COOPERATIVE IMPLEMENTATION AGREEMENT
AMENDMENT 3

This AMENDMENT 3 ENTERED INTO EFFECTIVE ON June 18, 2021 2021, is between the State of California acting by and through its Department of Transportation, referred to as CALTRANS and the CITY OF RICHMOND, referred to as "AGENCY" and together referred to as PARTIES.

RECITALS

1. CALTRANS and AGENCY entered into Cooperative Implementation Agreement No. D43CIARI0002 on January 22, 2019, defining the terms, covenants and conditions to implement the Water Capture Facility Project, within the regional area under the jurisdiction of AGENCY to comply with the TMDL referred to herein as PROJECT. AGENCY has agreed to implement PROJECT in accordance with Attachment II-SCOPE SUMMARY that defined in detail the PROJECT's scope of work, description, timeline, location and budget.

2. On June 24, 2020, CALTRANS and AGENCY amended the AGREEMENT to revise the scope of the PROJECT to implement an additional Water Capture Facility at another location, Bayview Avenue, to provide supplemental stormwater runoff treatment benefits under Phase II of the PROJECT ("AMENDMENT 1")

3. The AGENCY discovered geotechnical engineering constraints at the Bayview Avenue construction site precluding installation of the AMENDMENT 1 Water Capture Facility Project at the location.

4. On April 20, 2021, CALTRANS and AGENCY further amended the AGREEMENT to relocate the Water Capture Facility to Cutting Boulevard at South 3rd Street ("AMENDMENT 2").

5. As a result of changed circumstances, CALTRANS and the AGENCY have determined that the Water Capture Facility at Bayview Avenue is now feasible and wish to expand the scope of the PROJECT to include such additional work.

6. The purpose of this AMENDMENT 3 is to increase the scope of the PROJECT to provide additional stormwater runoff treatment. Phase 1 of the PROJECT has been completed and PARTIES have decided to amend the AGREEMENT to add an additional treatment location to the project as described under "Phase 3" as shown in

REVISED ATTACHMENT II – FOR AMENDMENT 3, attached and made a part of this AMENDMENT 3.

IT IS MUTUALLY AGREED:

7. The PARTIES hereby amend ATTACHMENT II by incorporating REVISED ATTACHMENT II – FOR AMENDMENT 3 in its entirety. No change to the cost is proposed.

8. Any reference to ATTACHMENT II in the AGREEMENT is deemed to incorporate REVISED ATTACHMENT II – FOR AMENDMENT 3 by reference.

9. AMENDMENT 3 with its ATTACHMENT(S) are by reference made a part of the AGREEMENT and incorporated herein.

10. All sections of AMENDMENT 3 including the recitals are enforceable.

11. Notwithstanding these amended terms of the AGREEMENT by this AMENDMENT 3, all other applicable terms and conditions of the AGREEMENT and attachments, AMENDMENT 1 and AMENDMENT 2, shall remain in full force and effect.

ATTACHMENTS

The following attachment is incorporated into and is made a part of this AMENDMENT 3 by this reference and attachment.

Revised Attachment II – FOR AMENDMENT 3.	Amended Scope of Work, Description, Timeline, Location and Budget

SIGNATURES

Signatories may execute this AMENDMENT 3 through individual signature pages provided that each signature is an original. This AMENDMENT 3 is not fully executed until all original signatures are attached. PARTIES are empowered by California Streets and Highways Code (SHC) sections 114 and 130 to enter into this AMENDMENT 3 and have delegated to the undersigned the authority to execute this AMENDMENT 3 on behalf of the respective agencies and covenant to have followed all the necessary legal requirements to validly execute this AMENDMENT 3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Signature: Kenneth Johansson
Print Name: **KEN JOHANSSON**
Title: **Interim Stormwater Coordinator**
Date: 06-18-2021

Signature: Hardeep Takhar for
Print Name: **SHAILA CHOWDHURY**
Title: **Assistant Chief, Division of Environmental Analysis**
Date: 06/18/21

Signature: Philip J. Stolarski
Print Name: **PHIL STOLARSKI**
Title: **Chief, Division of Environmental Analysis**
Date: 06/18/21

AGENCY

Signature:
Print Name: **LAURA SNIDEMAN**
Title: **City Manager**
Date: 6/18/2021

Signature
Print Name **JOE LEACH**
Title **Public Works Director**
Date 6/18/21

ATTACHMENT II – FOR AMENDMENT 3

CITY OF RICHMOND
PROPOSED WATER CAPTURE FACILITIES PROJECT

Executive Summary:

