

BPW-2025-0056

CONSTRUCTION SERVICES CONTRACT (CiSCo) – HYPERION WATER RECLAMATION PLANT (HWRP) SECONDARY CLARIFIERS WASTE ACTIVATED SLUDGE FLOWMETERS IMPROVEMENTS – CAPITAL IMPROVEMENT PROJECT (CIP) 8180 – HWRP HYPERION INSURANCE REIMBURSEMENT SECONDARY CLARIFIERS RETURN ACTIVATED SLUDGE FLOWMETERS IMPROVEMENTS – CIP 8182

Recommending the Board:

1. AUTHORIZE the City Engineer to use the CiSCo and issue task work orders to the contractor for an amount not -to-exceed \$804,000 for the CIP 8180 - HWRP Secondary Clarifiers Waste Activated Sludge Flowmeters Improvements Line; and
2. AUTHORIZE the City Engineer to use the CiSCo and issue task work orders to the contractor for an amount not-to-exceed \$1,962,000 for CIP 8182 - HWRP Hyperion Insurance Reimbursement Secondary Clarifiers Return Activated Sludge Flowmeters Improvements.

(W.O. SZH12155, SZH12156)

Department of Public Works

Bureau of Engineering
Report No. 3

January 27, 2025
CD No. 11

CAPITAL IMPROVEMENT PROJECT 8180 - HYPERION WATER RECLAMATION PLANT SECONDARY CLARIFIERS WASTE ACTIVATED SLUDGE FLOWMETERS IMPROVEMENTS AND CAPITAL IMPROVEMENT PROJECT 8182 - HYPERION WATER RECLAMATION PLANT HYPERION INSURANCE REIMBURSEMENT SECONDARY CLARIFIERS RETURN ACTIVATED SLUDGE FLOWMETERS IMPROVEMENTS - AUTHORIZATION TO UTILIZE CONSTRUCTION SERVICES CONTRACT (WORK ORDER NOS. SZH12155 AND SZH12156)

RECOMMENDING THE BOARD OF PUBLIC WORKS (BOARD):

1. AUTHORIZE the City Engineer to use the Construction Services Contract (CiSCo) and issue task work orders to the contractor for an amount not-to-exceed \$804,000 for the Capital Improvement Project (CIP) 8180 - Hyperion Water Reclamation Plant (HWRP) Secondary Clarifiers Waste Activated Sludge (WAS) Flowmeters Improvements Line (CIP 8180).
2. AUTHORIZE the City Engineer to use the CiSCo and issue task work orders to the contractor for an amount not-to-exceed \$1,962,000 for CIP 8182 - HWRP Hyperion Insurance Reimbursement (HIR) Secondary Clarifiers Return Activated Sludge (RAS) Flowmeters Improvements (CIP 8182).

DISCUSSION

Background

The HWRP secondary clarifiers remove the settled suspended solids and scum created during the biological treatment of the wastewater. A portion of the settled sludge, or activated sludge, is returned to the secondary treatment process as RAS. Excess activated sludge is removed from the process as WAS and conveyed to the HWRP's solids handling process. Secondary scum, which is mostly floating activated sludge or biofilm, is skimmed from the clarifiers and returned upstream for additional treatment.

The high volume of flocculent solids in the secondary clarifiers results in the formation of a sludge blanket. The thickness of the sludge blanket varies and may become thick enough that the biomass will flow into the final effluent. The RAS and WAS flow rates are important in controlling and maintaining this sludge blanket.

The RAS, WAS, and scum flowmeters were installed over 20 years ago and maintaining these devices has been difficult since they are no longer supported by the original manufacturer. These flowmeters are nearing the end of their service life which has

affected their reliability in obtaining accurate readings. Additionally, the HWRP flooding event that occurred on July 11, 2021, caused extensive damage to the RAS flowmeters which are in the utility trench of the secondary clarifier pipe galleries. It is critical that the RAS flowmeters be replaced so that the plant can resume normal monitoring operations. Since the RAS flowmeter replacements directly result from the impact of the flooding event, this scope became its own separate project to track costs for the insurance claim.

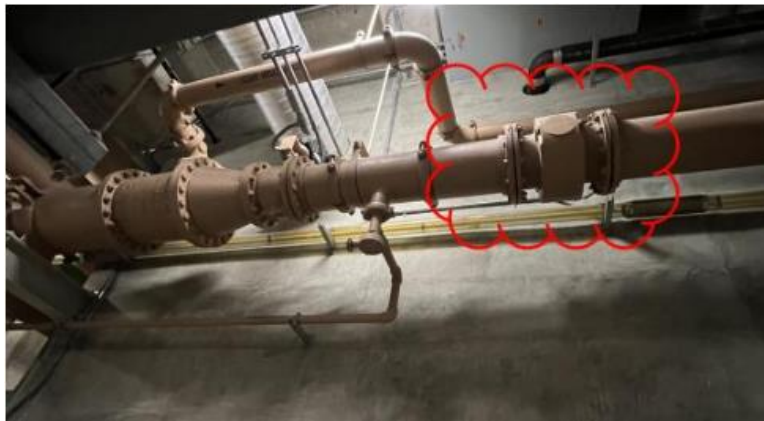


Figure No. 1: WAS Flowmeter



Figure No. 2: RAS Flowmeter

Proposed CiSCo Project

These projects will remove the existing WAS, RAS, and scum flowmeters and install new flowmeters. The scope of work for CIP 8180 includes: a) procure and install nine 12-inch WAS flowmeters and transmitters in all nine secondary clarifier modules with distributed

January 27, 2025
Page 3

control system (DCS) integration; b) procure and install nine 4-inch scum flowmeters and transmitters in all nine secondary clarifier modules with DCS integration; c) replace the existing conduit from the WAS flowmeters and transmitters; and d) perform loop checks. The total construction cost for this project is \$804,000.

