

City of Royal Oak

5th Avenue Improvements

60% Design Estimate of Probable Costs

Lafayette Avenue to S. Center Street



Project: 858380
Date: 10/18/2024
By: RWS/ DJD

Lafayette Avenue Intersection Improvements Total:	\$ 410,000
West of Washington ROW to Lafayette Avenue Total:	\$ 527,000
West of Washington ROW to Lafayette Avenue - Utility Items Total:	\$ 118,000
Washington Street Intersection Total:	\$ 608,000
East of Washington ROW to S Center St. - Total:	\$ 1,111,000
East of Washington ROW to S Center St. - Utilities Total:	\$ 207,000
S Center Street Intersection Total:	\$ 396,000
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Total All Areas:	\$ 3,377,000

City of Royal Oak

5th Avenue Improvements

60% Design Estimate of Probable Costs

Lafayette Avenue Intersection



Project: 858380
Date: 11.05.24
By: RWS/DJD

Item No.	Item Description	Unit	Est. Qty.	Engineer's Estimate	
				Unit Price	Amount
1	Mobilization, Bonds & Insurance - Included in cost of units	-	-	-	-
2	Traffic Control	LSum	1	\$20,000	\$20,000
3	Electric Utility Cash Allowance	Dollar	1	\$10,000.00	\$10,000
4	Inlet Protection, Fabric Drop	Each	4	\$500	\$2,000
5	Remove Concrete Curb & Gutter	Lft	250	\$6.00	\$1,500
6	Remove Concrete Sidewalk	Sft	635	\$2.00	\$1,270
7	Remove Existing HMA	Syd	400	\$9.00	\$3,600
8	Miscellaneous removals	LSum	1	\$5,000	\$5,000
9	Site Preparation & Grading	LSum	1	\$25,000	\$25,000
10	8" Aggregate Base, 22A	Syd	1,800	\$15.00	\$27,000
11	Concrete Pavement Bands, 18 inch Wide	Ft	300	\$30.00	\$9,000
12	Concrete Sidewalk Ramp, ADA, 6 inch	Sft	500	\$9.00	\$4,500
13	Concrete Pavement, 8 inch w/ Integral Color, Tan	Sft	2,500	\$20.00	\$50,000
14	Concrete Pavement, 8 inch w/ Integral Color, White	Sft	260	\$14.00	\$3,640
15	Concrete Sidewalk, 6 inch w/ Integral Color, Tan	Sft	425	\$20.00	\$8,500
16	Concrete Sidewalk, 6 inch w/ Integral Color, White	Sft	220	\$14.00	\$3,080
17	HMA Hand Patch, 13A	Ton	100	\$200.00	\$20,000
18	Concrete Curb & Gutter (MDOT F4)	Lft	800	\$30.00	\$24,000
19	4' Dia Catch Basin w/Casting	Ea	4	\$4,000.00	\$16,000
20	Adjust Dr. Structure Casting	Ea	4	\$500.00	\$2,000
21	Connect to Existing Drainage Structure	Ea	2	\$600.00	\$1,200
22	Storm Sewer 12 inch Dia.	Lft	200	\$75.00	\$15,000
23	Detectable Warning Plates	Lft	50	\$100.00	\$5,000
24	LandscapeForms Ring Lights w/ pole	Ea	4	\$10,000	\$40,000
25	Electric convenience outlet	Ea	4	\$1,200	\$4,800
26	Site Electrical Distribution	LSum	1	\$20,000	\$20,000
27	Landscaping Allowance	LSum	1	\$20,000	\$20,000

