

Project No.

PCN

## Various Pipes – Valley City District



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Prepared by

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION  
BISMARCK, NORTH DAKOTA**

<http://www.dot.nd.gov/>

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## SCOPING REPORT

### A. GENERAL INFORMATION

**Project Number:**

**District:** Valley City

**Highways:** 3, 11, 13, 20, 56, 281

**Location:** Various pipes

**Reference Point:** Varies

**Counties:** LaMoure, McIntosh, Dickey, Stutsman

**Legal Description:** Varies

**Functional and Funding Roadway Classification:**

ND 3 – District Corridor

ND 11 – District Corridor/Collector

ND 13 – State Corridor

ND 20 – District Corridor

ND 56 – District Collector

US 281 – Interregional

**National Highway System:**

**Speed Limit:** N/A

**Freight Level:** Varies

**Freight Constraints:** N/A

**Project Schedule:** Proposed to be added to the STIP as a pipe rehabilitation project.

**dTIMS Recommendations:** N/A

### B. PURPOSE, NEED, AND IMPROVEMENT

**Purpose and Need of Project:**

The Valley City District completed pipe inspections on various highways throughout the district and identified locations in need of repairs. The pipes have advanced separation at interior joints and end sections, leading to failures such as cracking and settlement to the road above. Some of the pipes are filled with sediment or underwater.

There are no major corridor projects in the STIP that coincide with the pipe locations.

