



RESOLUTION NO. U-11340

1 A RESOLUTION related to Tacoma Water, authorizing participation in a City of
2 Tacoma, Department of Environmental Services contract for the Madison
3 District Green Infrastructure Project, for the replacement and installation
4 of water main.

5 WHEREAS the City of Tacoma, Department of Public Utilities, Water
6 Division (d.b.a. "Tacoma Water"), requests authorization to participate in the
7 City of Tacoma, Department of Environmental Services ("Environmental
8 Services") contract for the Madison District Green Infrastructure project
9 ("Project"), and

10 WHEREAS Tacoma Water is partnering with Environmental Services in
11 its Project to reconstruct existing roadway with pervious asphalt and hot mixed
12 asphalt, and

13 WHEREAS Tacoma Water's work in the Project will be to replace a
14 portion of 30" Transmission Water main with 12" Ductile Iron pipe, and to install
15 approximately 7,500 feet of 6-inch to 12-inch water main along S. 45th St.,
16 between S. Union Ave and S. Pine St., S. Puget Sound Ave, between S. 43rd
17 St. and S. 47th St., S. Cedar St., between S. 43rd St. and S. 45th St., and S.
18 Junett St., between S. 43rd St. and S. 47th St., and

19 WHEREAS some of the pipes being replaced were constructed circa
20 1955 to 1969, and

21 WHEREAS the overall Project will address storm-water conveyance by
22 improving roadway surface with pervious asphalt, upgrade underground utilities
23 and sidewalks with ADA improvements, and minimize long-term road
24 maintenance, and
25
26



WHEREAS Tacoma Water believes it is in the best interests of the utility to include the water main work in the Environmental Services contract because it will improve project delivery, reduce project costs, mitigate future risks, and minimize construction disturbance to adjacent businesses and the general public, and

WHEREAS the estimated cost of the Tacoma Water work concerning the water main replacement is \$2,352,471.49 plus a 20 percent contingency, for a cumulative total of \$2,822,965.79; Now, Therefore,

BE IT RESOLVED BY THE PUBLIC UTILITY BOARD OF THE CITY OF TACOMA:

Section 1. That Tacoma Water is authorized to participate in the Environmental Services, Madison District Green Infrastructure project to replace and install water main for a project cost of \$2,352,471.49 plus a 20 percent contingency, for a cumulative total of \$2,822,965.79, including applicable taxes, and the proper officers of Tacoma Water are authorized to execute necessary agreements as approved by the City Attorney.

Approved as to form:

_____	_____
/s/	Chair
Chief Deputy City Attorney	Secretary
_____	Adopted_____
Clerk	



Board Action Memorandum

TO: Jackie Flowers, Director of Utilities ^{DS} JF
COPY: Charleen Jacobs, Director and Board Offices
FROM: Scott Dewhirst, Utilities Dir Dep. Water Superintendent, Tacoma Water ^{DS} TS
Troy Saghafi, Professional Engineer, Tacoma Water ^{DS} EV for
MEETING DATE: August 24, 2022
DATE: August 16, 2022

STRATEGIC DIRECTIVE ALIGNMENT (select as many that apply):

Please indicate which of the Public Utility Board's Strategic Directives is supported by this action.

- | | |
|--|---|
| <input type="checkbox"/> SD1 – Equity & Inclusion | <input type="checkbox"/> SD8 – Telecom |
| <input type="checkbox"/> SD2 – Financial Sustainability | <input type="checkbox"/> SD9 – Economic Development |
| <input type="checkbox"/> SD3 – Rates | <input type="checkbox"/> SD10 – Government Relations |
| <input type="checkbox"/> SD4 – Stakeholder Engagement | <input type="checkbox"/> SD11 – Decarbonization/Electric Vehicles |
| <input type="checkbox"/> SD5 – Environmental Leadership | <input type="checkbox"/> SD12 – Employee Relations |
| <input type="checkbox"/> SD6 – Innovation | <input type="checkbox"/> SD13 – Customer Service |
| <input checked="" type="checkbox"/> SD7 – Reliability & Resiliency | <input type="checkbox"/> SD14 – Resource Planning |

SUMMARY:

Authorize Tacoma Water to participate in the City of Tacoma, Department of Environmental Services Madison District Green Infrastructure Project. Tacoma Water proposes to install approximately 7,500 feet of 6-inch to 12-inch water main along S. 45 St, between S. Union Ave and S. Pine St., S. Puget Sound Ave, between S. 43rd St. and S. 47th St., S. Cedar St., between S. 43rd St. and S. 45th St., and S. Junett St., between S. 43rd St. and S. 47th St. Total project cost is \$2,352,471.49, plus a 20 percent contingency, for a cumulative total of \$2,822,965.79 plus applicable taxes.

