

CASS COUNTY HIGHWAY DEPARTMENT

REQUEST FOR QUOTES

FOR

COUNTY PROJECT FL2001

EMERGENCY FLOOD BARRIER CONSTRUCTION

Chrisan Blvd, Cass Highway 81, 76th Ave., Forest River Dr., 88th Ave., 25th Street, Highland
Park, & County Highway 31 Cass County, North Dakota

1:00 P.M., February 26th, 2020

Proposal of: _____

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of North Dakota.

Jason P. Benson /S/
Jason P. Benson
ND Reg. No. 7490

Date: 02/18/2020

THIS DOCUMENT WAS ORIGNALLY ISSUED AND SEALED BY JASON P. BENSON, ND REG. NO. 7490 ON 02/18/20 AND THE ORIGINAL DOCUMENT IS STORED AT THE CASS COUNTY HIGHWAY DEPARTMENT, WEST FARGO, ND.

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

SCOPE OF WORK:

The scope of this project is to construct Emergency Flood Barriers.

The Base Bid is the estimated flood protection for 39' plus 2' of freeboard.

The Base Bid shall include constructing 2'&3' emergency flood barriers using Sentinel Barriers (supplied by Cass County) and filled with Class 5 gravel material on the following roads on Chrisan Blvd, Cass Highway 81, 76th Ave., Forest River Dr. As well as constructing barrier crossovers, Ring Dikes and Levee Tie-Ins that will be needed for the project at designated locations.

The Alternate Bid is the estimated flood protection for 41' plus 2' of freeboard.

The Alternate bid shall include constructing 2',3',&4' emergency flood barriers using Sentinel Barriers (supplied by Cass County) and filled with Class 5 gravel material on the following roads on Chrisan Blvd, Cass Highway 81, 76th Ave., Forest River Dr., 88th Ave., 25th Street, Highland Park, & County Highway 31. As well as constructing barrier crossovers, Ring Dikes and Levee Tie-Ins that will be needed for the project at designated locations. The alternate bid also includes the option of constructing clay levees with a 8' top and 2:1 side slopes on the following roads and streets stated above pending availability of county owned Sentinel Barriers.

Depending on the magnitude of the flood the Engineer in the field will determine the final levee construction plan. The plan is to use Barriers for as much protection as possible but reserving the option to use Clay Levees if conditions change.

See the attached location maps for the Base Bid & Alternate Bid plans.

Contractors will be responsible for finding their own borrow source location.

Road Barriers/Levees shall be constructed from the lowest to the highest roads:

It is also possible that some of the higher barriers/levees will not be required to be built, depending on the water levels. Contractors are asked to submit their quotes accordingly.

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

INSTRUCTIONS TO BIDDERS:

The Cass County Highway Department, located at 1201 Main Ave. West, West Fargo, North Dakota, will receive quotes until 1:00 P.M. on February 26TH, 2020. Email or deliver quotes to Tom Soucy (701.793.9915-Cell) (soucyt@casscountynd.gov), and Kyle Litchy (litchyk@casscountynd.gov).

Cass County is an Equal Opportunity Employer.

NAME OF FIRM _____

ADDRESS OF FIRM _____

AUTHORIZED SIGNATURE _____

TITLE _____

DATE _____

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

INDEX OF PROVISIONS:

Basis of Estimate

Construction Notes

Base & Alternate Bid Summary of Bid Items

Location Maps

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

BASIS OF ESTIMATE:

- Estimated volume to fill barriers. **(1.4 TON PER CY)**
 - 2' Barriers – 4 CF
 - 3' Barriers – 9 CF
 - 4' Barriers – 20 CF

- **39' plus 2' of Freeboard – Base Bid**
 - South Barriers
 - 3' - Forest River Drive – 800' – 373 Ton of Class 5
 - 3' - 76th Ave S – 1,800' – 840 Ton of Class 5
 - 3' - Chrisan Blvd. – 1,800' – 840 Ton of Class 5
 - 2' - Cass Hwy 81 – Chrisan Blvd to 76th Ave S – 1,300' – 270 Ton of Class 5