CIP No.	*"Finance will assign"*	Total Estimated Capital Cost	$3,270,000
Project Manager	Mary Phelps	Estimated Start Date	07/01/2021
Dept/Division	Public Works/Water Resource Recovery	Estimated Completion Date	06/30/2022
Department Priority	High	Project Status	*Pending funding*
Project Name	Full-Trash Capture Facilities at Regatta Blvd (Meeker Ditch)		
Project Description and Scope	Phase III: The additional funding of the CIA, D43CIARI0002, approximately $3,270,000 will be utilized for the design, purchase and construction of two hydrodynamic separators, Contech Continuous Deflection Separation (CDS) units. These units will be constructed at Bayview Ave. Approximately 840 acres of land, of which 38 acres are from Caltrans Right of Way, 84 acres are from the City of Richmond, and 723 acres from the City of El Cerrito, will be treated by these units. Caltrans has already advanced $591,866.57 that will be used for the purchase of the CDS units for the Bayview Ave project. This amendment will bridge the funding gap that remains to complete the design and construction of the project. This CDS unit will screen, separate and trap debris, sediment, and oil and grease from stormwater runoff. The units have been rated as being effective at trapping 80% of sediment at either the 140- or 175-micron level depending on unit type. Thus, they will achieve load reductions of PCBs and Hg, beside trash. This project was previously revised due to the construction and time constraints. However, now with additional funding and longer period for construction, the project will be able to succeed. There are three potential sites that have been reviewed for the Bayview Ave project. Design engineers will review the site(s) and determine the best location for the		

	installation of the CDS units. The proposed projects gear toward compliance of TMDLs of trash, PCBs and Mercury, as set forth by in the San Francisco Bay Regional Water Resource Control Board. Ultimately, this project posts a watershed-based solution to reduce pollutant loadings, trash, and PCBs and Mercury in sediments, from entering local watersheds and the San Francisco Bay from three different jurisdictions, City of Richmond, City of El Cerrito, and Caltrans, thus enhancing water quality for beneficial and recreational uses.

Introduction

On January 22, 2019, the City of Richmond (the City) and CALTRANS entered a Cooperative Implementation Agreement (the Agreement) to implement a water capture facility project, which consists of the construction of two full-trash capture devices (FTCDs), Contech CDS units, with the cost not to exceed $3 million. These devices were installed in the City on Regatta Boulevard (Meeker Ditch). The project completed under budget with the total cost of approximately $700,000.

On June 24, 2020, the City and CALTRANS amended the CIA to revise the scope of work to add another water capture facility project, consisting of two FTCDs on Bayview Avenue; utilizing the remaining funds of approximately $2.3 million to deliver additional trash load reduction from the City and CALTRANS right of ways. During the design phase of the project, based rocks were preliminary determined through the regional geologic map of the Richmond quadrangle published through the U.S. Geological Survey in 1980. The presence of base rock at the project location was later confirmed through boring activities. Field log noted base rocks was discovered at ten feet below ground surface (bgs), and refusal was encountered at 15 ft bgs at the Bayview project site (see Exhibit A). The removal of base rocks for the installation of the proposed FTCDs would have required added cost and time for the completion of the project. Furthermore, this activity could damage the foundation of the apartment complex located adjacent to the project site. Due to this geotechnical engineering constraints, it was deemed infeasible to complete this project within to the time frame and budget as prescribed in Amendment No. 1 of CIA No. D43CIARIC002. In order to avoid the scenario as described above in future partnership opportunities with CALTRANS, the City learns that it must perform an alternative analysis of multiple project sites to determine the most feasible project location for the installation of FTCD.

This amended Scope Summary is to revisit the proposed water capture project at Bayview Avenue There were three locations that were examined regarding installation of the CDS units. Now that additional funding is available and time is not a factor, the Bayview Ave project can proceed.

Background

The City of Richmond is located in Contra Costa County, a county in the San Francisco Bay Region. The San Francisco Bay Region encompasses po1tions of Alameda, Contra Costa, Marin, Napa, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma Counties. One way that the San Francisco Regional Water Board protects water bodies within region is to develop Total Maximum Daily Loads (TMDLs), which are programs to restore water quality in water bodies impaired by pollutants such as Trash, PCBs and Mercury. To achieve the goals of the TMDLs, a reduction in the amount of inputs of the aforementioned pollutants to the San Francisco Bay (the Bay) is required.

In 2015, the San Francisco Regional Water Board reissued the stormwater Municipal Regional Permit 2.0 (MRP 2.0), a National Pollutant Discharge Elimination System (NPDES) permit that regulates discharges of stormwater runoff from MS4s. The MRP 2.0 includes provisions that implement the requirements in the Trash, PCBs, and Mercury TMDLs to reduce discharges of these pollutants in stormwater runoff to the San Francisco Bay. The reduction of these pollutants could be achieved through the implementations of FTCDs or green stormwater infrastructure (GS1), and programmatic approach such as the PCBs building demolition material controls.