Tacoma Water believes it is in the best interest of the utility and its customers to include the water main work in the Environmental Services project. This project partnership will improve project delivery, reduce project costs, improve system availability, and consolidate construction disturbance to businesses.

BACKGROUND:

Tacoma Water is partnering with the Environmental Services Department to reconstruct the existing roadway with pervious asphalt and hot mixed asphalt, replace a portion of 30" Transmission Water main with 12" Ductile Iron pipe, and construct approximately 7,500 feet of new and existing water main, constructed circa 1955 to 1969, along S. 45 St, between S. Union Ave and S. Pine St., S. Puget Sound Ave, between S. 43rd St. and S. 47th St., S. Cedar St., between S. 43rd St. and S. 45th St., and S. Junett St., between S. 43rd St. and S. 47th St.

The overall project will address storm-water conveyance by improving roadway surface with pervious asphalt, upgrade underground utilities, and sidewalks/ADA improvements.



Board Action Memorandum

Project partner contributions are summarized in the attachment “Secondary Agreement for Joint Project Environmental Services - Tacoma Water”.

ISSUE: The existing water main in this area is over 53 to 67 years old.

ALTERNATIVES: Rehabilitating the existing water main is cost prohibitive. It is more cost effective to mitigate the risk of future water main breaks under a new roadway by replacing the water main now.

ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED? Yes

IF THE ACTION REQUESTED IS APPROVAL OF A CONTRACT, INCLUDE LANGUAGE IN RESOLUTION AUTHORIZING \$200,000 INCREASE IN ADMINISTRATIVE AUTHORITY TO DIRECTOR? Yes.

ATTACHMENTS: Project Map
City Manager Action Memorandum
Secondary Agreement for Joint Project Environmental Services - Tacoma Water

CONTACT: Troy Saghafi, Professional Engineer, 253-345-8445
Ali Poldas, Principal Engineer, 253-310-1599

- **S. 45th St., between S. Union Ave and S. Pine St.**
- **S. Puget Sound Ave., between S. 43rd St. and S. 47th St.**
- **S. Cedar St., between S. 43rd St. and S. 45th St.**
- **S. Junett St., between S. 43rd St. and S. 47th St.**



TO: Elizabeth Pauli, City Manager
FROM: Michael P. Slevin III, P.E., Director, Environmental Services
John Burk, P.E., Division Manager, Science and Engineering
Lance Bunch, P.E., Project Manager, Science and Engineering
COPY: City Council, City Clerk, EIC Coordinator, LEAP Coordinator, and Dawn DeJarlais, Finance/Purchasing
SUBJECT: Madison District Green Infrastructure Project
Request for Bid Specification No. ES21-0004F
DATE: [7/26/2022]

Pursuant to the City of Tacoma March 12, 2020, state of emergency proclamation in response to COVID-19, made in accordance with Tacoma Municipal Code Chapter 1.10., contract awards for purchases must be approved by the City Manager or delegee.

RECOMMENDATION SUMMARY:

The Environmental Services Department recommends a contract be awarded to R.L. Alia Company, Renton, WA, in the amount of \$10,537,286.00 plus a 20 percent contingency, for a projected contract amount of \$12,644,743.20, plus applicable taxes, for construction of the Madison District Green Infrastructure Project. The project is funded in part by the Washington State Department of Ecology, agreement #WQC-2018-TacoES-00100.

STRATEGIC POLICY PRIORITY:

- Strengthen and support a safe city with healthy residents.
- Assure outstanding stewardship of the natural and built environment.

This work supports a safe city with healthy residents and assures outstanding stewardship of the natural and built environment through reconstruction of existing, failing roadways with a pervious asphalt street section, increased pedestrian mobility via a new walking and bike path with improved curb ramps and sidewalks, alleviation of localized flooding issues, and the installation of new street trees picked by residents of the neighborhood.

This project, through a partnership with Public Works and Tacoma Water, will also replace aging wastewater and water main pipes within the project area. Reducing the risk of a wastewater sewer system failure which could result in untreated wastewater discharging into the surrounding area as well as avoiding water main failures that would create costly repairs and service impacts to Tacoma Water customers.

BACKGROUND:

The Madison District Green Infrastructure project is intended to improve neighborhood streets, fix drainage problems, and protect the Puget Sound from polluted runoff by installing permeable pavement that will allow runoff to infiltrate into the groundwater. The Environmental Services Department received a grant from the Washington State Department of Ecology and has partnered with the Public Works Department and Tacoma Water to replace the streets and aging utilities in the Madison District.



In addition to replacing approximately 18 blocks of residential roadway, 15 of which will be permeable pavement, the project will also install a new shared use walking and bike path as part of a larger plan to increase walkability in the Tacoma Mall area. This path will eventually become a part of the planned Loop Road that will extend throughout the Tacoma Mall neighborhood.