The scope of work for CIP 8182 includes: a) procure and install 36 new 18-inch RAS flowmeters and transmitters in all nine secondary clarifier modules with DCS integration; b) replace the existing conduit from the RAS flowmeters and transmitters; and c) perform loop checks. The total construction cost for this project is \$1,962,000.

CiSCo Justification

These projects will be delivered through the CiSCo due to the complexity of the work schedule and the required plant shutdowns for the installation of the flowmeters. This project requires extensive coordination with HWRP staff in taking the secondary clarifier modules out of service and bringing them back into service with minimal impact to plant operations. The CiSCo is best suited to handle the uncertainties with the schedule and plant shutdowns due to the varying availability of shutdown time, as dictated by plant operations.

City Engineer's Recommendation

It is recommended that the Board authorize the use of the CiSCo and authorize the City Engineer to issue task work orders to the contractor for an amount not-to-exceed \$804,000, for CIP 8180, including contingency, as shown in Table 1, and \$1,962,000 for CIP 8182, including contingency, as shown in Table 2.

Table 1: CIP 8180		
Item	Description	Cost
1	Procure and install nine new 12-inch WAS flowmeters and transmitters in all nine modules with DCS	\$300,080
2	Piping modifications for WAS flowmeters	\$ 75,020
3	Procure and install nine new 4-inch scum flowmeters and transmitters in all nine modules with DCS	\$188,800
4	Piping modification for scum flowmeters	\$ 47,200
Permit		\$ 12,000
Escalation		\$ 46,900
Contingency		\$134,000
Total Project Construction Cost		\$804,000

Table 2: CIP 8182		
Item	Description	Cost
1	Procure and install 36 new 18-inch RAS flowmeters and transmitters in all nine modules with DCS	\$1,301,600
2	Piping modifications for RAS Flowmeters	\$ 325,400
	Permit	\$ 32,000
	Escalation	\$ 124,600
	Contingency	\$ 178,400
Total Project Construction Cost		\$1,962,000

Program Review Committee (PRC) Approval

The project budget was approved by the PRC on August 9, 2023, in the amount of \$804,000 for CIP 8180 HWRP Secondary Clarifiers Waste Activated Sludge Flowmeters Improvements.

The project budget was approved by PRC on August 9, 2023, in the amount of \$1,962,000 for CIP 8182 HWRP HIR Secondary Clarifiers Return Activated Sludge Flowmeters Improvements.

STATUS OF FINANCING

CIP 8180 HWRP Secondary Clarifiers Waste Activated Sludge Flowmeters Improvements

There is no impact to the General Fund. The total funding for this project is not-to-exceed \$804,000. No funds are required in this fiscal year. Funding will be budgeted within the Sewer Construction and Maintenance Fund.

Funds and appropriations are not yet identified and will be determined by the Director of the LA Sanitation and Environment (LASAN).

The City of Los Angeles' (City)'s liability under this contract shall only be to the extent of the present City appropriation to fund the contract. However, if the City shall appropriate funds for any succeeding years, the City's liability shall be extended to the extent of such appropriation, subject to the terms and conditions of the contract.

CIP 8182 HWRP HIR Secondary Clarifiers Return Activated Sludge Flowmeters Improvements

There is no impact to the General Fund. The total funding for this project is not-to-exceed \$1,962,000. No funds are required in this fiscal year. Funding will be budgeted within the Sewer Construction and Maintenance Fund.

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Page 5

(EBW VCA AM)

Report reviewed by:

BOE (ADM) and BOS (HWRP, FMD, WESD)

Report prepared by:

Environmental Engineering Division

Ethan B. Wong, PE, ENV SP
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EBW/AC/NS/11-2024-0148_EED.gr

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may be referred to:

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Respectfully submitted,


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Electronically signed by Ted Allen
2025 1/27 4:11 PM

Ted Allen, PE
City Engineer

Department of Public Works

Bureau of Engineering
Report No. 3

January 27, 2025
CD No. 11

ADOPTED BY THE BOARD
PUBLIC WORKS OF THE CITY
of Los Angeles California

JAN 27 2025


Executive Officer
Board of Public Works

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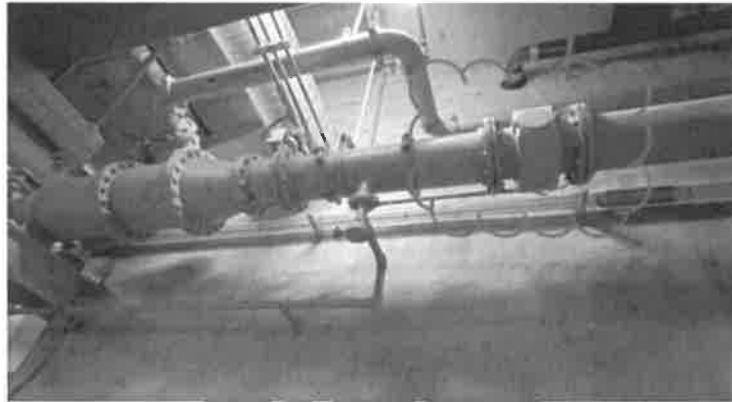


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January 27, 2025

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Respectfully submitted,

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Report prepared by:

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City Engineer

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