

Headworks Rehabilitation at Plant No. 1, Project No. P1-105

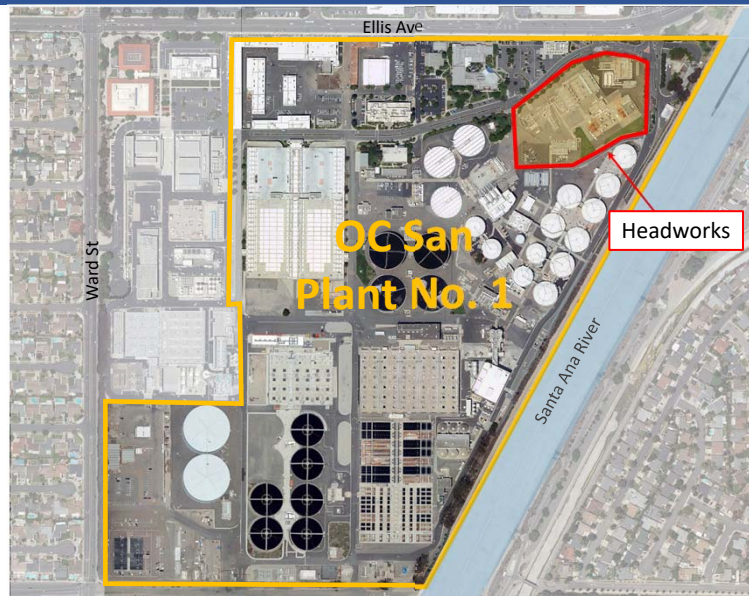
Presented by:
Kathy Millea
Director of
Engineering
Operations
Committee
March 3, 2021

Construction Contract Award



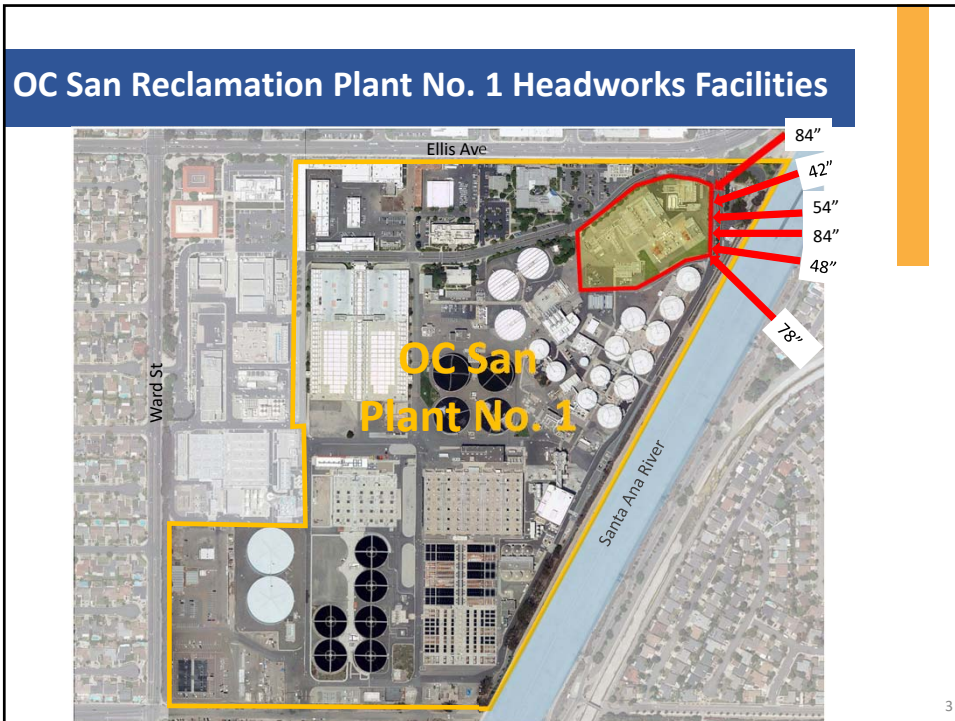
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OC San Reclamation Plant No. 1 Headworks Facilities