- **41' plus 2' of Freeboard – Alternate Bid**
 - South Barriers
 - 4' - Forest River Drive – 800' – 830 Ton of Class 5
 - 4' - 76th Ave S – 1,800' – 1,867 Ton of Class 5
 - 4' - Chrisan Blvd. – 1,800' – 1,867 Ton of Class 5
 - 3' - Cass Hwy 81 – Chrisan Blvd to 76th Ave S – 1,300' – 607 Ton of Class 5
 - 2' – C81 SW Corner of Maple Prairie 3,700' S. – 3,700' 2' - 88th Ave S – 3,500' – 767 Ton of Class 5
 - 2' - 25th St. – 5,300' – 4,515 CY of Clay
 - North Barriers
 - 2' - Cass Hwy 31 – Stockman's Sub. & City of North River - 1,000' – 207 Ton of Class 5
 - 2' - Highland Park – 2,000' – 415 Ton of Class 5

- Crossovers – 75 Ton of Crushed Concrete each.

- Clay needed for Tie-ins and Ring Dikes – vary from 50 to 150 CY per location.

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

CONSTRUCTION NOTES:

GENERAL PROVISIONS:

Quantities are rounded to the nearest whole unit for bidding purposes.

For all bid items paid for on a weight or volume basis, thicknesses indicated are approximate and may vary to correct for unevenness in the foundation or other abnormal unevenness encountered in the placement operations.

The attention of the bidders is directed to M.S. 298.75 (aggregate material tax), pursuant to the removal of aggregates from any deposit in clay county, Minnesota.

UTILITIES:

The contractor will be responsible for knowing the location of all utilities within the construction limits of this project. The contractor shall contact North Dakota One Call at the numbers listed and verify the locations and notify all utility companies prior to the start of construction. The contractor will be liable for any costs resulting from damage to utilities.

North Dakota One Call
1-800-795-0555

HAUL ROAD MAINTENANCE:

The contractor's attention is directed to section 107.08 of the standard specifications regarding the use of public roads for hauling materials to the project. It shall be the contractor's responsibility to investigate the suitability of routes with the agency having control of the road prior to submitting a bid. All costs to keep the haul road free of mud and other hazards to allow safe passage for the traveling public shall be included in the "EMERGENCY FLOOD BARRIERS-CONSTRUCTION" bid item.

CLAY RING DIKE & TIE-IN - CONSTRUCTION:

This item shall include all costs needed to excavate, transport, and place clay ring dikes around culvert structures, allowing enough room for pump placement. Clay ring dikes are located at 76th Ave (2), along Cass Highway 81 (1), and the South side of the intersection of 25th St S and 88th Ave S. (1). Clay ring dike estimated quantities are listed on the attached maps. This item shall also include levee tie-in points located at Chrisan Blvd., Maple Prairie, Cass Highway 81, and any other locations deemed necessary by the engineer. Levee tie in point estimated quantities are on the attached maps. Basis of payment will be the in-place compacted measurements per cy. All costs associated with snow and ice removal if any prior to placement of the clay levee shall be included in this proposal item. The location, elevation, and time of construction of will be directed by the engineer in the field. All lighting costs shall also be included in this bid item. The pit will need Culture Resource documentation. Pay based on in- place CY field measurements.

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

EMERGENCY FLOOD BARRIERS – CONSTRUCTION:

This item shall include all costs associated with the construction of emergency flood barriers as indicated on the attached location map. Payment will be the actual amount of class 5 material (not crushed concrete) per ton placed in the barriers. The barriers take approximately 4 CF of material for the 2' barriers, 9 CF for the 3' barriers, and 20 CF for the 4' barriers per lineal foot. No cost adjustments will be made for increased or decreased quantities. This process may require a 24/7 operation from start to finish to be completed in a timely manner. Cass County will provide the barrier loading equipment/stands along with the sentinel bags. All bags are the type with a vertical and slanted side. **The vertical side faces the water.** All lighting costs shall also be included in this proposal item.

CROSSOVER - CONSTRUCTION:

This item shall include all costs associated the construction of crushed concrete levee crossings. Cross overs shall construct in a manner to accommodate resident vehicles. Two crossing will be required to allow residents access to their homes when water levels permit. No cost adjustments will be made for increased or decreased quantities. All lighting costs shall also be included in this bid item.

