

RESOLUTION NO. 09-16

Commissioner Lawson introduced the following Resolution and moved its adoption:

RESOLUTION DIRECTING ENGINEER FOR THE CITY OF WILLISTON TO PREPARE DETAILED PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF THE IMPROVEMENT PROJECT DESIGNATED AS **WATER, SEWER AND STREET IMPROVEMENT DISTRICT 09-4**

BE IT RESOLVED BY THE BOARD OF CITY COMMISSIONERS OF THE CITY OF WILLISTON, NORTH DAKOTA:

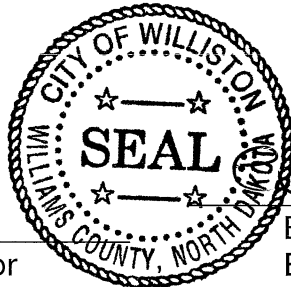
That the City Engineer for the City of Williston, North Dakota, prepare detailed plans and specifications for construction of the improvement project designated as **WATER, SEWER AND STREET IMPROVEMENT DISTRICT 09-4** which is an improvement project consisting **Water, Sewer and Street Improvements** on:

West Broadway between 4th Avenue West and 8th Avenue West

The motion for the adoption of the foregoing Resolution was duly seconded by Commissioner Klug, and upon vote being taken thereon, the following Commissioners voted "AYE": Bekkedahl, Klug, Lawson and Koeser and the following voted "NAY": None Absent and not voting: Bogar. Whereupon said motion was declared duly passed and adopted this 24th day of February, 2009.

ATTEST:

John Kautzman
John Kautzman, City Auditor



E. Ward Koeser
Board of City Commissioners
E. Ward Koeser, President

**PRELIMINARY ENGINEERING REPORT
WATER, SEWER & STREET IMPROVEMNETS
WEST BROADWAY
FROM 4TH AVE WEST TO 8TH AVE WEST
CITY OF WILLISTON, NORTH DAKOTA**



2-17-09

February 2009

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1409101

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WEST BROADWAY
FROM 4TH AVE WEST TO 8TH AVE WEST
CITY OF WILLISTON, NORTH DAKOTA**

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Preliminary Engineering Report

WATER, SEWER & STREET IMPROVEMENTS WEST BROADWAY FROM 4TH AVE WEST TO 8TH AVE WEST CITY OF WILLISTON, NORTH DAKOTA

This report will address the following items with respect to the proposed water, sanitary sewer and street improvements on West Broadway between 4th Ave West to 8th Ave West:

- General Nature & Existing Conditions
- Purpose of the Project
- Proposed Implementation Schedule
- Opinion of Estimated Project Cost
- Map of Proposed Project

GENERAL NATURE AND EXISTING CONDITIONS

The city of Williston is located within and serves as the county seat for Williston County, North Dakota. Williston was founded in 1887. The population was 12,512 based on the 2000 census. Williston is located at the crossroads of US Highway 2 and 85. It is near the confluence of the Yellowstone River and Missouri River, at the upper end of the Lake Sakakawea Reservoir. The 2000 Census also indicated that there were 5,255 households and 3,205 families residing in the city. The median household income was \$29,962.00 with a median family income of \$38,713.00. About 11.3% of families and 13.4% of the population were below the poverty line.

The existing water mains consist of 4" cast iron pipe and the existing water service lines consist of primarily ¾" copper with the possibility that some may be lead. The water mains were installed in the early 1900's. The existing 4" cast iron main limits the volume and pressure to adjacent residents during peak times such as hot summer days. Fire fighting capabilities are

certainly limited at all times. Water breaks have become very common due to the age, type and size of the pipe which are a very costly maintenance expense to the city.

The existing sanitary sewer mains consist of 8" clay tile pipe and 4" clay tile service lines to the residential dwellings. The sewer mains were also installed in the early 1900's. The age and type of pipe is the reason for extensive tree root intrusion causing infiltration and/or blockage on both the main and service line. The manholes are also constructed of brick and mortar and have been deteriorating due to their age and long term effects of the gases produced by raw sewage.

The existing street consists of an urban street section with curb, some gutter, asphalt pavement, sidewalks and driveways. The street width is approximately 35 feet with asphalt pavement that is in very poor condition attributed to the poor drainage and soil conditions. Storm sewer mains, manholes, inlet leads, inlet barrels and castings were also installed when the street was initially constructed.