Subtotal: \$ **342,000**
Contingency 20%: \$ 68,000

Lafayette Avenue Intersection Improvements Total: \$ 410,000

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City of Royal Oak

5th Avenue Improvements

60% Design Estimate of Probable Costs

West of Washington ROW to Lafayette Avenue



Project: 858380
 Date: 11.05.24
 By: RWS/DJD

Item No.	Item Description	Unit	Est. Qty.	Engineer's Estimate	
				Unit Price	Amount
1	Mobilization, Bonds & Insurance - Included in cost of units	-	-	-	-
2	Traffic Control	LSum	1	\$10,000	\$10,000
3	Electric Utility Cash Allowance	Dollar	1	\$20,000.00	\$20,000
4	Inlet Protection, Fabric Drop	Each	2	\$500	\$1,000
5	Remove Concrete Curb & Gutter	Lft	130	\$6.00	\$780
5	Remove Concrete Sidewalk	Sft	4,000	\$2.00	\$8,000
6	Remove Brick Pavers	Sft	1,000	\$4.00	\$4,000
7	Remove Existing HMA	Syd	400	\$9.00	\$3,600
8	Tree Removal	LSum	1	\$5,000	\$5,000
9	Miscellaneous removals	LSum	1	\$5,000	\$5,000
10	Site Preparation & Grading	LSum	1	\$30,000	\$30,000
11	8" Aggregate Base, 22A	Syd	800	\$15.00	\$12,000
12	Concrete Pavement Bands, 18 inch Wide	Ft	300	\$30.00	\$9,000
13	Concrete Sidewalk Ramp, ADA, 6 inch	Sft	500	\$9.00	\$4,500
14	Concrete Sidewalk, 6 inch w/ Integral Color, Tan	Sft	2,800	\$20.00	\$56,000
15	Concrete Sidewalk, 6 inch w/ Integral Color, White	Sft	2,200	\$14.00	\$30,800
16	Grass Areas /Sod	Sft	700	\$4.00	\$2,800
17	6" Crushed Limestone - Under sod for drainage	Sft	700	\$3.00	\$2,100
18	Geotextile Fabric	Sft	700	\$4.00	\$2,800
19	HMA Hand Patch, 13A	Ton	20	\$200.00	\$4,000
20	Concrete Curb & Gutter (MDOT F4)	Lft	108	\$30.00	\$3,240
21	Concrete Planter Curb	Lft	150	\$40.00	\$6,000
22	Concrete Seat Wall	Lft	120	\$300.00	\$36,000
23	Catch Basin Casting	Ea	2	\$800.00	\$1,600
24	Adjust Dr. Structure Casting	Ea	2	\$500.00	\$1,000
25	Nyoplast Drainage Basin, 12" Diameter w/ Casting	Ea	3	\$1,000	\$3,000
26	Nyoplast Drainage Basin, 18" Diameter w/ Casting	Ea	2	\$1,200	\$2,400
27	Connect to Existing Drainage Structure	Ea	3	\$600.00	\$1,800
28	6 inch Dia. SDR 35 PVC Pipe Drain Pipe	Lft	250	\$30.00	\$7,500
29	6 inch Dia. Perforated Underdrain w/ Sock	Lft	200	\$10.00	\$2,000
30	Site Electrical Distribution	LSum	1	\$20,000	\$20,000
31	Landscapeforms Ring Light	Ea	5	\$10,000	\$50,000
32	Electric convenience outlet	Ea	5	\$1,200	\$6,000
33	Festoon Light Pole w/ Support Wire	LSum	1	\$30,000	\$30,000
34	Bollard	Ea	5	\$1,200	\$6,000
35	Irrigation	LSum	1	\$20,000	\$20,000
36	Perennial Landscaping	LSum	1	\$25,000	\$25,000
37	Shade Tree, 4" Cal.	Ea	4	\$900	\$3,600
38	Slope Restoration	Syd	200	\$5.00	\$1,000
39	Sign, Type IIIB	Sft	40	\$25	\$1,000
40	Sign Post	Ea	2	\$250	\$500

Subtotal: \$ 439,000

Contingency 20%: \$ 88,000

West of Washington ROW to Lafayette Avenue Total: \$ 527,000

Utility Items - Per Engineering Dept.