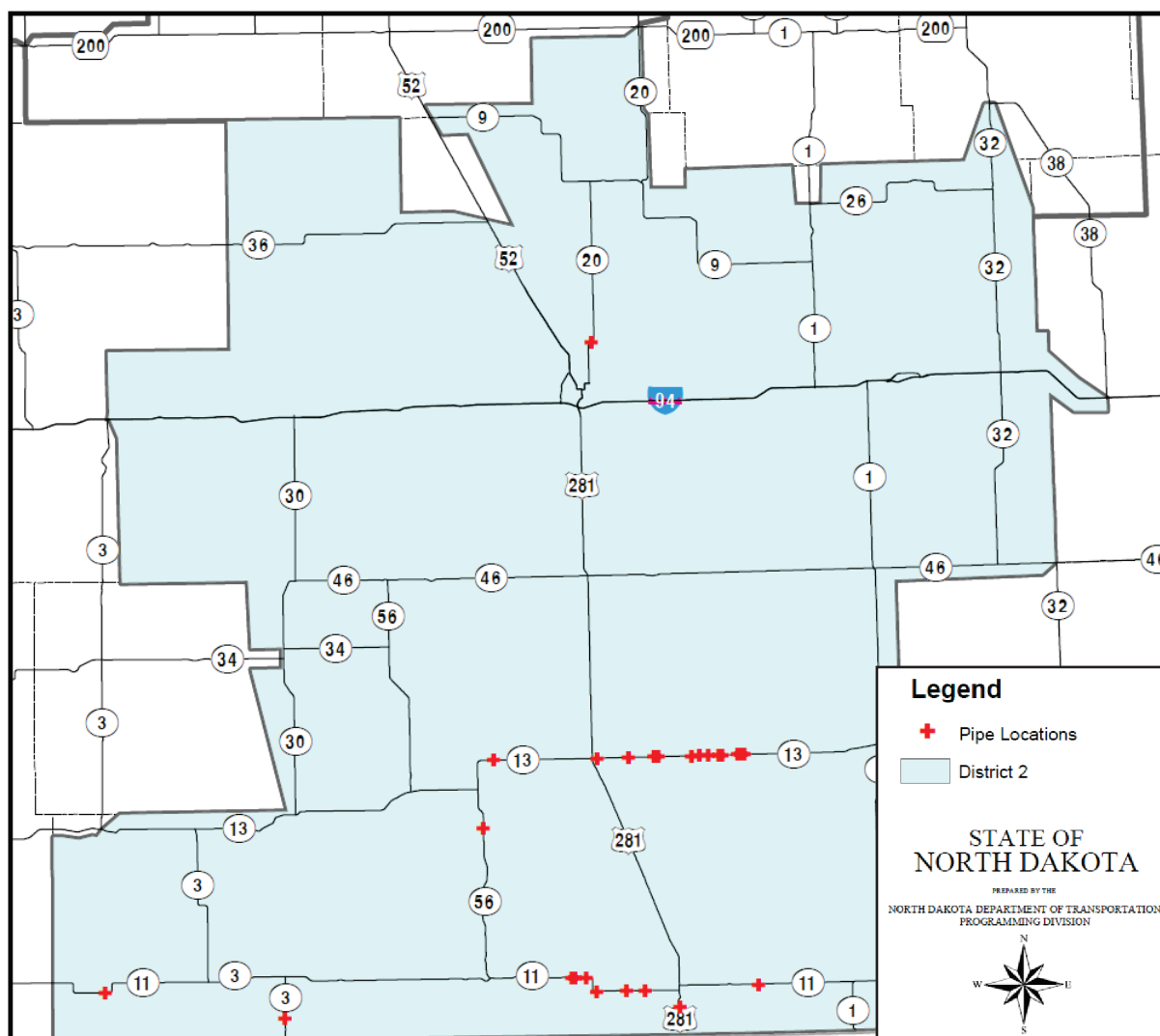
**Proposed Improvements:**

The district identified 25 locations on various highways. The proposed work types and approximate quantities are listed in the table below.

Proposed Pipe Repair Summary		
Work Type	Unit	Quantity
Cofferdam	EA	10
Cleanout	EA	18
Line	LF	866
Void Fill/Foam	Gal	350
Joint Repair	EA	1
Remove/Reset End Sections	EA	33

The pipe lining locations are not expected to need a hydraulic analysis, as long as the liner does not exceed the thickness requirements set in Chapter III-04.11 of the Design Manual. Any locations that need a thicker liner would require a hydraulic analysis.

### Project Location Map



\*Full sized map in Appendix.

C. TRAFFIC AND CRASH ANALYSIS

N/A

D. EXISTING ROADWAY CHARACTERISTICS

Roadway characteristics vary by location and are not anticipated to be impacted by the proposed pipe work.

E. EXISTING GEOMETRY

Horizontal Curves & Superelevations: N/A

Vertical Curves: N/A

F. EXISTING STRUCTURES

Bridges: None

Centerline Pipes: See proposed improvements.

G. LAND INTERESTS

Communities: No  
Reservation: No  
Surface Trust Land: No  
National Parks/Grasslands: No  
State Parks/Forests: No  
Waterfowl Production Area: No  
Wildlife Management Area: No  
Adjacent Land Usage: Agricultural

H. ISSUES AND APPURTENANCES CHECKLIST

- |                             |   |  |
|-----------------------------|---|--|
| 1. Curb and Gutter?         | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 2. Sidewalk?                | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 3. Multi-Use Path?          | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 4. ADA Ramps?               | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 5. State Bicycling Network? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |

ND 3 is a proposed Tier 1 and US 281 and ND 20 are proposed Tier 3. There are no proposed improvements with this project.

- |              |                              |  |
|--------------|------------------------------|--|
| 6. Lighting? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 7. Signals?  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

- |  |   |  |
|--|---|--|
| 8. Storm Sewer?                              | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 9. Manholes?                                 | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 10. Water, Sewer, or Other Underground Work? | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 11. Parking Facilities?                      | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 12. Frontage Roads?                          | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 13. Utility Issues?                          | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |

There are various utilities in the vicinity of the pipe locations. There may be impacts depending on the work types proposed.