PURPOSE OF THE PROJECT

The purpose of this project is to provide the adjacent residents with reliable water and sanitary sewer service along with adequate fire fighting capabilities. The project would also include the reconstruction of the urban street section to provide positive drainage, improved safety, improved traffic flow and less maintenance for the city.

The existing 4" cast iron water mains will be replaced with 8" C900 PVC pipe. The existing service lines and curb stops will also be replaced with 1" poly service lines and new curb stops up to the property line. New gate valves and fire hydrants will also be installed.

The existing 8" clay tile sanitary sewer mains will be replaced with new 8" SDR35 PVC sewer pipe. The existing 4" clay tile sewer service line will be replaced with new 4" PVC sewer service line, along with new wye connections at the main. The existing manholes located in the street intersections will be replaced with new precast concrete manhole sections with new castings and covers.

The majority of the existing deteriorated street will be disturbed due to the installation of the new water and sewer mains and service lines. It is proposed to remove the remaining asphalt pavement, curb and gutter if any and replace with a new 35 foot urban street section consisting of prepared subgrade, 6" aggregate base, 4" hot bituminous asphalt pavement between new concrete curb and gutter. New handicap ramp sidewalks will be installed at the corners of the intersections. The existing storm inlets, castings and storm pipe to the storm manholes will also be replaced with new. Concrete sidewalks and driveways will be removed and replaced as needed due to the installation of the new water and sewer service lines.

PROPOSED IMPLEMENTATION SCHEDULE

January 30, 2009	Engineering Services Agreement
February 2, 2009	Meeting with City Engineer
February 4, 2009	Preliminary Site Survey
February 10, 2009	Begin CADD Drafting
February 17, 2009	Submit Preliminary Engineering Report
February 25, 2009	Plan Review with City
March 6, 2009	Submit Final Plans and Specifications
March 10, 2009	Approval of Plans and Specifications
March 12, 2009	Advertise for Bids
April 7, 2009	Bid Opening
April 14, 2009	Award Contracts
April 27, 2009	Begin Construction
June 15, 2009	Complete Underground
September 1, 2009	Complete Street Construction
September 15, 2009	Contract Closeout

**OPINION OF COST
SANITARY SEWER IMPROVEMENTS**

**WEST BROADWAY
FROM 4TH AVE. W. TO 8TH AVE.W.
CITY OF WILLISTON, ND**

Item No.	Description	Quantity	Unit	Unit Cost	Total Sum
1	Mobilization & Contract Bond	0.333	LS	\$ 2,500.00	\$ 832.50
2	Remove Underground Vault 10' x 10' x 9' Deep	1.000	LS	\$ 5,000.00	\$ 5,000.00
3	Standard Sanitary Manhole	5	EA	\$ 5,000.00	\$ 25,000.00
4	8" SDR 35 Sewer Main	1600	LF	\$ 35.00	\$ 56,000.00
5	4" SDR 35 Sewer Service Line	1650	LF	\$ 25.00	\$ 41,250.00
6	8"X4" Sewer Service Connection	50	EA	\$ 250.00	\$ 12,500.00
7	Remove & Salvage Asphalt-Milling	2000	SY	\$ 5.00	\$ 10,000.00
8	Aggregate Base Crs. CI 5	350	CY	\$ 35.00	\$ 12,250.00
9	Sidewalk Removal & Replacement	150	SY	\$ 55.00	\$ 8,250.00
10	Traffic Control	0.333	LS	\$ 7,500.00	\$ 2,497.50
11	Erosion Control Barrier - Manhole	8	EA	\$ 300.00	\$ 2,400.00
12	Erosion Control Weighted Fiber Rolls	1000	LF	\$ 4.50	\$ 4,500.00
13	Sewer System Connections	2	EA	\$ 500.00	\$ 1,000.00
TOTAL ESTIMATED CONSTRUCTION COST - SANITARY SEWER					\$ 181,480.00

Design Engineering	\$ 6,550.00
Construction Engineering & Review	\$ 9,800.00
Contingency (2%)	\$ 3,170.00
TOTAL ESTIMATED PROJECT COST	\$ 201,000.00

