Modifications to Wet Weather Improvement Plan

Paragraph B.1 of the Wet Weather Implementation Program (WWIP), originally approved by the Regulators on January 6, 2010, and modified by agreement of the parties a number of times, including on June 27, 2017, is modified as follows:

B. WWIP Phase 2

1. Schedule of Work: By June 30, 2018, Defendants shall submit to the Regulators a proposed Phase 2 schedule for additional WWIP projects to be constructed consistent with the priority order established in Attachment 2, and according to the design and performance criteria set forth on Attachment 2 (and Attachment 5 for EHRT facilities). The Phase 2 schedule shall be as expeditious as practicable, based on the considerations set forth in Exhibit 4, Section II.F of the CSO Consent Decree (June 9, 2004) (including the Residential Indicator analysis through the method set forth below) (in Paragraph B.3), and other relevant factors, including but not limited to (a) the impact that the cost and length of schedule of Phase 2 will have on Defendants' financing in the tax exempt market, (b) local and national experience with the time, cost, economics and practicality of CSO/SSO program implementation, (c) availability of "stimulus" money applicable to WWIP projects, and (d) technical feasibility.

a. If Defendants fail to submit a Phase 2 schedule by August 31, 2018, in addition to applicable stipulated penalties, the Regulators may impose on Defendants a schedule for all or a part of Phase 2 that is as expeditious as practicable, which schedule is not subject to dispute resolution. Upon receipt of the Regulator schedule, Defendants shall implement the Regulator schedule until they have submitted a proposed Phase 2 schedule (which Regulators shall promptly review) in accordance with the requirements of this Paragraph B, and they have either (1) obtained the Regulators' approval of Defendants' proposed schedule, (2) Defendants' Phase 2 schedule has been determined in accordance with dispute resolution as set forth below in Paragraph C.4, or (3) the Regulators agree to adjust the Regulator schedule pending the approval process of the Defendants' Phase 2 schedule.

The WWIP is also modified to add a new Paragraph D as follows to bridge the time between the Phase 1 schedule and Phase 2 schedule:

D. Bridge Plan Schedule

1. Defendants shall implement, complete and achieve the following by December 31, 2019, except as otherwise noted in Paragraphs D.1.a, D.1.b., D.1.g and D.1.h:

    a. Implement and achieve substantial completion of construction of the projects listed as Index Lines 185, 186, and 319 in Attachment 2 of the WWIP, in accordance with the design criteria set forth in Attachment 2 for those projects; provided, however, that completion of projects listed as Index Lines 185 and 186 may be extended to a date beyond December 31, 2019, to account for right of way acquisition or utility relocation issues, provided that the extension ensures that the projects are completed as expeditiously as practicable;

    b. Complete at least 90% of planning and design work and submit an application or applications for Ohio EPA Permit(s) to Install to Ohio EPA for the regulator improvement projects set forth in Index Lines 218-222 of Attachment 2; provided, however, that submission of any Permit(s) to Install may be extended to a date beyond December 31, 2019, to account for right of way acquisition or utility relocation issues, provided that the extension ensures that the submittal date(s) is/are as expeditious as practicable.

    c. In connection with the project set forth in Index Line 248 of Attachment 2 and as set forth below:

        (i) Complete planning and design work for a diversion chamber(s) which work shall include planning and design for the future tie-ins of the Mill Creek and Auxiliary Mill Creek Interceptors to the diversion chamber(s), and
        (ii) Substantially complete construction of the diversion chamber(s) in a manner that will facilitate future tie-ins;

    d. Implement and achieve substantial completion of construction of the projects listed as Index lines 195, 197, 231, 232, 238 (CSO 408 only) and 239 (CSO 413 only) by December 31, 2020. To achieve substantial completion of construction of these projects by December 31, 2020, Defendants anticipate performing work worth approximately the following amounts (in 2006$s) by December 31, 2019: $4,291,306 worth of work on Index 195 projects; $5,450,444 worth of work on Index 197 projects; $1,561,440 worth of work on Index 231 projects; $851,820 on Index 232 projects; $348,755 on Index 238 projects; and $656,095 worth of work on Index 239 projects;

e. Implement and achieve partial completion of construction of the projects listed as Index lines 234 and 236 as set forth below with the remaining work to be completed in Phase 2:
   (i) Index 234 – Repair or replace at least 6000 lf of existing sewer beginning at a downstream point at the Muddy Creek Oxbow;
   (ii) Index 236 – Complete work for diversion chamber and facility improvements in accordance with the description in Exhibit B;

f. Implement and achieve substantial completion of construction of the projects described below, which descriptions replace the description/design criteria currently specified in Index Lines 255 and 285 in Attachment 2:

   (i) Index 255 – Regulator improvements – dynamic underflow control;
   (ii) Index 285 – Regulator improvements – dynamic underflow control;

g. Implement and achieve substantial completion of construction of the following projects in accordance with the design criteria set forth below:

   (i) SSO 700 Storage and Treatment Facility Upgrades and Reliability Improvements specified in the attached Exhibit A as Numbers 1-16. Defendants shall implement and substantially complete the SSO 700 Storage and Treatment Facility Upgrade and Reliability Improvement specified in Exhibit A as Number 17 by December 31, 2020; and

