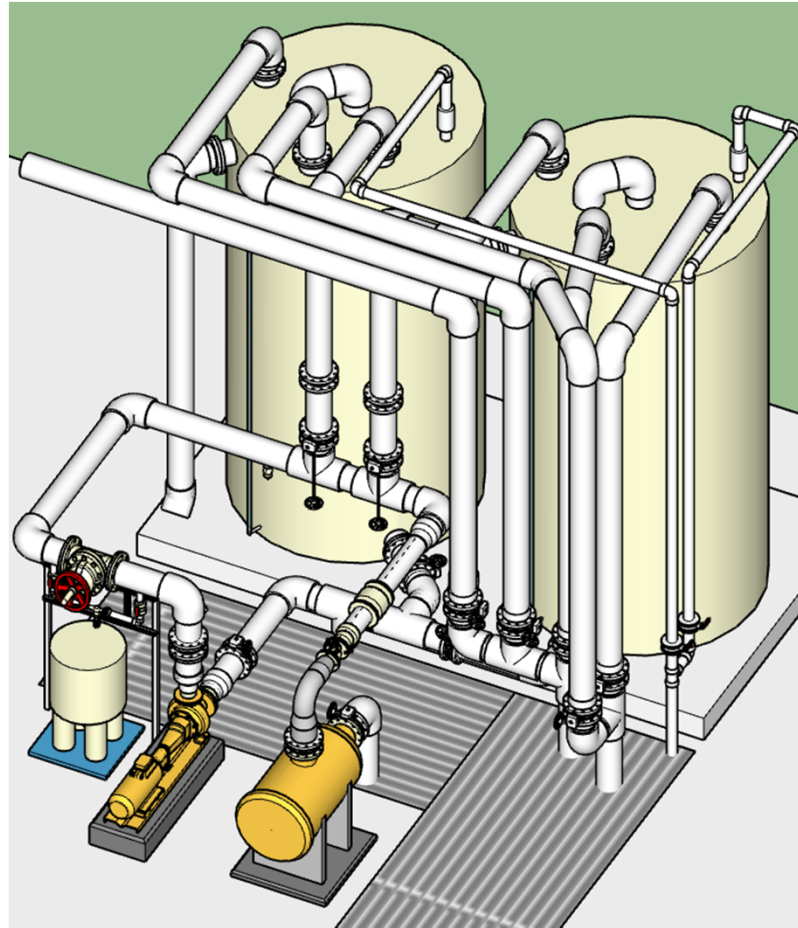


## Long Span Girders with Sloped Tops

# // Desalination Facility Membranes



## // Clean-in-Place System



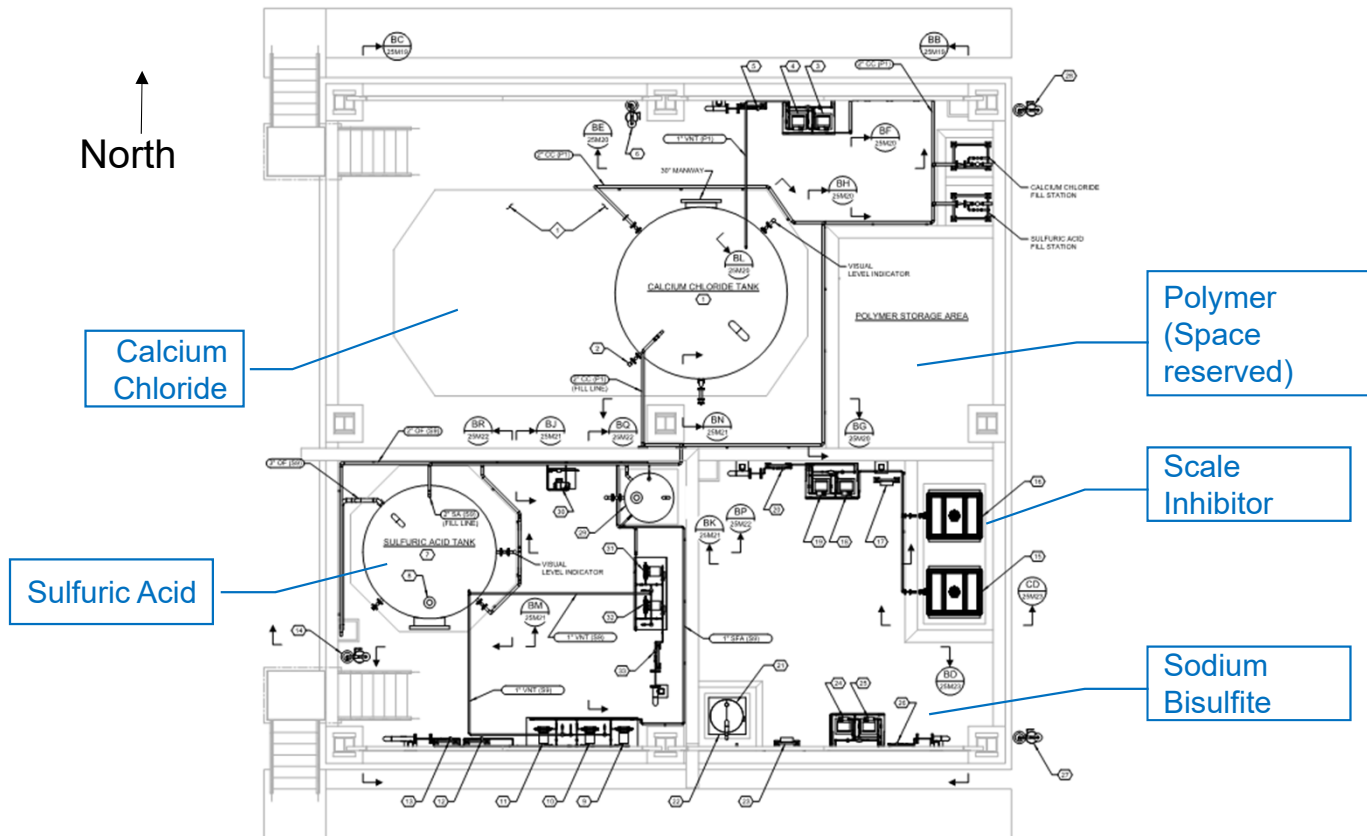
# NEW CHEMICAL SYSTEMS

## // New Chemical Systems



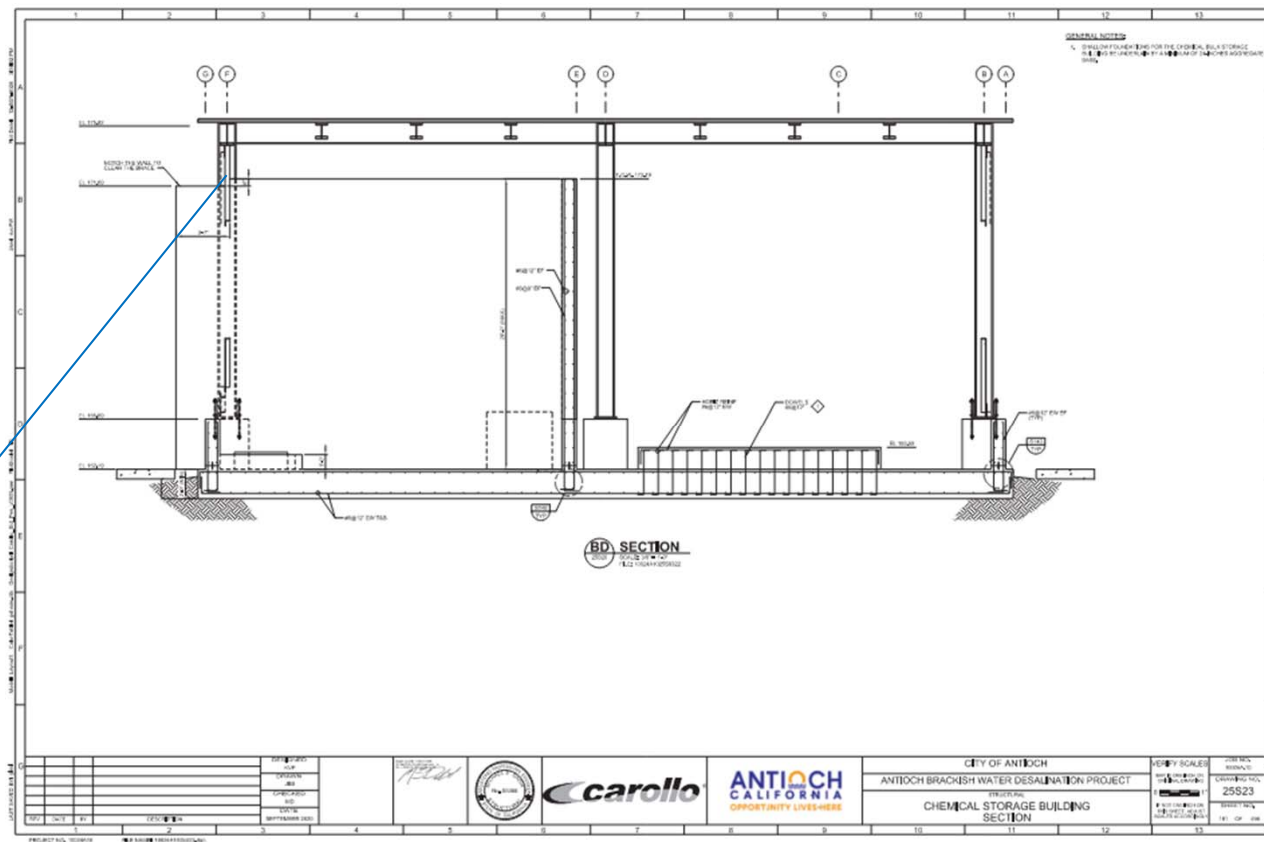
*Architectural Renderings*

## // Chemical Storage



## // Chemical Storage – Section

Canopy  
Structure  
