METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

Project ID 10142910 Ludlow Run Sustainable Source Control Contract 95x12762

Progress Report for Professional Services provided October 31, 2022 through November 27, 2022

Arcadis U.S., Inc.

At the request of the Metropolitan Sewer District of Greater Cincinnati, Arcadis worked on the following items as summarized below.

Task 1 Project Administration - Planning

- Performed project administration and resource management; communicated updates to MSDGC project manager.
- Draft Schedule Included, and to be updated

Task 2 Data Review and Collection

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Task 3 Collection System Model Review

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Task 4 Model Update and Calibration

- Performed and completed data review and event development for 12 meters.
- Performed and completed event exclusion tables for 12 meters.
- Performed and completed Flowfinity Submittal for Event File app for 12 meters.
- Meetings and coordination with MSDGC on schedule updates.
- Performed initial review of Hazen Delineation and discovered need for update (model couldn't run)
- Completed Step 5 Data submittal, including maintenance information and table of meter graphics of velocity and depth scattergraphs. No data edits were performed by Arcadis, based on pipe size or daylight savings time. Only edits were performed by the flow monitoring subconsultants, as indicated in site maintenance logs and captured in Data App Table.

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4.050	Validate and Calibrate Hydraulic Model	85 14-Nov-22	10-Mar-23													 Validate and Calibr 	Validate and Calibrate Hydraulic Model
4.060	Prepare Draft Task 4 Deliverables based on MSDGC Modeling guidelines	105 31-Oct 22	24-Mar-23													Prepare Diaft Ta	Prepare Draft Task 4 Deliverables based on MSDGC M
4.070	Submit Event Fle (Step 4) for Review	0	28-Oct-22											 Sut 	Submit Event File (Step 4) for Review	o 4) for Review	
4.075	MSDGC Review and Approval of Event File	10 31 Oct 22	11-Nov-22											-	SDGC Reviewar	MSDGC Review and Approval of Event File	<u>.</u>
4.080	Submit Data File (Step 5) for Review	0	28-0ct-22											 Sut 	 Subinit Data File (Step 5) för Review 	5) for Review	
4.085	MSDGC Review and Approval of Data Review File	10 31-Oct-22	11-Nov-22											-	SDGC Reviewar	MSDGC Review and Approval of Data Review File	wiew File
4.090	Submit Model Calibration (Model to Monitor Comparisons) (Step 6) for Review	0	10-Feb-23												vī ♦	bmit Model Calibratio	 Submit Model Calibration (Model to Monitor Comparisons) (Ste
4.095	MSDGC Review of Calibration, Revisions and Approval	20 13 Feb 23	10-Mar-23													MSDGC Review of	MSDGC Review of Calibration, Revisions and Approval
4,100	Submit Model for Review (Step 7)	0	10-Mar-23													 Submit Model for Review (Step 7) 	teview (Step 7)
4.105	MSDGC Review of Model, Revisions and Approval	10 13-Mar-23	24-Mar-23													MSDGC Review	MSDGC Review of Model, Revisions and Approval
4,110	Prepare Draft Modeling Report	10 27-Mar 23	07-Apr-23													Prepare Draft	Prepare Draft Modeling Report
4.115	Submit Draft Modeling Report (Step 8)	0	07-Apr-23													 Submit Draft I 	 Submit Draft Modeling Report (Step 8)
4.120	MSDGC Review of Draft Modeling Report	10 10 Apr 23	21-Apr-23			- - - - - - -										MSDGC R	MSDGC Review of Draft Modeling Report
4.130	Resolve MSDGC Comments and Update Modeling Report	10 21 Apr 23	04-May-23													Resolve	Resolve MSDGC Comments and Update Mode
4.140	Submit Final Modeling Report and Model Files	0	04 May-23													Submit F	Submit Final Modeling Report and Model Files
4,150	Develop Baseline Project Model	10 27-Mar-23	07-Apr-23													Develop Base	Develop Baseline Project Model
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5.010	Perform Conditions and Capacity Analysis	20 13-Mar-23	07-Apr-23													Perform Conc	Perform Conditions and Capacity Analysis
5.020	Perform Alternatives Analysis and Modeling	50 10-Apr-23	16-Jun-23														Perform Atternatives Analysis and Mode
5,030	Prepare Alternatives Analysis Report	20 19 Jun 23	14-Jul-23														Prepare Alternatives Analysis Rep
5,040	Submit Draft Alternatives Analysis Report for MSDGC Review	0	14-Jul-23														 Submit Draft Alternatives Analysis
5.050	MSDGC Review of Draft Alternatives Analysis Report	10 17-Jul-23	28-Jul-23														MSDGC Review of Draft Altern
5.060	Conduct Alternatives Analysis Review Meeting	0 03 Aug 23															 Conduct Alternatives Analysis
5.070	Resolve MSDGC Comments and Update Alternatives Analysis Report	15 31-Jul-23	18-Aug-23														Resolve MSDGC Commer
5.080	Submit Final Alternatives Analysis Report	0	18-Aug-23														 Submit Final Alternatives Ar
5,090	Prepare Draft BCE	20 21-Aug-23	15-Sep-23														Prepare Draft BCE
5,100	Submit Draft BCE for MSDGC Review	0	15-Sep-23														 \$ubmit Draft BCE for
5,110	MSDGC Review of Draft BCE	10 18-Sep-23	29-Sep-23														MSDGC Review of
5.120	Conduct BCE Review Meeting	0 05-Oct-23															Conduct BCE Rev
5,130	Resolve MSDGC Comments and Update BCE	15 02 Oct 23	20-Oct-23														Resolve MSDG
5,140	Submit Final BCE Report	0	20-0ct-23														 Submit Final Bo
5,999	End of Planning Phase	0	20-Oct-23*														End of Plannin