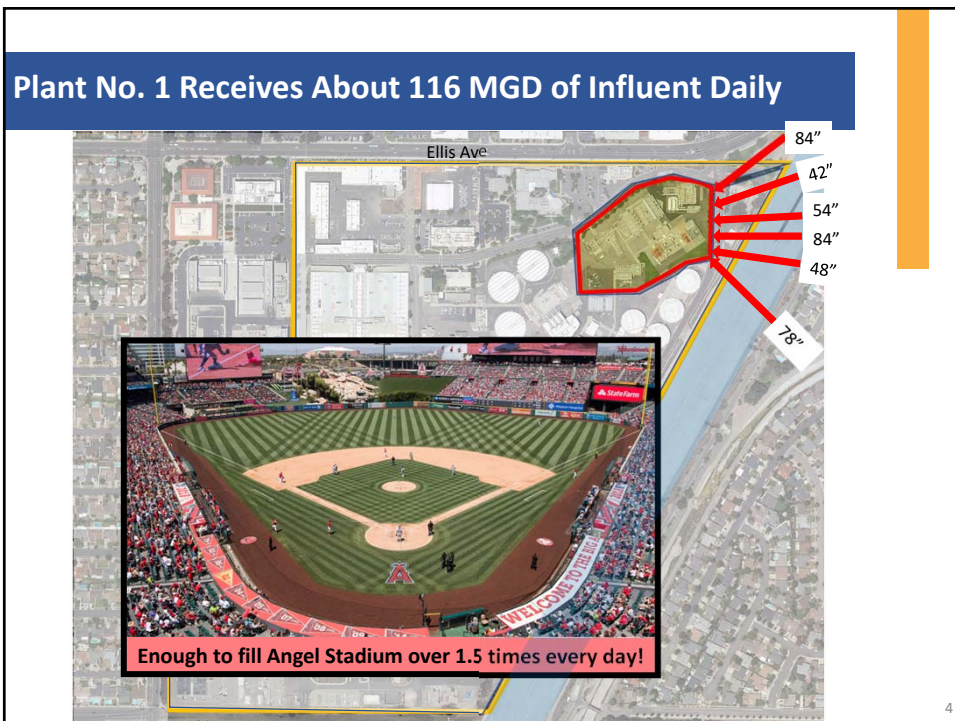


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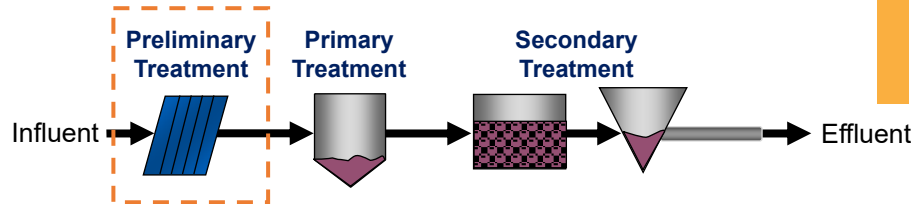


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Preliminary Treatment (Headworks) Protects Subsequent Treatment Process



Bar Screen



Grit waste

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Metering and Diversion Structure



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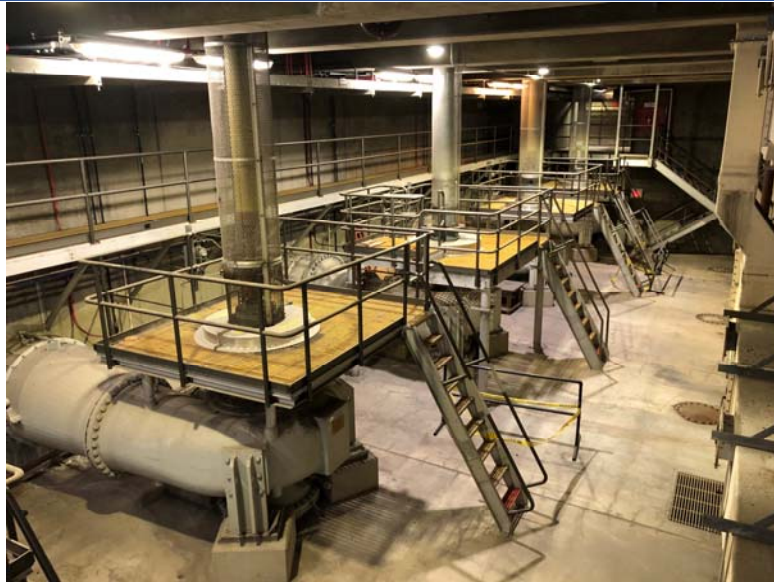
Bar Screen Facility



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Main Sewage Pumps



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Headworks Facilities are Aging



