

ENGINEER'S REPORT

The undersigned is the engineer for the City of West Fargo, Cass County, North Dakota, and submits the following report to the Board of City Commissioners of said city:

The purpose of the improvements is to install new City infrastructure for Wilds 9th Addition development as petitioned by Westport Investments, LLC. The infrastructure installed will meet regional infrastructure needs which include a sanitary sewer lift station, storm water retention ponds, and extending 9th Street West approximately 2,250' including sanitary sewer, water main, storm sewer, concrete streets with curb and gutter, street lights, multi-use path and trees. The infrastructure installed for the development include sanitary sewer, water main, storm sewer, asphalt streets with curb and gutter, street lights, and side yard sidewalks.

Sewer, Water, Storm and Street Improvement District No. 1305 will involve the construction of improvements consisting of sanitary sewer, water mains, storm sewer, asphalt streets, concrete streets, curb and gutter, street lights, sidewalks, multi-use paths, storm water retention ponds, sanitary lift station with siren and other miscellaneous installations.

Based upon the estimate of the probable cost, attached hereto and made a part thereof, and the engineering information and studies, the work proposed in said district is feasible.

Dated this 19th day of June, 2017.

Dustin Scott
Moore Engineering, Inc.
West Fargo ND



Engineer for the City of West Fargo, ND

**SEWER, WATER, STORM AND STREET IMPROVEMENT DIST. NO. 1305
THE WILDS 9TH ADDITION & SANITARY LIFT STATION (SA 46)
WEST FARGO ND**

Engineer's Opinion of Probable Cost

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
<u>Sanitary Sewer Items</u>				
1. Sanitary Sewer - Remove	LF	20	\$25.00	\$500.00
2. Sanitary Sewer - Connect To Existing	Each	1	\$1,000.00	\$1,000.00
3. Sanitary Sewer - 8" PVC SDR 35	LF	4,900	\$32.00	\$156,800.00
4. Sanitary Sewer - 10" PVC SDR 26	LF	2,150	\$80.00	\$172,000.00
5. Sanitary Sewer Manhole	Each	35	\$45.00	\$1,575.00
6. Sanitary Sewer Manhole - Remove	Each	1	\$1,000.00	\$1,000.00
7. External Manhole Chimney Seal	Each	35	\$250.00	\$8,750.00
8. Sanitary Sewer Cleanout	Each	5	\$500.00	\$2,500.00
9. Sanitary Sewer Service Connection - 6" PVC SDR 26	Each	141	\$175.00	\$24,675.00
10. Sanitary Sewer Service - 6" PVC SDR 26	LF	8,600	\$16.00	\$137,600.00
11. Televising - Sanitary Sewer Main	LF	7,050	\$1.00	\$7,050.00
12. Televising - Sanitary Sewer Service	Each	141	\$50.00	\$7,050.00
13. Sanitary Sewer Lift Station	LSum	1	\$200,000.00	\$200,000.00
<u>Water Main Items</u>				
1. Water Main - Connect To Existing	Each	1	\$500.00	\$500.00
2. Water Main - 8" PVC C900	LF	4,900	\$22.00	\$107,800.00
3. Water Main - 12" PVC C900	LF	2,150	\$38.00	\$81,700.00
4. Specials	Lbs	7,000	\$3.50	\$24,500.00
5. Gate Valve & Box - 6"	Each	10	\$1,000.00	\$10,000.00
6. Gate Valve & Box - 8"	Each	15	\$1,350.00	\$20,250.00
7. Gate Valve & Box - 12"	Each	5	\$3,000.00	\$15,000.00
8. Hydrant - 10'	Each	10	\$4,000.00	\$40,000.00
9. Hydrant Lead - 6" PVC C900	LF	75	\$17.50	\$1,312.50
10. Corporation - 1"	Each	141	\$200.00	\$28,200.00
11. Curb Stop & Box - 1"	Each	141	\$300.00	\$42,300.00
12. Water Service Line - 1"	LF	8,600	\$13.00	\$111,800.00
<u>Storm Sewer Items</u>				
1. Storm Sewer - 4" Perforated PVC - Connect To Existing	Each	2	\$20.00	\$40.00
2. Storm Sewer - 4" Perforated PVC	LF	16,300	\$3.00	\$48,900.00
3. Storm Sewer - Connect To Existing	Each	1	\$500.00	\$500.00
4. Storm Sewer - 12" PP	LF	1,415	\$22.00	\$31,130.00
5. Storm Sewer - 15" RCP	LF	2,700	\$31.00	\$83,700.00
6. Storm Sewer - 18" RCP	LF	850	\$34.00	\$28,900.00
7. Storm Sewer - 21" RCP	LF	600	\$38.00	\$22,800.00
8. Storm Sewer - 24" RCP	LF	325	\$41.50	\$13,487.50
9. Storm Sewer - 27" RCP	LF	160	\$52.00	\$8,320.00
10. Storm Sewer - 30" RCP	LF	165	\$60.00	\$9,900.00
11. Storm Sewer - 36" RCP	LF	300	\$75.00	\$22,500.00
12. Storm Sewer - 42" RCP	LF	600	\$100.00	\$60,000.00
13. Storm Sewer - 48" RCP	LF	400	\$125.00	\$50,000.00
14. Storm Sewer - 60" RCP	LF	1,900	\$165.00	\$313,500.00
15. Storm Sewer Plug	Each	4	\$100.00	\$400.00
16. Storm Sewer Manhole - 48"	Each	15	\$2,500.00	\$37,500.00
17. Storm Sewer Manhole - 60"	Each	10	\$3,500.00	\$35,000.00
18. Storm Sewer Manhole - 72"	Each	5	\$5,000.00	\$25,000.00
19. Storm Sewer Manhole - 84"	Each	5	\$6,500.00	\$32,500.00
20. Storm Sewer Manhole - 96"	Each	4	\$8,000.00	\$32,000.00
21. Storm Sewer Manhole - 108"	Each	2	\$10,000.00	\$20,000.00
22. Storm Sewer Manhole - 120"	Each	2	\$12,500.00	\$25,000.00
23. Storm Sewer Control Structure	Each	2	\$15,000.00	\$30,000.00
24. Storm Sewer Catch Basin - 2' x 3'	Each	50	\$1,750.00	\$87,500.00