   (ii) Defendants shall implement and achieve substantial completion of construction of the Columbia Square Development Separation to partially separate and convey stormwater to the Ohio River by December 31, 2020;

h. Implement and achieve substantial completion of construction of the projects that are specified in the document entitled Description of Additional Bridge Projects that is attached as Exhibit B and as set forth below:

   (i) Index 188 by December 31, 2020;
   (ii) Index 453 (CSO 21 only) substantial completion of

construction by December 31, 2019 but may extend beyond December 31, 2019 to account for Ohio Department of Transportation schedules for their ongoing Interstate 75/74 Reconstruction Program;

i. Advance right-of-way for Index 453 (CSO 12 only) as specified in the document entitled Description of Additional Bridge Projects that is attached as Exhibit B.

2. Nothing in this Paragraph D modifies any of the Performance Criteria associated with specific projects, CSOs or SSOs in the Attachments to the WWIP. The work required under Paragraph D shall constitute WWIP project work for all WWIP purposes, including, but not limited to the Residential Indicator/Affordability analysis. Defendants' proposed Phase 2 schedule, submitted in accordance with Paragraph B.1, may include changes to any of the December 31, 2020, milestones for substantial completion of construction. Such changed milestones must be as expeditious as practicable and shall not become effective unless they are included in the Phase 2 schedule approved by the Regulators or in the Phase 2 schedule determined through dispute resolution in accordance with Paragraph C.4.

EXHIBIT A

SSO 700 STORAGE AND TREATMENT FACILITY
UPGRADES AND RELIABILITY IMPROVEMENTS

Table 7-1(a) pages A2 – A3 from SSO 700 FRP Addendum (April 24, 2017) with changes noted in Red.

NO.	AREA/ITEM	MODIFICATION DESCRIPTION
1	Interceptor Chamber / Combined Outfall Sewer Hydraulics Controls	Provide controls to allow throttling of the two (2) 3-foot square sluice gates at the entrance to the influent pump station wet well
2	PACL Storage Tank	Install a new PACL storage tank adjacent to the existing bulk storage tank; perform necessary building modifications for additional tank
3	CEHRS Solids Pump Station	Install a new CEHRS solids pump station, and new solids force main between the new pump station and proposed storage tank
4	Support System Hydraulics	Replace portions of the existing valve vault drainage system network with larger pipelines. Install a flap gate on the end of the proposed larger drain pipe to eliminate any back flows from the pump station wet well. In addition, relocate valve vault actuators to above ground to eliminate system shutdowns
5	Valve Actuators	Replace all valve actuators with above-grade standard electric actuators, and incorporate actuator protection from vehicular traffic
6	Treatment Building HVAC System	Evaluate and design needed heating, ventilation, and air conditioning (HVAC) improvements for the control and UV rooms
7	Foam Control	Install a foam control system. Install foam control to improve UV level control
9	Electrical System Improvements	Electrical System improvements, including upgrade of Influent Pump No. 1 with an 18 pulse AFD
10	Polymer System	Replace the existing polymer system with an emulsion polymer system to improve CEHRS startup efficiency
12	Additional Storage Tank	Install a new 1.2MG storage tank (ST-4) for storage of CEHRS solids and or facility influent; associated tank appurtenances and yard improvement.
13	Treatment & UV Building HVAC System	Construct a new air-conditioned room in the UV building to house the UV Control Panels (required by UV manufacture's equipment for proper operation)
14	Water Pressure Booster System	Install a new water pressure booster system with break tank and air gap to supply NPW loads at the facility
15	Coordinated control implementation	Implement coordinated control algorithm at the STF to enable use of the facility to minimize wet weather capacity constraints downstream and reduce overflow in other parts of the basin.

16	New Storage Tank Piping	Modify proposed piping for new tank to eliminate overflow to Mill Creek and provide piping from ST4 to CEHRS. This will provide greater flexibility to utilize the new tank for influent storage and flow to CEHRS. (approx. $370K)
17	Disinfection Improvements	Evaluate, design, and implement disinfection improvements

Exhibit B
Bridge Factsheets

Index 236 Muddy Creek and Westbourne HRT – Phase A (Project ID 10130700)

Title	Muddy Creek and Westbourne HRT		
Basis	MSD has completed a facility plan and identified near term improvements to improve wet weather performance. This work will facilitate the future Phase 2 project and will serve as the first phase of improvement.		
Original Cost (2006$)	$24,184,412	**Updated Bridge Project Cost (2006$)**	$4,600,000
WWIP Plan Remaining CSO (MG/Year)	No change		
Bridge Project Benefit	Diversion chamber and facility improvements & SBU Mitigation		

The Muddy Creek Road & Westbourne Drive High Rate Treatment (HRT) Facility was placed on-line in June 2001 to address approximately 189 MG of overflow historically discharged at the location annually. It is a storage and treatment facility – and provides screening, detention, settling, and disinfection of combined sewer overflows at CSOs 198. These overflows were historically discharged to upper Muddy Creek from the Westwood Trunk Sewer.