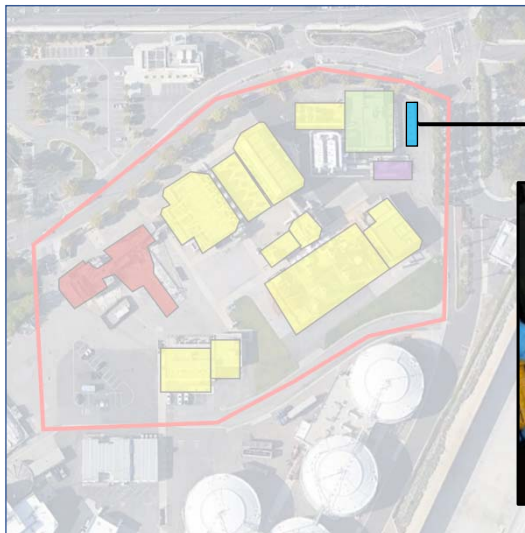
Age of Facilities

- 22 years
- 29 years
- 34 years
- 49 years
- 63 years

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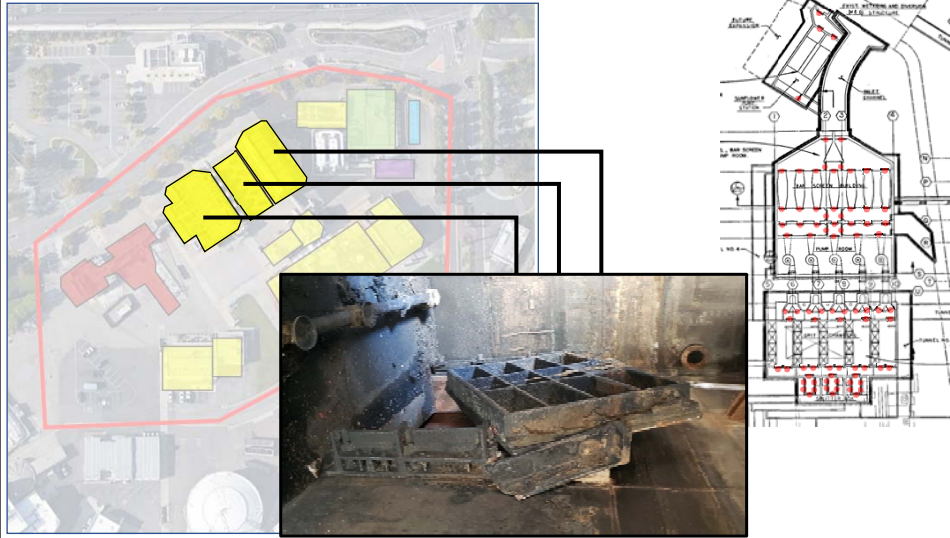
Metering & Diversion Box Requires Replacement



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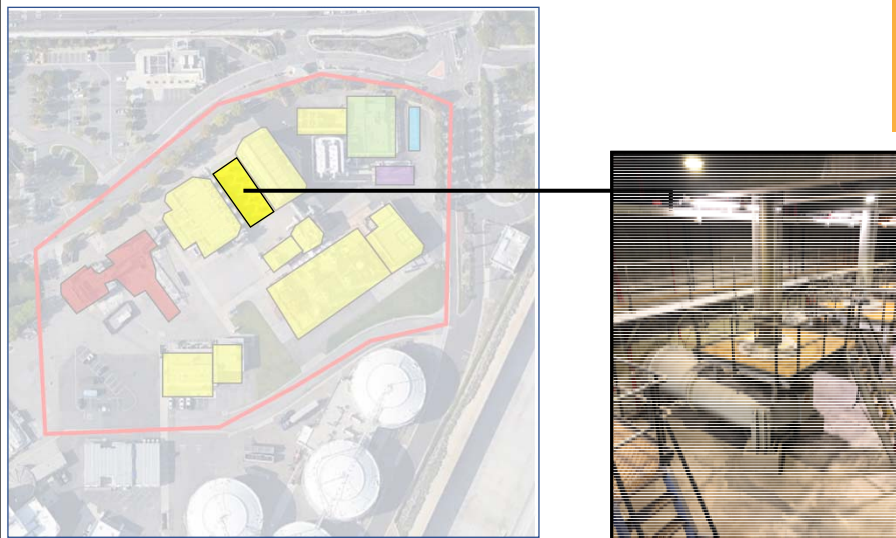
110 Hydraulic Gates Require Replacement