A	8" Watermain	Ft	320	\$260	\$83,200
B	Curb Stop Box	Ea	4	\$600	\$2,400
C	1 1/2" or 2" Corp Stop Valve	Ea	0	\$2,000	\$0
D	1 1/2" to 2" Water service	Ft	0	\$100	\$0
E	Fire Hydrant Upgrade	Ea	0	\$12,000	\$0

\$85,600

Contingency 20%: \$ 17,000

Subtotal: \$ 102,600

Design & Construction Engineering: \$ 15,000

Utility Items Total: \$ 118,000

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City of Royal Oak

5th Avenue Improvements

60% Design Estimate of Probable Costs

Washington Street Intersection



Project: 858380

Date: 11.05.24

By: RWS/DJD

Item No.	Item Description	Unit	Est. Qty.	Engineer's Estimate	
				Unit Price	Amount
1	Mobilization, Bonds & Insurance - Included in cost of untis	-	-	-	-
2	Traffic Control	LSum	1	\$25,000	\$25,000
3	Electric Utility Cash Allowance	Dollar	1	\$10,000.00	\$10,000
4	Inlet Protection, Fabric Drop	Each	1	\$500	\$500
5	Silt Fence	Lft	0	\$2.00	\$0
6	Remove Concrete Curb & Gutter	Lft	500	\$6.00	\$3,000
7	Remove Concrete Sidewalk	Sft	2,500	\$2.00	\$5,000
8	Remove Existing Brick Pavers	Sft	3,300	\$4.00	\$13,200
9	Remove Existing HMA	Syd	1,500	\$5.00	\$7,500
10	Tree Removal	LSum	1	\$10,000	\$10,000
11	Miscellaneous removals	LSum	1	\$10,000	\$10,000
12	Site Preparation & Grading	LSum	1	\$25,000	\$25,000
13	8" Aggregate Base, 22A	Syd	1,800	\$15.00	\$27,000
14	Concrete Pavement Bands, 18 inch Wide	Ft	700	\$30.00	\$21,000
15	Concrete Sidewalk Ramp, ADA, 6 inch	Sft	1,000	\$9.00	\$9,000
16	Concrete Pavement, 8 inch w/ Integral Color, Tan	Sft	1,100	\$20.00	\$22,000
17	Concrete Pavement, 8 inch w/ Integral Color, White	Sft	2,100	\$14.00	\$29,400
18	Concrete Sidewalk, 6 inch w/ Integral Color, Tan	Sft	2,400	\$20.00	\$48,000
19	Concrete Sidewalk, 6 inch w/ Integral Color, White	Sft	1,500	\$14.00	\$21,000
20	HMA Hand Patch, 13A	Ton	100	\$175.00	\$17,500
21	Concrete Curb & Gutter (MDOT F4)	Lft	600	\$30.00	\$18,000
22	Concrete Planter Curb	Lft	275	\$40.00	\$11,000
23	Detectable Warning Plates	Lft	60	\$100.00	\$6,000
24	4' Dia Catch Basin w/Casting	Ea	4	\$4,000.00	\$16,000
25	Adjust Dr. Structure Casting	Ea	4	\$500.00	\$2,000
26	Connect to Existing Drainage Structure	Ea	4	\$600.00	\$2,400
27	Storm Sewer 12 inch Dia.	Lft	200	\$75.00	\$15,000
28	Site Electrical Distribution	LSum	1	\$15,000	\$15,000
29	Landscapeforms Ring Light	Ea	6	\$10,000	\$60,000
30	Electric convenience outlet	Ea	4	\$1,200	\$4,800
31	Bollard	Ea	10	\$1,200	\$12,000
32	Irrigation	LSum	1	\$10,000	\$10,000
33	Landscaping	LSum	1	\$25,000	\$25,000
34	Shade Tree, 4" Cal.	Ea	4	\$900	\$3,600
35	Sign, Type IIIB	Sft	60	\$25	\$1,500
36	Sign Post	Ea	4	\$250	\$1,000

Subtotal: \$ **507,000**

Contingency 20%: \$ 101,000

Washington Street Intersection Total: \$ 608,000

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City of Royal Oak

5th Avenue Improvements

60% Design Estimate of Probable Costs

East of Washington ROW to S Center St.