The HRT Facility provides 51 MGD treatment capacity (screening and settling) for wet weather flows to CSOs 198 and during the recreation season flows are also disinfected. Flows between 51 MGD and 135 MGD receive coarse and fine screening only. Flows greater than 135 MGD overflow to the receiving water with only coarse screening. Smaller flows receive treatment and retention, and either overflow to the receiving water or are conveyed to the Muddy Creek WWTP. This unmanned, satellite plant is set up to automatically handle high volume, wet weather sewage flow.

The HRT Facility uses the traditional settling process, which relies strictly on gravity to separate solids from liquids. The HRT Facility treats and disinfects a significant portion of the annual wet-weather flow discharging to Muddy Creek and utilizes gravity flow in and gravity flow out. During large rain events, the Muddy Creek can back up into the facility contributing to operational difficulties.

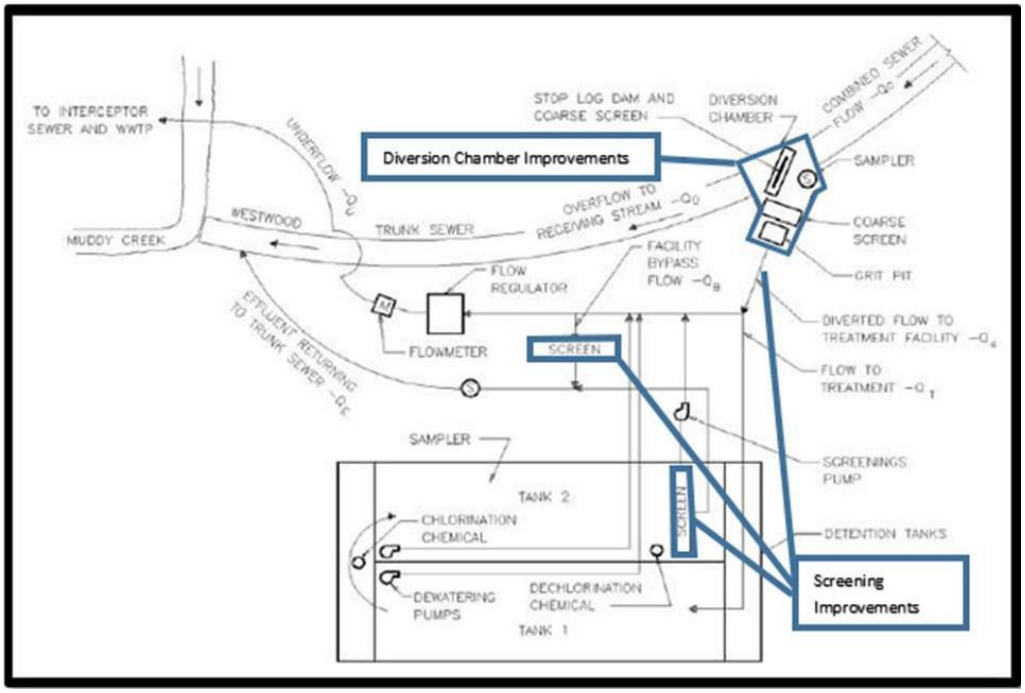
Cleanup of the facility is very labor intensive. The Maintenance crews at the Muddy Creek Treatment Plant indicate that it typically requires between 4 and 8 hours of manned entry to service the facility after each event. The screens must be thoroughly cleaned and the debris that accumulates at the head of the system must be removed with a vacuum truck since the chopper pumps are unable to process it.

Planned Improvements for Muddy Creek and Westbourne HRT

The current diversion chamber constructed on the combined trunk sewer is a fixed weir chamber utilizing stop logs. During large rain events, this weir causes flow to back up and may contribute to SBUs upstream. A primary goal of this project is to modify the diversion chamber to address SBUs while not reducing the volume of wastewater treated in a Typical Year and still maintaining 51 MGD full treatment capacity for wet weather flows,

coarse and fine screening of flows between 51 MGD and 135 MGD, as well as setup the facility to divert additional flow for enhanced treatment as part of the Phase 2 EHRT facility. This project is being brought forward and proposed for the bridge schedule so this project can be completed now to address the SBU issue and improve performance of the existing HRT system before the Phase 2 Muddy Creek and Westbourne EHRT is constructed. Other facility improvements may also include new fine screens upstream of settling tanks along with the necessary odor control. It is anticipated that Index 236 would be implemented as Phase A during the Bridge achieving partial completion by December 31, 2019, with at least $4.6M (2006$) worth of work by December 31, 2019.

Muddy Creek and Westbourne HRT (existing facility schematic)



Index 188R CSO 214 Partial Separation (Project ID 10171640)

Title	CSO 214 Partial Separation		
Original Cost (2006$)	$14,074,375	**Updated Bridge Project Cost (2006$)**	$2,982,418
WWIP Plan Remaining CSO (MG/Year)	No change.		
Bridge Project Benefit	CSO Reduction of 2.3 MG/Typical Year		

CSO 214 Partial Separation is expected to work in concert with other hydraulically connected CSO projects.