with Siding



# BRACKISH FILTERED WATER PUMP STATION

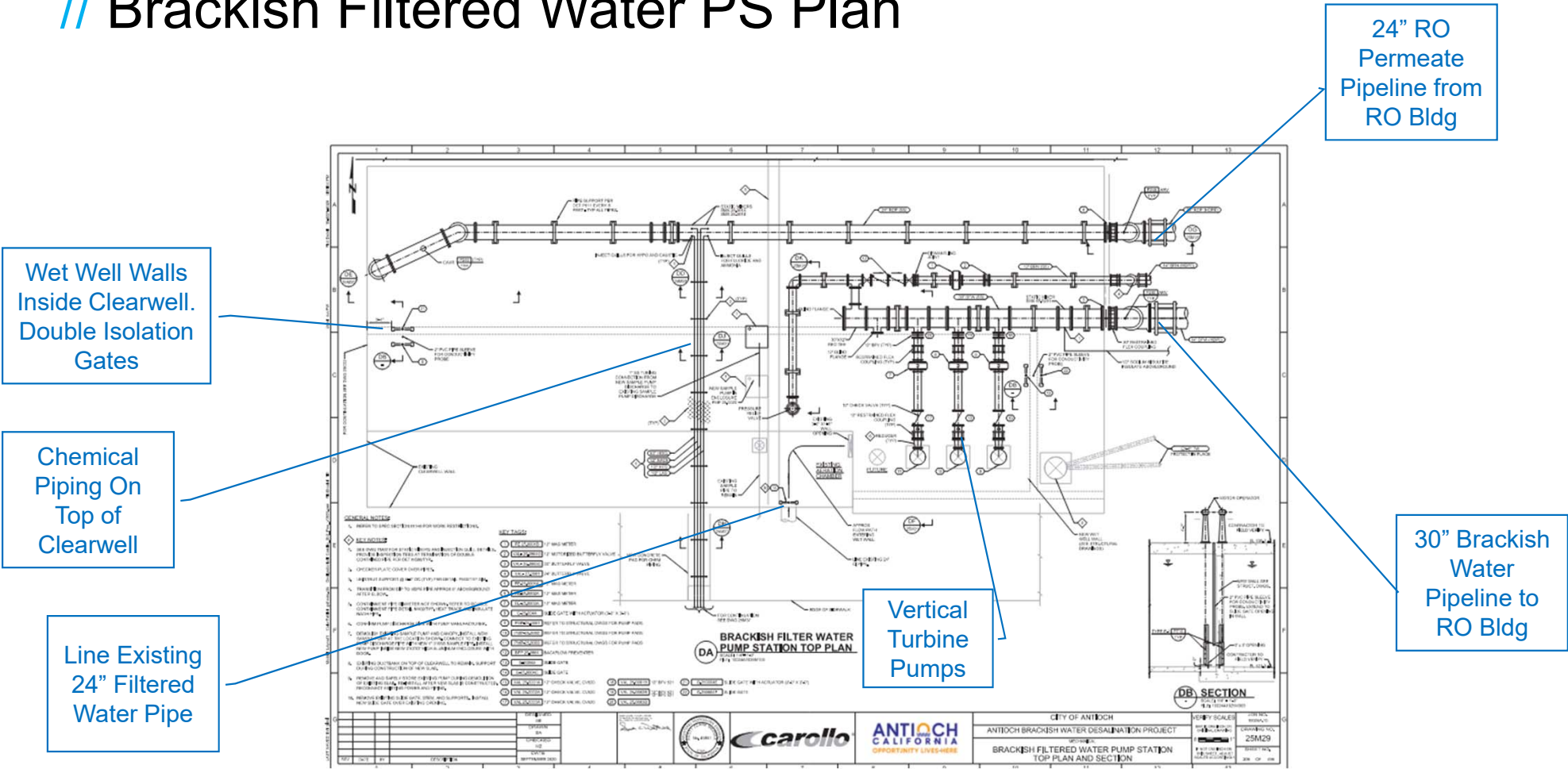


## // Brackish Filtered Water Pump Station



*Architectural Renderings*

# // Brackish Filtered Water PS Plan



New Walls,  
Floor, and  
Ceiling



PLANT A  
FILTER UPGRADES AND  
SEDIMENTATION BASIN COATING

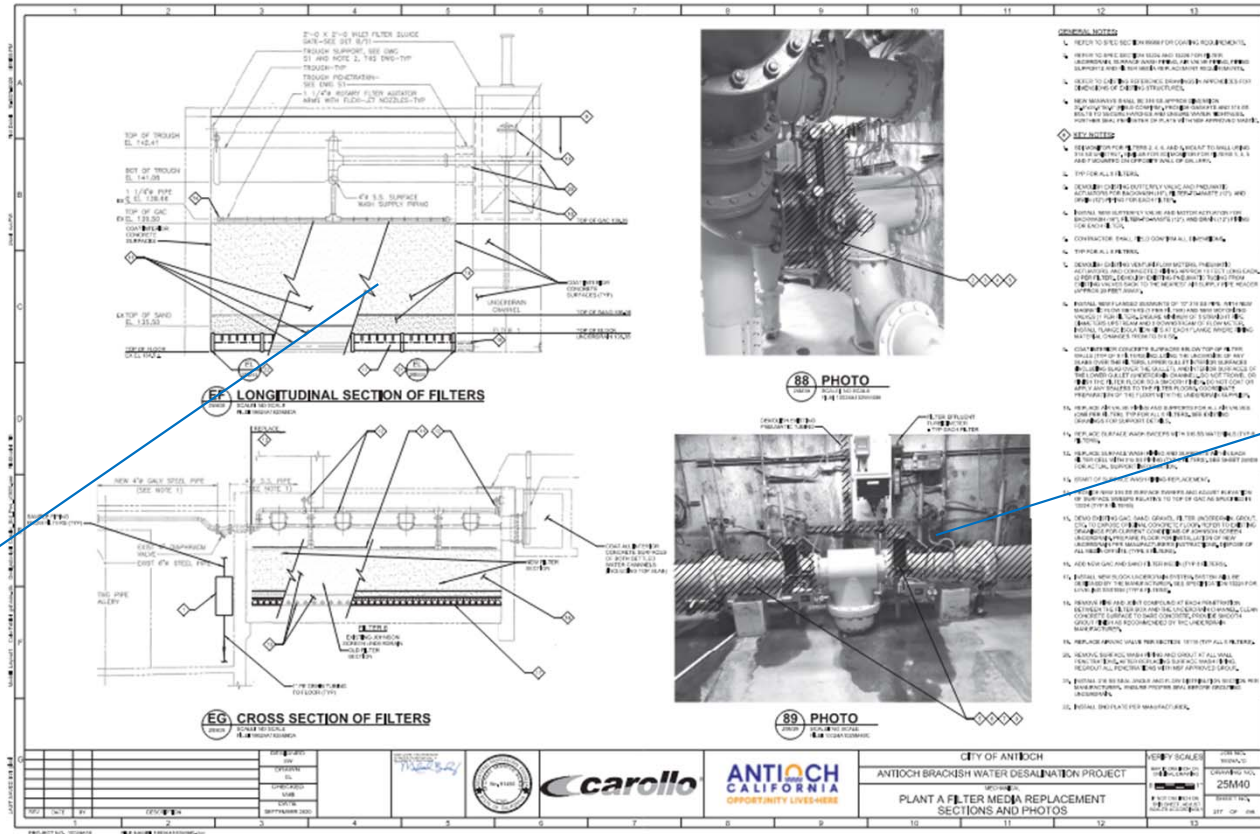
## // Plant A Filter Upgrades and Sed Basin Coating