TRAFFIC CONTROL - CONSTRUCTION:

This item shall include all costs associated construction under limited traffic conditions with signage, and flagging. The need/location of these items will be determined by the engineer the field. No cost adjustments will be made for increased or decreased quantities. The time period for this item is for construction only.

CLAY RING DIKE & TIE-IN - REMOVAL:

This item shall include all costs associated with the removal of clay ring dikes around culvert structures and levee tie-in points. All removed clay shall become property of the contractor and hauled off the project site. Pay quantity shall be based on the CY agreed on for construction of ring dikes and levee tie-ins.

EMERGENCY FLOOD BARRIERS - REMOVAL:

This item shall include all costs associated with the removal and disposal of the barrier bags at a designated location outside the project limits at a site approved by the engineer. Payment will be the actual amount of lineal footage barriers removed. The class 5 material shall all be picked up and placed on the nearest County gravel road in a uniform manner, within a 25 mile radius determined by the engineer in the field. Any barriers on gravel roads the gravel will remain the roads to be bladed out in a uniform manner (25th St S 5,300' long and 88th Ave S.3,500' long are the only gravel sections.) All paved surfaces shall be swept clean of any left over gravel and any other debris after the removal process. All costs associated with pickup, trucking and cleaning of the existing paved surface shall be included in this bid item.

CROSSOVER - REMOVAL:

This item shall include all costs associated with the removal and cleaning of the road surface of crushed concrete crossings. The crushed concrete material is to be hauled to the Cass County Highway Department in West Fargo and stockpiled. Payment will be the same amount of tonnage used to construct each crossover.

**COUNTY PROJECT FL2001
EMERGENCY FLOOD BARRIER CONSTRUCTION**

TRAFFIC CONTROL - REMOVAL:

This item shall include all costs associated with the removal items under traffic conditions for signage, and flagging. The need/location of these items will be determined by the engineer in the field. No cost adjustments will be made for increased or decreased quantities. The time period for this item is for removal only.

EMERGENCY CLAY LEVEE-CONSTRUCTION:

This item shall include all costs needed to excavate, transport, and place clay per the locations indicated on the attached location map and as directed by the engineer in the field. All levees shall to be constructed with an 8' top that has 2:1 side slopes. All costs associated with snow and ice removal if any prior to placement of the clay levee shall be included in this proposal item. Basis of payment will be the in-place compacted measurements per cy. The location, elevation, and time of construction of will be directed by the engineer in the field. The levee construction project may require a 24/7 operation from start to finish. The contractor may be required have more than one levee operation depending upon the weather forecast to insure a timely completion. All lighting costs shall also be included in this proposal item. Pay based on in-place CY field measurements.

EMERGENCY CLAY LEVEE-REMOVAL:

This item shall include all costs associated with removing clay levee from gravel or paved roadways. All paved surfaces shall be flushed with water and swept clean, of any leftover clay material and any other debris after the removal process. All clay material shall be become property of the contractor and hauled off the project site.

CONSTRUCTION SURVEY:

Cass county will provide all initial staking of clay levee locations and elevations. The contractor will be responsible for all other staking required to build the clay levee's. All costs associated with contractor staking to be included in the bid item "EMERGENCY CLAY LEVEE-CONSTRUCTION" bid item.

PROPOSAL SCHEDULE FOR COUNTY PROJECT NUMBER FL2001 – BASE BID

PROPOSER MUST TYPE OR NEATLY PRINT UNIT PRICES IN NUMERALS, MAKE EXTENSIONS FOR EACH ITEM, AND TOTAL, DO NOT CARRY UNIT PRICES FURTHER THAN THREE (3) DECIMAL PLACES.

Spec. No.	Item No.	Description	Unit & Approx. Quant.	Unit Price		Amount	
				\$\$	00	\$\$	00
203	001	CLAY RING DIKE & TIE-IN - CONSTRUCTION	CY 600				
302	002	EMERGENCY FLOOD BARRIERS-CONSTRUCTION	TON 2,323				
302	003	CROSSOVER-CONSTRUCTION	TON 150				
702	004	MOBILIZATION	LS 1				
704	005	TRAFFIC CONTROL-CONSTRUCTION	LS 1				
203	006	CLAY RING DIKE & TIE-IN - REMOVAL	CY 600				
302	007	EMERGENCY FLOOD BARRIERS-REMOVAL	LF 5,700				
302	008	CROSSOVER-REMOVAL	TON 150				
704	009	TRAFFIC CONTROL-REMOVAL	LS 1				

BASE TOTAL: \$ _____

PROPOSAL SCHEDULE FOR COUNTY PROJECT NUMBER FL2001 – ALTERNATE #1

PROPOSER MUST TYPE OR NEATLY PRINT UNIT PRICES IN NUMERALS, MAKE EXTENSIONS FOR EACH ITEM, AND TOTAL, DO NOT CARRY UNIT PRICES FURTHER THAN THREE (3) DECIMAL PLACES.