During the planning phase of this project as part of the Upper Duck Bundle, it was determined that CSO 214 required further improvements to meet the WWIP CSO control requirement of the plan remaining overflow volume of 57.4 MG. Several alternatives were considered and separation of approximately 55 acres with a small emergent stormwater wetlands feature were selected as the recommended alternatives to implement. Existing inlets to the combined sewer will be plugged or elevated to allow large flows to enter the combined sewer for events greater than the Typical Year. The exsting storm outlet will be improved to convey storm flow from CSO 214 to a tributary of Duck Creek. Floatables control will be added to the existing CSO 214 overflow along with other miscellaneous upgrades to the regulator chamber.

The ravine area immediately upstream of the CSO 214 regulator is currently connected to the CSO 214 combined sewer system via a series of inlets along the invert of the ravine. During typical year wet weather conditions, stormwater is diverted into the combined system. This project will plug the flow entering the combined system in the ravine and allow the stormwater to flow overland along the ravine to a new storm pipe that will convey the separated flow directly to Yononte Creek, which is a tributary of Duck Creek. A preliminary engineering report was completed in 2014.

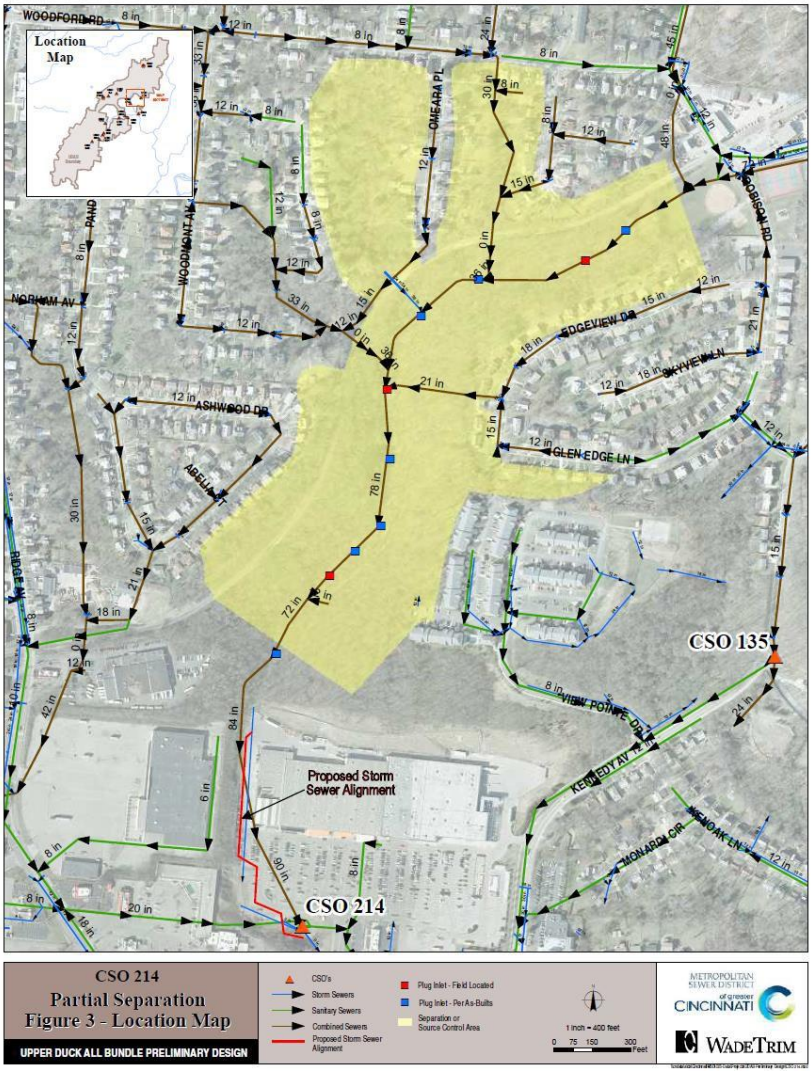
Within the preliminary CSO 214 separation project, the proposed 18-inch storm sewer shown connecting to the proposed 42-inch storm sewer is conveying storm water from the former Kmart property (now Cincinnati Belt and Transmission). This property has been, and continues to discharge storm water runoff into the existing 90-inch combined sewer located between the Cincinnati Belt and Transmission property and the Home Depot property. While the redeveloped site includes storm water detention, the overall impact on the size of the 18-inch and 42-inch sewers will be investigated during the detailed design of the CSO 214 project. As a part of the next phase of design, a review of the record drawings for this site is needed to confirm the amount of drainage that is being sent to that connection to determine the impacts.

The proposed CSO 214 project is anticipated to meet the Remaining Overflow Volume (ROV)of 57.4 MG. However, it should be noted that this project is part of a bundle that were intended to work in concert to achieve the final ROV.

The past decade has seen considerable development of a residential area and the addition of restaurants, small businesses and other light commercial facilities within the sewershed. The project is 30% designed and will result in

regulator improvements and separation of stream and street loading from the interceptor. The partial separation has been modelled and is estimated to reduce combined sewer overflows by 2.3 MG during a typical year.

The following graphic illustrates the location of proposed improvements for CSO 214 Partial Separation. Storm sewer improvements will convey flow from CSO 214 and a portion of the future separated CSO 552 flows to a tributary of Duck Creek. It is anticipated that this project will be substantially complete by December 31, 2020 or as expeditiously as practical.



