



CITY COUNCIL PUBLIC HEARING

MODIFICATIONS TO THE WASTEWATER TREATMENT PLANT UPGRADE - PA 17-075

APRIL 15, 2019

AGENDA

- Purpose
- Reasons for Modification
- Background
- Design modifications / renderings
- Resolution Adoption; Ordinance Introduction

PURPOSE

Review and consider design modifications to the approved WWTP:

- Modification to the Site Plan & Architectural Review (SPAR)
- Second Addendum to the EIR
- Ordinance to allow off-site construction staging

WHY HAS THE PROJECT CHANGED?

- Redesigned to mitigate rising construction costs
~ *\$25M in savings*
- Aligned design with pending regulatory requirements
- Optimized treatment process facilities
- Maintains Program Objectives

BENEFITS OF THE MODIFICATIONS

- Critical RWQCB requirements and deadlines
- Meets WIFIA application schedule for August 2019
~ \$100M in interest cost savings for rate payers
- Mitigates continually rising construction costs
~ \$1M in cost escalation each month of delay
- Maintains schedule to award construction contract on May 6, 2019

PROJECT LOCATION



RECENT PROJECT HISTORY

- JULY 16, 2018 - Council approved WWTP project
- FEBRUARY 19, 2019 - CWP Update, City Council acknowledged project modifications
- MARCH 4, 2019 - Council Adopted a Resolution exempting project modifications from having to conduct a Neighborhood Meeting and Study Session
- MARCH 26, 2019 - Planning Commission Public Hearing on project modifications

Site plan for the J. Hart Clinton Drive Wastewater Treatment Plant. The plan shows various buildings including Headworks, Dual Use Clarifiers (No. 1, 2, 3), BNR Basins, Membrane Filtration Basins, Electrical Bldg, and Admin Bldg. It also depicts parking areas, a ramp station, and a slough. Key features include a 30' x 6' road, 8' high vehicular gates, and a 10' x 10' ramp station. The plan is oriented with North at the top.

The aerial site plan for the Detroit Water Treatment Plant shows a complex layout of buildings and infrastructure. Key features include:

- Buildings:** Admin Bldg, MBR Equipment Building, Chemical Tanks, Electrical Building, Transformers and Generators, Bioactive, Primary Clarifiers, Headworks, and Odor Control.
- Parking Areas:** Public Parking, Entry Plaza, ADA Van Space, and various other parking lots.
- Roads and Paths:** J Hart Clinton Drive, Detroit Drive, and various pedestrian paths.
- Infrastructure:** Sewerage treatment tanks, electrical equipment, and various utility structures.
- Landscaping:** Trees and green spaces throughout the site.
- Other Features:** A large circular structure, possibly a slough or a large tank, is visible in the lower right.

The plan also includes various labels for existing and proposed structures, parking areas, roads, and landscaping. Key features include the Admin Bldg, MBR Equipment Building, Chemical Tanks, and various parking areas. The plan also shows the Detroit River and surrounding infrastructure.



1. Replacement of circular clarifiers with rectangular and a reduction of the structure by 31,950 SF
2. Relocation of Administration Building
3. Increase in size of maintenance warehouse building by 2,800 SF and a change in the exterior materials
4. Landscape modifications

AERIAL VIEW OF MODIFIED PROJECT



VIEW FROM NORTHWEST



VIEW FROM PEDESTRIAN PATH



MODIFIED PROJECT

ORIGINAL APPROVAL



VIEW FROM NORTHEAST

ORIGINAL APPROVAL



MODIFIED PROJECT



OFF-SITE CONSTRUCTION STAGING



- Three City-Owned parcels
- Parks and Recreation Commission approved
- First Addendum evaluated environmental affects
- Zoning Code prohibits in the Open Space and Shoreline Districts
- Ordinance required

CEQA

Second Addendum was prepared:

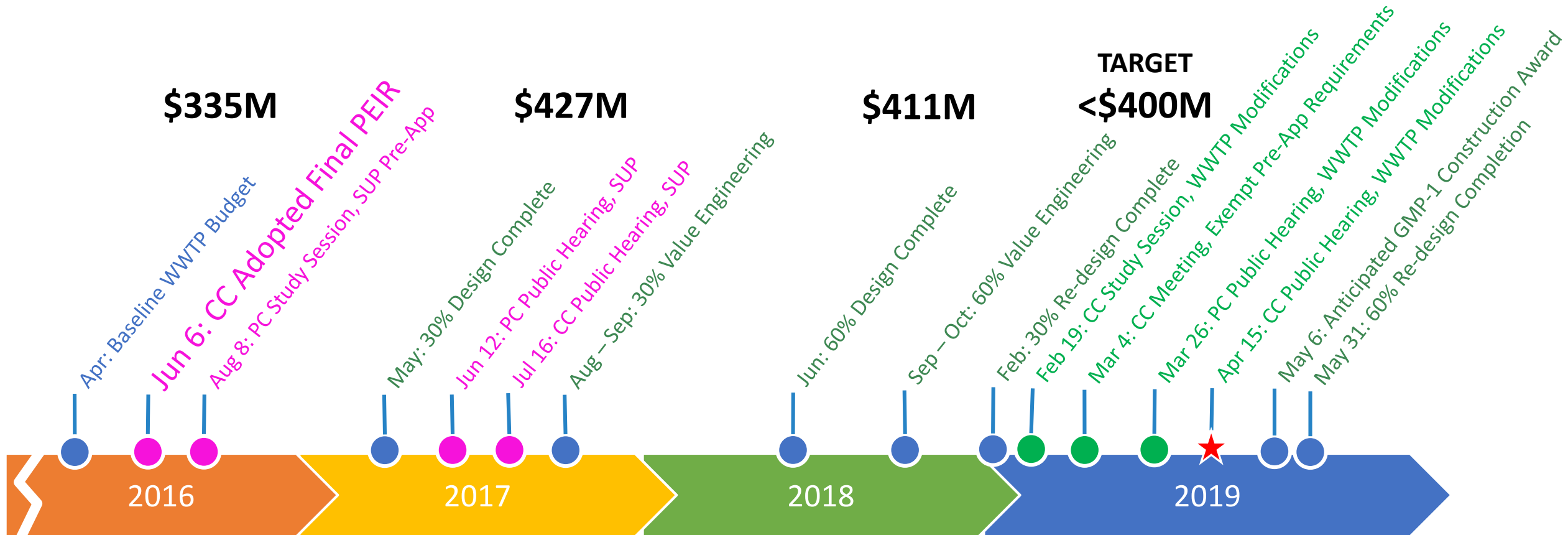
- Only Minor Changes to the Project;
- No New Information;
- No New Environmental Impacts; and
- No New Mitigation Measures.

RECOMMENDED COUNCIL ACTIONS

- Adopt Resolution:
 - Approving Design Modifications to the SPAR; and
 - Finding that the Second Addendum adequately analyzes the environmental affects of modifications
- Introduce Ordinance Exempting specific City-Owned Sites from the Provisions of the Zoning Code



PROJECT HISTORY



Color Legend:

Timeline of Project Design and Cost Progress

Planning Commission (PC) and City Council (CC) Meetings (Previously Approved Project)

Planning Commission (PC) and City Council (CC) Meetings (Project Modifications)