*Architectural Renderings*



## // Filter Area Modifications

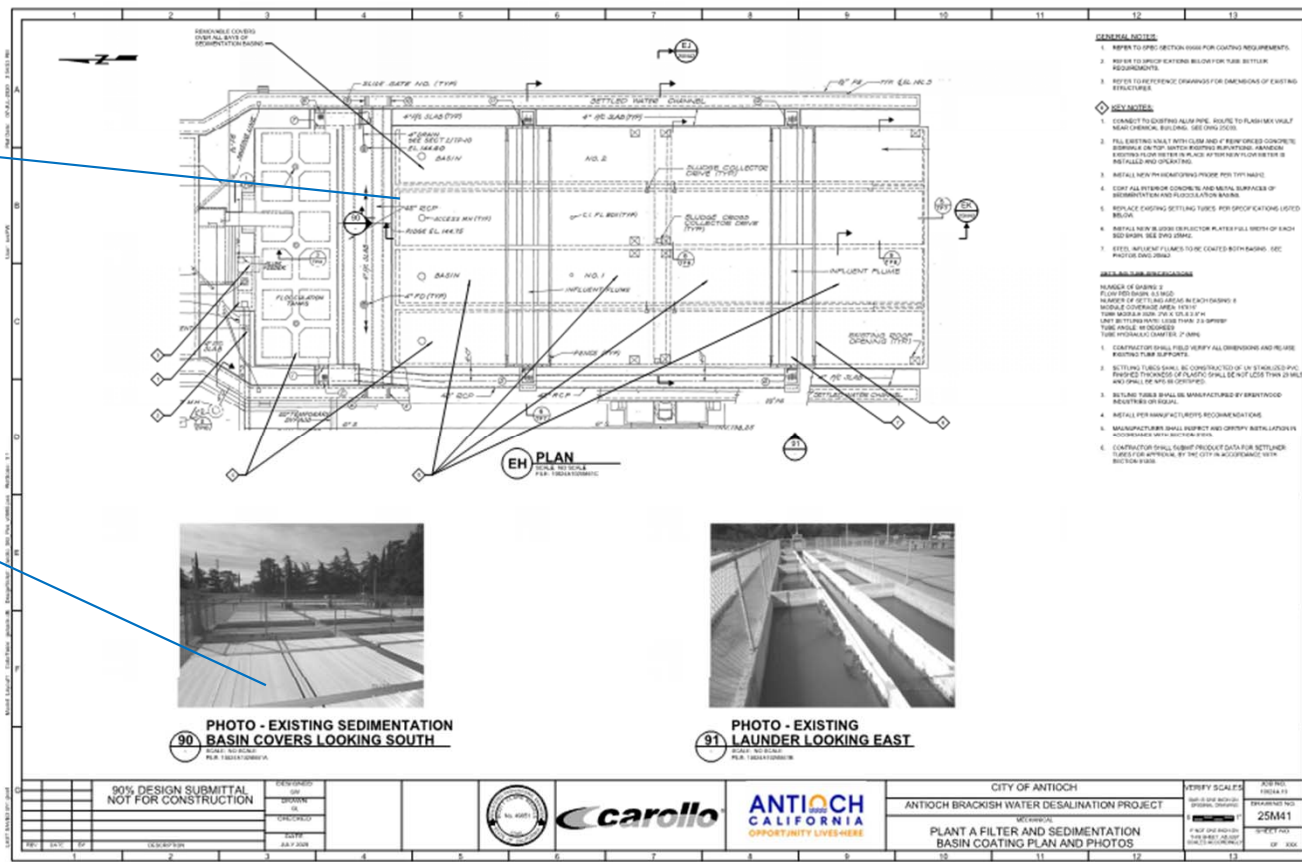


Replace Underdrains and Filter Media.  
Interior Surface Coating

## Replace Filter Valves and Flow Meters



Replace  
Tube Settlers  
Under  
Covers