- |  |   |  |
|--|---|--|
| 14. Landscaping?                                 | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 15. Approach or Ditch Block Flattening?          | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 16. T Intersection Recovery Approaches?          | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 17. Fence?                                       | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 18. Railroad Crossings?                          | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 19. Detours?                                     | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 20. Automatic Traffic Recorder Locations?        | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 21. Weigh-In-Motion Sites?                       | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 22. ITS (Deicing, Snow Gates, VMS, RWIS, etc.)?  | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 23. Highway Patrol/Truck Pullouts or Rest Areas? | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |
| 24. Additional Right of Way?                     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |

The existing ROW varies by location. Temporary construction easements may be needed to provide staging areas. Permanent ROW is not anticipated.

- |                      |   |                             |
|----------------------|---|-----------------------------|
| 25. Drainage Issues? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
|----------------------|---|-----------------------------|

See "Purpose and Need" section.

- |                                     |                              |  |                                |
|-------------------------------------|------------------------------|--|--------------------------------|
| 26. Snow Impact Areas?              | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |                                |
| 27. Subgrade Issues?                | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |                                |
| 28. Noise Analysis: Type I Project? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Maybe <input type="checkbox"/> |

29. Maintenance Issues?

Yes   X   No       

See "Purpose and Need" section.

30. Guardrail?

Yes        No   X  

31. Milling?

Yes        No   X  

32. Repeated ER Events?

Yes        No   X  

33. Interstate Access Gates?

Yes        No   X   N/A       

34. Steep Slopes?

Yes        No        N/A   X  

## I. LOAD RESTRICTIONS

N/A

## J. ROADWAY WIDTHS

N/A

## K. PERFORMANCE GUIDELINES

**Design Speed:** N/A

**Clear Zone:** Use existing.

**Foreslopes:** Use existing.

## L. PROPOSED IMPROVEMENTS

HWY	RP	Size (IN)	Length (LF)	Type	Proposed Improvements
3	2.528	18	48	CSP	Clean, Line, Void Foam
11	15.255	24	42	RCP	Clean, Line, Remove/Reset End Sections
11	65.220	36	40	Tpl RCP	Remove/Reset End Sections
11	65.489	30	46	Tpl RCP	Remove/Reset End Sections
11	66.494	30	46	RCP	Remove/Reset End Sections
11	69.272	36	40	RCP	Remove/Reset End Sections
11	72.348	36	40	RCP	Cofferdam, Clean, Line, Void Foam
11	74.281	48	50	Tpl RCP	Clean, Joint Repair, Remove/Reset End Sections
11	86.855	36	40	RCP	Cofferdam, Clean, Line, Void Foam
13	267.894	30	132	RCP	Cofferdam, Clean, Line, Void Foam
13	278.646	24	74	RCP	Cofferdam, Clean, Line, Remove/Reset End Sections
13	281.919	24	66	RCP	Remove/Reset End Sections
13	284.543	24	48	RCP	Remove/Reset End Sections
13	284.998	30	62	RCP	Remove/Reset End Section

13	288.451	24	60	RCP	Cofferdam, Clean, Line
13	289.245	24	52	RCP	Clean, Line
13	290.300	24	54	RCP	Cofferdam, Clean, Line
13	291.291	24	56	RCP	Cofferdam, Clean, Line
13	291.687	24	56	RCP	Clean, Remove/Reset End Sections
13	293.292	24	50	RCP	Clean, Remove/Reset End Sections
13	293.641	24	52	RCP	Clean, Line, Remove/Reset End Sections
13	293.963	24	54	RCP	Cofferdam, Clean, Line
20	5.503	24	46	RCP	Cofferdam, Clean, Line
56	16.107	30	50	RCP	Cofferdam, Clean, Line, Void Foam
281	2.691	30	66	RCP	Clean, Line, Void Foam