ISSUE: Existing roadways in the Madison District are in poor condition or failing and experience recurring drainage issues. The project aims to mitigate drainage issues by replacing failed roadways with pervious streets, improving water quality and providing better pedestrian mobility within the neighborhood.

ALTERNATIVES:

The City could choose not to move forward with this project and lose out on the \$6,600,032.94 in combined grant and SRF funding from the Department of Ecology and not improve the failed residential streets or provide a solution to the current flooding issues. This would put the City in a position of accepting the risks of continued roadway failures and damage our working relationship with the Department of Ecology.

COMPETITIVE SOLICITATION:

Request for Bids Specification No. ES21-0004F was opened July 26, 2022. There were 6 submittals received. R.L. Alia Company submitted a bid that resulted in the lowest evaluated submittal. The table below reflects the amount of the base award.

<u>Respondent</u> (RFB)	<u>Location</u>	<u>Submittal Amount</u>	<u>Responsiveness</u>
R.L. Alia Company	Renton, WA	\$10,537,286.00	Responsive
Northwest Cascade, Inc.	Puyallup, WA	\$10,634,489.00	Responsive
Miles Resources, LLC	Puyallup, WA	\$10,758,177.80	Responsive
Ceccanti, Inc.	Tacoma, WA	\$11,479,774.00	Responsive
Tucci & Sons, Inc.	Tacoma, WA	\$11,996,895.10	Responsive
Active Construction	Tacoma, WA	\$15,679,679.00	Responsive

Pre-bid Estimate: \$10,998,240.00.

The recommended award is 4.2% below the pre-bid estimate.

CONTRACT HISTORY: New Contract

SUSTAINABILITY: The use of pervious pavement will divert flows from the City's Surface Water collection system and infiltrate it to the groundwater table as would naturally occur in undeveloped conditions. Additionally, the replacement of existing underground infrastructure will reduce the risk of failures and any potential subsequent discharge onto neighboring properties.



DBE/MBE/WBE COMPLIANCE: EIC and LEAP compliance are not applicable to this project due to the partial grant funding through the Department of Ecology. A condition of the grant requires the inclusion of a Disadvantaged Business Enterprise (DBE) and Minority and Women Business Enterprise (MBE/WBE) participation goal as part of the project. The goals for this project are 0%, 7%, and 6% respectively.



FISCAL IMPACT:

EXPENDITURES:

FUND NUMBER & FUND NAME	COST OBJECT (CC/WBS/ORDER)	COST ELEMENT	TOTAL AMOUNT
4300 ES Wastewater Fund	ENV-04023-16	5330100	\$2,123,280.00
4301 ES Surface Water Fund	ENV-03031-25	5330100	\$6,007,021.91
1085 PW Street Initiative Fund	PWK-00438-18	5330100	\$120,701.09
4600 Tacoma Water Capital Reserve Fund	WTR-00604-01-13	5330100	\$2,286,283.00
TOTAL			Up to \$10,537,286.00

REVENUES:

FUNDING SOURCE	COST OBJECT (CC/WBS/ORDER)	COST ELEMENT	TOTAL AMOUNT
4300 ES Wastewater Fund	524700	6310010	\$2,123,280.00
4301 ES Surface Water Fund	529700	6310010	\$6,007,021.91
1085 PW Street Initiative Fund	663020	6311139	\$120,701.09
4600 Tacoma Water Capital Reserve Fund	587501	6311170	\$2,286,283.00
TOTAL			Up to \$10,537,286.00

FISCAL IMPACT TO CURRENT BIENNIAL BUDGET: \$12,664,743.20, PLUS APPLICABLE TAXES

ARE THE EXPENDITURES AND REVENUES PLANNED AND BUDGETED? Yes

IF EXPENSE IS NOT BUDGETED, PLEASE EXPLAIN HOW THEY ARE TO BE COVERED. N/A

APPROVED

City Manager/Deputy City Manager



TO: John Burk, P.E., Division Manager, Science & Engineering Division, Environmental Services

Jessica Knickerbocker, P.E., Assistant Division Manager, Planning & Engineering, Tacoma Water

FROM: Seth Gottlieb, Science & Engineering Division, Environmental Services

Troy Saghafi, P.E., Professional Engineer, Planning & Engineering, Tacoma Water

SUBJECT: Agreement for Madison District Green Infrastructure Project / ES21-0004F &
MRP 2020-33

DATE: August 16, 2022

Tacoma Science & Engineering Division and Tacoma Water, Planning & Engineering is collaborating to add water related infrastructure to the Madison District Green Infrastructure Project.

The following summarizes the construction cost allocations for the project and other commitments.