The MRP requires compliance with TMDL requirements, specifically the San Francisco Bay Mercury TMDL (SFRWQCB, 2004, amended by SFRWQCB, 2006) and the San Francisco PCB TMDL (SFRWQCB, 2008). Water quality objectives were established in each TMDL to protect beneficial uses of the impaired receiving water, mainly San Francisco Bay. PCB concentrations tend to be highest in sediments, thus typical bioaccumulation starts with bottom-feeding species and transfers along the flood chain, with the additional issue of biomagnification (increased concentrations in organisms higher up on the food chain) known to occur with PCBs. Mercury is also strongly associated with sediments and builds up through bioaccumulation and biomagnification. Methylmercury, the organic form of mercury, is of particular concern due to the toxicity and increased bioavailability to aquatic organisms. Overall, the consumption of some fish in San Francisco Bay can be a threat to human health given the elevated levels of PCBs and mercury in fish tissue. The legacy nature of the pollutants of concerns and lack of knowledge on dispersion and degradation processes contributed to the uncertainty in future conditions.

The PCB TMDL established two water quality objectives; a fish tissue target of 10 micrograms per kilogram (µg/kg) and a sediment target of 1 µg/kg based on a food web model developed by the

San Francisco Estuary Institute (SFEI). To achieve these objectives, the total mass of PCBs in the active layer of the Bay must be reduced to 160 kilograms. Based on a mass budget model in the TMDL, external loads to the Bay must be reduced to IO kilograms per year to achieve the required reduction within 30 years. The waste load allocation (WLA) for urban stormwater is 2 kilograms per year, which must be achieved by 2030. Allocations were further broken down by County based on respective Bay-side populations in the year 2000, resulting in a WLA for Contra Costa County of 0.3 kilograms per year. The baseline PCB load from stormwater runoff was estimated at 20 kilograms per year, based on grab samples from Water Year (WY) 2005, resulting in a required load reduction of 10 kilograms per year (90% reduction).

The Mercury TMDL established two water quality objectives; a fish tissue target applying to 60-centimeter-long striped bass of 0.2 mg/kg (to protect consumption of fish) and a fish target applying to 3- 5- centimeter long fish of 0.03 mg/kg (to protect aquatic organisms and wildlife). To achieve these objectives, the suspended sediment mercury concentration must be reduced to 0.2 mg/kg dry sediment. The WLA for mercury in stormwater is 82 kilograms per year, of which Contra Costa County has a WLA of 11 kilograms per year. The baseline/existing load from urban stormwater was estimated at 160 kilograms per year, based on box models for sediment and mercury corresponding to WY 2003. The required load reduction from stormwater is therefore 78 kilograms per year. MRP Permittees are responsible for a load reduction of 62 kilograms per year, to be achieved by 2028, of which Contra Costa County is responsible for reducing 11.0 kilograms per year.

These reduction rates are required by the MRP as part of the process to achieve compliance with the Mercury and PCBs TMDLs for San Francisco Bay. Contra Costa County permittees are also required to reduce trash discharges to the Bay from municipal storm drain systems. This requirement began with the issuance of the first MRP in 2009, with a 40% reduction required in 2014. Under the current MRP term, no adverse impact on receiving waters from trash is required by 2022.

These reductions will largely be accomplished through the implementation of green infrastructure, including stormwater capture and use and/or infiltration to groundwater. Contra Costa County Clean Water Program developed a countywide Storm Water Resource Plan (SWRP) that focuses primarily on stormwater capture with a multi-benefit approach to overall water resources planning, including water quality. This plan is being followed by local Green Infrastructure Plans (GI Plans) to meet MRP requirements. Development of the GI Plans will be a multi-year effort that includes preparation of a reasonable assurance analysis (RAA) to demonstrate that long-term GI Plan

implementation by all MRP permittees will reduce PCB loads by three kilograms per year by 2040.

Proposed Project

The City proposes to relocate the project site back to Bayview Ave. Approximately 840 acres of land, of which 38 acres are from Caltrans Right of Way, 84 acres are from the City of Richmond, and 723 acres from the City of El Cerrito, will be treated by these units.

Caltrans has already advanced $591,866.57 that will be used for the purchase of the CDS units for the Bayview Ave project. This amendment will bridge the funding gap that remains to complete the design and construction of the project.

