



North Dakota Department of Transportation

Grant Levi, P.E.
Director

Jack Dalrymple
Governor

September 29, 2015

ADDENDUM 2 – JOB 8

TO: All prospective bidders on project NHU-1-981(101)111, Job No. 8, scheduled for the October 9, 2015 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions:

See attached summary from Gabe Schell, PE; KLJ, dated September 25, 2015 for an explanation.

Request for Proposal Revisions:

Remove and replace pages 12-16 of 19 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 9/28/2015.

Page 12 of 19:

Item 724 0210 FITTINGS-DUCTILE IRON; quantity increased from 1540 to 1585 LBS.
Item 724 0310 GATE VALVE & BOX 8 IN; quantity increased from 1 to 2 EA.

Page 13 of 19:

Item 724 0820 WATERMAIN 8IN; quantity increased from 159 to 238 LF.
Item 724 0944 CONNECTION TO EXISTING MAIN; quantity increased from 5 to 6 EA.
Item 724 0960 WATER SERVICE CONNECTION 2IN; 1 EA was added.

Page 13-16 of 19:

Items shifted due to added item.

This addendum is to be incorporated into the bidder's proposal for this project.

Expedite bid files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> or the Department's web page (<http://www.dot.nd.gov>) and load it into the Expedite program.

CAL J. GENDREAU – CONSTRUCTION SERVICES ENGINEER

80:plm

Enclosure

◇ September 25, 2015

ADDENDUM 2 - JOB 8

TO: All prospective bidders on project NHU-1-981(101)111 PCN 20196, Job 8, scheduled for the October 9, 2015 bid opening.

The following plan and proposal revisions shall be made:

Plan Revisions:

Remove and replace sheets 6-7, 6-12, 6-15, 8-3, signed 9/25/15 and 55-7 signed 9/24/15.

- Section 6 Sheet 7: Revised 724-P14 to include new water main connection at Sta 49+36
- Section 6 Sheet 12: Revised 772-P12 to include communication from City traffic engineer's office to master controller.
- Section 6 Sheet 15: Added 724-P18 for new water main connection at Sta 49+36
Added 770-100 for lighting foundation anchor bolt requirement
- Section 8 Sheet 3: Revised following 100% City Funds bid items:
- 724 0210 Fittings-Ductile Iron; from 675 LBS to 720 LBS
 - 724 0310 Gate Valve & Box 8IN; from 1 EA to 2 EA
 - 724 0820 Watermain 8IN; from 130 LF to 209 LF
 - 724 0944 Connection to Existing Main; from 5 EA to 6 EA
- Added the following 100% City Funds bid item:
- 724 0960 Water Service Connection 2IN; 1 EA
- Section 55 Sheet 7: Added new water main connection at Sta 49+36

KLJ



Gabe Schell, PE
Project Engineer

BID ITEMS

Project: NHU-1-981(101)111 (PCN-20196)

Bidder 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.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
081	722	1140	MANHOLE RISER 96IN	LF	7.500				
082	722	3410	MANHOLE REPAIR	EA	3.				
083	722	3510	INLET-TYPE 2	EA	24.				
084	722	3520	INLET-TYPE 2 DOUBLE	EA	37.				
085	722	3701	INLET SPECIAL-TYPE 2 48IN	EA	1.				
086	722	3730	INLET SPECIAL CATCH BASIN 9IN BEEHIVE 48IN	EA	2.				
087	722	3761	INLET SPECIAL-TYPE 2 60IN	EA	4.				
088	722	3790	INLET SPECIAL CATCH BASIN 9IN BEEHIVE 60IN	EA	1.				
089	722	4020	INLET CATCH BASIN 9IN BEEHIVE	EA	2.				
090	722	6200	ADJUST MANHOLE	EA	12.				
091	722	6240	ADJUST UTILITY APPURTENANCE	EA	32.				
092	724	0210	FITTINGS-DUCTILE IRON	LBS	1,585.				
093	724	0310	GATE VALVE & BOX 8IN	EA	2.				
094	724	0314	GATE VALVE & BOX 12IN	EA	4.				
095	724	0317	GATE VALVE & BOX 16IN	EA	2.				
096	724	0324	GATE VALVE & BOX 24IN	EA	1.				

BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
097	724	0375	RELOCATE GATE VALVE & BOX	EA	2.				
098	724	0412	8IN HYDRANT	EA	5.				
099	724	0420	HYDRANT-RELOCATE	EA	5.				
100	724	0427	ADJUST HYDRANT	EA	2.				
101	724	0430	REMOVE HYDRANT	EA	1.				
102	724	0820	WATERMAIN 8IN	LF	238.				
103	724	0855	12IN WATERMAIN	LF	239.				
104	724	0858	WATERMAIN 16IN	LF	1,098.				
105	724	0870	24IN WATERMAIN	LF	3,109.				
106	724	0891	WATERMAIN MODIFICATIONS	L SUM	1.				
107	724	0944	CONNECTION TO EXISTING MAIN	EA	6.				
108	724	0960	WATER SERVICE CONNECTION 2IN	EA	1.				
109	724	1020	MEDIAN SPRINKLER SYSTEM	L SUM	1.				
110	724	1117	12IN SANITARY SEWER PIPE	LF	619.				
111	724	1118	15IN SANITARY SEWER PIPE	LF	109.				
112	744	0100	POLYSTYRENE INSULATION BOARD	BD FT	12,464.				

BID ITEMS

Project: NHU-1-981(101)111 (PCN-20196)

Bidder 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.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
113	748	0140	CURB & GUTTER-TYPE I	LF	34,197.				
114	750	0111	DECORATIVE PAVED BOULEVARD	SY	175.				
115	750	0115	SIDEWALK CONCRETE 4IN	SY	13,558.				
116	750	0140	SIDEWALK CONCRETE 6IN	SY	577.				
117	750	0200	CONCRETE MEDIAN PAVING	SY	3,833.				
118	750	0210	CONCRETE MEDIAN NOSE PAVING	SY	451.				
119	750	1020	DRIVEWAY CONCRETE 8IN	SY	209.				
120	750	2115	DETECTABLE WARNING PANELS	SF	1,230.				
121	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	832.				
122	754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	624.				
123	754	0193	FLEXIBLE DELINEATORS-TYPE D	EA	105.				
124	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	1,659.				
125	754	0592	RESET SIGN PANEL	EA	2.				
126	754	0593	RESET SIGN SUPPORT	EA	1.				
127	754	0805	OBJECT MARKERS - CULVERTS	EA	15.				
128	762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	1,280.				

BID ITEMS

Project: NHU-1-981(101)111 (PCN-20196)

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
129	762	0420	SHORT TERM 4IN LINE-TYPE R	LF	770.				
130	762	0424	SHORT TERM 8IN LINE-TYPE R	LF	150.				
131	762	1108	PVMT MK PAINTED 8IN LINE	LF	150.				
132	762	1255	PREFORMED THERMO PLASTIC PVMT MK 6IN LINE	LF	1,999.				
133	762	1270	PREFORMED THERMO PLASTIC PVMT MK 24IN LINE	LF	718.				
134	762	1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	18,951.				
135	762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	8,948.				
136	764	9010	ATTENUATING CRASH CUSHION TL-2	EA	6.				
137	766	0120	RESET MAILBOX	EA	3.				
138	770	0020	CONCRETE FOUNDATION-HIGHWAY LIGHTING	EA	57.				
139	770	0060	CONCRETE FOUNDATION-FEED POINT-TYPE B	EA	2.				
140	770	0100	PULL BOX	EA	13.				
141	770	0210	CABLE TRENCH-TYPE I	LF	151.				
142	770	0330	2IN DIAMETER RIGID CONDUIT	LF	13,024.				
143	770	0503	UNDERGROUND CONDUCTOR NO2-TYPE RHW	LF	26,492.				
144	770	0504	UNDERGROUND CONDUCTOR NO4-TYPE RHW	LF	11,936.				

BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
145	770	0507	UNDERGROUND CONDUCTOR NO10-TYPE RHW	LF	1,252.				
146	770	0604	UNDERGROUND CONDUCTOR NO4-TYPE THW	LF	10,179.				
147	770	0605	UNDERGROUND CONDUCTOR NO6-TYPE THW	LF	3,832.				
148	770	0750	FEED POINT-TYPE V-PAD MOUNTED	EA	1.				
149	770	1676	LT STD 6FT MA 40FT MT HT BREAKAWAY	EA	19.				
150	770	2876	LT STD TWIN 6FT MA 40FT MT HT BREAKAWAY	EA	38.				
151	770	4220	LED LUMINAIRE - 150 WATT	EA	103.				
152	770	4540	RELOCATE LIGHT STANDARD	EA	2.				
153	770	4560	REMOVE LIGHT STANDARD	EA	8.				
154	770	9270	MODIFY EXISTING FEED POINT	EA	1.				
155	772	2110	FLASHING BEACON-POST MOUNTED	EA	4.				
156	772	2906	REVISE TRAFFIC SIGNAL SYSTEM-SITE 1	EA	1.				
157	772	2907	REVISE TRAFFIC SIGNAL SYSTEM-SITE 2	EA	1.				
158	772	2935	REVISE FLASHING BEACON SYSTEM	EA	1.				
159	772	9200	IT SYSTEM	EA	1.				
160	772	9811	TRAFFIC SIGNAL SYSTEM - SITE 1	EA	1.				

NOTES

Revised 9/25/15	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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samples shall be taken on each side of the repair or connection. If positive bacteriological samples are recorded, then the situation shall be evaluated to determine corrective action, and daily sampling shall be continued until two (2) consecutive negative samples are recorded.

All costs for disinfection and bacteriological testing, including taps, shall be included in price bid for "()IN Watermain".

724-P11 **BEDDING MATERIAL:** The bedding material shall consist of granular material in accordance with the requirements for gradation shown in the following table:

Square Mesh Sieve Size	Percent By Weight Passing
2"	100%
1"	90-100%
3/4"	80-100%
No. 4	30-90%
No. 30	10-60%
No. 100	0-15%

One gradation test shall be made for each source for each 500 tons of screened and/or blended material and for each 200 tons of non-screened or "bank run" material. The cost for pipe bedding (as shown in the Pipe Bedding Quantities Detail in Section 20) shall be included in the price bid for "()IN Watermain" or "8IN Sanitary Sewer Pipe" .

724-P12 **RELOCATE WATERMAIN UTILITIES:** The cost of salvaging existing hydrants and gate valves and relocating to new locations shall be included in the price bid for "Relocate Gate Valve & Box" and "Hydrant-Relocate"

724-P13 **24IN WATERMAIN:** The cost of salvaging the existing 24" x 8" reducer at 535+50 RT and relocating it to 504+41 RT shall be included in the price bid for "24IN Watermain".

724-P14 **CONNECTION TO EXISTING MAIN:** This bid item is for the wet tap connection only, not including the median sprinkler system or other watermain connections. The connection occurs at the following locations:

- Sta 30+40: extend 8" watermain west to Arabian Ave from 16" watermain on N Washington St.
- Sta 49+36: extend 8" watermain west to adjacent property from 16" watermain on N Washington St.
- Sta 58+97: extend 12" watermain east to adjacent property from 16" watermain on N Washington St.
- Sta 59+60: extend 12" watermain west to adjacent property from 16" watermain on N Washington St.
- Sta 95+28: extend 12" watermain west to adjacent property from 16" watermain on N Washington St.
- Sta 104+71: extend 12" watermain west to 57th Ave NW from 16" watermain on N Washington St.

These connections shall be made with a tapping sleeve and valve. The existing watermain shall remain in service during the connection. The gate valve will be paid separately under its respective bid item.

The tapping sleeve shall be stainless steel with a stainless steel flange and bolts and shall conform the "Smith Blair" Type 663 or "Romac" Type SST or an approved equal. See detail "Water Main Wet Tap" in section 20. Tapping saddles with valves shall be hydrostatically pressure tested on the main prior to requesting a tap. The test shall be 125 pounds per square inch for a duration of 30 minutes.

Tapping saddles shall be installed according to manufacturer's installation instructions. The tapping saddle bolts shall be torqued using a calibrated torque wrench with a handle at least 12 inches in length. The Contractor should be prepared to show certification of torque wrench calibration at the request of the Engineer.

The City of Bismarck Public Works Department will tap the watermain at a charge to the Contractor. The Contractor shall be responsible for all work connected with installation of the tapping sleeve and valve including the necessary space around the watermain required for the tapping machine and assisting the Public Works Department in positioning the tapping machine.

All costs for fees, labor, tapping sleeve, material and equipment shall be included in the price bid for "Connection to Existing Main".