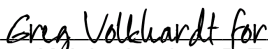
1. The project is located along S. 45th St, between S. Pine St. and S. Union Ave., S. Puget Sound Ave, between S.43rd St. and S. 47th St., S. Cedar St, between S. 43rd St. and S. 45th St., and S. Junett St., between S. 43rd St. and S. 47th St. Water infrastructure improvements include installing new 12-inch water main and associated appurtenances along the project extents
2. The project has been combined into a single Environmental Services construction contract. Environmental Services has the responsibility to lead and coordinate the compilation of contract plans & specifications and advertise & award the construction contract.
3. Tacoma Water will be responsible for the cost of water distribution main work, valves, hydrants, trench excavation, trench backfill and compaction to subgrade elevation, mobilization, traffic control, and other appurtenant items directly related to the installation of new water main. These costs have been segregated within "Schedule D" of the contract bid proposal. The estimated cost of "Schedule D" plus force account is \$2,246,348.00 plus taxes.
4. Tacoma Water will be responsible for the shared street restoration and general contract costs as reflected in the Project Breakdown Estimate worksheet (see exhibit A). Tacoma Water's portion of the shared cost is based on actual bid pricing and is estimated to be approximately \$39,935.00 plus taxes. As quantities on the Project Breakdown Estimate worksheet are contractor bid prices, the Departmental actual bid quantities and costs will be separated by the same percentage, as the per bid item estimate reflected on the Project Breakdown Estimate worksheet.
5. The Department of Environmental Services will administer the construction contract and provide construction management (contract administration and construction inspection assistance). Environmental Services Department will charge Tacoma Water for the additional incremental contract administration time associated with Tacoma Water's scope of work. Tacoma Water will compensate the Environmental Services Department in the amount of 3% of the lowest responsible bidder's water base bid plus the shared item costs less force account bid items and sales tax. The estimated cost for the Tacoma Water portion of contract administration is



\$66,188.49. This amount will be transferred to the Department of Environmental Services via journal entry at the completion of the project. This method is consistent with how construction management and overhead costs were addressed on previous projects.

6. Tacoma Water will be responsible for the daily inspection and surveying of the water main construction. Tacoma Water, Public Works and Environmental Services inspections will be a cooperative and coordinated effort.
7. Tacoma Water has provided the following WBSE for charging these construction costs:
 - o WTR-00604-01-13-03 Construction Payments
8. Project participation is subject to Public Utility Board Approval.

We look forward to continuing our spirit of coordination and cooperation to accomplish this and future projects of mutual benefit to the citizens of Tacoma, the Department of Environmental Services, and Tacoma Water. Tacoma Water's water-related project construction costs is \$2,286,283.00 plus a contract administration cost of \$66,188.49 for a cumulative total of \$2,352,471.49 plus applicable taxes and contingencies. Payment by Tacoma Water will be made for the actual quantities and costs incurred during project closeout. By signature, please indicate your approval to proceed with this joint project.

DocuSigned by:

Jessica Knickerbocker, P.E.
Planning & Engineering Division Manager
Tacoma Water

08/16/2022

Date

DocuSigned by:

John Burk, P.E.
Science & Engineering Division
Environmental Services

08/16/2022

Date

Attachment: Exhibit-A Project Breakdown Estimate

Cc: Geff Yotter, Operations Manager, Planning & Engineering, Tacoma Water
Phill Ringrose, Construction Manager, Planning & Engineering, Tacoma Water
Julie Louviere, Management Analyst II, Water Budget and Financial Analysis
Marc Powell, Management Analyst II, Water Financial Stewardship

SHARED BY PERCENTAGE - ALL UTILITIES				Engineer Estimate			RL Alia		Water Dept Cost		
Item #	Bid Item Name	Unit	Qty	Unit Price	Amount	Qty	Unit Price	Amount	%	Tot Amount	Tax(Y/N)
R002	SPCC Plan	LS	1	\$ 1,000.00	\$ 1,000.00	1	\$ 1,000.00	\$ 1,000.00	24%	\$ 240.00	N
R030	Erosion/Water Pollution Control	FA	1	\$ 15,000.00	\$ 15,000.00	1	\$ 15,000.00	\$ 15,000.00	24%	\$ 3,600.00	N
R031	Stormwater Pollution Prevention Plan (SWPPP)	LS	1	\$ 1,000.00	\$ 1,000.00	1	\$ 1,000.00	\$ 1,000.00	24%	\$ 240.00	N
R032	NPDES Construction Stormwater General Permit	LS	1	\$ 3,000.00	\$ 1,000.00	1	\$ 1,000.00	\$ 1,000.00	24%	\$ 240.00	N
R035	Landscape Restoration	FA	1	\$ 50,000.00	\$ 50,000.00	1	\$ 50,000.00	\$ 50,000.00	24%	\$ 12,000.00	N