CSO 214 Separation Project

Index 453R Bates Run Regulator – Phase A4b1 (Project ID 11242846)

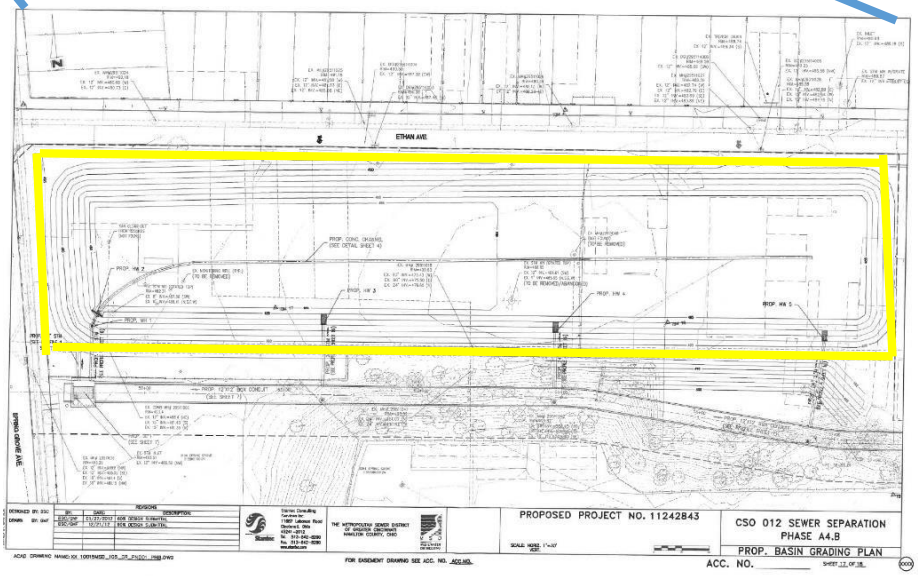
Title	CSO 12 Sewer Separation Phase A.4b - Colerain to Spring Grove Avenue		
Basis	MSD has coordinated with ODOT I-75 Reconstruction Improvements related to CSO 12 through Phases A.2, A.3, A.4 (see overview map below); this strategic separation project would allow for the separation and detention of stormwater in the combined system and is within the LMCFR area		
Original Cost (2006$)	Included in total LMCFR estimate	**Updated Bridge Project Cost (2006$)**	Not applicable; MSD estimates ROW and property acquisition may be $600,933
WWIP Plan Remaining CSO (MG/Year)	No change		
Bridge Project Benefit	Purchase of right-of-way for detention basin will extend storm sewers closer to Mill Creek Estimated CSO reduction of 8.1 MG/Year (after construction of Phase A4b).		

Attachment 2 currently specifies the potential solution for CSO 12 mitigation as "Default tunnel/conveyance". The ODOT partnership offered MSD the opportunity to construct a separate storm sewer system to separate future portions of CSO 12 catchment, which included some redirection of flows from CSOs 9 and 15 to CSO 12. The overall plan for separation of CSO 12 requires separate storm conveyance from the Clifton neighborhood, including University of Cincinnati, Burnett Woods Park, under the I-75 highway and under the railyard to the Mill Creek. The project was phased to allow MSD to coordinate with transportation partners; phases are summarized below.

Phase	Summary	Status
A2	ODOT constructed storm sewers to separate a large portion of the I- 75/Hopple Street interchange and most importantly constructed a storm sewer crossing under I-75 large enough to eliminate I-75 as a barrier and convey additional separation west toward Mill Creek	Complete
A3	MSD coordinated with the Cincinnati Department of Transportation Engineering (DOTE) to build the storm sewer east of the highway as part of their reconstruction of Martin Luther King Jr. Drive, thereby separating a significant grey corridor that was previously all combined	Under construction
A4a	As part of Phase A.4, MSD has also extended the new storm sewer trunk west of the highway to ensure proper drainage of the highway and work toward Mill Creek. Phase A4 was split into Phase A4a and A4b to coordinate with ODOT construction schedules.	Complete
A4b	The separated storm sewers are planned to be extended for separation to the Mill Creek as part of the LMCFR and are labeled as Phase B. MSD needs to acquire property and ROW which will be performed as part of the Bridge and design and construction of detention will then proceed.	Phase A.4b is currently in the design and property acquisition phase.
Remaining Phases	Separate storm conveyance from the Clifton neighborhood, including University of Cincinnati, Burnett Woods Park – connection to "Phase A" and then conveyance to the Mill Creek around or under the railyard.	Future planned

The CSO 12 phase A4b project (11242846) includes installation of approximately 900 LF of 12x12 box culvert and construction of a detention basin from Colerain Ave. to Spring Grove Ave. The phase A4b Bridge project only includes the property acquisition of that phase. A proposed detention basin extends the previously constructed facilities closer towards Mill Creek. The detention basin will be constructed at a future date independent of the railyard ROW acquisition and will fit into the long-term remedy proposed for the Lower Mill Creek. The proposed detention basin will be constructed at a later date even if the storm system does not discharge directly to the Mill Creek. Through 2019, MSD will, if practicable, acquire the ROW east of the railyard that would be utilized for future stormwater detention storage.