LANDSCAPE DESIGN

Increased Perimeter Landscaping at Pedestrian Path

Stormwater Treatment

Shifted Screening Landscaping

Additional Open and Green Space



WWTP ENTRY VIEW



PEDESTRIAN & BIKE PATH WITH INTERPRETIVE LANDSCAPE



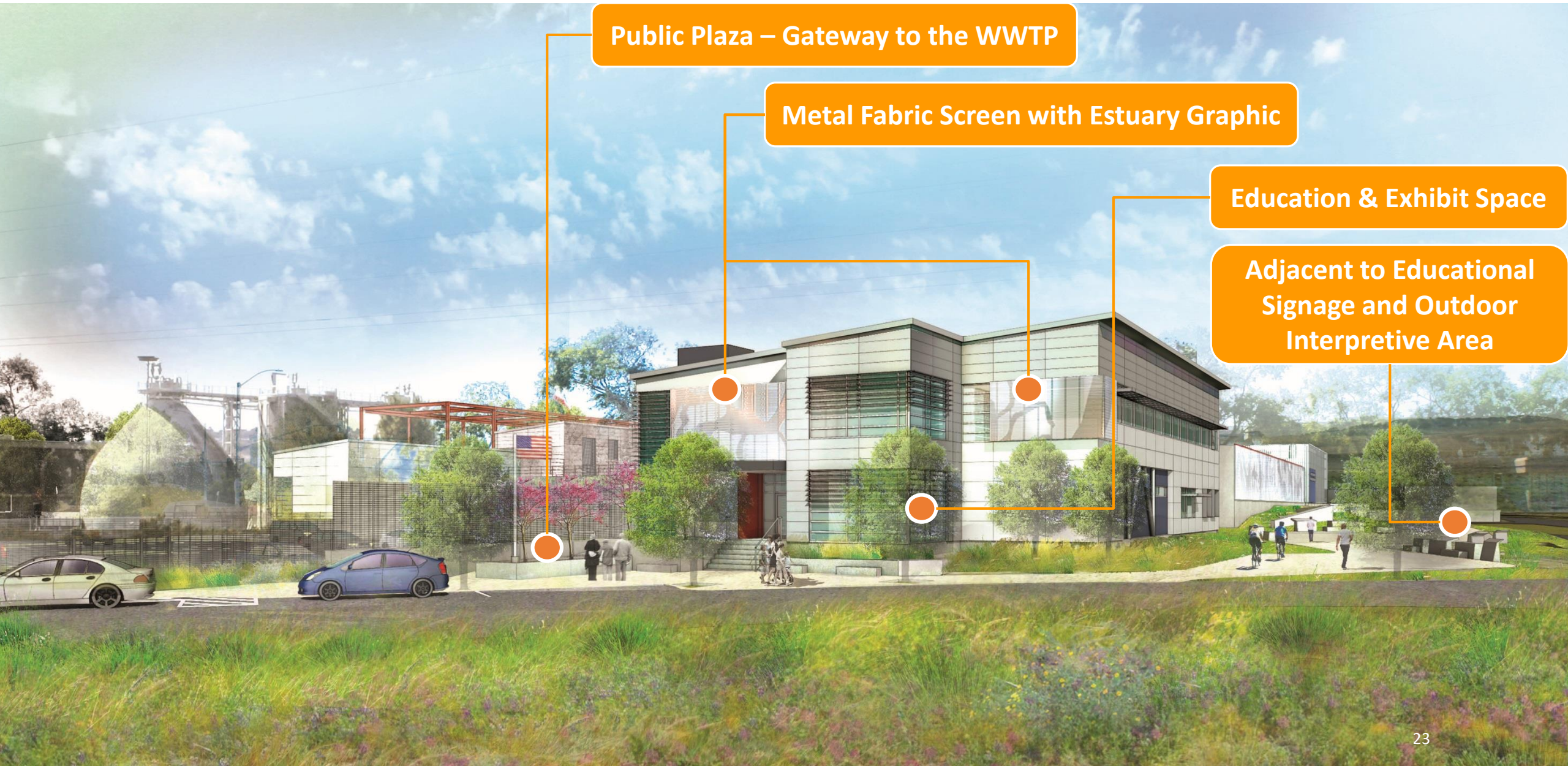
Interpretive Signage
