



Memo

TO: Public Works Committee
FROM: Ed Andrews, Public Works Director
DATE: June 1, 2018
SUBJECT: Lawndale Ave Engineering

The engineering design and start of a portion of the reconstruction of Lawndale Ave from Walnut Street to Knollcrest Drive was requested to be revisited for this year as a representative project / template for reconstruction for portions of the east end of town.

This project is unique in that it will be one of the first City projects to address full pavement reconstruction and the renewal of underground utilities such as the 4" water main and sanitary sewer. This project would also serve as the template for addressing aging water services and sanitary laterals.

It is also planned to upgrade portions of the storm sewer to include sump collection lines so that any sump pump connections to the sanitary sewer could be redirected appropriately.

Staff has requested that Mohr & Kerr Engineering prepare a proposal for discussion based on similar projects they have performed for the Village of Morton and Dunlap.

Consideration of advancing this proposal to a formal contract is being brought before Public Works Committee for review and updating.

cc: File



City of Washington
Lawndale Concept Estimate of Cost
Mohr & Kerr Engineer & Land Surveying, PC
8/1/2017

Engineer's Estimate				
Item	Unit	Quan.	Unit Price	Total
Earth Excavation	Cu. Yd.	1,562	\$33.00	\$51,546.00
Undercutting Subbase	Cu. Yd.	118	\$34.10	\$4,023.80
Aggregate Base Course CA-6 for Subbase Repair	Ton	242	\$29.70	\$7,187.40
Geotechnical Fabric for Base Repair	Sq. Yd.	236	\$2.75	\$649.00
Furnishing & Placing Top Soil, 4"	Sq. Yd.	2,400	\$8.25	\$19,800.00
Seeding, Cl. 1A	Acre	0.50	\$11,000.00	\$5,500.00
Storm Sewer Structure Protection	Each	22	\$286.00	\$6,292.00
Beaver Dams	Each	3	\$236.50	\$709.50
Stone RipRap, RR-4	Sq. Yd.	40	\$110.00	\$4,400.00
Geotechnical Fabric for Ground Stabilization	Sq. Yd.	4,735	\$2.75	\$13,021.25
Aggregate Base Course, Ty. B, 9"	Sq. Yd.	4,735	\$16.50	\$78,127.50
Bituminous Materials (Prime Coat)	Gallon	1,657	\$4.95	\$8,202.15
Poly. Bituminous Materials (Prime Coat)	Gallon	237	\$6.60	\$1,564.20
Hot-Mix Asphalt Bind. Cse., IL-19.0, N50	Ton	398	\$126.50	\$50,347.00
Poly. Hot-Mix Asphalt Surf. Cse., Mix D, N50	Ton	398	\$132.00	\$52,536.00
P.C.C. Sidewalk, 4"	Sq. Yd.	710	\$71.50	\$50,765.00
P.C.C. Driveway Pavement, 6"	Sq. Yd.	562	\$77.00	\$43,274.00
Comb. Conc. Curb & Gutter, Type M-6.12	Feet	3,014	\$35.20	\$106,092.80
Driveway Pavement Removal	Sq. Yd.	562	\$16.50	\$9,273.00
Combination Curb & Gutter Removal	Feet	3,014	\$10.45	\$31,496.30
Connect to Existing Water Main	Each	5	\$700.00	\$3,500.00
8" Ductile Iron, Water Main (Fittings Incidental)	Feet	1,718	\$40.00	\$68,720.00
Fire Hydrant w/ 6" Gate Valve and Valve Box	Each	3	\$5,000.00	\$15,000.00
Fire Hydrant Removal	Each	3	\$600.00	\$1,800.00
Gate Valve and Valve Box	Each	6	\$1,000.00	\$6,000.00
Corporation Stop, 1 1/2" and Box	Each	31	\$125.00	\$3,875.00
Water Service, 1 1/2"	Feet	823	\$12.00	\$9,876.00
Trench Backfill (Storm)	Cu. Yd.	1,200	\$55.00	\$66,000.00
Storm Sewer Removal	Feet	1,146	\$49.50	\$56,727.00
Storm Sewers, Cl. A, Type 2, RCP, 12"	Feet	645	\$88.00	\$56,760.00
Storm Sewers, Cl. A, Type 2, RCP, 18"	Feet	1,000	\$100.00	\$100,000.00
Inlet Manhole, 4' Dia., Type G-1	Each	4	\$4,180.00	\$16,720.00
MH to be Adjusted w/ New Ty. 1 Fr. & Gr., C.L.	Each	3	\$1,650.00	\$4,950.00
Inlet, Type G-1	Each	18	\$3,960.00	\$71,280.00
P.R.C.F.E.S., 18"	Each	1	\$880.00	\$880.00
Removing End Sections	Each	2	\$400.00	\$800.00
Removing Inlets	Each	9	\$495.00	\$4,455.00
Removing Manholes	Each	9	\$1,210.00	\$10,890.00
Sump Drains, PVC, SDR 26	Feet	822	\$15.00	\$12,330.00
Trench Backfill (Sanitary)	Cu. Yd.	0	\$66.00	\$0.00
San. Manholes, 4' Dia., Ty. 1 Fr., C.L.	Each	7	\$4,125.00	\$28,875.00
Sanitary Sewer, PVC, SDR 26, 6"	Feet	748	\$99.00	\$74,052.00
Sanitary Sewer, PVC, SDR 26, 8"	Feet	979	\$95.70	\$93,690.30
Sanitary Sewer Tees, 8" x 8" x 6"	Each	31	\$275.00	\$8,525.00
Sanitary Sewer Cleanouts	Each	31	\$682.00	\$21,142.00
Traffic Control & Protection	L. Sum	1	\$9,350.00	\$9,350.00
Subtotal				\$1,291,004.20
15% Design Contingency				\$193,650.63
Total				\$1,484,654.83