The proposed CDS unit for this project has been rated as being effective at trapping 80% of sediments at the 125-micron level. The reduction of PCBs and Mercury load in the Watershed can be as high as 1.15 mg/year/acre, and 12 mg/year/acre, respectively based on the land-use of the drainage area, 106.7 acres of old urban and 19.3 acres of old industrial The accounting method used for these reductions were documented in the BASMAA Source Control Load Reduction Accounting Report (2020). The loads reduced accounting methodology for FTCDs is the product of tributary area treated by large full trash capture device in acres, area weighted PCBs or mercury yield (mg/acre-year) and efficiency factor for FTCDs, which is assumed to be 20%. Small inlet FTCDs (i.e., United Storm CPS units) will be installed, where feasible, at the City's storm drain inlets to which stormwater from CALTRANS right of way discharge. A total of forty-two inlets are being evaluated for the feasibility of installing these units (Figure 5). The treatment shed areas, as well as PCBs and Mercury load reductions, will be calculated upon completion of feasibility evaluation for these small FTCDs. The installation of the small FTCDs will provide supplement treatment areas to address the reduced treatment areas as a result of the change in project location.

The revised project scope includes initial engineering and geotechnical assessments, detailed design, environmental compliance, local permit application (i.e., Encroachment permit) construction of a diversion structure and piping, construction of a CDS unit, excavation and construction of a high void underground storage/infiltration chamber, disposal of non-hazardous excavated soil, and reconstruction of disturbed portions of the site.

Figure 1: Project Site

Cost Details:

COST TYPE	TOTAL
Design and Field Work for Design	$300,000

CDS Units	$650,000
Isolation Valves	$200,000
Construction Costs	$1,670,000
Contingency	$450,000
Total	**$3,270,000**

Budget Details:

FUND SOURCE	TOTAL
CALTRANS Cooperative Implementation Agreement	$3,270,000
Total	**$3,270,000**

Phase III: Installation of CDS Units at Bayview Avenue.

PERFORMANCE BENCHMARK	July 2021	August 2021	September 2021	October December 2021	January-March, 2021	April-June, 2021	June, 2021
Design	10%	30%	70%	100%			
Purchase and Delivery of CDS units	10%	30%	50%	100%			
Bidding Process		10%	100%				
Construction				30%	70%	90%	100%
Report and Follow-up							100%

Annually during the term of the PROJECT, CALTRANS and AGENCY will agree upon the amount CALTRANS will encumber each year for the PROJECT. Encumbered funds are to be expended within three Fiscal Years (FY). The FY in which the funds are encumbered is considered number one. Any funds not expended by the end of the third FY, that amount will be deducted from RECITALS, Section 2 "not to exceed amount".

WATER RESOURCE RECOVERY DEPARTMENT

City of Richmond

1 inch = 833 feet

0 840 1,680 Feet

BAYVIEW HDS WATERSHED

Legend

Storm Conveyance
- Storm Drain Pipe
- AC / Concrete Swale
- Earthen Ditch
- Culverts
- Partial CP Culverts
- Abandoned Conveyance
- Caltrans/Private Conveyance
- Stream
- Virtual Edge
- City Limit

HDS Locations

Status
- Potential

Drainage Areas
- Bayview - Caltrans
- Bayview - Richmond
- Bayview - El Cerrito
- Bayview - Ells Ln (Optional)

OMCA Data
- Creek
- Engineered Channel
- Underground culvert or storm drain
- historic creek (distributary point)
- historic creek (ephemeral)
- historic creek (well located)

MACDONALD AVE
CUTTING BLVD
ARLINGTON BLVD
POTRERO AVE
SAN PABLO AVE
EASTSHORE BLVD
MOESER LN
MEADE ST
S 51ST ST
BAYVIEW AVE
CARLSON BLVD
WILDCAT
BAYVIEW
687
300.5
280
222
15" - 477
36" - 591.3
30" - 486.9
392.6
399.5
54" - 738
386.1
65" - 280.3
65" - 677.9
72" - 1410.4
24" - 512
428.4
633.7
80
580
Richmond
El Cerrito
Unincorporated
751 ACRES
70 ACRES
38 ACRES
84 ACRES
Bayview Ave

Mary Phelps

From: Yan, Qi@Waterboards <Qi.Yan@Waterboards.ca.gov>
Sent: Tuesday, June 15, 2021 2:08 PM
To: Mary Phelps
Cc: Joe Leach; Johansson, Kenneth H@DOT; Joanne Le; Beauduy, Derek@Waterboards
Subject: Re: Approval of Trash Capture Device for City of Richmond