with Site History and
Water Treatment Process

Benches Along the Path
Provide Areas to Rest

Tiered Seating

Stormwater Treatment in
Landscape

PUBLIC INTERFACE AT ADMINISTRATION BUILDING



Public Plaza – Gateway to the WWTP

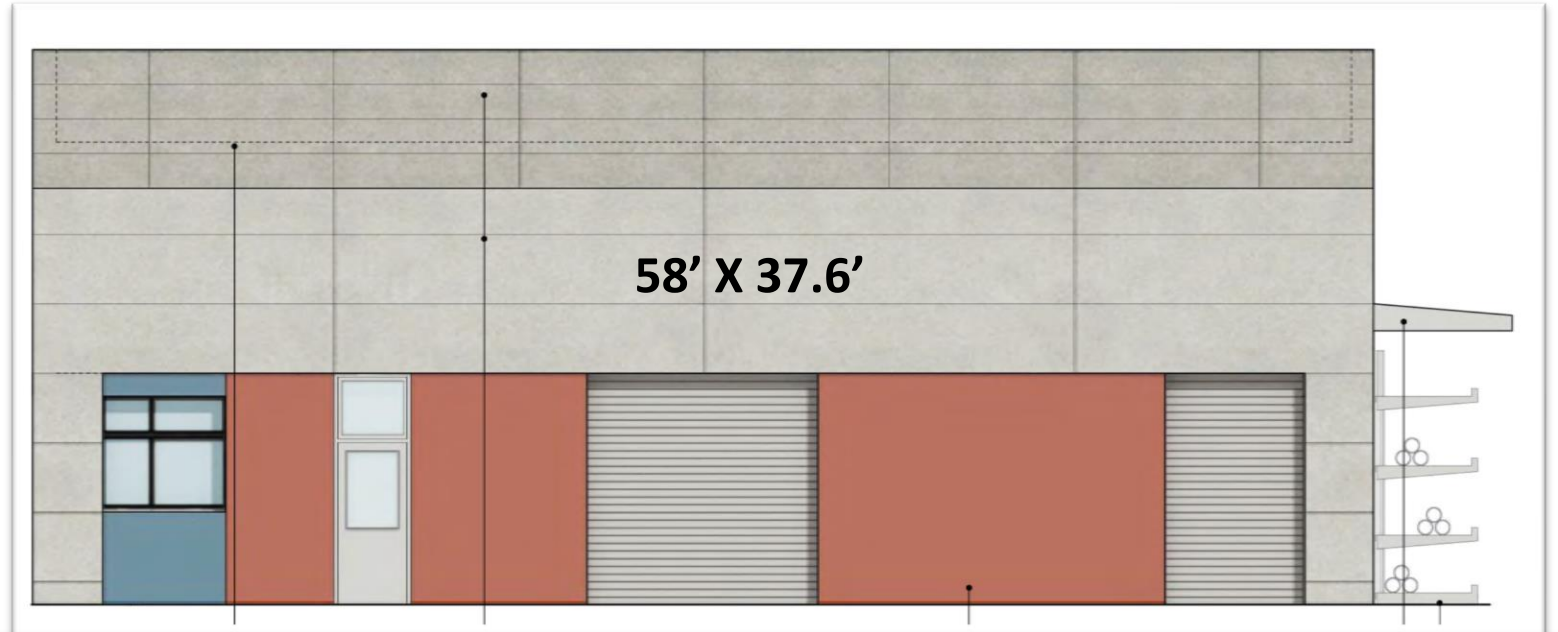
Metal Fabric Screen with Estuary Graphic