# BRINE DISPOSAL FACILITIES AT DELTA DIABLO WWTP

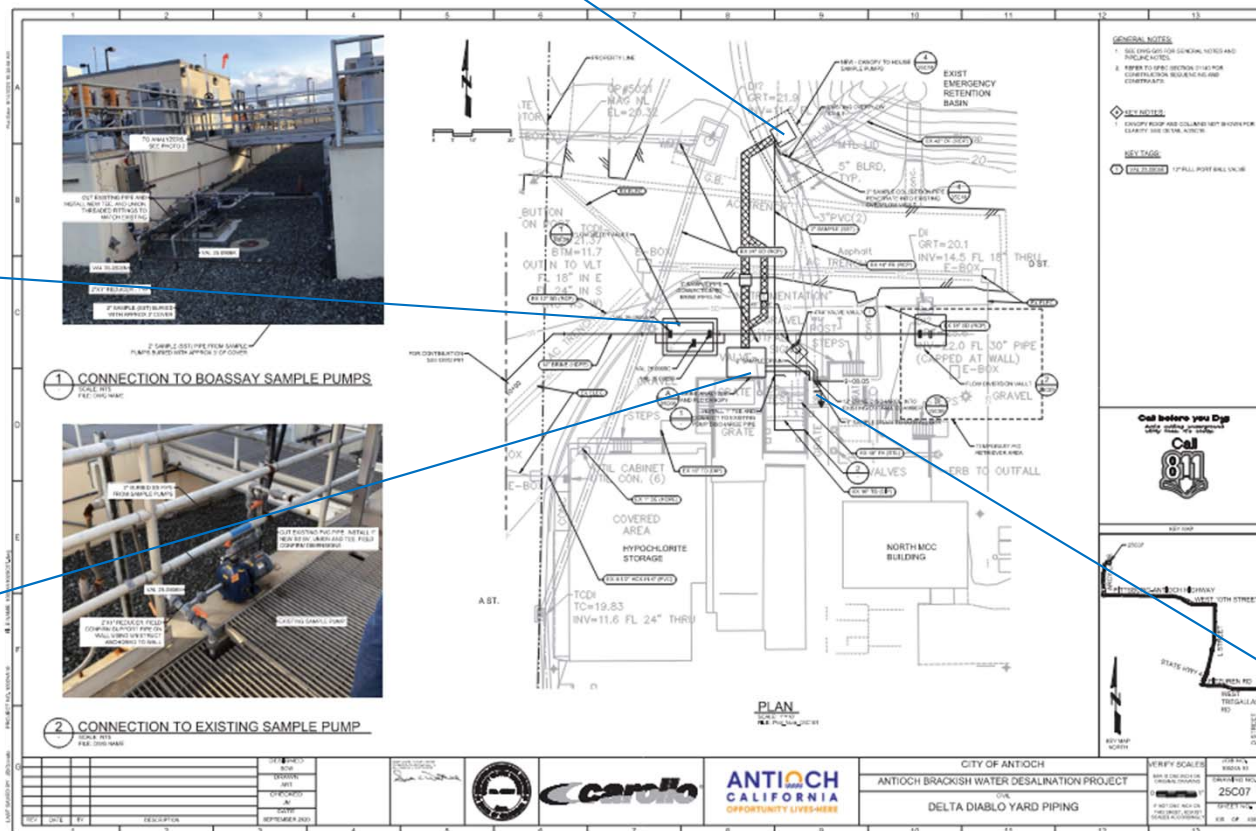
# // Site Plan

Sample Pump  
Canopy and and  
Piping Inside  
Existing Vault

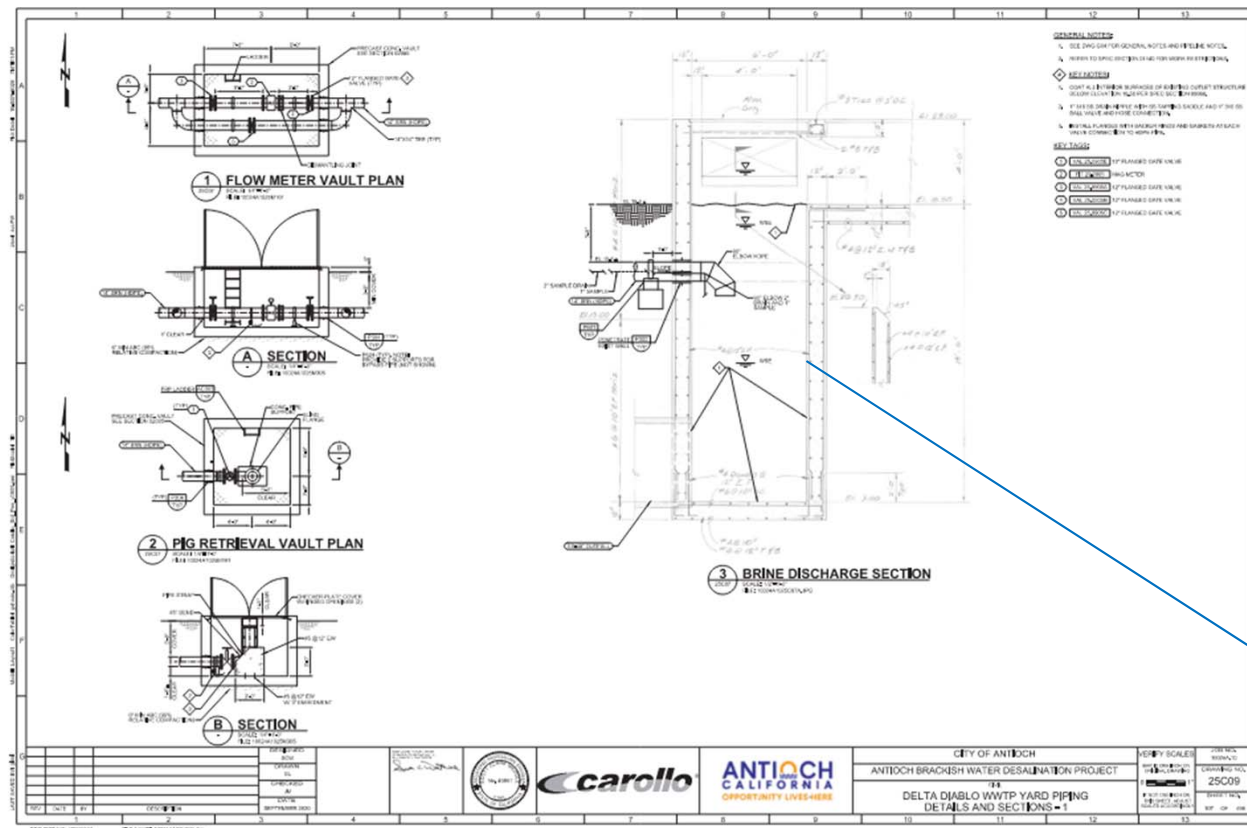
Valve and  
Flow Meter  
Vaults for 12"  
Brine  
Pipeline

