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Application for Certification (15-AFC-01)

Puente Power Project (P3)
Oxnard, CA

Responses to Robert Sarvey's Data Request Set 2



October 2016

Submitted to:
The California Energy Commission



Prepared by:



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LIST OF ACRONYMS AND ABBREVIATIONS USED IN RESPONSES

BCW bearing cooling water
MGS Mandalay Generating Station

Technical Area: Soil and Water Resources

BACKGROUND:

The Project Enhancement – Outfall Removal and Beach Restoration states on page 1-2 that the “MGS Unit 3 is a jet-engine–powered unit that was commissioned in 1970 and uses much smaller amounts of water intake from the Edison Canal for bearing cooling purposes. MGS Units 1, 2, and 3 discharge wastewater (consisting of once-through cooling water and other process wastewaters) and stormwater into the Pacific Ocean via a concrete-and-rock revetted structure immediately offshore of the facility, in compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit for withdrawal and discharge.

DATA REQUEST

1. *Please provide the annual water discharge in AFY for the MGS Unit 3.*

RESPONSE

The estimated maximum annual water discharge for Mandalay Generating Station (MGS) Unit 3 is approximately 240 acre-feet per year. This is based on a peak discharge rate of approximately 3,200 gallons per minute for the MGS bearing cooling water (BCW) and approximately 400 hours per calendar year of discharge. Since the source of cooling water for MGS Unit 3 is the Edison Canal, all discharges to the canal from MGS Unit 3 will be preceded by an equivalent amount of withdrawals.

For conservative purposes, Applicant assumed 200 hours per year for MGS Unit 3 operations. As stated in the Project Enhancement – Outfall Removal and Beach Restoration (TN # 213802, see page 3-39), MGS Unit 3 is limited to 200 hours of annual operation and is typically operated for short durations (several hours at a time); therefore, withdrawal and discharge to the canal will be infrequent and intermittent (when the unit is needed for peaking generation). The discharge from MGS Unit 3 will be equivalent to the unit's withdrawal from the canal that will be used as single-pass bearing cooling water.

The up to 400 hours per year accounts for running the BCW pumps during the maximum allowable turbine operating time of 200 hours per calendar year, plus an equivalent amount pump operating time (up to 200 hours) as turbine operating hours to account for startup and shutdown periods.

DATA REQUEST

- 2. Please indicate how many more years NRG expects to continue operation of the MGS Unit 3 and the maximum water discharge during those years that could occur from the unit.***

RESPONSE

MGS Unit 3 is peaking generation which continues to be integral to local grid reliability. The number of years that MGS Unit 3 will operate into the future is uncertain; however, NRG intends to continue operation of this unit as future market conditions allow. There is no looming regulation that affects MGS Unit 3's permitted operations. With continued maintenance, MGS Unit 3 will be capable of operating well into the future.

See the response to Data Request 1 for the estimated maximum water discharge from MGS Unit 3. The MGS outfall system will continue to be required for MGS Unit 3 discharge after Units 1 and 2 cease operations by the end of 2020 in compliance with the State Water Resources Control Board's Once Through Cooling Policy—unless Puente Power Project is approved, which could direct MGS Unit 3 discharge to the Edison Canal.

Technical Area: Project Description

BACKGROUND:

The Project Enhancement – Outfall Removal and Beach Restoration states on page 2-2 that “Removal of the outfall will be conducted in a manner intended to minimize impacts to the surrounding area, beach dunes, and habitat. The outfall wing walls, riprap, and fencing that surround the outfall will be removed. The circulating water pipes that connect to the outfall will be plugged with concrete.”

DATA REQUEST

3. *Are there other underground portions of the outfall that will remain in place other than the pipes that connect to the outfall after demolition?*

RESPONSE

The outfall structure will be plugged at the outflow end and the adjoining wing walls and riprap will be removed. The underground portion of the outfall structure beneath the sand will be filled with available riprap and concrete slurry. The mixing vault along the MGS perimeter fence and the adjoining cooling water discharge piping that runs from the mixing vault beneath the dunes will be filled with concrete slurry. The cooling water discharge pipe will be capped near at the powerblock area and managed as part of the MGS Units 1 and 2 demolition. For additional information, please see Applicant's responses to CEC Data Requests Set 4, Data Requests 93 through 95.