Education & Exhibit Space

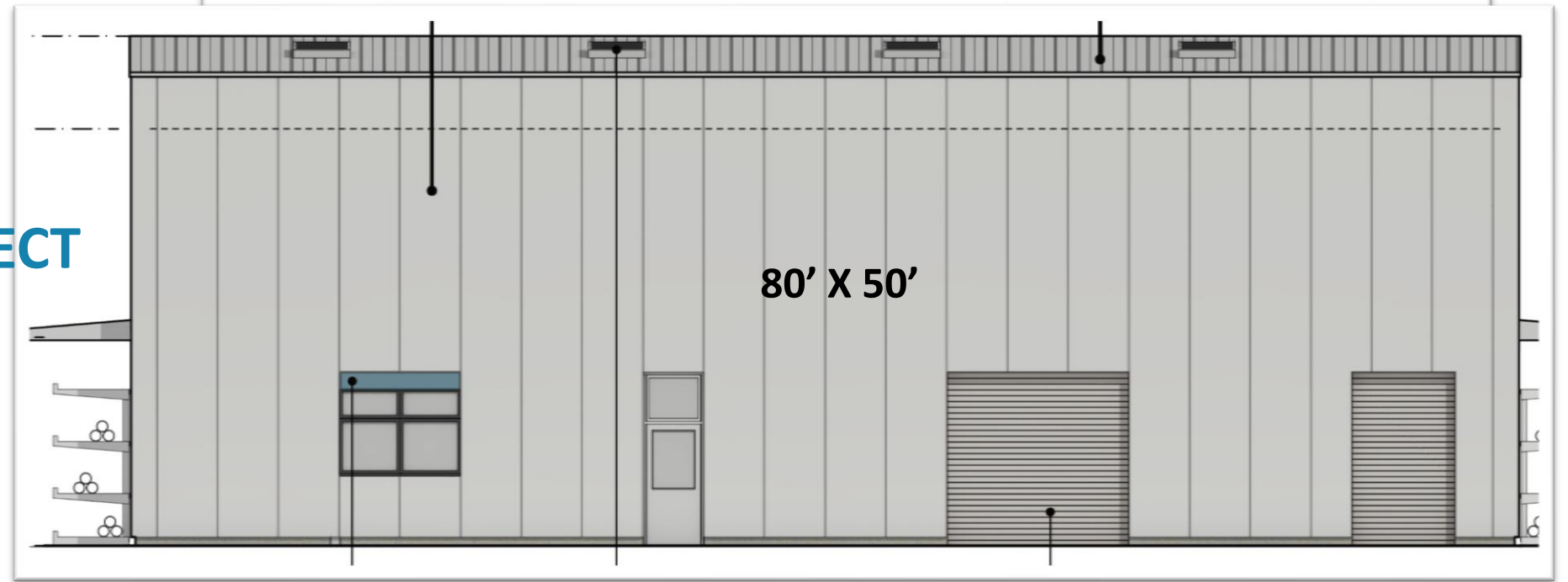
Adjacent to Educational
Signage and Outdoor
Interpretive Area