## M. ADDITIONAL COMMENTS

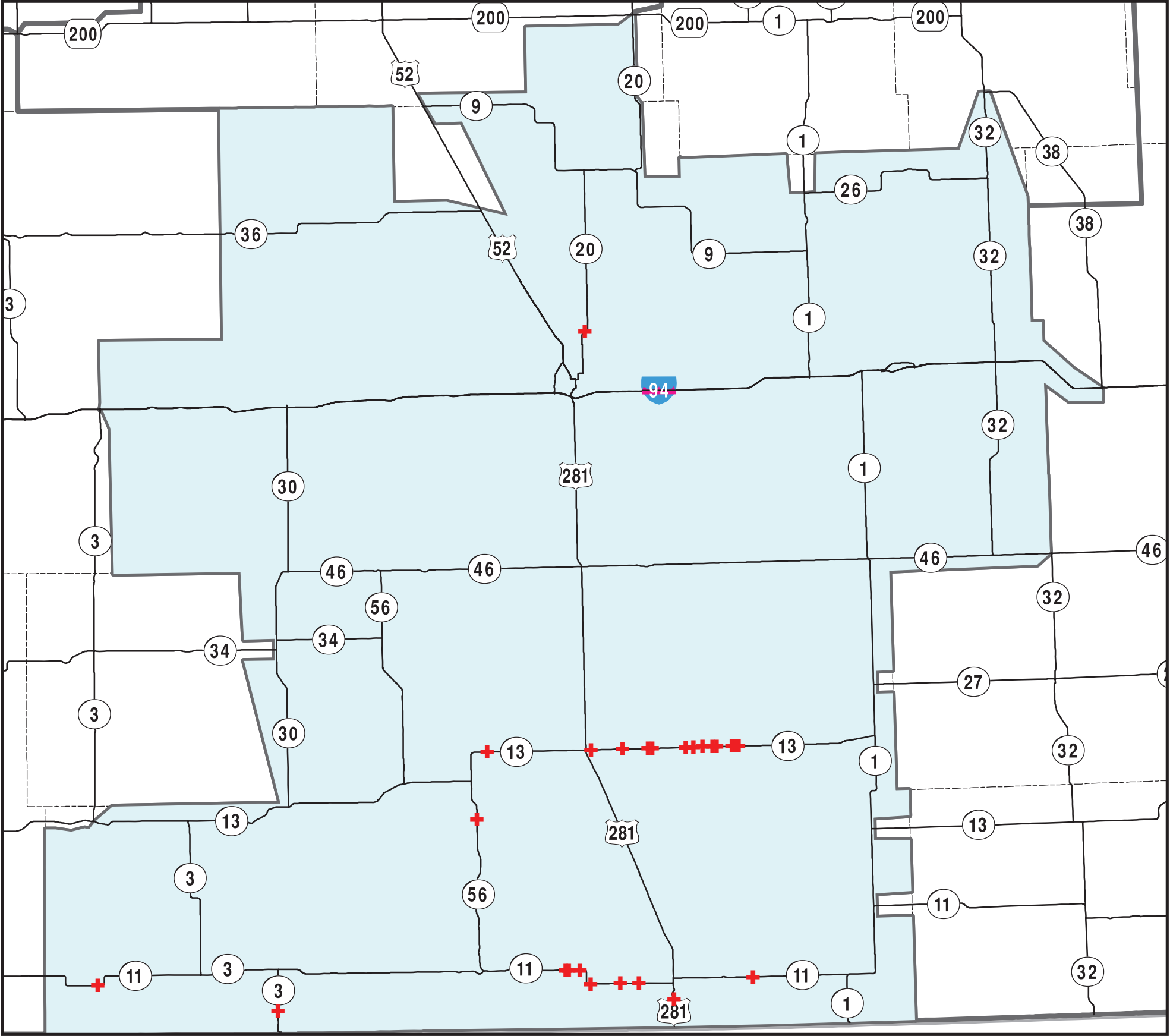
**District Engineer:**

## **Appendix**

### Pipe Location Map



# Proposed Pipe Repair Locations



## Legend

 Pipe Locations

 District 2

STATE OF  
NORTH DAKOTA

PREPARED BY THE  
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION  
PROGRAMMING DIVISION