724-P15 **WATERMAIN MODIFICATIONS:** This bid item is for trench excavation and backfill required to install insulation over the existing 16" PVC watermain along N Washington Street from Sta 34+20 to 39+10 Rt. The price bid shall include all costs for labor, equipment, and materials required to locate the existing main, excavate, backfill, installation of new marking tape, and trench compaction. This work shall be included in the price bid for "Watermain Modifications." The insulation shall be paid for separately.

724-P16 **CONTROLLED DENSITY BACKFILL:** Controlled density backfill shall be installed to provide special structural support at the following storm-over-sanitary sewer crossings:

- STA 37+80, 18' LT
- STA 57+15, 115' LT
- STA 58+65, 115' LT

The properties of the backfill shall be a blend of cement, water, pozzolanic materials, and fillers. The materials shall be fluid on placement to flow around and fill voids around the pipe in the backfill area. The material shall be able to support normal loads after six hours and shall have a compressive strength in the range of 80 psi to 130 psi at 28 days. The material shall be such that it lends itself to easy removal with a tractor backhoe. If the mix design shown is used, no additional testing will be required. The mix design yields approximately one cubic yard of flowable mortar.

Mix Design

Sand	2600 lbs
Water	70 gals
Fly Ash (Class C)	300 lbs
Cement	100 lbs

The lower crossing pipe shall be excavated to the top of pipe for the width of the upper crossing pipe trench and the trench bottom shall be thoroughly compacted by mechanical means, with care taken not to damage or disturb the lower crossing pipe. The trench shall be filled with controlled density backfill for 5 feet in either direction for a length of ten feet along the upper crossing pipe. The trench shall be filled with controlled density backfill for 5-feet in either direction from the crossing up to 4" below the bottom of the upper pipe. The standard bedding material shall be placed over the controlled density backfill after the controlled density backfill has adequately cured. The cost of the controlled density backfill shall be included in the price bid for "Pipe Conc Reinf ()IN CL ()-Storm Drain".

This document was originally issued and sealed by Gabriel J Schell Registration Number PE-6876, on 9/25/15 and the original document is stored at the City of Bismarck

NOTES

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	ND	NHU-1-981(101)111	6	12

772-P11 SIGNAL EQUIPMENT:
 A. All pedestal adapters/collars shall be steel.
 B. All pedestrian heads shall be 16" with countdown displays.
 C. All vehicle and pedestrian heads shall be polycarbonate and installed level on all sides. All fasteners shall be stainless steel and anti-seize lubricant used.
 D. Two-point mounting system such as Astro Brackets, Sky Brackets or approved equal shall be used for all mast arm mounted signals.
 E. All traffic signal backplates shall be louvered aluminum.
 F. All indications on new signal heads shall be LED.
 G. Furnishing and installing signal equipment is included in the price bid for "Traffic Signal System – Site _".

772-P12 VIDEO DETECTION SYSTEM AND COMMUNICATION: The video detection system shall reuse the existing Autoscope ENCORE2 Video Detection Equipment. All cable connections, camera aiming and system set-up, including programming detection zones and verification of reliable operation shall be provided by the Contractor. The location of cameras in the plans are for reference only. Cable and camera installation shall be performed by the Contractor.

The video detection equipment shall be capable of transmitting continuous real time digital video images from any camera at 43rd Ave to the traffic engineer's office. Midcontinent Communications will provide a cable modem and cable from their existing pedestal to the new traffic signal controller cabinet at 43rd Avenue. The Contractor shall be responsible for coordination and providing technical support to Midcontinent Communications, and the City of Bismarck IT Department. The Contractor shall also be responsible for supplying Ethernet modem switches, routers and any other equipment to relay the IP-based video images to the cable modem. The cable modem shall transmit the images to the traffic engineer's office. The Contractor shall also shall also provide communication from the traffic engineer's office to the traffic signal controllers.

The Contractor shall provide all labor and equipment necessary for the video detection system to be fully operational. All costs, labor, materials and equipment necessary for furnishing and installing this item and providing the video images, all technical support and equipment into the traffic engineer's office shall be included in the price bid for "Traffic Signal System – Site _".