MAINTENANCE WAREHOUSE

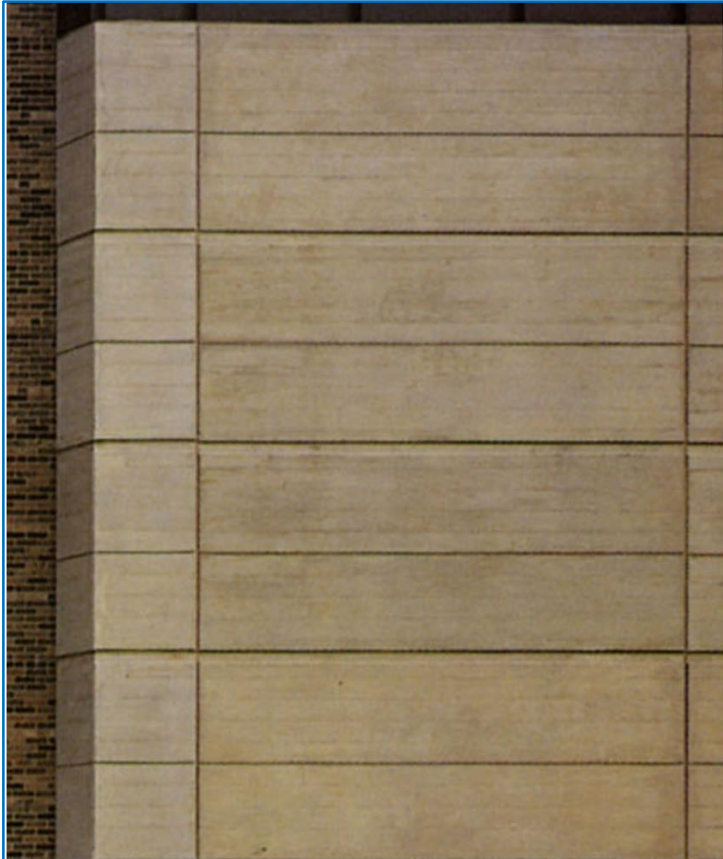
ORIGINAL APPROVAL



MODIFIED PROJECT



MAINTENANCE BUILDING EXTERIOR



MATERIAL: POURED-IN-PLACE CONCRETE
FINISH: HORIZ. & VERT. REVEALS
COLOR: -

ORIGINAL APPROVAL

INSULATED METAL WALL PANEL SYSTEM



MANUFACTURER: KINGSPAN OR EQUAL
PRODUCT: SHADOWLINE
MATERIALS: DOVE GREY

MODIFIED PROJECT

SITE OVERVIEW

ORIGINAL APPROVAL



MODIFIED PROJECT



ORIGINAL APPROVAL - REAR PERSPECTIVE



MODIFIED PROJECT – REAR ELEVATION



ORIGINAL APPROVAL

CLARIFIER AND BIORETENTION

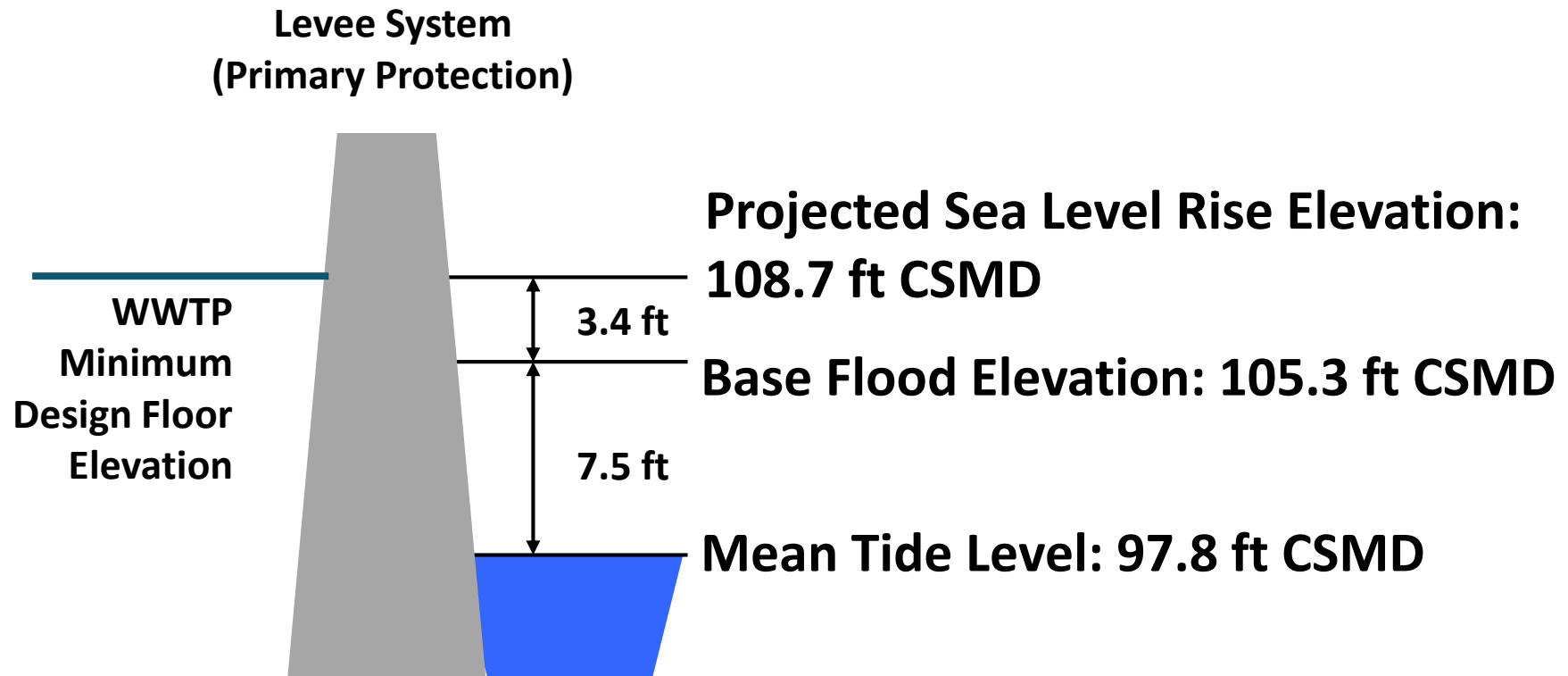
A path anchors the industrial plant to the natural environment. A widened area with seating and interpretive signage creates an