Scope Item		Professional Engineer			Professional Land Surveyor			Senior Design Engineer			Engineering Technician			1 Man Survey Crew			Senior Construction Inspector			Total
		Hours	Rate	Total	Hours	Rate	Total	Hours	Rate	Total	Hours	Rate	Total	Hours	Rate	Total	Hours	Rate	Total	
2.5 Post Office Coordination		6	\$112.00	\$672.00		\$112.00	\$0.00		\$101.00	\$0.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$572.00
2.6 Permits		12	\$112.00	\$1,344.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$1,748.00
2.7 Survey		40	\$112.00	\$4,480.00	40	\$112.00	\$4,480.00		\$101.00	\$0.00		\$69.00	\$0.00		\$118.00	\$7,080.00		\$76.00	\$0.00	\$11,580.00
2.8 Project Schedule		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$0.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$448.00
2.9 Submittals		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$0.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$448.00
3.1 Project Development Report		40	\$112.00	\$4,480.00		\$112.00	\$0.00		\$101.00	\$2,020.00		\$69.00	\$0.00	6	\$118.00	\$0.00		\$76.00	\$0.00	\$862.00
3.2 Specifications Preparation		24	\$112.00	\$2,688.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$6,500.00
3.3 Electronic Delivery		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$3,092.00
4.1 Cover Sheet		2	\$112.00	\$224.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$404.00
4.2 Schedule of Quantities		16	\$112.00	\$1,792.00		\$112.00	\$0.00		\$101.00	\$2,424.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$628.00
4.2 Typical Sections		2	\$112.00	\$224.00		\$112.00	\$0.00		\$101.00	\$808.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$4,216.00
4.4 General Notes		2	\$112.00	\$224.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$1,032.00
4.5 Summary of Quantities		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$852.00
4.6 Plan & Profiles		16	\$112.00	\$1,792.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00	12	\$118.00	\$0.00		\$76.00	\$0.00	\$1,680.00
4.7 Intersection Ramp Layouts		8	\$112.00	\$896.00		\$112.00	\$0.00		\$101.00	\$5,456.00		\$69.00	\$0.00	20	\$118.00	\$0.00		\$76.00	\$0.00	\$8,626.00
4.8 Misc Details		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$1,616.00		\$69.00	\$0.00	8	\$118.00	\$0.00		\$76.00	\$0.00	\$3,064.00
4.9 Highway Standards		2	\$112.00	\$224.00		\$112.00	\$0.00		\$101.00	\$1,212.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$1,660.00
4.10 Cross Sections		16	\$112.00	\$1,792.00		\$112.00	\$0.00		\$101.00	\$3,232.00		\$69.00	\$0.00	6	\$118.00	\$0.00		\$76.00	\$0.00	\$5,438.00
4.11 Traffic Control Plans		6	\$112.00	\$672.00		\$112.00	\$0.00		\$101.00	\$3,232.00		\$69.00	\$0.00	6	\$118.00	\$0.00		\$76.00	\$0.00	\$2,712.00
4.12 Utility Adjustment Plans		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$1,212.00		\$69.00	\$0.00	12	\$118.00	\$0.00		\$76.00	\$0.00	\$404.00
4.13 Erosion Control Plan/SWPPP		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$404.00		\$69.00	\$0.00		\$118.00	\$0.00		\$76.00	\$0.00	\$1,660.00
5.1 Drainage Analysis		4	\$112.00	\$448.00		\$112.00	\$0.00		\$101.00	\$1,212.										