772-P13 TRAFFIC SIGNAL HEAD BACK PLATES: Traffic signal head back plates shall be furnished with a yellow Type XI retroreflective border. The yellow border shall be installed around the perimeter of the face of the backplate and shall be 1 inch wide. The backplates shall be installed with stainless steel fasteners including a washer. All fasteners shall be anti-seize lubricant applied to the threads. The cost for furnishing the border shall not be bid separately but shall be included in the price bid for "Traffic Signal System – Site _".

772-P14 EMERGENCY VEHICLE PRE-EMPTION: The Contractor shall notify the fire chief (Joel Boespflug) (701-355-1400) when the proposed signalized intersection EVP systems are tested and operable. The existing EVP equipment shall be reset to the new signal mast arms. The confirmation light shall be at the same location on the mast arm as the EVP detectors. The City of Bismarck is responsible for setting the range of the system.

772-P15 CONDUIT: Conduit shall be installed at the location shown on the plans. HDPE conduit shall be used when boring. Bored conduit shall be included in the bid price for "Traffic Signal System – Site _".

All conduits shall be sealed with duct seal at the controller cabinet and at the traffic signal standard foundations. The Contractor shall install two spare 2" conduit sweeps in the controller cabinet foundation and one spare 2" conduit sweep in each traffic signal standard base. Spare conduits shall be capped with an oil-tight plug with wing nut and labeled as to which direction they face.

772-P16 LABEL ALL FIELD CABLES: All labeling materials shall be approved by the City. Labels shall be readable without moving the cables. All field cables installed by the Contractor shall be labeled with the cable designations:

TYPE	LABEL	LABEL LOCATION
Communication cable	Comm./address of other end	Within 12" of conduit
Pedestrian push button	Phase/location (i.e. NW, SW, etc.)	Within 6" of terminals
Video detection cable	Approach Detection (i.e. NW, SW, etc.)	Within 6" of terminals
Control cable	Cable number & location (i.e. NW, SW, etc.)	Within 12" of conduit
Opticom cable	Pre-empt number/location (i.e. NW, SW, e tc.)	Within 6" of terminal

Not a separate pay item, cost to be included in the price bid for "Traffic Signal System – Site _".

772-P17 CONTROLLER CABINET WIRING DIAGRAM: The following items shall be labeled on the cabinet wiring diagram, in addition to information required by NDDOT Standard Specification.

- A. The camera number (i.e., D2-1) from the plan shall be labeled on the detector panel drawing adjacent to the point for termination.
- B. The field wire terminals for the vehicle/pedestrian head control cables shall be labeled with the phase number and direction (i.e., Ø2, SB).
- C. The field wire terminals for the Opticom cable shall be labeled with the pre-empt number (i.e., P.E. #1).
- D. The field wire terminal for the pre-empt indicator lamps shall be labeled with the pre-empt number and direction (i.e., P.E. #1, NB).
- E. The field wire terminals for the pedestrian push-button cables shall be labeled with the phase number (i.e., Ø8 PED).
- F. Provide an intersection diagram on cabinet door showing phasing of intersection and camera numbering and detection zone numbering
- G. Provide a CAD drawing file of the as-built cabinet wiring diagram.

The Contractor shall use a heat-shrink labeling system. The cables shall not be stripped back from the connection more than 12 to 18 inches. This work is not a separate pay item and cost shall be included in the price bid for "Traffic Signal System – Site _".

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NOTES

Revised 9/25/15	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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All irrigation lines, heads and wiring disturbed during construction activity shall be reinstalled to match existing distribution and functionality. Any damage to the existing irrigation system parts shall be the responsibility of the contractor to replace, install and test to ensure proper working order.

The cost of providing and installing plant material, landscape edging, rock mulch, landscape fabric and irrigation adjustments shall be included in the Lump Sum Bid Price for Landscape Appurtenance

970-P03 LANDSCAPE APPURTENANCE – AREA 2

1. Contractor shall inventory existing plant material at Sta. 49+30 along the existing First Evangelical Free Church where plant material has been removed due to the installation of 5' sidewalk and grading operations. The individual tree shall be replaced with same species at a minimum size of:

F. Evergreen Tree: 6' Height

The location of replacement shall be at a minimum of 10' east from existing location.

The cost of providing and installing plant material shall be included in the Lump Sum Bid Price for Landscape Appurtenance.