Water  
Quality  
Monitoring  
Equipment  
Canopy

Brine Pipeline  
Discharge Into  
Existing Outfall  
Chamber



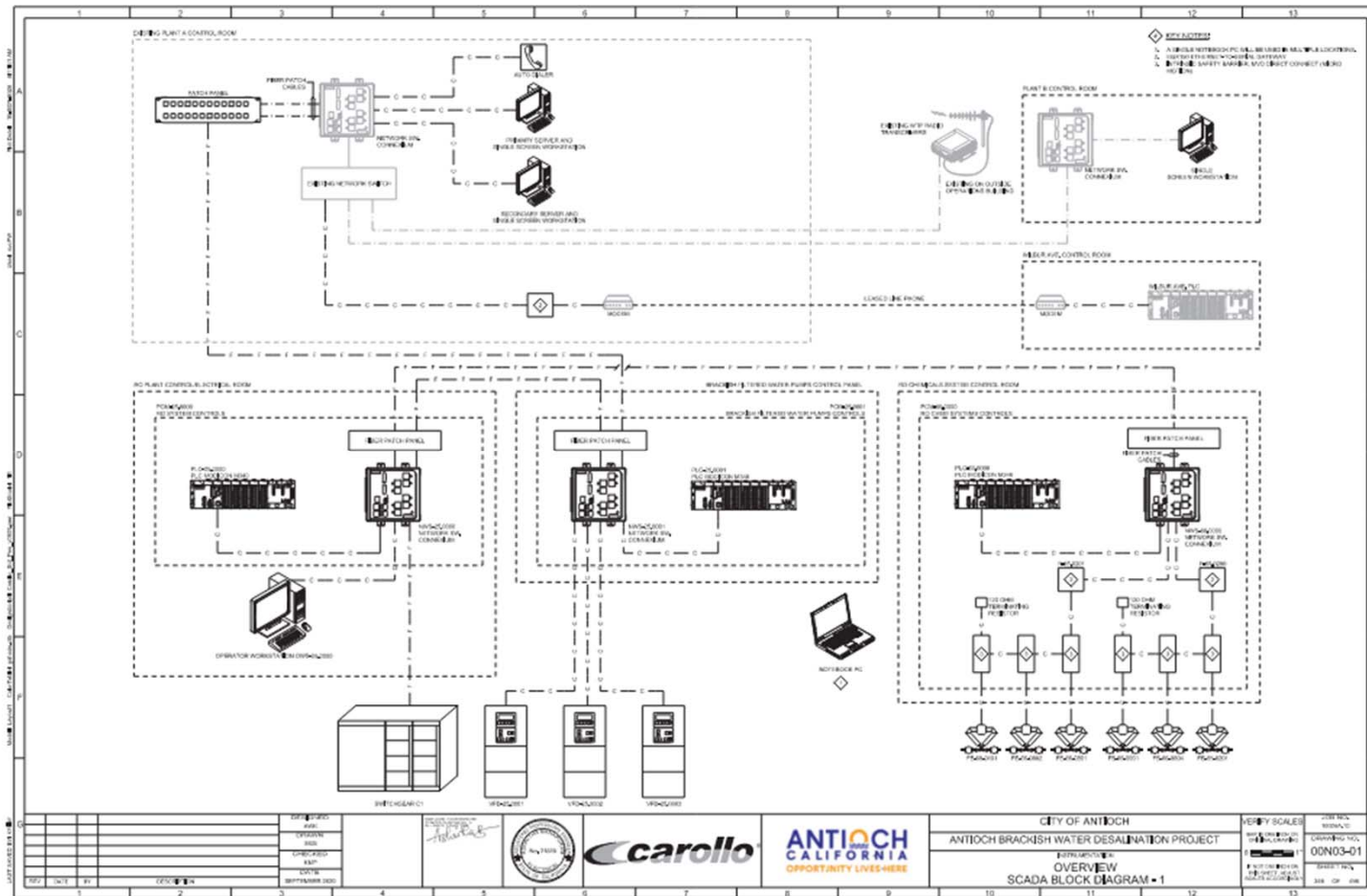




Coat Interior  
Surfaces  
During 8-hr  
Plant  
Shutdown

# CONTROL SYSTEM MODIFICATIONS

# // SCADA Block Diagram – WTP





# ELECTRICAL SYSTEM MODIFICATIONS

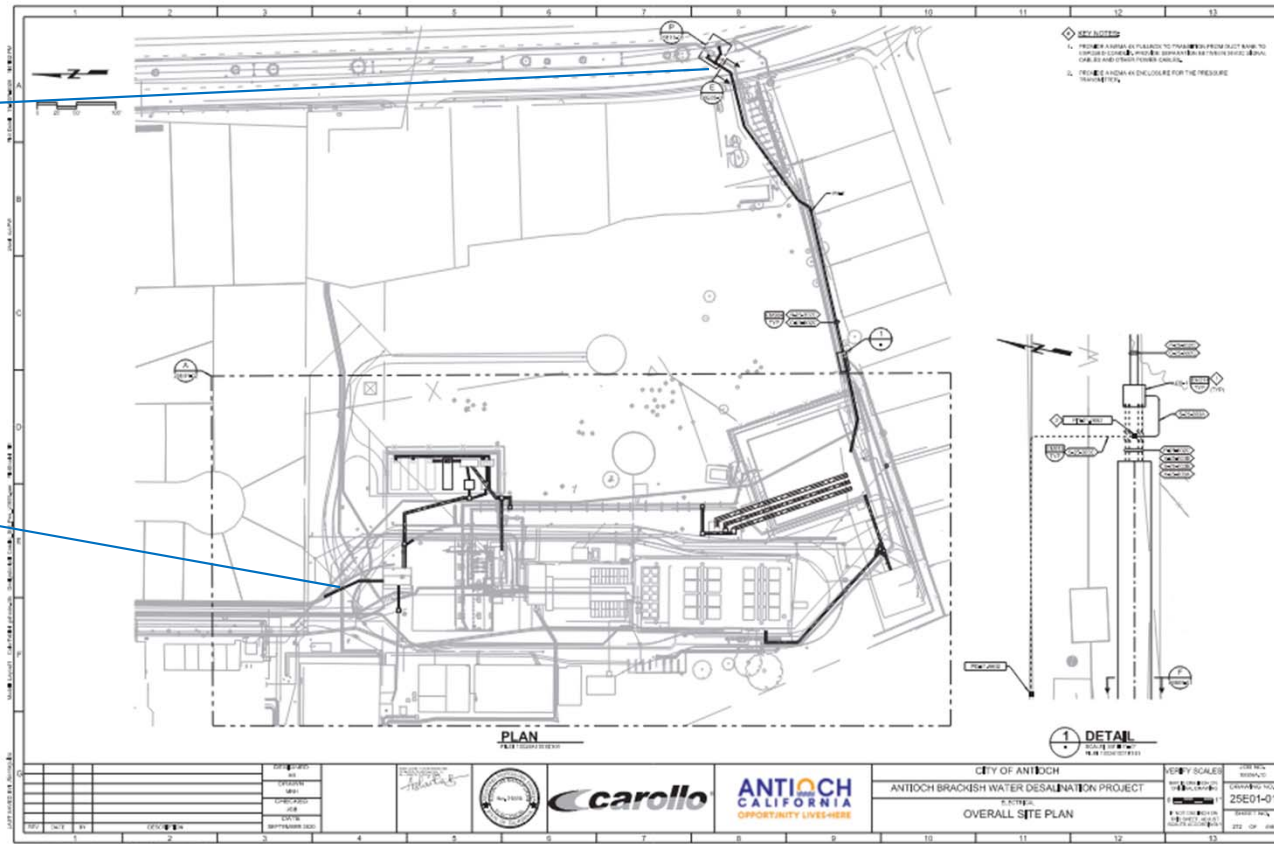
Filename.ppt/50



# // Electrical Site plan - WTP

Power and Control Conduits to Valves on Lone Tree Way

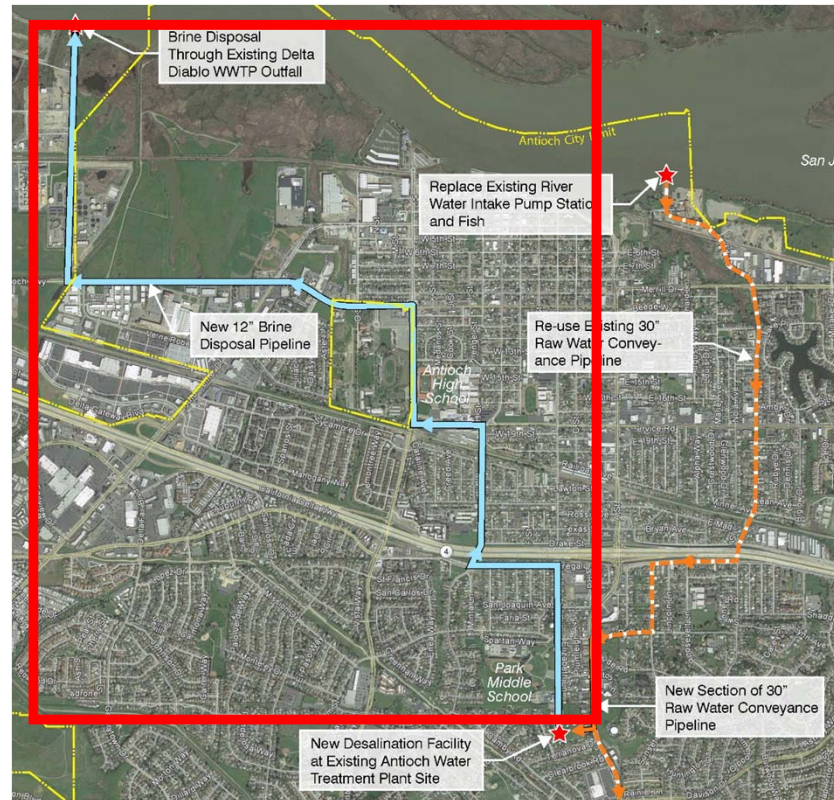
New Conduits from Existing PG&E Vault to New Service Panel