DATA REQUEST

- 4. *Please describe the underground portions of the outfall that will remain in place.***

RESPONSE

The underground portions of the outfall system that will remain in place include the circulating pipelines, the mixing vault, and the outfall conduits. All of these will remain in place, plugged and filled with slurry, as described in the response to Data Request 3 above. For additional information, please see Applicant's responses to CEC Data Requests Set 4, Data Requests 93 through 95. In particular, please see Figure 94-1, included in the response to CEC Data Request 94, which shows the portions of the outfall that will remain in place and be filled.

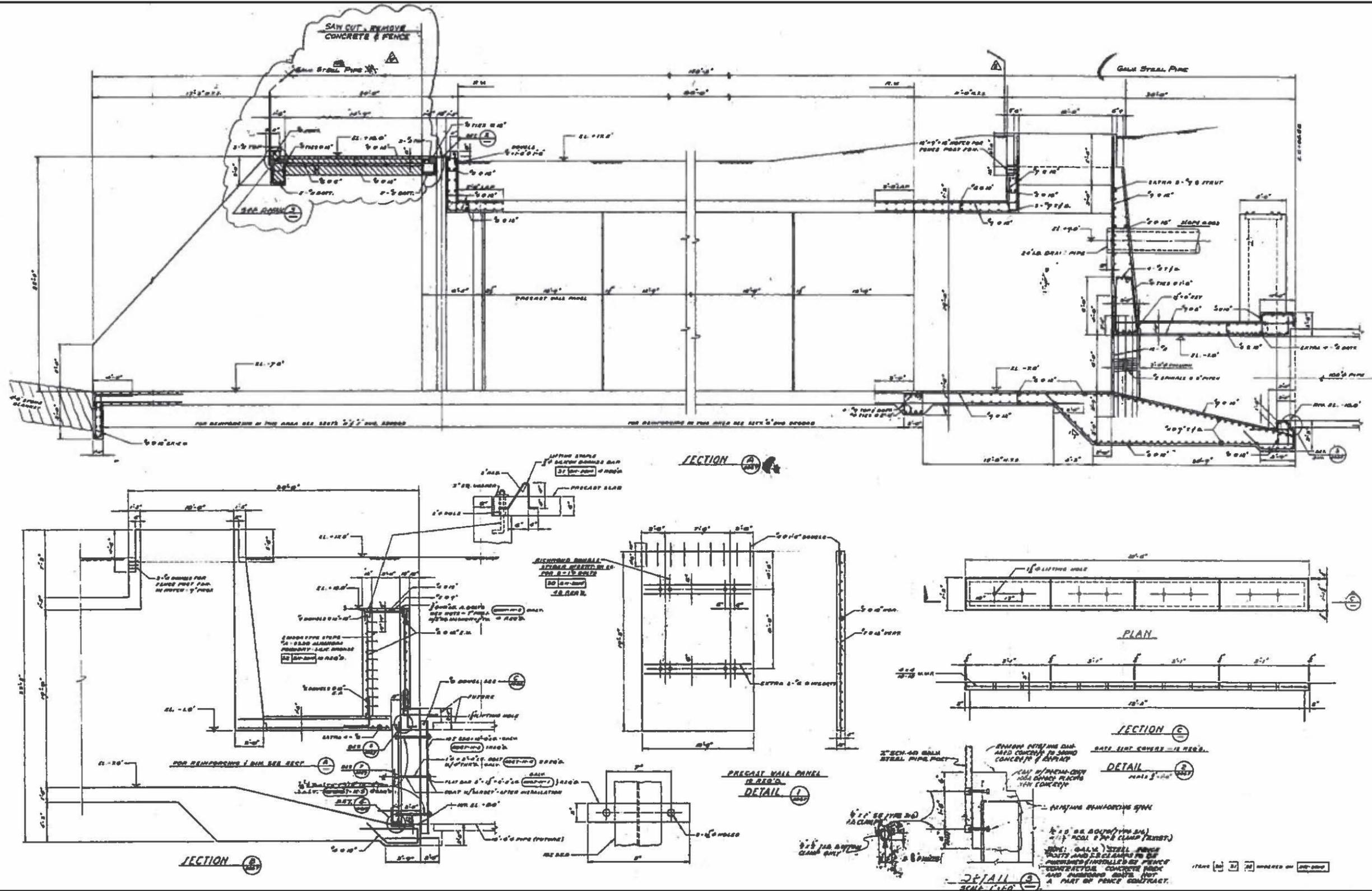
DATA REQUEST

- 5.** *Please provide an as built drawing of the existing outfall.*

RESPONSE

See Figures 5-1 and 5-2 for as-built drawings of the existing outfall.