CSO 12 Wet Weather Improvements: All Phases shown.



CSO 12 Wet Weather Improvements Phase A.4b

A.4b Proposed basin area – targeted property acquisition, east of the railyard during the bridge schedule

Index 453R Streng Street Diversion Dam Phase A (Project ID 1143260)

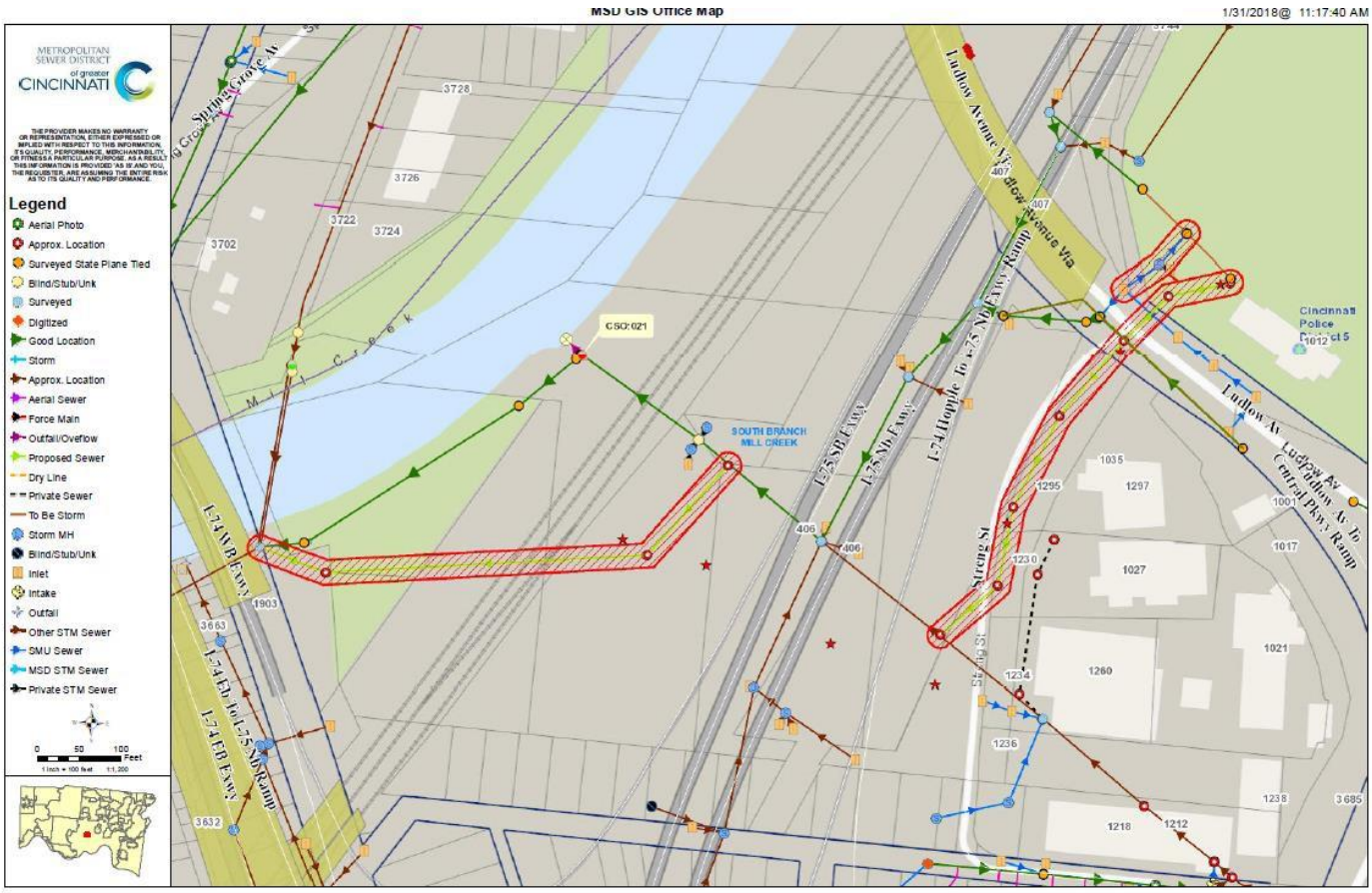
Title	CSO 21 I-75 Crossing and Bioretention Phase A		
Basis	MSD has coordinated with ODOT I-75 Reconstruction Improvements related to CSO 21; this project will advance the long term project for Phase 2		
Original Cost (2006$)	Included in total LMCFR estimate	**Updated Bridge Project Cost (2006$)**	$1,830,785
WWIP Plan Remaining	No change		
Bridge Project Benefit	CSO Reduction of approximately 11 MG/Typical Year		

Attachment 2 currently specifies the potential solution for CSO 21 mitigation as "Default tunnel/conveyance" and is part of the Lower Mill Creek Final Remedy.