25.	Storm Sewer Catch Basin - 30"	Each	10	\$1,200.00	\$12,000.00
26.	External Manhole Chimney Seal	Each	100	\$250.00	\$25,000.00
27.	Temporary Pumping	LSum	1	\$1,000.00	\$1,000.00
28.	Culvert - 24" CMP	LF	50	\$35.00	\$1,750.00
29.	End Section - 24" CMP Flared	Each	2	\$600.00	\$1,200.00
30.	End Section - 60" RCP Flared	Each	6	\$2,000.00	\$12,000.00

Roadway Items

1.	Excavation - Unclassified	CY	7,500	\$5.00	\$37,500.00
2.	Embankment	CY	7,500	\$2.00	\$15,000.00
3.	Subgrade Preparation	SY	27,900	\$1.50	\$41,850.00
4.	Reinforcement Fabric	SY	27,900	\$1.60	\$44,640.00
5.	Gravel - 9" NDDOT Class 5	CY	7,450	\$27.50	\$204,875.00
6.	Curb & Gutter - Saw Full Depth	LF	5	\$5.00	\$25.00
7.	Curb & Gutter - Connect To Existing	Each	2	\$50.00	\$100.00
8.	Curb & Gutter	LF	20,300	\$14.00	\$284,200.00
9.	Asphalt Base Course - 3.5"	SY	13,115	\$12.00	\$157,380.00
10.	Tack Coat	Gal	655	\$1.75	\$1,146.25
11.	Asphalt Wear Course - 2"	SY	13,115	\$7.50	\$98,362.50
12.	Concrete Pavement - Saw Full Depth	LF	50	\$5.00	\$250.00
13.	Concrete Pavement - Connect To Existing	Each	1	\$1,000.00	\$1,000.00
14.	Concrete Pavement - 8" Non-Reinforced	SY	7,500	\$50.00	\$375,000.00
15.	Sidewalk - Saw Full Depth	LF	5	\$5.00	\$25.00
16.	Sidewalk - Connect To Existing	Each	1	\$100.00	\$100.00
17.	Sidewalk - 4" Concrete	SY	610	\$35.00	\$21,350.00
18.	Sidewalk - 6" Concrete	SY	1,375	\$36.00	\$49,500.00
19.	Multi-Use Path - Saw Full Depth	LF	10	\$5.00	\$50.00
20.	Multi-Use Path - Connect To Existing	Each	1	\$100.00	\$100.00
21.	Multi-Use Path - 5" Concrete	SY	5,600	\$36.00	\$201,600.00
22.	Curb Ramp - 6" Concrete	SY	125	\$45.00	\$5,625.00
23.	Detectable Warning Panel	SF	325	\$40.00	\$13,000.00
24.	Decorative Colored Concrete - Median	SY	1,100	\$75.00	\$82,500.00
25.	Median Nose Apron - Concrete	SY	40	\$75.00	\$3,000.00
26.	Driveway - 7" Concrete	SY	70	\$50.00	\$3,500.00
27.	Driveway - 8" Concrete	SY	170	\$55.00	\$9,350.00
28.	Signing	LSum	1	\$35,000.00	\$35,000.00
29.	Striping	LSum	1	\$50,000.00	\$50,000.00
30.	Flexible Delineator	Each	7	\$100.00	\$700.00
31.	Cluster Box Unit - 8 Unit	Each	13	\$1,400.00	\$18,200.00
32.	Cluster Box Unit - 12 Unit	Each	4	\$1,500.00	\$6,000.00
33.	Spare Cluster Box Unit - 8 Unit	Each	1	\$1,300.00	\$1,300.00
34.	Spare Cluster Box Unit - 12 Unit	Each	1	\$1,400.00	\$1,400.00