970-P04 LANDSCAPE APPURTENANCE – AREA 3

1. Contractor shall provide and install new plant material from approximate Sta. 518+60 to Sta. 519+40 along the existing First Evangelical Free Church parking lot perimeter where an existing driveway has been removed. All plant material shall be installed with same species and spacing adjacent to the existing driveway with to a minimum size of:

A. Evergreen Tree: 6' Height

The cost of providing and installing plant material shall be included in the Lump Sum Bid Price for Landscape Appurtenance.

724-P18 WATER SERVICE CONNECTION 2IN: The existing 2IN water service line at Sta 49+26 Lt shall be replaced from the existing curb stop to the 16IN water main. The Contractor shall close the corporation stop at the existing 16IN water main, remove the existing 2IN service line from the corporation stop and plug the existing corporation stop. The Contractor shall install a new copper service line from the existing curb stop at the right of way line to the proposed 8IN water main. The pipe and the corporation stop shall match specifications found in plan note 724-P17. The Contractor shall connect the service line to the 8IN watermain with a 2-bolt minimum stainless steel service saddle. All materials including pipe, service saddle, and corporation stop, labor and equipment necessary to construct a new service line and disconnect the old service line shall be included in the price bid for "Water Service Connection 2IN".

770-100 CONCRETE FOUNDATIONS: Install and tighten anchor bolts as specified in Section 754.04 D.5, "Overhead Sign Structures".