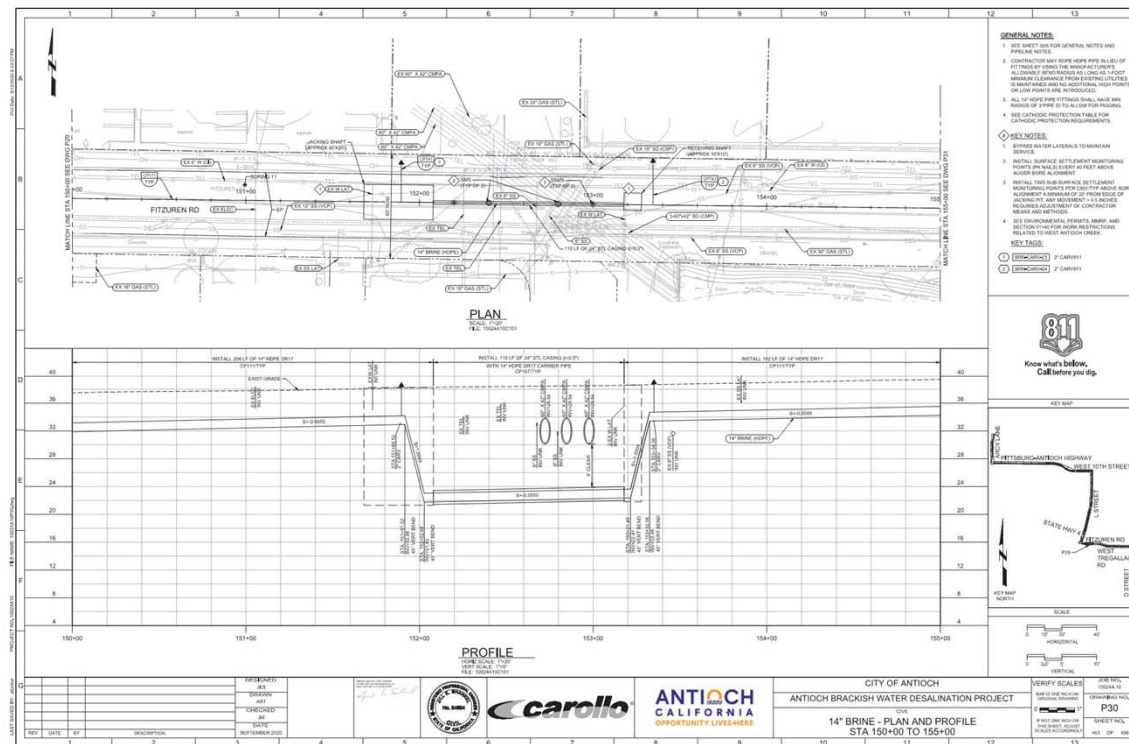


# BRINE DISPOSAL PIPELINE

## // New 14" Brine Disposal Pipeline

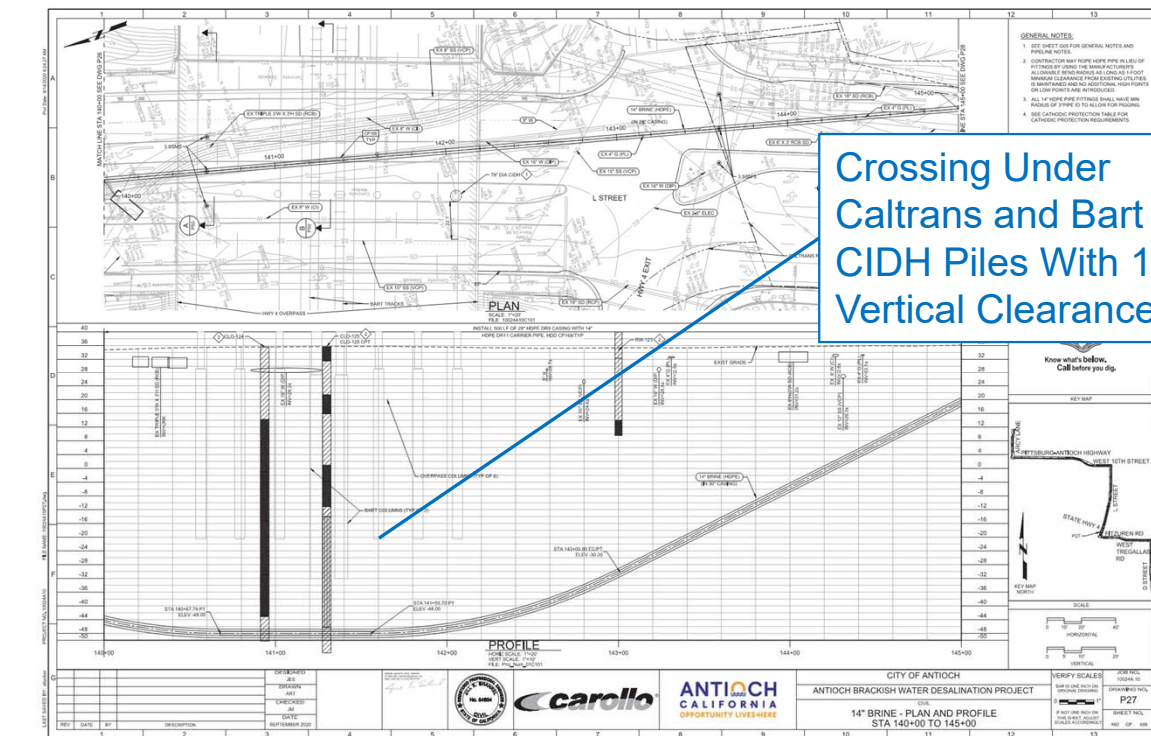


# // 110 LF Auger Bore on Fitzuren Road



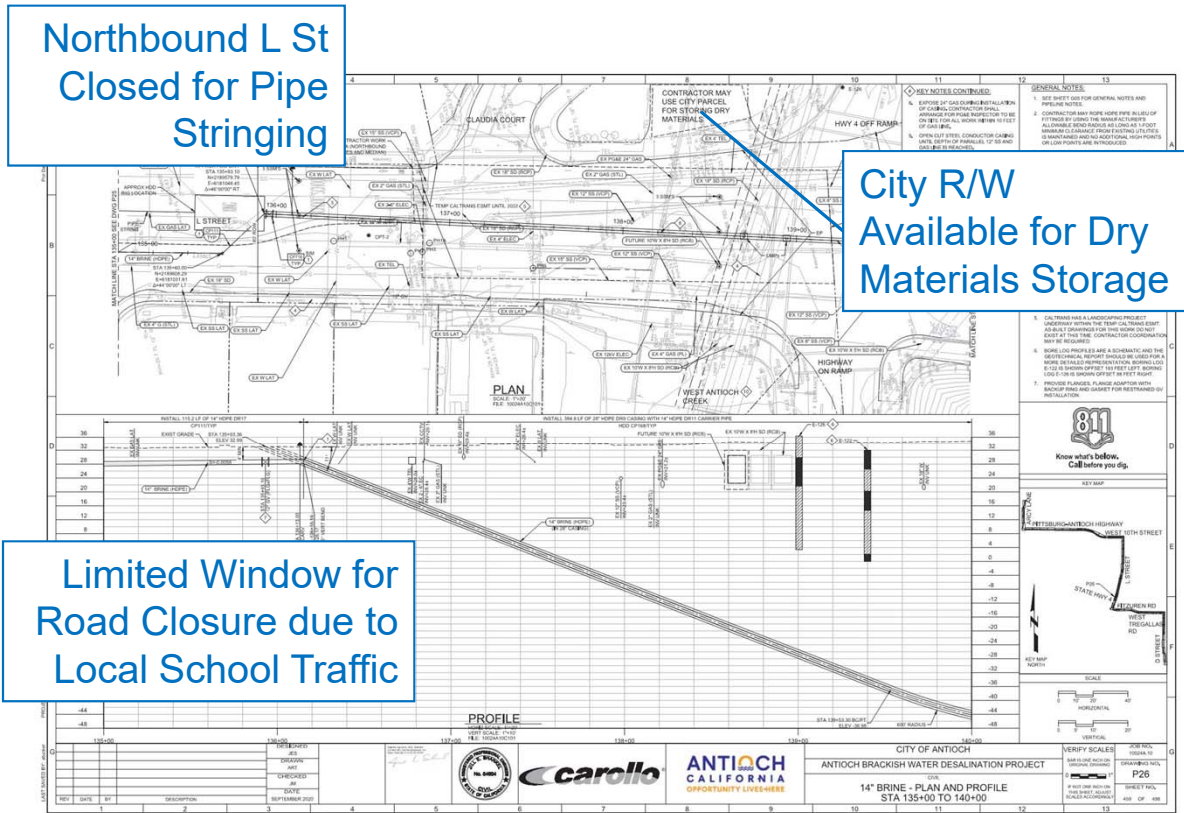