Pond Items

1.	Excavation - Pond - On Site	CY	210,000	\$1.50	\$315,000.00
2.	Air Bubbler System	Each	1	\$100,000.00	\$100,000.00
3.	Riprap & Fabric - 18" Class III	CY	200	\$100.00	\$20,000.00

General Items

1.	Cleaning	LSum	1	\$1,000.00	\$1,000.00
2.	Storm Water Management	LSum	1	\$1,000.00	\$1,000.00
3.	Traffic Control	LSum	1	\$1,000.00	\$1,000.00
4.	Mowing	Acre	20	\$45.00	\$900.00
5.	Watering	Each	6	\$250.00	\$1,500.00
6.	Excavation - 6" Topsoil Stripping	CY	47,000	\$1.50	\$70,500.00
7.	Topsoil Replacement - 4"	CY	5,200	\$5.00	\$26,000.00
8.	Rear Yard Grading	SY	5,500	\$2.00	\$11,000.00
9.	Inlet Protection Device	Each	60	\$100.00	\$6,000.00
10.	Sedimentation Control Wattle - 9"	LF	1,500	\$2.75	\$4,125.00
11.	Sedimentation Control Fence	LF	1,500	\$2.00	\$3,000.00
12.	Stabilized Construction Entrance	Each	1	\$1,000.00	\$1,000.00
13.	Seeding - Type II	Acre	20	\$6.00	\$120.00
14.	Mulch - Type B - Hydromulch	Acre	6	\$1,500.00	\$9,000.00
15.	Mulch - Type A - Permanent Straw	Acre	45	\$300.00	\$13,500.00

16.	Mulch - Type A - Temporary Straw	Acre	65	\$300.00	\$19,500.00
17.	Tree - Small Deciduous	Each	34	\$300.00	\$10,200.00
18.	Tree - Large Deciduous	Each	130	\$350.00	\$45,500.00
19.	Decorative Fence - 6'	LF	1,650	\$70.00	\$115,500.00
Electrical Items					
1.	Conductor - #6 USE/Cu.	LF	22,500	\$1.00	\$22,500.00
2.	Tracer Wire - #12	LF	7,500	\$0.25	\$1,875.00
3.	Innerduct - 1.5" PVC	LF	7,500	\$3.50	\$26,250.00
4.	Concrete Base - 5'	Each	40	\$325.00	\$13,000.00
5.	Light Standard - Single LED and 14' Post	Each	30	\$2,100.00	\$63,000.00
6.	Light Standard - Double LED and 16' Post	Each	10	\$5,550.00	\$55,500.00
7.	Spare Light Standard - Single LED and 14' Post	Each	4	\$2,000.00	\$8,000.00
8.	Spare Light Standard - Double LED and 16' Post	Each	1	\$5,450.00	\$5,450.00
9.	Sanitary Sewer Lift Station - Electrical	LSum	1	\$50,000.00	\$50,000.00
10.	Sanitary Sewer Lift Station - Electrical Cash Allowances	LSum	1	\$50,000.00	\$50,000.00
11.	Siren	Each	1	\$5,000.00	\$5,000.00
Construction Subtotal					\$5,114,938.75
Contingencies					\$512,261.25
Total Construction					\$5,627,200.00
Engineering					\$618,992.00
Legal & Administration					\$562,720.00
Bond Discount					\$225,088.00
TOTAL PROJECT					\$7,034,000.00