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2-17-2009

Project No. 1409101

OPINION OF COST

WATER IMPROVEMENTS WEST BROADWAY FROM 4TH AVE. W. TO 8TH AVE.W. CITY OF WILLISTON, ND

Item No.	Description	Quantity	Unit	Unit Cost	Total Sum
1	Mobilization & Contract Bond	0.333	LS	\$ 7,500.00	\$ 2,497.50
2	12" SDR 21 CI 200 PVC Water Main	105	LF	\$ 35.00	\$ 3,675.00
3	12" Gate Valve & Box	2	EA	\$ 2,000.00	\$ 4,000.00
4	8" SDR 21 CI 200 PVC Water Main	1700	LF	\$ 28.00	\$ 47,600.00
5	8" Gate Valve & Box	8	EA	\$ 1,500.00	\$ 12,000.00
6	6" PVC C-900 Water Main	75	LF	\$ 23.00	\$ 1,725.00
7	Standard Hydrant	5	EA	\$ 3,500.00	\$ 17,500.00
8	8"X1" Water Service Connection	52	EA	\$ 250.00	\$ 13,000.00
9	1" Curb Stop & Box	52	EA	\$ 350.00	\$ 18,200.00
10	1" Poly Water Service Line - Class 160	1600	LF	\$ 25.00	\$ 40,000.00
11	Ductile Iron Fittings	535	LBS	\$ 6.00	\$ 3,210.00
12	12" System Connection	2	EA	\$ 800.00	\$ 1,600.00
13	8" System Connection	2	EA	\$ 700.00	\$ 1,400.00
14	6" System Connection	2	EA	\$ 500.00	\$ 1,000.00
15	Remove & Salvage Asphalt-Milling	2000	SY	\$ 5.00	\$ 10,000.00
16	Aggregate Base Crs. CI-5	350	CY	\$ 35.00	\$ 12,250.00
17	Sidewalk Removal & Replacement	150	SY	\$ 55.00	\$ 8,250.00
18	Traffic Control	0.333	LS	\$ 7,500.00	\$ 2,497.50
19	Erosion Control Barrier - Manhole	8	EA	\$ 300.00	\$ 2,400.00
20	Erosion Control Weighted Fiber Rolls	1000	LF	\$ 4.50	\$ 4,500.00
TOTAL ESTIMATED CONSTRUCTION COST - WATER					\$ 207,305.00

Design Engineering	\$ 7,700.00
Construction Engineering & Review	\$ 11,525.00
Contingency (3%)	\$ 3,970.00
TOTAL ESTIMATED PROJECT COST	\$ 230,500.00

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**OPINION OF COST
STORM SEWER IMPROVEMENTS**

**WEST BROADWAY
FROM 4TH AVE. W. TO 8TH AVE.W.
CITY OF WILLISTON, ND**

Item No.	Description	Quantity	Unit	Unit Cost	Total Sum
1	Mobilization & Contract Bond	0.333	LS	\$ 7,500.00	\$ 2,497.50
2	Remove & Salvage Culverts All types & sizes	490	LF	\$ 20.00	\$ 9,800.00
3	Removal of Inlets	14	Ea	\$ 750.00	\$ 10,500.00
4	Pipe PVC 12" Storm Drain SDR 26	490	LF	\$ 45.00	\$ 22,050.00
5	Casting Inlet Type 2 Neenah R3295 Type R	14	EA	\$ 500.00	\$ 7,000.00
6	Inlet Type 2 - 2' x 3' Precast Barrel	14	EA	\$ 2,500.00	\$ 35,000.00
7	Remove & Salvage Asphalt-Milling	2000	SY	\$ 5.00	\$ 10,000.00
8	Aggregate Base Crs. CI 5	350	CY	\$ 35.00	\$ 12,250.00
9	Traffic Control	0.333	LS	\$ 7,500.00	\$ 2,497.50
10	Erosion Control Barrier - Manhole	8	EA	\$ 300.00	\$ 2,400.00
11	Erosion Control Weighted Fiber Rolls	1000	LF	\$ 4.50	\$ 4,500.00
12	Erosion Control Inlet Protection Fiber Roll 12"	14	EA	\$ 250.00	\$ 3,500.00
TOTAL ESTIMATED CONSTRUCTION COST - STORM SEWER					\$ 121,995.00

