

**PRELIMINARY ENGINEERING REPORT  
STREET IMPROVEMENT DISTRICT 2017-8  
NORTHWOOD DRIVE, SOUTHWOOD DRIVE & SOUTHWIND DRIVE  
HORACE, NORTH DAKOTA  
May, 2017  
W17-00-065**

**INTRODUCTION**

Horace is located in east central North Dakota along the Sheyenne River between Cass County Highway 14 and 52<sup>nd</sup> Avenue South on Cass County Highway 17. The area economy is based upon agriculture, light manufacturing and commercial business. The 2010 population was 2,430 residents. This report reviews five street improvement districts within the City. A project location map is included at the end of this report.

**EXISTING CONDITIONS**

- Street Improvement District 2017-8 – Mill and Overlay Improvements
  - This area consists of Northwood Drive, Southwood Drive and Southwind Drive.
  - This area currently has 56 homes.
  - The existing streets are a rural section with a bituminous surface.
  - The pavement width is 20' wide with no curb and gutter.
  - The existing pavement on the roadway is in poor condition with alligator cracking, longitudinal cracking, rutting and pavement fatigue due to the age of the pavement.

**PROPOSED IMPROVEMENTS**

The purpose of the project is to rehabilitate the pavement section at various locations in the City of Horace. The proposed project would utilize normal construction techniques. An Opinion of Probable Project Cost and Proposed Improvement maps for each area are attached at the end of this report.

- Street Improvement District 2017-8 – Mill and Overlay Improvements
  - Areas of deteriorated pavement would be removed and patched.
  - The entire existing pavement surface would be milled to a depth of 1-2 inches with a 2% cross slope.
  - A 2" hot bituminous asphalt overlay would be placed on the full width of the existing pavement.

- All utilities and manholes would be adjusted to match the new pavement elevation.
- Existing driveway aprons would be patched to tie in to the new pavement elevation.

## **ATTACHMENTS**

- Opinion of Probable Project Cost
- Project Location Map
- Proposed Improvements Maps
- Benefitting Area Maps

## **APPROVALS**

All improvements will be designed in accordance with current engineering standards.

The Horace City Council will need to approve the Preliminary Engineering Report for Street Improvement District 2017-8.

After approval of the Preliminary Engineering Report the Horace City Council would then direct the City Engineer to prepare Plans and Specifications for the Project.

After the Plans and Specifications are prepared by the City Engineer the Horace City Council will approve the Plans and Specifications for the Project and then the Horace City Council will need to pass a resolution to advertise the project for bidding.

After bids are received for the project and publically opened the Horace City Council would award the project to the lowest responsible, responsive bidder.

## **PERMITS**

No permits will be required for this project.

## **METHOD OF CONSTRUCTION**

The project would be bid competitively with a public bid opening.

## **PROJECT FINANCING**

The Engineer's Opinion of Probable Total Project Cost is \$284,000.00 for the proposed project.

The project cost would be special assessed to the benefitting areas. A Benefitting Area map is attached at the end of this report for each district.

There are a total of 56 residential homes in the benefitting area for all of the projects combined.

- **Northwood Drive, Southwood Drive and Southwind Drive**

The area within the project consists of Northwood Drive, Southwood Drive and Southwind Drive. This area currently has 56 homes.

- The Estimated Cost for the project in the Northwood Drive, Southwood Drive and Southwind Drive Areas is \$284,000.00. If the total cost for the project is assessed equally to all 56 homes in the benefitting area the cost for each home would be approximately \$5,071.43. This approximate cost per home is based upon the estimated cost of the project of \$284,000.00.

If you have any questions concerning this report, please do not hesitate to contact me.

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APPENDIX A  
PROJECT LOCATION MAP

# Street Improvement District 2017-8 Mill and Overlay Improvements Northwood Dr./Southwood Dr.



APPENDIX B  
OPINION OF PROBABLE PROJECT COST

**Engineer's Opinion of Probable Project Cost**  
**Street Improvement Northwood and Southwood Dr**  
**Horace, North Dakota**  
**June 1, 2017**  
**Street Improvement District 2017-8**  
**Milling with a 2-inch HBP overlay**

Item No.	Item	Unit	No. of Units	Probable Unit Cost	Probable Total Cost
1	Milling	SY	9,500	\$ 4.50	\$ 42,750.00
2	Mobilization	LS	1	\$ 30,000.00	\$ 30,000.00
3	Bituminous Material, PG 58-28	TON	75	\$ 475.00	\$ 35,625.00
4	Hot Bituminous Pavement - FAA 43	TON	1,200	\$ 50.00	\$ 60,000.00
5	Patching	TON	40	\$ 150.00	\$ 6,000.00
6	Bituminous Tack Coat CSS-1h	GAL	1,650	\$ 2.00	\$ 3,300.00
7	Testing Laboratories Services	LS	1	\$ 7,500.00	\$ 7,500.00
8	Adjust Utilities	EA	20	\$ 500.00	\$ 10,000.00
9	Manhole Adjustment	EA	20	\$ 750.00	\$ 15,000.00
10	Traffic Control	LS	1	\$ 5,000.00	\$ 5,000.00

Opinion of Probable Bid Cost \$ 215,175.00  
Contingencies (10%) \$ 21,325.00  
Opinion of Probable Construction Cost \$ 236,500.00

Engineering, Legal, Administrative and Bonding (20%) \$ 47,500.00  
Opinion of Probable Project Cost \$ 284,000.00

APPENDIX C  
PROPOSED IMPROVEMENTS MAPS



# Street Improvement District 2017-8 Mill and Overlay Improvements Northwood Dr./Southwood Dr.



APPENDIX D  
BENEFITTING AREA MAPS

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# Street Improvement District 2017-8 Benefitting Area Map Mill and Overlay Improvements Northwood Dr./Southwood Dr.