# // 950 LF HDD Hwy 4/BART Xing at L St



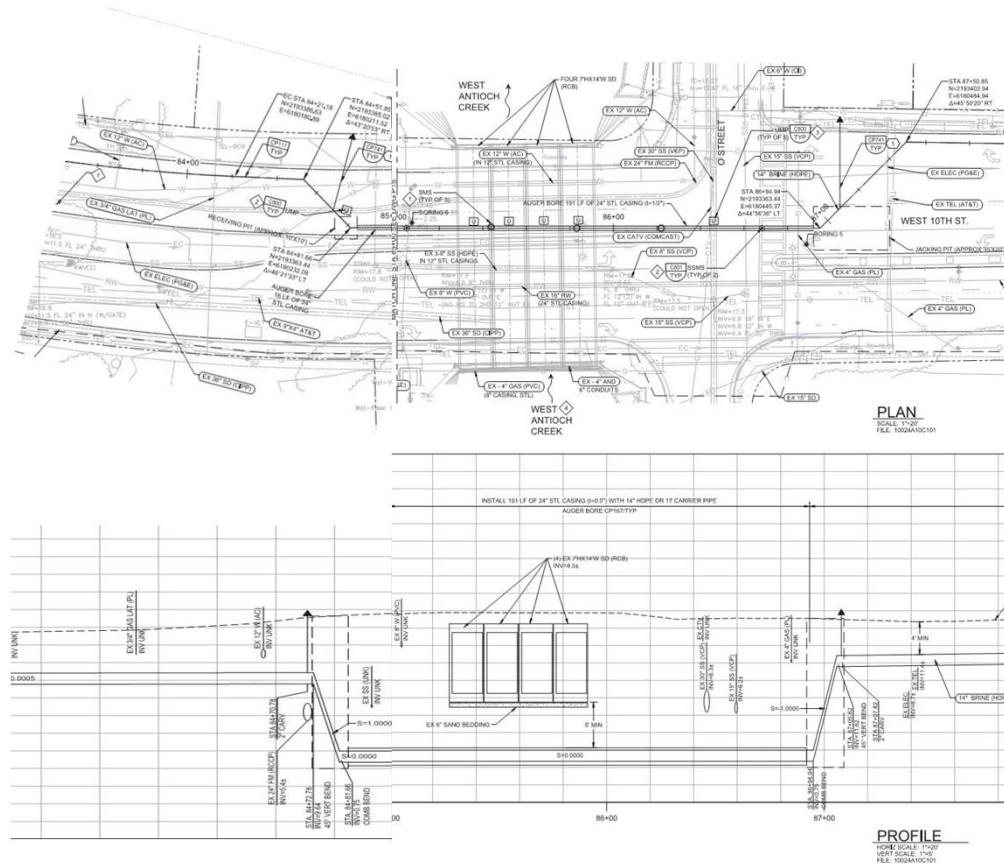
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## // HDD Exit at L St & Claudia Ct