outdoor classroom. The contrast between the natural bioretention areas and the plant will create a unique place where visitors can learn about nature's ecological systems and the work of the plant to clean wastewater and return it safely to the Bay. The clarifiers are screened with a translucent material that can be lit to reveal the sculptural form of the plant.



WWTP AND SEA LEVEL RISE

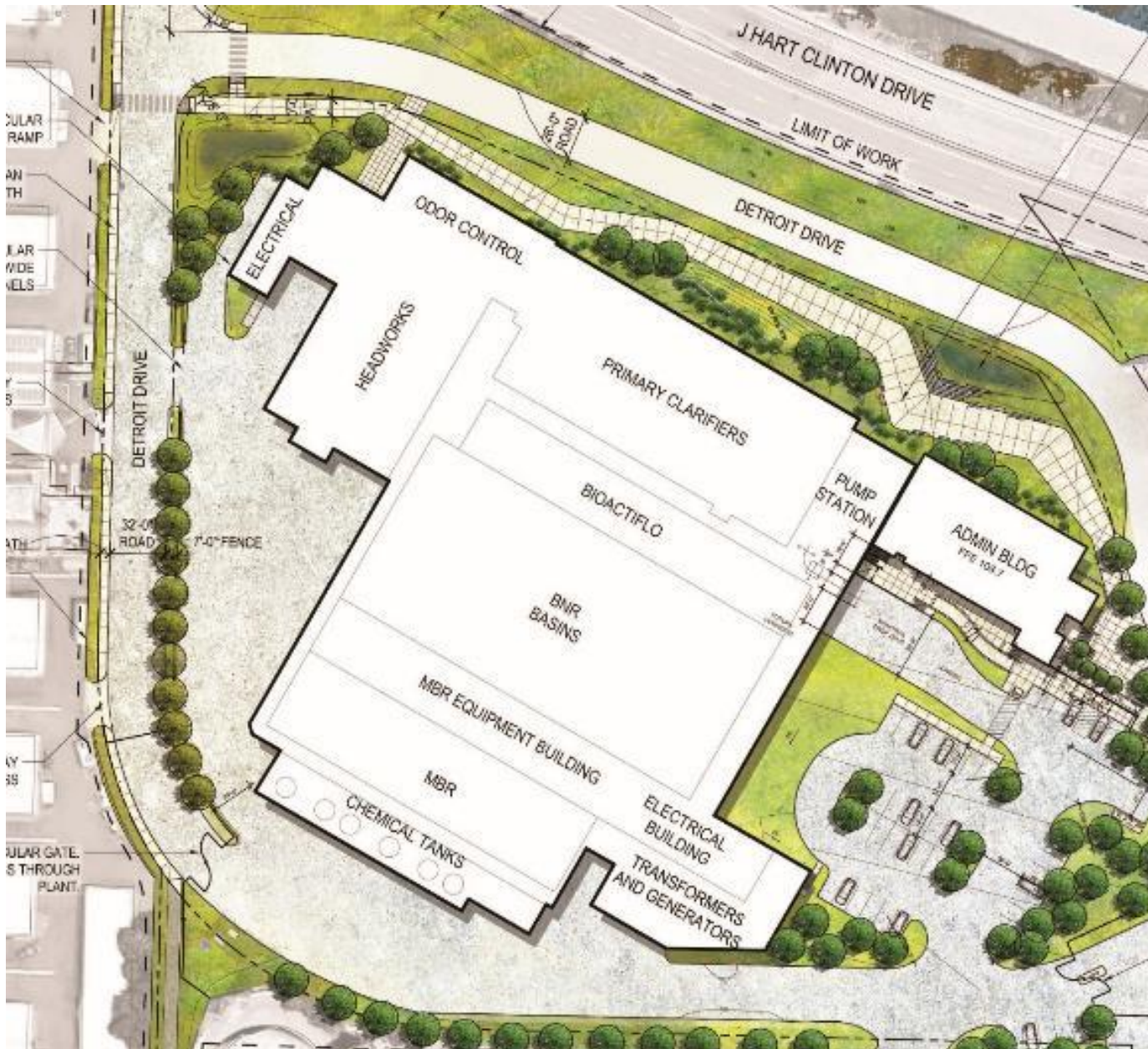
- Primary Level of Protection - Bayfront Levee System
- Secondary Level of Protection – Added resiliency
- 2018 State Guidance on Sea Level Rise
 - Year 2100 High Emissions Scenario
 - Likely Range / Low Risk Aversion = 66% probability that SLR will range between 2.4 and 3.4 ft