Total Shared by Percentage Items

\$ 70,000.00

\$ 16,320.00

SHARED BY QUANTITIES - ALL UTILITIES				Engineer Estimate			RL Alia		Water Dept Cost		
Item #	Bid Item Name	Unit	Qty	Unit Price	Amount	Qty	Unit Price	Amount	%	Tot Amount	Tax(Y/N)
R004	Pedestrian Traffic Control	LS	1	\$ 40,000.00	\$40,000.00	1	\$ 10,000.00	\$ 10,000.00	6%	\$ 595.00	N
R033	Inlet Protection	EA	44	\$ 75.00	\$3,300.00	44	\$ 50.00	\$ 2,200.00	1	\$ 50.00	N
R043	Cement Conc. Traffic Curb and Gutter	LF	3,650	\$ 35.00	\$127,750.00	3,650	\$ 22.00	\$ 80,300.00	1,010	\$ 22,220.00	N
R051	Poured Monument	EA	10	\$ 1,000.00	\$10,000.00	10	\$ 750.00	\$ 7,500.00	1	\$ 750.00	N

Total Shared by Quantities Items

\$ 41,110.00

\$ 23,615.00

SCHEDULE D - WATER ITEMS				Engineer Estimate			RL Alia		Water Dept Cost		
Item #	Bid Item Name	Unit	Qty	Unit Price	Amount	Qty	Unit Price	Amount	%	Tot Amount	Tax(Y/N)
W001	Mobilization (1-09.7)	LS	1	\$ 227,000.00	\$ 227,000.00	1	\$200,000.00	\$200,000.00	100.00%	\$200,000.00	Y
W002	Project Temporary Traffic Control (1-10)	LS	1	\$ 96,000.00	\$ 96,000.00	1	\$15,000.00	\$15,000.00	100.00%	\$15,000.00	Y
W003	Removal/Disposal of existing asphalt, concrete sidewalk/curbing & concrete pavement. Includes all thicknesses and combinations (2-02.3(3))	SY	4,644	\$ 10.00	\$ 46,440.00	4,644	\$7.50	\$34,830.00	100.00%	\$34,830.00	Y
W004	Temporary HMA Class ½" PG58H-22, 2-inch minimum depth, installed & removed (5-04 & 9-03.8)	SY	4,644	\$ 25.00	\$ 116,100.00	4,644	\$5.00	\$23,220.00	100.00%	\$23,220.00	Y
W005	HMA CI ½" PG58H-22 pavement for permanent trench patch (5-04 & 9-03.8)-6" in Depth	TN	146	\$ 200.00	\$ 29,200.00	146	\$160.00	\$23,360.00	100.00%	\$23,360.00	Y
W006	Crushed Surfacing Top Course for trench backfill per Section 9-03.9(3) of the 2018 WSDOT Standard Specifications, shoulder restoration, and as directed by the Inspector. (7-09.5 & 9-03.9(3))	TN	8,451	\$ 25.00	\$ 211,275.00	8,451	\$30.00	\$253,530.00	100.00%	\$253,530.00	Y
W007	Crushed Surfacing Top Course for street restoration per Section 9-03.9(3) of the 2018 WSDOT Standard Specifications, shoulder restoration, and as directed by the Inspector. (7-09.5 & 9-03.9(3))	TN	10	\$ 25.00	\$ 250.00	10	\$100.00	\$1,000.00	100.00%	\$1,000.00	Y
W008	Gravel for Pipe Zone Bedding of Polyethylene encased pipe (7-09.3(9))	TN	2,378	\$ 20.00	\$ 47,560.00	2,378	\$30.00	\$71,340.00	100.00%	\$71,340.00	Y
W009	8 mil. V-Bio Enhanced Polyethylene Encasement Installed on various sizes of ductile iron pipe and fittings (7-09.3(17))	LF	8,054	\$ 10.00	\$ 80,540.00	8,054	\$3.00	\$24,162.00	100.00%	\$24,162.00	Y
W010	Storm, Sanitary, Side Sewer Restoration (7-04,7-09.5, 7-17, & 7-18)	EA	43	\$ 750.00	\$ 32,250.00	43	\$1,000.00	\$43,000.00	100.00%	\$43,000.00	Y
W011	Trench Excavation & Disposal (7-09.3(7) & 7-09.5)	CY	7,255	\$ 25.00	\$ 181,375.00	7,255	\$17.00	\$123,335.00	100.00%	\$123,335.00	Y
W012	Trench Shoring (7-09.3(7) & 7-09.5)	LF	7,510	\$ 1.00	\$ 7,510.00	7,510	\$2.50	\$18,775.00	100.00%	\$18,775.00	Y