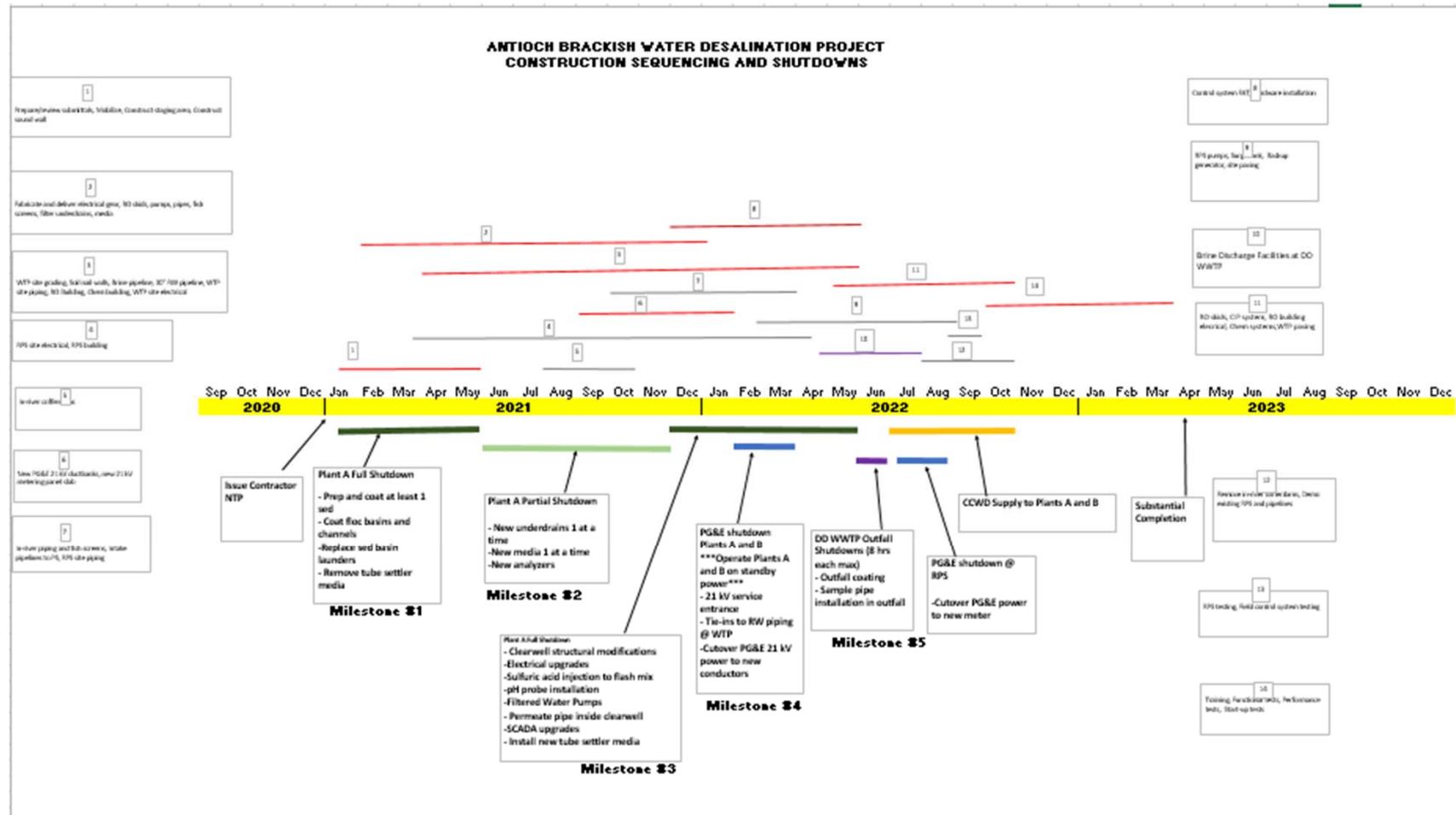


# // 207 LF Auger Bore at 10<sup>th</sup> and O St



# MILESTONES AND WORK RESTRICTIONS

# // Construction Sequence and Milestones



## // Milestones Specified in 00800 and 01140

Contractual Completion Event	Completion Time (# of calendar days from Notice to Proceed date) or Seasonal Dates
Milestone #1	April 30, 2021
Milestone #2	October 31, 2021
Milestone #3	March 31, 2022
Milestone #4	April 30, 2022
Milestone #5	July 31, 2022
Substantial Completion	810
Final Completion	850



# // Liquidated Damages

## A. Failure to Meet Completion Dates

The amount of liquidated damages for delays for which extensions of time have not been granted shall be as listed below for each day of delay beyond each of the required completion dates listed in the Contract Documents.

<u>ITEM</u>	<u>LIQUIDATED DAMAGE</u>
Project Completion Deadline 1 (Milestone #1)	\$10,000/day
Project Completion Deadline 2 (Milestone #2)	\$10,000/day
Project Completion Deadline 3 (Milestone #3)	\$10,000/day
Project Completion Deadline 4 (Milestone #4)	\$10,000/day
Project Completion Deadline 5 (Milestone #5)	\$10,000/day
Substantial Completion	\$1,600/day.
Final Completion	\$800/day.

## // Permit Restrictions

- Regulatory Requirements and Permit – Section 01060
  - Stormwater - RWQCB
  - Encroachment – Caltrans, UPRR, City of Pittsburgh
  - Cal-OSHA
  - BAAQMD
- Environmental Permits - Section 01061
  - Restrictions on in-water work
  - Fish rescue
  - Biological surveys
  - Contractor to hire qualified biologists. Oversight by City
- Traffic Control – 01550
- Work Within Public Right of Way – Section 01734

# SRF LOAN AND DWR GRANT REQUIREMENTS

## // Funding Requirements

- Project funded by SWRCB DWSRF Loan and DWR Prop 1 Grant
- Labor Compliance – Davis Bacon and also Prevailing Wage whichever is higher
  - Addendum will be issued 10 days prior to bid close for the updated Davis Bacon wage determinations
- Disadvantaged Business Enterprise
  - Good Faith Efforts
  - 30-days+ are being provided to bidders
- Project Signs



## // Bidding and Funding Requirements

- Following are due with Bids. See Section 00400.

**All Bidders must submit with Bid:**

Attachment A	Bidder's Bond (if this is the Bidder's chosen Bid Security)
Attachment B	Non-Collusion Declaration
Attachment C	Designation of Subcontractors
Attachment D	Iran Contracting Act Certification
Attachment D-1	Anti-Lobbying Certification
Attachment E	Schedule of Major Equipment and Material Suppliers
Attachment F	SWRCB Form 4500-3 DBE Subcontractor Performance Form
Attachment G	SWRCB Form 4500-4 DBE Subcontractor Utilization Form
Attachment G-1	DBE Good Faith Efforts Verification
Attachment H	Consolidated Appropriations Act Buy American Iron and Steel Certification
Attachment I	Certification of Bidder's Experience and Qualifications
Attachment J	Certification of Electrical Subcontractor's Experience and Qualifications
Attachment K	Certification of Off Plant Site Pipeline Subcontractor's Experience and Qualifications
Attachment L	Certification of Marine Subcontractor's Experience and Qualifications
Attachment M	Certification of System Integrator Experience and Qualifications.

Complete or have each of your subcontractors complete the above DBE Program and Buy American Iron and Steel forms as required by the SWRCB CWSRF Program and submit with the Bid.

## // Bidding and Funding Requirements

- Following are due within 4 business days following Bids.  
See Section 00400.

**The three lowest monetary Bidders must submit the following Attachments within four (4) business days following the opening of the Bids:**

Attachment I	Part C- Financial Information
Attachment N	Bid Document Certification
Attachment O	DBE Contractor Subcontractor Certification
Attachment P	DBE Selected by Prime Contractor
Attachment Q	Buy American Iron and Steel Designation of Equipment or Material Manufacturers

In addition, complete or have each of your subcontractors complete the above forms included herein as required by the guidelines on the form and submit within four (4) business days following the opening of the Bids.

# PROJECT STABILIZATION AGREEMENT

## // Project Stabilization Agreement

- See Section 00250 for terms of Project Stabilization Agreement
- Applies to Contractors and Subcontractors



# PRE-BID SITE INSPECTIONS

## // Pre-bid Site Inspections

- Mandatory site inspections for Bidders
- See Section 00100
- By appointment only
  - Starting 10/14 through 11/5
  - Tues-Thurs 9 am and 1 pm time slots
  - Email request to Scott Weddle [sweddle@carollo.com](mailto:sweddle@carollo.com) at least 3 days in advance
- Email the Covid 19 symptom form (attached to section 00100) 24 hours in advance of site inspection to Scott Weddle

QUESTIONS?