Project: 858380

Date: 11.05.24

By: RWS/DJD

Item No.	Item Description	Unit	Est. Qty.	Engineer's Estimate	
				Unit Price	Amount
1	Mobilization, Bonds & Insurance - Included in cost of untis	-	-	-	-
2	Traffic Control	LSum	1	\$10,000	\$10,000
3	Electric Utility Cash Allowance	Dollar	1	\$30,000.00	\$30,000
4	Inlet Protection, Fabric Drop	Each	4	\$500	\$2,000
5	Silt Fence	Lft	0	\$2.00	\$0
6	Remove Concrete Curb & Gutter	Lft	1,650	\$6.00	\$9,900
7	Remove Concrete Sidewalk	Sft	17,000	\$2.00	\$34,000
8	Remove Existing HMA	Syd	4,100	\$5.00	\$20,500
9	Tree Removal	LSum	1	\$10,000	\$10,000
10	Miscellaneous removals	LSum	1	\$10,000	\$10,000
11	Site Preparation & Grading	LSum	1	\$60,000	\$60,000
12	8" Aggregate Base, 22A	Syd	2,000	\$15.00	\$30,000
13	Boardwalk Surfacing	Sft	4,300	\$50.00	\$215,000
14	Concrete Pavement Bands, 18 inch Wide	Ft	700	\$30.00	\$21,000
15	Concrete Sidewalk Ramp, ADA, 6 inch	Sft	1,000	\$9.00	\$9,000
16	Concrete Pavement, 8 inch w/ Integral Color, Tan	Sft	3,750	\$12.00	\$45,000
17	Concrete Pavement, 8 inch w/ Integral Color, White	Sft	3,200	\$10.00	\$32,000
18	Grass Areas/Sod	Sft	5,200	\$4.00	\$20,800
19	6" Crushed Limestone - Under Lawn Areas for drainage	Sft	5,200	\$3.00	\$15,600
20	Geotextile Fabric	Sft	5,200	\$4.00	\$20,800
21	Detectable Warning Plates	Lft	50	\$75.00	\$3,750
22	4' dia. Catch Basin w/Casting	Ea	2	\$4,000.00	\$8,000
23	Adjust Dr. Structure Casting	Ea	4	\$500.00	\$2,000
24	Nyoplast Drainage Basin, 12" Diameter w/ Casting	Ea	2	\$1,000	\$2,000
25	Nyoplast Drainage Basin, 18" Diameter w/ Casting	Ea	2	\$1,200	\$2,400
26	Connect to Existing Drainage Structure	Ea	2	\$600.00	\$1,200
27	Storm Sewer, 12 inch Dia.	Lft	300	\$75.00	\$22,500
28	6 inch Dia. Perforated Underdrain w/ Sock	Lft	500	\$20.00	\$10,000
29	Site Electrical Distribution	LSum	1	\$40,000	\$40,000
30	LandscapeForms Ring Light w/ Pole	Ea	12	\$10,000	\$120,000
31	Electric convenience outlet	Ea	12	\$1,200	\$14,400
32	Festoon Light Allowance	LSum	1	\$40,000	\$40,000
33	Bicycle Loops	Ea	9	\$1,200	\$10,800
34	Bollard	Ea	10	\$1,200	\$12,000
35	Irrigation	LSum	1	\$20,000	\$20,000
36	Landscaping	LSum	1	\$10,000	\$10,000
37	Shade Tree, 4" Cal.	Ea	5	\$1,200	\$6,000
38	Slope Restoration	Syd	600	\$5.00	\$3,000
39	Sign, Type IIIB	Sft	60	\$25	\$1,500
40	Sign Post	Ea	4	\$250	\$1,000

Subtotal \$ **926,000**

Contingency 20%: \$ 185,000

East of Washington ROW to S Center St. - Total \$ 1,111,000

Utility Items - Per Engineering Dept.