W013	12-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 & 9-30.1(1))	LF	5,179	\$ 100.00	\$ 517,900.00	5,179	\$110.00	\$569,690.00	100.00%	\$569,690.00	Y
W014	8-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 & 9-30.1(1))	LF	2,281	\$ 60.00	\$ 136,860.00	2,281	\$81.00	\$184,761.00	100.00%	\$184,761.00	Y
W015	6-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 & 9-30.1(1))	LF	406	\$ 40.00	\$ 16,240.00	406	\$75.00	\$30,450.00	100.00%	\$30,450.00	Y
W016	30-inch Steel Flange x Plain end, 2-feet long, installed. (9-30.2) & (9-06.5) Does not include procuring actual water product which will be provided by contracting agency,	EA	2	\$ 10,000.00	\$ 20,000.00	2	\$3,000.00	\$6,000.00	100.00%	\$6,000.00	Y
W017	30-inch Steel Sleeve (Butt Straps), installed. (9-30.2) & (9-06.5) Does not include procuring actual water product which will be provided by contracting agency,	EA	2	\$ 5,000.00	\$ 10,000.00	2	\$3,000.00	\$6,000.00	100.00%	\$6,000.00	Y
W018	30-inch Flange Isolation kit, installed, (7-16) Does not include procuring actual water product which will be provided by contracting agency,	EA	2	\$ 2,500.00	\$ 5,000.00	2	\$3,000.00	\$6,000.00	100.00%	\$6,000.00	Y
W019	30-inch M.J. x Flange adapter, installed. (9-30.2) & (9-06.5) Does not include procuring actual water product which will be provided by contracting agency,	EA	2	\$ 2,500.00	\$ 5,000.00	2	\$3,000.00	\$6,000.00	100.00%	\$6,000.00	Y
W020	12-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))	EA	2	\$ 925.00	\$ 1,850.00	2	\$1,100.00	\$2,200.00	100.00%	\$2,200.00	Y
W021	12-inch x 6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))	EA	7	\$ 625.00	\$ 4,375.00	7	\$900.00	\$6,300.00	100.00%	\$6,300.00	Y
W022	8-inch x 6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))	EA	5	\$ 385.00	\$ 1,925.00	5	\$550.00	\$2,750.00	100.00%	\$2,750.00	Y
W023	30-inch x 16-inch Ductile Iron Reducer, PE x PE, installed, including gaskets (7-05.9 & 9-30.2(1)) Does not include procuring actual water product which will be provided by contracting agency,	EA	2	\$ 1,800.00	\$ 3,600.00	2	\$3,000.00	\$6,000.00	100.00%	\$6,000.00	Y
W024	16-inch x 12-inch Ductile Iron Reducer, LEB, installed, including gaskets (7-05.9 & 9-30.2(1)) Does not include procuring actual water product which will be provided by contracting agency,	EA	2	\$ 1,800.00	\$ 3,600.00	2	\$3,000.00	\$6,000.00	100.00%	\$6,000.00	Y
W025	12-inch x 6-inch Ductile Iron Reducer, 2-B, M.J., w/ anchor, installed (7-05.9 & 9-30.2(1))	EA	5	\$ 400.00	\$ 2,000.00	5	\$500.00	\$2,500.00	100.00%	\$2,500.00	Y
W026	8-inch x 6-inch Ductile Iron Reducer, 2-B, M.J., w/ anchor, installed (7-05.9 & 9-30.2(1))	EA	3	\$ 250.00	\$ 750.00	3	\$400.00	\$1,200.00	100.00%	\$1,200.00	Y
W027	12-inch Ductile Iron Cross, 4-B, M.J., installed (9-30.2(1))	EA	3	\$ 1,700.00	\$ 5,100.00	3	\$1,550.00	\$4,650.00	100.00%	\$4,650.00	Y
W028	12-inch x 8-inch Ductile Iron Cross, 4-B, M.J., installed (9-30.2(1))	EA	3	\$ 1,100.00	\$ 3,300.00	3	\$1,250.00	\$3,750.00	100.00%	\$3,750.00	Y
W029	12-inch x 6-inch Ductile Iron Cross, 4-B, M.J., installed (9-30.2(1))	EA	1	\$ 950.00	\$ 950.00	1	\$1,000.00	\$1,000.00	100.00%	\$1,000.00	Y
W030	12-inch Ductile Iron Ell, M.J., 45°, installed. (7-09, & 9-30.2(1))	EA	28	\$ 550.00	\$ 15,400.00	28	\$700.00	\$19,600.00	100.00%	\$19,600.00	Y
W031	12-inch Ductile Iron Ell, M.J., 22 1/2°, installed. (7-09, & 9-30.2(1))	EA	2	\$ 500.00	\$ 1,000.00	2	\$700.00	\$1,400.00	100.00%	\$1,400.00	Y
W032	12-inch Ductile Iron Ell, M.J., 11 1/4°, installed. (7-09, & 9-30.2(1))	EA	2	\$ 500.00	\$ 1,000.00	2	\$700.00	\$1,400.00	100.00%	\$1,400.00	Y
W033	8-inch Ductile Iron Ell, M.J., 45°, installed. (7-09, & 9-30.2(1))	EA	6	\$ 275.00	\$ 1,650.00	6	\$500.00	\$3,000.00	100.00%	\$3,000.00	Y
W034	6-inch Ductile Iron Ell, M.J., 45°, installed. (7-09, & 9-30.2(1))	EA	6	\$ 225.00	\$ 1,350.00	6	\$450.00	\$2,700.00	100.00%	\$2,700.00	Y