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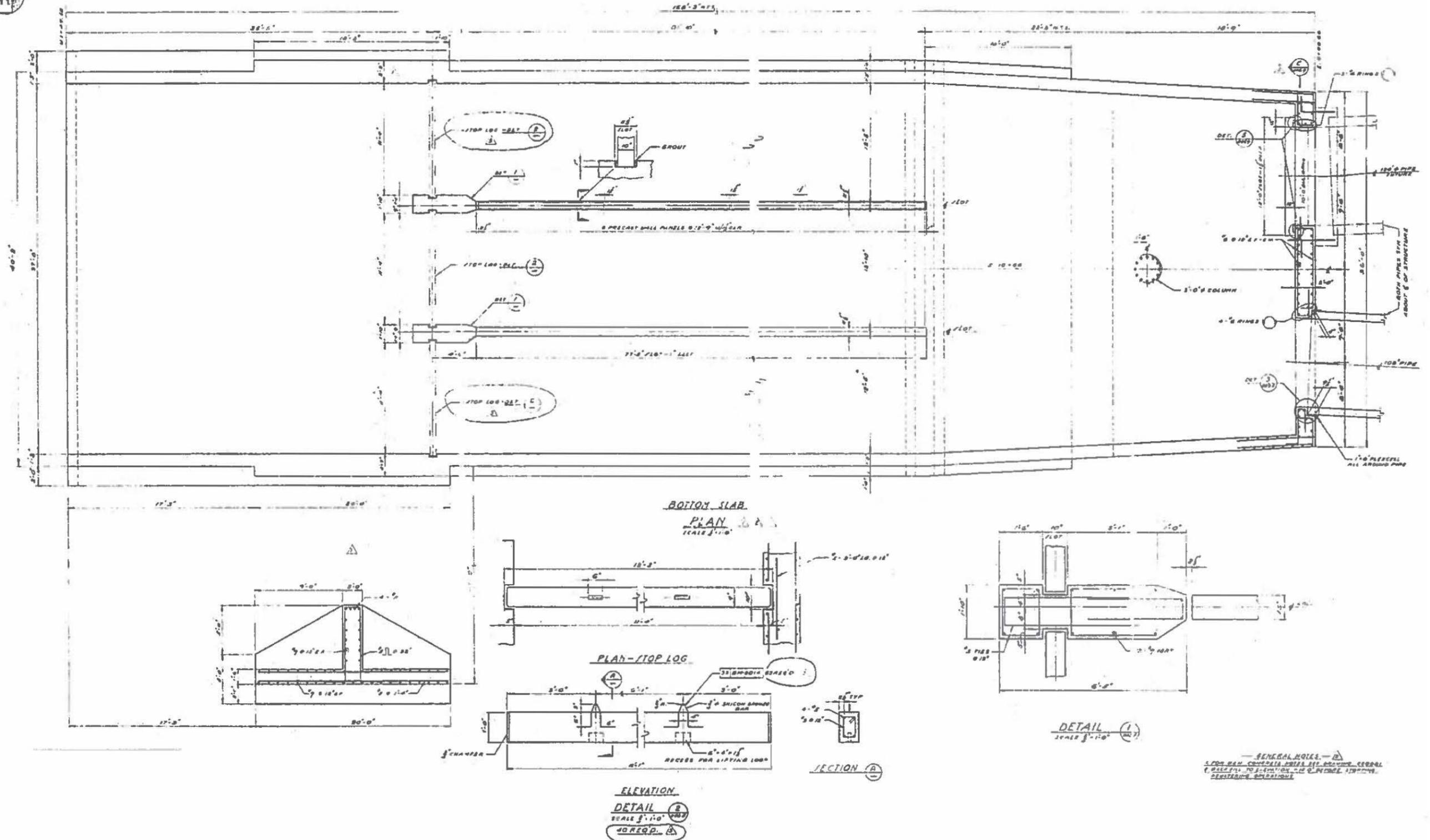


AS-BUILT DRAWING OF EXISTING OUTFALL STRUCTURE

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FIGURE 5-1

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AS-BUILT DRAWING OF EXISTING OUTFALL STRUCTURE

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FIGURE 5-2