Spec. No.	Item No.	Description	Unit & Approx. Quant.	Unit Price		Amount	
				\$\$	00	\$\$	00
203	001	CLAY RING DIKE & TIE-IN - CONSTRUCTION	CY 700				
302	002	EMERGENCY FLOOD BARRIERS-CONSTRUCTION	TON 7,285				
203	003	CLAY LEVEE - CONSTRUCTION	CY 4,515				
302	004	CROSSOVER-CONSTRUCTION	TON 450				
702	005	MOBILIZATION	LS 1				
704	006	TRAFFIC CONTROL-CONSTRUCTION	LS 1				
203	007	CLAY RING DIKE & TIE-IN-REMOVAL	CY 700				
302	008	EMERGENCY FLOOD BARRIERS-REMOVAL	LF 15,900				
203	009	CLAY LEVEE-REMOVAL	CY 4,515				
302	010	CROSSOVER-REMOVAL	TON 450				
704	011	TRAFFIC CONTROL-REMOVAL	LS 1				

ALTERNATE TOTAL: \$ _____

RECEIPT OF ADDENDUMS

NO. 1 _____

NO. 2 _____

NO. 3 _____

Award based on the **lowest BASE BID.**

Contractor should be prepared to begin construction on March 16th, 2020 or sooner if needed.

Levee Alignments

-  Proposed Barriers
-  Ring Dike for pump
-  In Place
-  Crossover
-  Ring Dike
-  Clay Tie-In



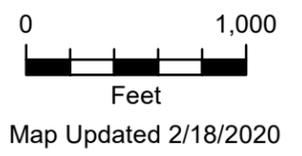
Cass County Hwy Dept
 1201 Main Ave W
 West Fargo, ND 58078
 701-298-2375 (phone)
 701-298-2395 (fax)
 highway@casscountynd.gov

Cass County Levee Locations

South of Fargo Metro

2020 Spring Flood

Base Bid - 39' Plus 2' of Freeboard



Imagery: 2019 NAIP

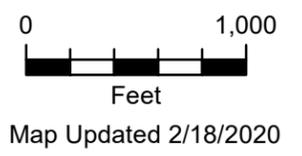
Levee Alignments

-  Proposed Barriers or Clay
-  Ring Dike for pump
-  In Place
-  Crossover
-  Ring Dike
-  Clay Tie-In



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Cass County Levee Locations South of Fargo Metro 2020 Spring Flood Alternate Bid - 41' Plus 2' of Freeboard



Imagery: 2019 NAIP

Levee Alignments

- Proposed Barriers
- In Place



2,000'

Highland Park

1,000'

City of North River

Currier's Subdivision & Stockman's Subdivision



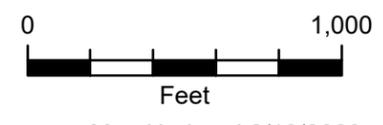
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Cass County Levee Locations