CSO 21 was evaluated under the I-75 Reconstruction Program. The resultant project includes the relocation of CSO 21 and related new 24-inch sanitary sewer, construction of an access drive, and the installation of approximately 580 feet of new sanitary sewer along Streng and Ludlow Streets to facilitate abandonment of an existing 30-inch combined sewer in ODOT's Right-of-Way. The existing combined sewer located downstream of the relocated CSO structure will be repurposed as an outfall pipe. The existing 15-inch combined sewer north of Ludlow will be converted to a storm only sewer.

As part of the Bridge, MSD has developed an agreement with ODOT, where ODOT will incorporate the construction of MSD's CSO 21 relocation project into ODOT's I-74/I-75 highway interchange improvement construction project. In collaboration with ODOT, the highway improvement project will separate the highway stormwater runoff from the existing combined system and outfall the separated stormwater to the Mill Creek. ODOT will be acting as the Defendant's construction project manager for this project. Based on modeling performed for this project, it is estimated that disconnection of highway drainage from CSO 21 is estimated to achieve approximately 11 MG/Typical Year reduction in sewer overflows and will fit into the long-term remedy proposed for the Lower Mill Creek.

This project facilitates future separation of upstream areas in Phase 2 as needed to meet the WWIP ROV for CSO 21. It is anticipated that this project would be complete by December 21, 2019 but may extend beyond December 31, 2019 to account for Ohio Department of Transportation schedules for their ongoing Interstate 75/74 Reconstruction Program.



Streng Street Improvements at CSO 21. Red hatched area denotes new sewer alignment.

Index 248: Mill Creek WWTP Chemical Enhanced Primary Treatment (Project ID 10144882)

Title	Mill Creek WWTP Chemical Enhanced Primary Treatment Phase A		
Basis			
Original Cost (2006$)	$25,215,765	**Updated Bridge Project Cost (2006$)**	$7,464,000
WWIP Plan Remaining CSO (MG/Year)	No change		
Bridge Project Benefit	Planning, Design and Construction associated with first phase of Flow Diversion Chamber to future Wet Weather Facility		

The Mill Creek Raw Sewage Pump Station consists of two physically separate pumping stations: The North PS and the South PS. The North PS was constructed in the mid-1950's and consists of nine vertical centrifugal pumps rated at 40 MGD each (320 MGD firm capacity). The South PS was constructed in the late 1980's and consists of three vertical centrifugal pumps with two rated at 65 MGD each and one rated at 30 MGD (95 MGD firm capacity). Flow from four interceptors (Mill Creek, Mill Creek Auxiliary, East Branch Ohio River, and West Branch Ohio River) is conveyed to the pumping stations through a Diversion Chamber. The Diversion Chamber was constructed at the same time as the North PS.

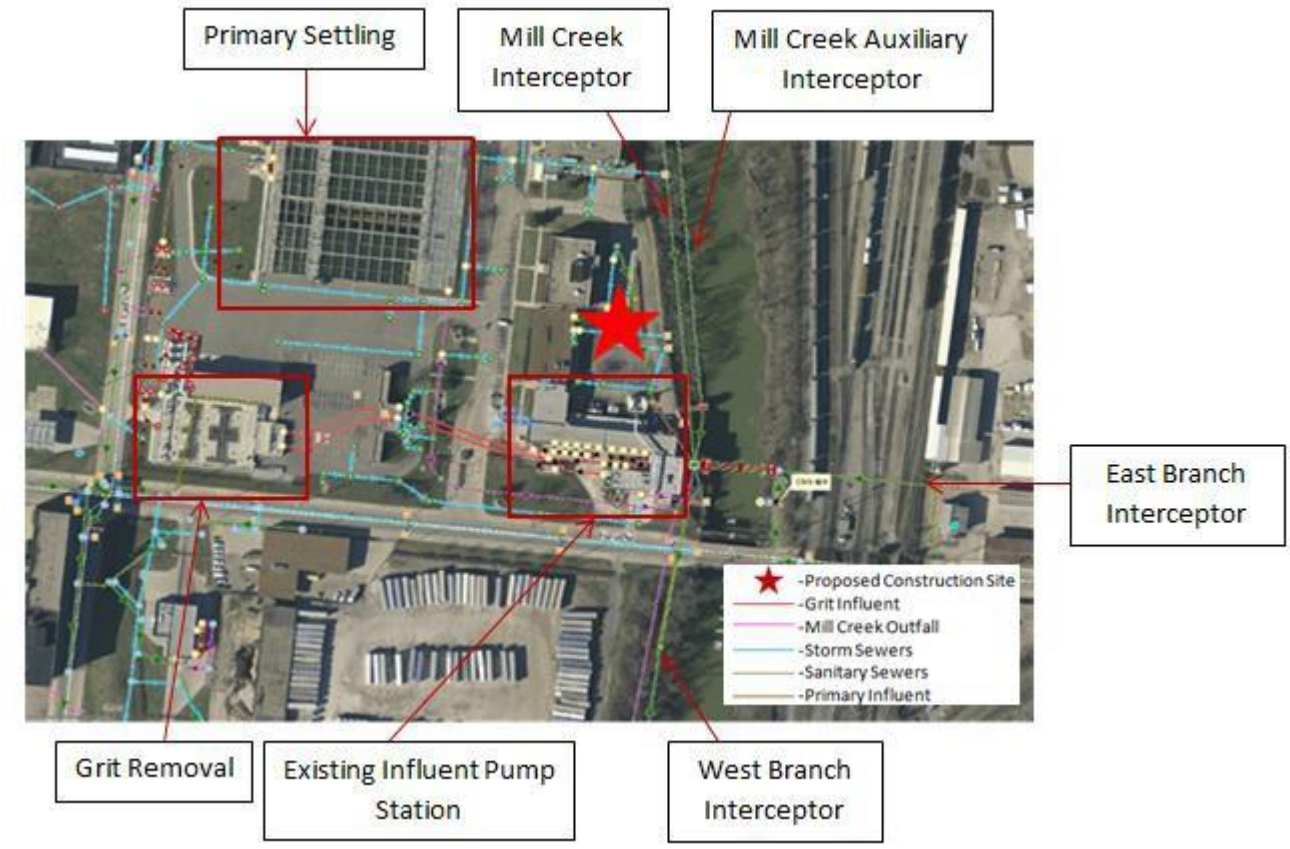
The WWIP anticipates a future wet weather facility at Mill Creek and this project would advance the initial phase of a future HRT or CEPT facility; the future wet weather facility may be located where the existing pump stations are now located, north of Gest Street and within the WWTP fence line.