EXHIBIT A-PROJECT BREAKDOWN ESTIMATE

MADISON DISTRICT GREEN INFRASTRUCTURE PROJECT

MRP 2020-33 / ES21-0004F

W035	12-inch Ductile Iron Vertical Ell, M.J., 11 1/4°, installed. (7-09, & 9-30.2(1))	EA	2	\$ 325.00	\$ 650.00	2	\$1,000.00	\$2,000.00	100.00%	\$2,000.00	Y
W036	6-inch Ductile Iron Vertical Ell, M.J., 22 1/2°, installed. (7-09, & 9-30.2(1))	EA	2	\$ 225.00	\$ 450.00	2	\$500.00	\$1,000.00	100.00%	\$1,000.00	Y
W037	12-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, C.I. to D.I., installed (7-09.3(19)A, 7-09.5 & 9-30.2(7))	EA	4	\$ 1,700.00	\$ 6,800.00	4	\$3,500.00	\$14,000.00	100.00%	\$14,000.00	Y
W038	6-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, C.I. to D.I., installed (7-09.3(19)A, 7-09.5 & 9-30.2(7))	EA	13	\$ 800.00	\$ 10,400.00	13	\$3,200.00	\$41,600.00	100.00%	\$41,600.00	Y
W039	12-inch Ductile Iron Cap, M.J., tapped 2", installed and removed (9-30.2(1) & 7-09.5)	EA	12	\$ 325.00	\$ 3,900.00	12	\$300.00	\$3,600.00	100.00%	\$3,600.00	Y
W040	8-inch Ductile Iron Cap, M.J., tapped 2", installed and removed (9-30.2(1) & 7-09.5)	EA	3	\$ 200.00	\$ 600.00	3	\$300.00	\$900.00	100.00%	\$900.00	Y
W041	6-inch Ductile Iron Cap, M.J., tapped 2", installed and removed (9-30.2(1) & 7-09.5)	EA	14	\$ 145.00	\$ 2,030.00	14	\$300.00	\$4,200.00	100.00%	\$4,200.00	Y
W042	12-inch Ductile Iron Plug, M.J., installed and removed (7-09.5 & 9-30.2(1))	EA	2	\$ 200.00	\$ 400.00	2	\$400.00	\$800.00	100.00%	\$800.00	Y
W043	8-inch Ductile Iron Plug, M.J., installed (7-09.5 & 9-30.2(1))	EA	1	\$ 80.00	\$ 80.00	1	\$400.00	\$400.00	100.00%	\$400.00	Y
W044	6-inch Ductile Iron Plug, M.J., installed (7-09.5 & 9-30.2(1))	EA	2	\$ 80.00	\$ 160.00	2	\$400.00	\$800.00	100.00%	\$800.00	Y
W045	Temporary 2-inch Blow-Off Assembly, installed and removed (Dwg. 17-56-1) (7-09.3(22) & 7-09.5)	EA	31	\$ 1,750.00	\$ 54,250.00	31	\$500.00	\$15,500.00	100.00%	\$15,500.00	Y
W046	6-inch Push on Joint Restraining Gasket, installed 9-30.2(6))	EA	3	\$ 250.00	\$ 750.00	3	\$150.00	\$450.00	100.00%	\$450.00	Y
W047	30-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	EA	2	\$ 800.00	\$ 1,600.00	2	\$1,500.00	\$3,000.00	100.00%	\$3,000.00	Y
W048	16-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	EA	2	\$ 350.00	\$ 700.00	2	\$350.00	\$700.00	100.00%	\$700.00	Y
W049	12-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	EA	65	\$ 235.00	\$ 15,275.00	65	\$225.00	\$14,625.00	100.00%	\$14,625.00	Y
W050	8-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	EA	15	\$ 130.00	\$ 1,950.00	15	\$75.00	\$1,125.00	100.00%	\$1,125.00	Y
W051	6-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	EA	90	\$ 115.00	\$ 10,350.00	90	\$50.00	\$4,500.00	100.00%	\$4,500.00	Y
W052	Concrete Thrust Anchor, installed. (7-09.3(21) & 7-09.5)	EA	51	\$ 500.00	\$ 25,500.00	51	\$75.00	\$3,825.00	100.00%	\$3,825.00	Y
W053	Temporary Concrete Thrust Anchor, installed and removed (7-09.3(21) & 7-09.5)	EA	31	\$ 300.00	\$ 9,300.00	31	\$50.00	\$1,550.00	100.00%	\$1,550.00	Y
W054	Excavate,Remove and dispose of existing Air vents, piping, and other appurtenances	LS	1	\$ 10,000.00	\$ 10,000.00	1	\$5,000.00	\$5,000.00	100.00%	\$5,000.00	Y
W055	Excavate, remove and dispose of existing valve chamber, piping, conduits and other appurtenances.	LS	1	\$ 10,000.00	\$ 10,000.00	1	\$5,000.00	\$5,000.00	100.00%	\$5,000.00	Y
W056	Removal, cutting, loading and transport of abandoned 30-inch Steel pipe, all thicknesses (2-02.3) (7-09.3)	LF	2,400	\$ 125.00	\$ 300,000.00	2,400	\$35.00	\$84,000.00	100.00%	\$84,000.00	Y
W057	Parking Slip Markings (8-22)	LS	1	\$ 2,500.00	\$ 2,500.00	1	\$2,500.00	\$2,500.00	100.00%	\$2,500.00	Y
W058	Removal and disposal of abandoned CI pipe, all sizes (7-09.3)	LF	140	\$ 80.00	\$ 11,200.00	140	\$10.00	\$1,400.00	100.00%	\$1,400.00	Y
W059	Trench Compaction Test (as directed by the Inspector) (7-09.3(11) & 7-09.5)	EA	255	\$ 150.00	\$ 38,250.00	255	\$60.00	\$15,300.00	100.00%	\$15,300.00	Y
W060	Test Holes (See Special Provisions). (7-09.3(6) & 7-09.5)	LS	1	\$ 5,000.00	\$ 5,000.00	1	\$7,500.00	\$7,500.00	100.00%	\$7,500.00	Y
W061	12-inch Butterfly valve, M.J., ANSI/AWWA, C504, with C.I. valve box (7-12 & 9-30.3)	EA	27	\$ 2,050.00	\$ 55,350.00	27	\$3,600.00	\$97,200.00	100.00%	\$97,200.00	Y
W062	8-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 & 9.30.3)	EA	7	\$ 1,975.00	\$ 13,825.00	7	\$2,950.00	\$20,650.00	100.00%	\$20,650.00	Y