Design Engineering	\$ 4,600.00
Construction Engineering & Review	\$ 6,800.00
Contingency (2%)	\$ 2,605.00
TOTAL ESTIMATED PROJECT COST	\$ 136,000.00

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OPINION OF COST
STREET RECONSTRUCTION
WEST BROADWAY
FROM 4TH AVE. W TO 8TH AVE. W.
CITY OF WILLISTON, ND

Item No.	Description	Quantity	Unit	Unit Cost	Total Sum
1	Mobilization & Contract Bond	1	LS	\$ 35,000.00	\$ 35,000.00
2	Asphalt Removal Full Depth Milling	1,500	SY	\$ 4.00	\$ 6,000.00
3	Concrete Removal	1,000	SY	\$ 10.00	\$ 10,000.00
4	Curb & Gutter Removal	2,100	LF	\$ 10.00	\$ 21,000.00
5	Excavation	1,400	CY	\$ 6.00	\$ 8,400.00
6	Subgrade Preparation Type A (6")	7,500	SY	\$ 2.00	\$ 15,000.00
7	Aggregate Base Course Cl. 5 (6")	310	CY	\$ 30.00	\$ 9,300.00
8	SS1H or CSS1H or MS-1 Emulsion Asphalt	750	GAL	\$ 1.50	\$ 1,125.00
9	Hot Bituminous Pavement (Cl. 27)	1,650	TON	\$ 65.00	\$ 107,250.00
10	Asphalt Cement (6.5%) PG 58-34	110	TON	\$ 550.00	\$ 60,500.00
11	Curb & Gutter - Machine Placed	1,900	LF	\$ 18.00	\$ 34,200.00
12	Curb & Gutter - Hand Placed	200	LF	\$ 30.00	\$ 6,000.00
13	4" Concrete Sidewalk	500	SY	\$ 45.00	\$ 22,500.00
14	6" Concrete Driveway	850	SY	\$ 60.00	\$ 51,000.00
15	Adjust Manhole	11	EA	\$ 700.00	\$ 7,700.00
16	Adjust Gate Valve	10	EA	\$ 350.00	\$ 3,500.00
17	Adjust Storm Inlet	14	EA	\$ 350.00	\$ 4,900.00
18	Street Light Junction Box Replacement	4	EA	\$ 1,000.00	\$ 4,000.00
19	Hydromulch Seeding	5,600	SY	\$ 1.50	\$ 8,400.00
20	Erosion Control Barrier - Inlet	14	EA	\$ 250.00	\$ 3,500.00
21	Erosion Control Barrier - Manhole	12	EA	\$ 250.00	\$ 3,000.00
22	Traffic Control	1	LS	\$ 7,500.00	\$ 7,500.00
TOTAL ESTIMATED CONSTRUCTION COST- STREET RECONSTRUCTION					\$ 429,775.00

Design & Preparation of Plans & Specifications	\$15,900.00
Construction Engineering & Review	\$23,900.00
Contingency (2%)	\$8,425.00
TOTAL ESTIMATED PROJECT COST	\$ 478,000.00

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OPINION OF COST

SUMMARY

Water, Sanitary Sewer, Storm Sewer & Street Reconstruction

WEST BROADWAY

FROM 4TH AVE. W. TO 8TH AVE.W.

CITY OF WILLISTON, ND

PROJECT	ESTIMATED CONSTRUCTION COST	DESIGN ENGINEERING	CONSTRUCTION ENGINEERING	CONTINGENCY	TOTAL PROJECT COST
SEWER	\$ 181,480.00	\$ 6,550.00	\$ 9,800.00	\$ 3,170.00	\$ 201,000.00
WATER	\$ 207,305.00	\$ 7,700.00	\$ 11,525.00	\$ 3,970.00	\$ 230,500.00
STORM	\$ 121,995.00	\$ 4,600.00	\$ 6,800.00	\$ 2,605.00	\$ 136,000.00
STREET	\$ 429,775.00	\$15,900.00	\$23,900.00	\$8,425.00	\$ 478,000.00
TOTAL	\$ 940,555.00	\$ 34,750.00	\$ 52,025.00	\$ 18,170.00	\$ 1,045,500.00
TOTAL ESTIMATED CONSTRUCTION COST					\$ 1,045,500.00

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