North of Fargo Metro

2020 Spring Flood

Alternate Bid - 41' Plus 2' of Freeboard



Map Updated 2/18/2020

Imagery: 2019 NAIP

Culvert Type

- Beehive
- Flap Gate
- Screw Gate
- Other

Levee Alignments

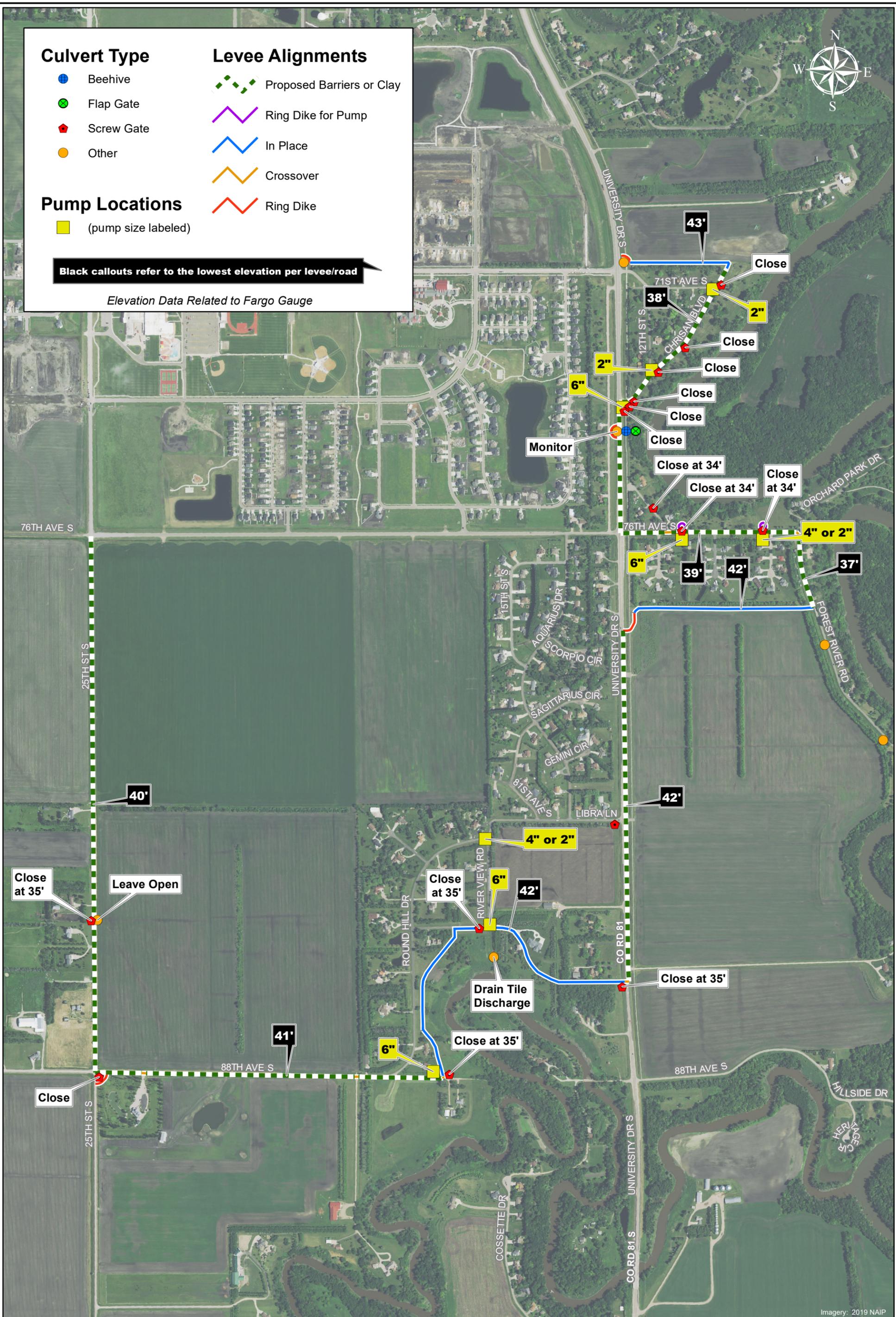
- Proposed Barriers or Clay
- Ring Dike for Pump
- In Place
- Crossover
- Ring Dike

Pump Locations

(pump size labeled)

Black callouts refer to the lowest elevation per levee/road

Elevation Data Related to Fargo Gauge



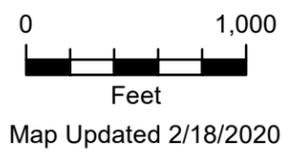
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Cass County Culvert Action Map