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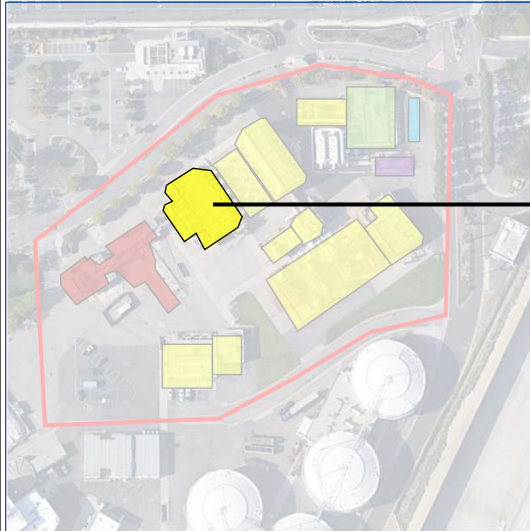
Existing Pumps Require Replacement



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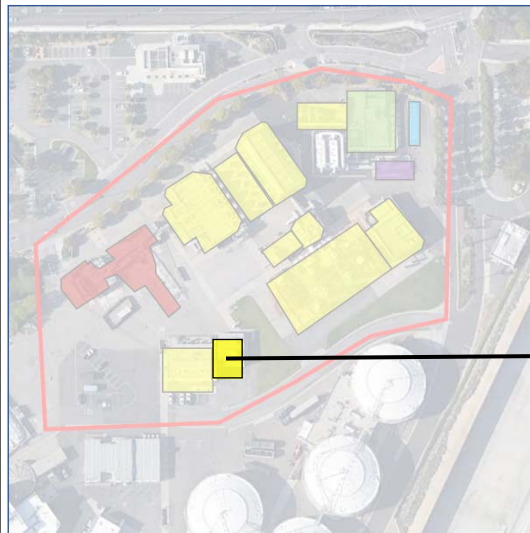
Poor Grit Removal System Requires Upgrading



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Electrical Power System Requires Replacement Due to Arc Flash Hazard and Poor Condition

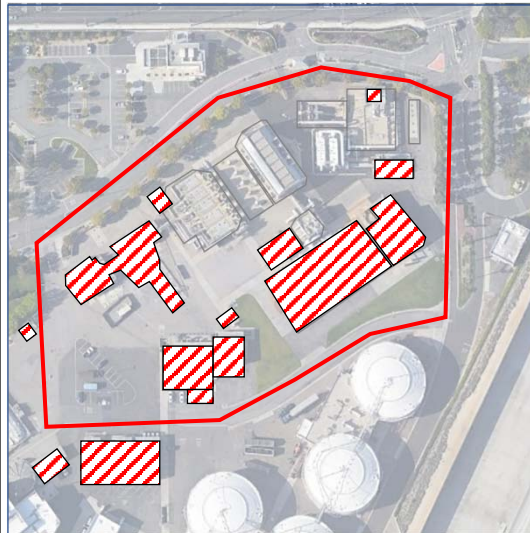



Not an OC San facility Photo

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Demolition of Unused & Replaced Facilities



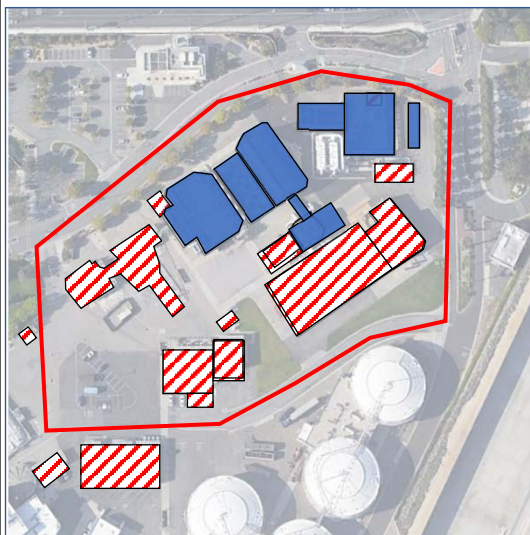
 To be demolished


- Headworks 1
- Chlorine Building
- Hydrogen Peroxide
- Odor Control & Chemical System
- Electrical Buildings
- Office Trailers

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
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Rehabilitation of Facilities



 To be demolished

- Headworks 1
- Chlorine Building
- Hydrogen Peroxide
- Odor Control & Chemical System
- Electrical Buildings
- Office Trailers