W063	6-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 & 9.30.3)	EA	13	\$ 1,200.00	\$ 15,600.00	13	\$2,300.00	\$29,900.00	100.00%	\$29,900.00	Y
W064	6-inch Hydrant, M.J., 4.5-ft bury, with 4-inch Tacoma Standard Threads & 5-inch Quick Coupling (7-14 & 9-30.5(2))	EA	2	\$ 4,300.00	\$ 8,600.00	2	\$6,000.00	\$12,000.00	100.00%	\$12,000.00	Y
W065	6-inch Hydrant, M.J., 5.5-ft bury, with 4-inch Tacoma Standard Threads & 5-inch Quick Coupling (7-14 & 9-30.5(2))	EA	1	\$ 4,500.00	\$ 4,500.00	1	\$6,100.00	\$6,100.00	100.00%	\$6,100.00	Y
W066	6-inch Hydrant, M.J., 6.0-ft bury, with 4-inch Tacoma Standard Threads & 5-inch Quick Coupling (7-14 & 9-30.5(2))	EA	7	\$ 4,600.00	\$ 32,200.00	7	\$6,200.00	\$43,400.00	100.00%	\$43,400.00	Y
W067	Street cleaning with Self-propelled Pickup and Vacuum Street Sweeper Equipment. (8-01.3(8))	HR	94	\$ 100.00	\$ 9,400.00	94	\$180.00	\$16,920.00	100.00%	\$16,920.00	Y
W068	Force Account (1-09.6)	FA	1	\$ 80,000.00	\$ 80,000.00	1	\$80,000.00	\$80,000.00	100.00%	\$80,000.00	Y

Water Items-Schedule D Totals

\$ 2,575,920.00

\$2,246,348.00

COST SUMMARY			
Total Shared by Percentage Items			\$ 16,320.00
Total Shared by Quantities Items			\$ 23,615.00
Shared Items Total			\$ 39,935.00
Water Items-Schedule D Totals			\$ 2,246,348.00
Subtotal			\$ 2,286,283.00
3% Admin cost (Minus FA and Tax)			\$ 66,188.49
Total (less Tax)			\$ 2,352,471.49
20% Contingency			\$ 470,494.30

Authorized Amount (less Tax)

\$ 2,822,965.79