Hello Mary,

Thank you for sending the information and working with Caltrans on this project to install a trash capture device in the City of Richmond. This email gives the Water Board's acceptance of the CIA trash capture project proposal that you describe in your email below. Our approval of this cooperative project with Caltrans is conditioned on submittal of the following information by the City and/or Caltrans once project planning and design is finalized, and prior to construction:

- Map(s) delineating the area draining to the trash capture devices. Maps should identify the areas and trash generation rating of Caltrans and City ROW to be controlled for trash by the device.
- GIS mapping and/or as-built plans showing the storm drain system draining to the trash capture device. Storm drain information should correspond with the drainage area maps.
- Breakdown of Caltrans and City ROW acres controlled by the devices and the trash generation rating of those areas.
- Final design plans and calculations.
- Confirmation that the device meets the requirements of MRP Provision C.10 and is on the State Board list of approved trash capture devices.
- Final project agreements between Caltrans and the City. These should include identification of the party responsible for ongoing operation and maintenance of the device once installed. If operation/maintenance responsibilities are not described in the final agreements, provide this information in a separate document.

Thank you for identifying this opportunity to reduce trash discharges through the MS4 and working cooperatively with Caltrans to implement the project. This email serves as our conceptual approval of the project. Please let Derek Beauduy or me know if you have questions or if there are significant changes to the project as the planning and design process moves forward.

Thanks,

Qi Yan, PhD
Water Resource Control Engineer
San Francisco Bay Regional Water Quality Control Board
mobile 510-622-2499 | qi.yan@waterboards.ca.gov

From: Mary Phelps <Mary_Phelps@ci.richmond.ca.us>
Sent: Friday, June 11, 2021 9:17 AM
To: Lichten, Keith@Waterboards <Keith.Lichten@waterboards.ca.gov>; Beauduy, Derek@Waterboards <Derek.Beauduy@waterboards.ca.gov>; Yan, Qi@Waterboards <Qi.Yan@Waterboards.ca.gov>

Cc: Joe Leach <joe_leach@ci.richmond.ca.us>; Johansson, Kenneth H@DOT <ken.johansson@dot.ca.gov>; Joanne Le <Joanne_Le@ci.richmond.ca.us>; Mary Phelps <Mary_Phelps@ci.richmond.ca.us>
Subject: Approval of Trash Capture Device for City of Richmond

EXTERNAL:

To Whom it May Concern:

As you may be aware, the City of Richmond and Caltrans are seeking a partnership to design and construct a large trash capture device in Richmond.
The proposed device is a debris/nutrient separating baffle box (DSBB/NSBB) that will treat 840 acres of land: 38 acres are Caltrans right-of-way, 84 acres are from the City of Richmond, and 723 acres are from the City of El Cerrito.
The attached map shows the drainage area.

This location was previously approved. However, due to physical constraints (utilities, ground impediments), the location was changed.
Now, with the additional funding, the device can be installed.

Project Scope:
These CDS units will screen, separate and trap debris, sediment, and oil and grease from stormwater runoff. The units have been rated as being effective at trapping 80% of sediment at either the 140 or 175 micron level depending on unit type. Thus, they will achieve load reductions of PCBs and Hg, beside trash.

The proposed projects gear toward compliance of TMDLs of trash, PCBs and Mercury, as set forth by in the San Francisco Bay Regional Water Resource Control Board. Ultimately, this project posts a watershed-based solution to reduce pollutant loadings, trash, and PCBs and Mercury in sediments, from entering local watersheds and the San Francisco Bay from three different jurisdictions, City of Richmond, City of El Cerrito, and Caltrans, thus enhancing water quality for beneficial and recreational uses.

Once we enter into an agreement with Caltrans, our projected spending is as follows:

Project Cost	Estimated Duration	Cost
Design and Field Work for Design	3 months	$300,000
CDS Units	3 months	$650,000
Isolation Valves	2 months	$200,000
Construction Costs	8 months	$1,670,000
Contingency	N/A	$450,000
TOTAL:		**$3,270,000**

Performance Benchwork	Estimated Duration	Fiscal Year
Design	3 months	2021-22
Purchase/Delivery of CDS Units	4 months	2021-22
Bidding Process	1 month	2021-22
Construction	8 months	2021-23
Report and Follow-up	1 month	2021-23
TOTAL:	**17 months**	

The City of Richmond and Caltrans is seeking Water Board approval before moving ahead with funding this project. Please let us know of the Board's support and if any additional documentation is needed to assess this project, or if you have any further questions.

Respectfully,

Mary Phelps
Project Manager I
Public Works Department
Water Resource Recovery Division
450 Civic Center Plaza
Richmond CA 94804
(510) 621-1269 (direct)
(510) 685-0820 (cell)
(510) 307-8195 (fax)