A	8" Watermain	Ft	350	\$260	\$91,000
B	Curb Stop Box	Ea	2	\$600	\$1,200
C	1 1/2" or 2" Corp Stop Valve	Ea	2	\$2,000	\$4,000
D	1 1/2" to 2" Water service	Ft	100	\$100	\$10,000
E	Fire Hydrant Upgrade	Ea	2	\$12,000	\$24,000

\$130,200

Contingency 20%: \$ 26,000

Subtotal: \$ 180,200

Design & Construction Engineering: \$ 27,000

East of Washington ROW to S Center St. - Utilities Total: \$ 207,000

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City of Royal Oak

5th Avenue Improvements

60% Design Estimate of Probable Costs

S Center Street Intersection



Project: 858380

Date: 11.05.24

By: RWS/DJD

Item No.	Item Description	Unit	Est. Qty.	Engineer's Estimate	
				Unit Price	Amount
1	Mobilization, Bonds & Insurance - Included in cost of untis	-	-	-	-
2	Traffic Control	LSum	1	\$20,000	\$20,000
3	Electric Utility Cash Allowance	Dollar	1	\$10,000.00	\$10,000
4	Inlet Protection, Fabric Drop	Each	4	\$500	\$2,000
5	Remove Concrete Curb & Gutter	Lft	250	\$6.00	\$1,500
6	Remove Concrete Sidewalk	Sft	1,200	\$2.00	\$2,400
7	Remove Existing HMA	Syd	400	\$5.00	\$2,000
8	Miscellaneous removals	LSum	1	\$10,000	\$10,000
9	Site Preparation & Grading	LSum	1	\$25,000	\$25,000
10	8" Aggregate Base, 22A	Syd	1,800	\$15.00	\$27,000
11	Concrete Pavement Bands, 18 inch Wide	Ft	700	\$30.00	\$21,000
12	Concrete Sidewalk Ramp, ADA, 6 inch	Sft	1,000	\$9.00	\$9,000
13	Concrete Pavement, 8 inch w/ Integral Color, Tan	Sft	500	\$20.00	\$10,000
14	Concrete Pavement, 8 inch w/ Integral Color, White	Sft	1,400	\$14.00	\$19,600
15	HMA Hand Patch, 13A	Ton	100	\$200.00	\$20,000
16	Concrete Curb & Gutter (MDOT F4)	Lft	1,700	\$30.00	\$51,000
17	Storm Sewer, 12 inch Dia.	Lft	150	\$75.00	\$11,250
18	Detectable Warning Plates	Lft	50	\$100.00	\$5,000
19	4' Dia. Catch Basin W/Casting	Ea	4	\$4,000.00	\$16,000
20	Adjust Dr. Structure Casting	Ea	4	\$500.00	\$2,000
21	Connect to Existing Drainage Structure	Ea	2	\$600.00	\$1,200
22	Site Electrical Distribution	LSum	1	\$15,000	\$15,000
23	Landscapeforms Ring Light	Ea	3	\$10,000	\$30,000
24	Electric convenience outlet	Ea	3	\$1,200	\$3,600
25	Irrigation	LSum	1	\$5,000	\$5,000
26	Landscaping	LSum	1	\$5,000	\$5,000
27	Shade Tree, 2 1/2" Cal.	Ea	4	\$500	\$2,000
28	Slope Restoration	Syd	100	\$9.00	\$900
29	Sign, Type IIIB	Sft	60	\$25	\$1,500
30	Sign Post	Ea	4	\$250	\$1,000

Subtotal: \$ **330,000**

Contingency 20%: \$ **66,000**

S Center Street Intersection Total: \$ 396,000

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