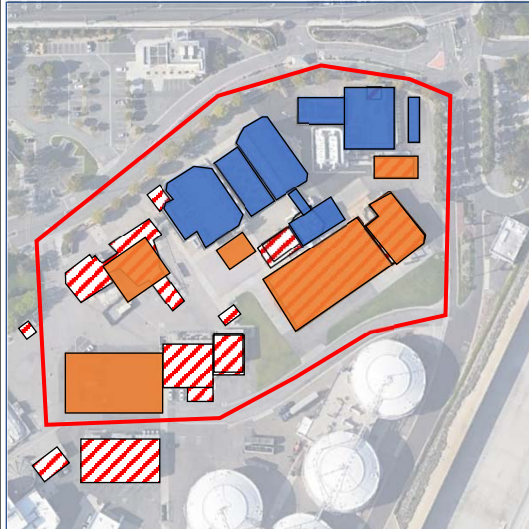
 To be rehabilitated


- M&D Structure
- Bar Screens
- Bin Loading
- Main Sewage PS
- Grit Basins
- Sunflower PS

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Construction of New Structure



 To be demolished

- Headworks 1
- Chlorine Building
- Hydrogen Peroxide
- Odor Control & Chemical System
- Electrical Buildings
- Office Trailers

 To be rehabilitated

- M&D Structure
- Bar Screens
- Bin Loading
- Main Sewage PS
- Grit Basins
- Sunflower PS

 New Structures

- Grit pumping & handling
- Odor control & chemical facilities
- Electrical buildings

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P1-105 is OC San's Biggest Construction Contract

Final Design Phase: 3.5 years

Construction Duration: 6.5 years



300 Specification
Sections

2,000 sheets of
Drawings

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Construction Complexities

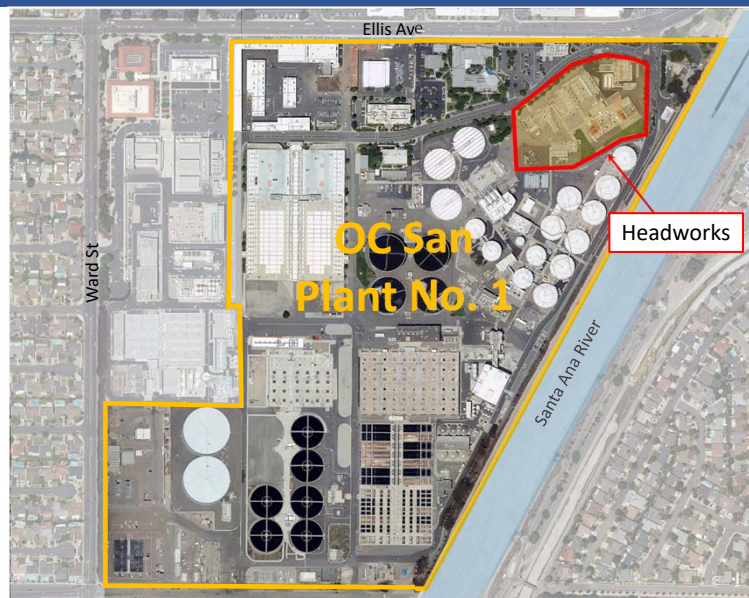
- Must maintain facilities during construction
- Work must be performed in prescribed sequence
 - Dry weather only activities (Apr 15 to Oct 15)
- Major shutdowns & flow diversions are required
- Rehab work involves unknown issues & unanticipated delays
- Extensive confined space entry work



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Must Rehabilitate in Place

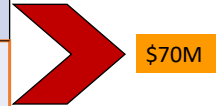


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Bid Results

Bidder	Amount of Bid
Engineer's Estimate	\$292,299,000
★ Kiewit Infrastructure West Co.	\$222,330,000
J.F. Shea Construction, Inc.	\$259,506,000
Shimmick Construction Co., Inc.	\$276,611,500



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Construction Contingency

Construction Cost	\$222,330,000
Contingency	\$8,893,200
% of Construction Cost	4%

Staff will report on progress & risks
midway through construction.

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Recommendation: Construction Contract

- Receive and file Bid Tabulation and Recommendation for Headworks Rehabilitation at Plant No. 1, Project No. P1-105;
- Award a Construction Contract to Kiewit Infrastructure West Co. for Headworks Rehabilitation at Plant No. 1 for a total amount not to exceed \$222,330,000; and
- Approve a contingency of \$8,893,200 (4%).

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Questions



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