FLOOR ELEVATION & SEA LEVEL RISE



FLOOD PROTECTION - CAPITAL IMPROVEMENT PROJECTS

- FEMA Accreditation
 - Requirements: 2 feet of freeboard above 1% still water elevation / 100 year event*
 - Will Require Ongoing Levee Improvements as Sea Levels Rise*
- Bayfront Levee System
 - North Shoreview Levee and Pump Station Improvement Project, FEMA Accreditation*



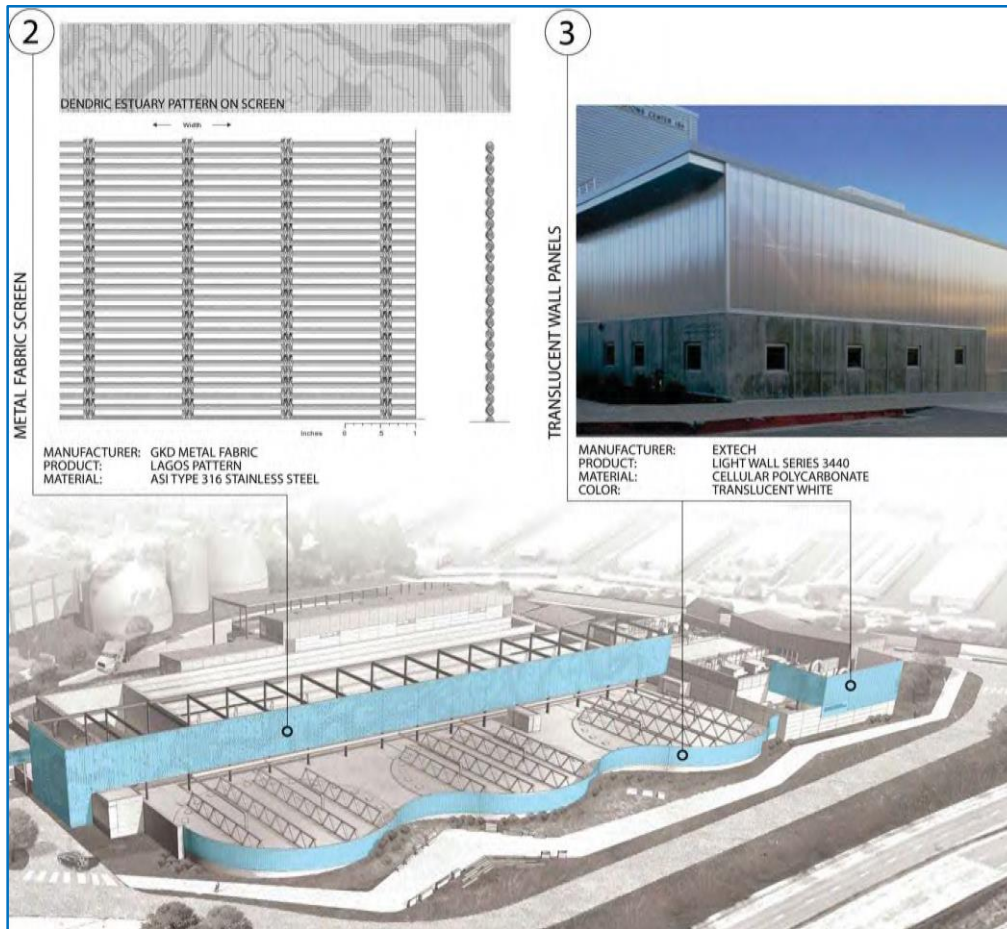
FLOOD AND SEA LEVEL RISE PROTECTION

- 97.8 ft CSMD = Mean tide level
- 105.3 CSMD = 1% still water elevation / 100 year event / base flood elevation
- 108.7 to 120 ft CSMD = Slab elevation of structures
- >10 ft of flood protection

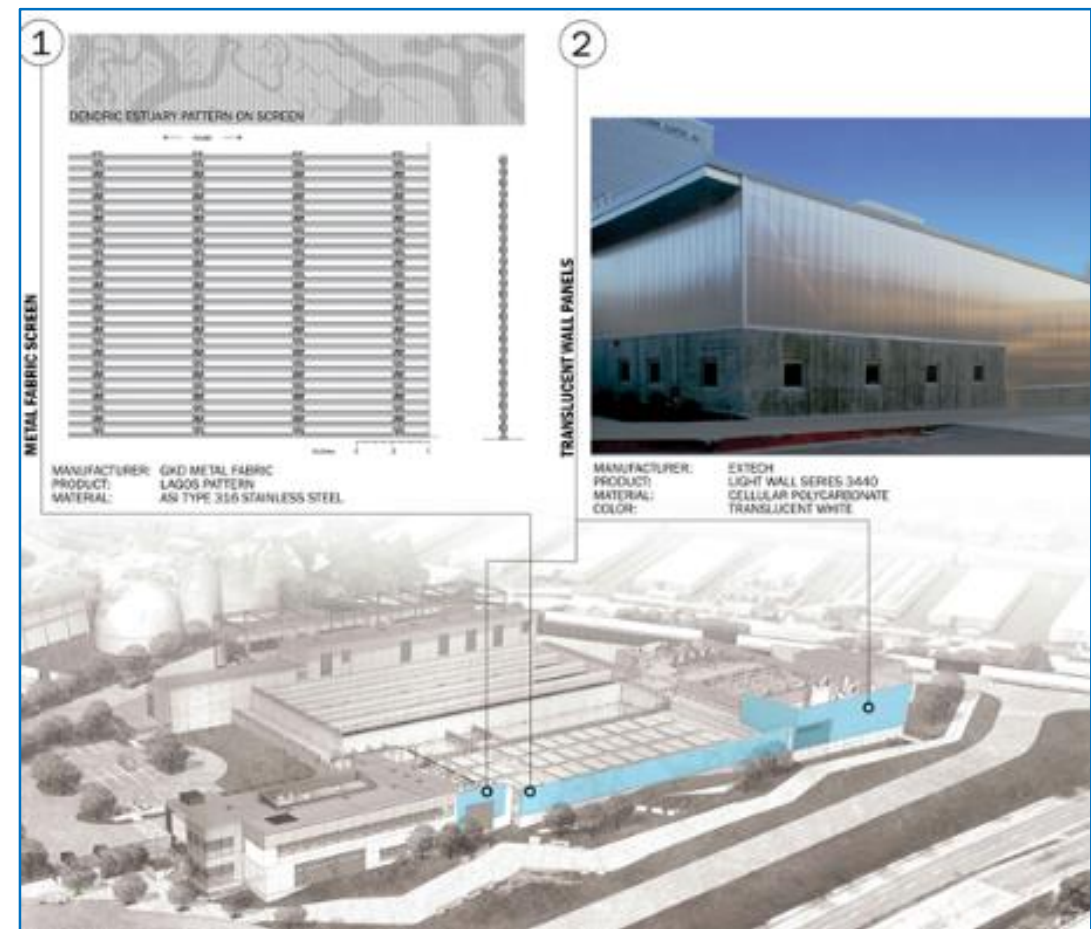
CWP PROGRAMMATIC EIR

- Evaluated Alternatives and Impacts of all of the Clean Water Program components.
- Circulated for Public & Agency Review (October 2015 – January 2016)
- Certified by the City Council on June 16, 2016.
- First Addendum Approved by City Council July 16, 2018

TREATMENT PROCESS STRUCTURE



ORIGINAL APPROVAL



PROJECT MODIFICATIONS