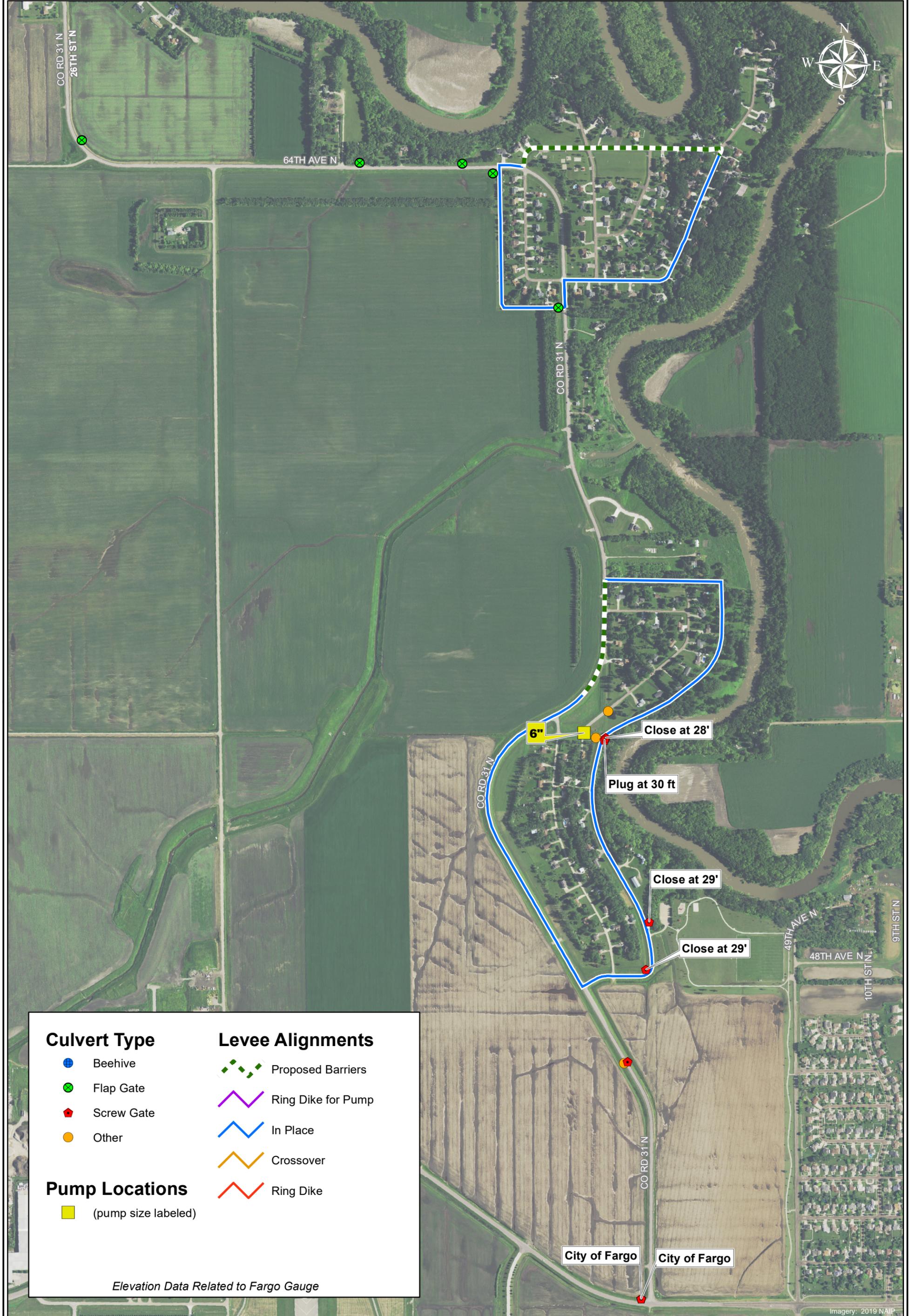
South of Fargo Metro

2020 Spring Flood

Alternate Bid - 41' Plus 2' of Freeboard



Imagery: 2019 NAIP



Culvert Type		Levee Alignments	
	Beehive		Proposed Barriers
	Flap Gate		Ring Dike for Pump
	Screw Gate		In Place
	Other		Crossover
	Pump Locations (pump size labeled)		Ring Dike

Elevation Data Related to Fargo Gauge

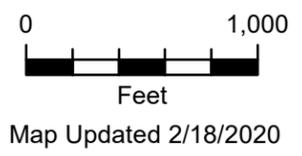


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Cass County Culvert Action Map

North of Fargo Metro 2020 Spring Flood

Alternate Bid - 41' Plus 2' of Freeboard



Imagery: 2019 NAIP