MSD has identified the location for a proposed diversion chamber and identified conceptual options for a pump station and a future wet weather facility. Advancing the first stage of construction allows for flexibility in future stages of construction where rerouting of plant utilities and possible demolition of structures may be required. Future stages of construction, i.e. the pump station and a future wet weather facility will occur as part of WWIP Phase 2.

The current WWTP pump station lacks the ability to isolate the influent diversion chamber and the north PS wet well, and is a known risk. Recent physical scale model and computation fluid dynamics (CFD) studies have shown that there is no other feasible way to increase plant pumping capacity with the existing wet wells. Building additional pumping capacity and a new larger diversion chamber at the Mill Creek WWTP site would be required. Thus, any additional wet weather treatment capacity at the plant will require a new diversion chamber and pump station construction. This project is being brought forward and proposed for the bridge schedule so that a new diversion chamber can be constructed to facilitate future isolation of the existing North and South pump stations and facilitate future wet weather treatment.

In summary, the Mill Creek Diversion Chamber project will include the design of the diversion chamber(s) and the tie-ins to the existing interceptors. Additionally, it will include the construction of a new diversion chamber (or chambers) for future connections to the Mill Creek Interceptor and Auxiliary Interceptor that will send flow to a future influent pump station and a future wet weather facility. The project will be the first phase in a multi- phase project to mitigate the environmental impact of a failure in the diversion chamber, screening facility or influent pump station. The new diversion chamber will facilitate the implementation of bypass pumping in a much shorter time frame than could currently be done. As we begin the design, we will have a better idea of whether the interceptor connections can or should be made during the first construction phase, and a risk mitigation plan will be developed. Nevertheless, final connections and full functionality of the new diversion chamber will not occur until a later construction phase.

It is anticipated that Index 248 would be implemented as Phase A during the Bridge achieving partial completion of that index project by December 31, 2019, with substantial completion of the diversion chamber(s) by December 31, 2019.



Site of Mill Creek Diversion Chamber at Mill Creek WWTP

Index 282a: Columbia Square Development Separation

Title	Columbia Square Development Separation		
Original Cost (2006$)	n/a	**Updated Project Cost (2006$)**	$555,514
WWIP Plan Remaining CSO	New WWIP project for benefit of Eastern Delta Ave.		
Bridge Project Benefit	Increased CSO reduction at CSO 469 by an estimated 2.8 MG (based on the Typical Year) by separating approximately six acres		

The Columbia Square Development Separation project has been discussed as part of Eastern Delta Ave. Ph3 (Index 95) Mitigation to enhance CSO reduction associated with Index 95. As part of the Eastern Delta Ave. Ph3 project, the underflow for 469 was relocated to connect to the Delta Interceptor while other sections of pipe were to be abandoned.

This project will utilize some of the abandoned sections and enhance the effectiveness of the Eastern Delta Ave. Ph3 project. The project will connect the "Columbia Square" development site storm water serving the retail/office development to the abandoned (dry) sewer. By making these connections and improvements, the project will direct the storm sewer to the Ohio River by using the abandoned sewer that previously served as the underflow for CSO 469 as a portion of the outfall for the separated storm flow.

By connecting the site storm sewer to the abandoned line and providing a connecting sewer from the abandoned line to the CSO 469 outfall sewer downstream of the regulator, the storm water runoff from the Columbia Square retail/office development will have the means to be conveyed directly to the Ohio River. The CSO reduction association with Columbia Square separation is estimated at 2.8 MG (based on the Typical Year).

MSD will use best professional judgement and industry standards to complete the necessary tasks. Additionally, any ROW coordination will begin as soon as possible. Defendants shall implement and achieve substantial completion of construction of the Columbia Square Development Separation to partially separate and convey stormwater to the Ohio River by December 31, 2020.

Columbia Square Development Separation