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ESTIMATE OF QUANTITIES

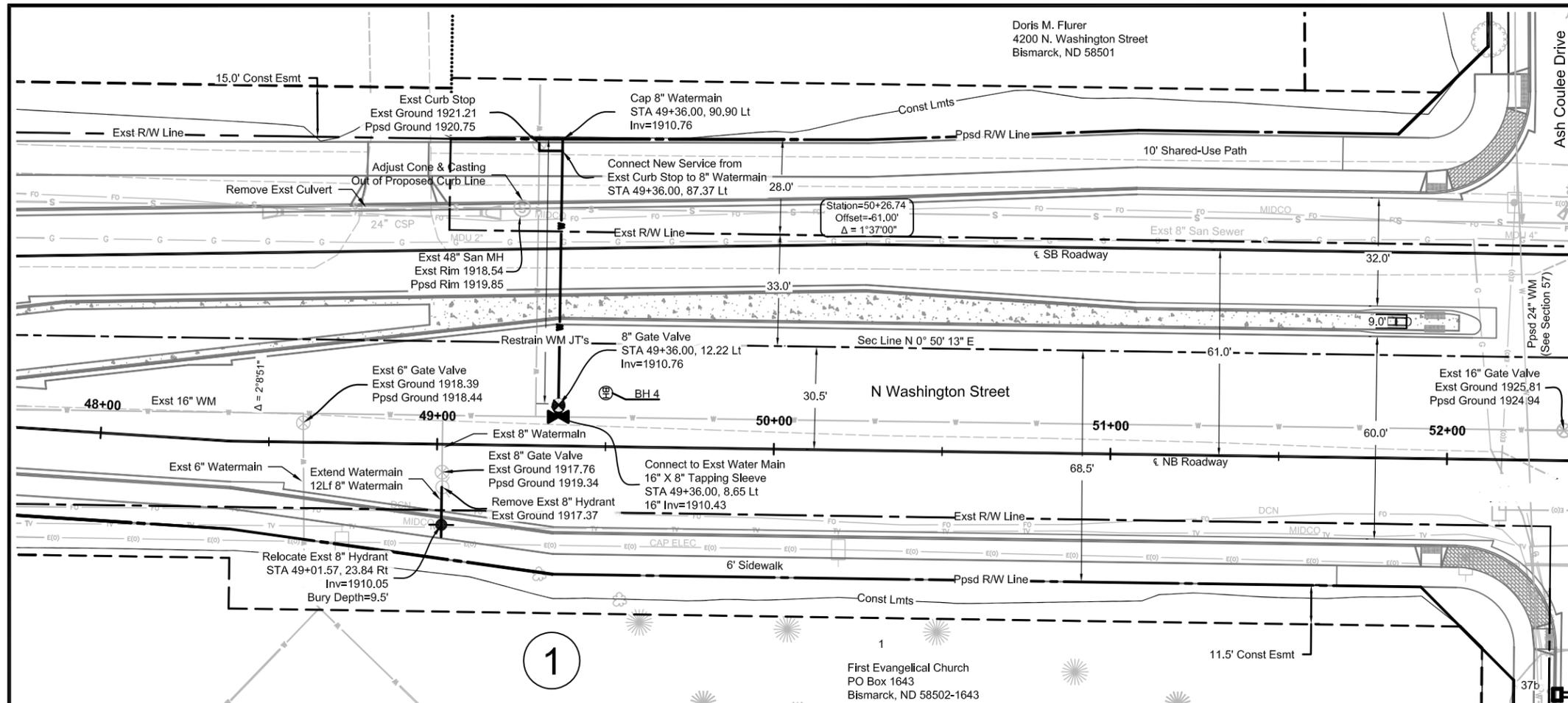
SPEC	CODE	ITEM DESCRIPTION	UNIT	NHU-1-981(101)111	PARTIALLY PARTICPATING (49% Federal/ 51% City)	100% CITY FUNDS	TOTAL
722	3410	MANHOLE REPAIR	EA	3	-	-	3
722	3510	INLET-TYPE 2	EA	24	-	-	24
722	3520	INLET-TYPE 2 DOUBLE	EA	37	-	-	37
722	3701	INLET SPECIAL-TYPE 2 48IN	EA	1	-	-	1
722	3730	INLET SPECIAL CATCH BASIN 9IN BEEHIVE 48IN	EA	2	-	-	2
722	3761	INLET SPECIAL-TYPE 2 60IN	EA	4	-	-	4
722	3790	INLET SPECIAL CATCH BASIN 9IN BEEHIVE 60IN	EA	1	-	-	1
722	4020	INLET CATCH BASIN 9IN BEEHIVE	EA	2	-	-	2
722	6200	ADJUST MANHOLE	EA	12	-	-	12
722	6240	ADJUST UTILITY APPURTENANCE	EA	32	-	-	32
724	0210	FITTINGS-DUCTILE IRON	LBS	865	-	720	1,585
724	0310	GATE VALVE & BOX 8IN	EA	-	-	2	2
724	0314	GATE VALVE & BOX 12IN	EA	-	-	4	4
724	0317	GATE VALVE & BOX 16IN	EA	2	-	-	2
724	0324	GATE VALVE & BOX 24IN	EA	-	-	1	1
724	0375	RELOCATE GATE VALVE & BOX	EA	2	-	-	2
724	0412	8IN HYDRANT	EA	1	-	4	5
724	0420	HYDRANT-RELOCATE	EA	4	-	1	5
724	0427	ADJUST HYDRANT	EA	2	-	-	2
724	0430	REMOVE HYDRANT	EA	1	-	-	1
724	0820	WATERMAIN 8IN	LF	29	-	209	238
724	0855	12IN WATERMAIN	LF	-	-	239	239
724	0858	WATERMAIN 16IN	LF	966	-	132	1,098
724	0870	24IN WATERMAIN	LF	-	-	3,109	3,109
724	0891	WATERMAIN MODIFICATIONS	L SUM	1	-	-	1
724	0944	CONNECTION TO EXISTING MAIN	EA	-	-	6	6
724	0960	WATER SERVICE CONNECTION 2IN	EA	-	-	1	1
724	1020	MEDIAN SPRINKLER SYSTEM	L SUM	1	-	-	1
724	1117	12IN SANITARY SEWER PIPE	LF	-	-	619	619
724	1118	15IN SANITARY SEWER PIPE	LF	-	-	109	109
744	0100	POLYSTYRENE INSULATION BOARD	BD FT	10,928	-	1,536	12,464
748	0140	CURB & GUTTER-TYPE I	LF	34,197	-	-	34,197
750	0111	DECORATIVE PAVED BOULEVARD	SY	175	-	-	175
750	0115	SIDEWALK CONCRETE 4IN	SY	13,558	-	-	13,558
750	0140	SIDEWALK CONCRETE 6IN	SY	577	-	-	577
750	0200	CONCRETE MEDIAN PAVING	SY	3,833	-	-	3,833
750	0210	CONCRETE MEDIAN NOSE PAVING	SY	451	-	-	451
750	1020	DRIVEWAY CONCRETE 8IN	SY	209	-	-	209
750	2115	DETECTABLE WARNING PANELS	SF	1,230	-	-	1,230
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	832	-	-	832
754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	624	-	-	624

Estimate of Quantities

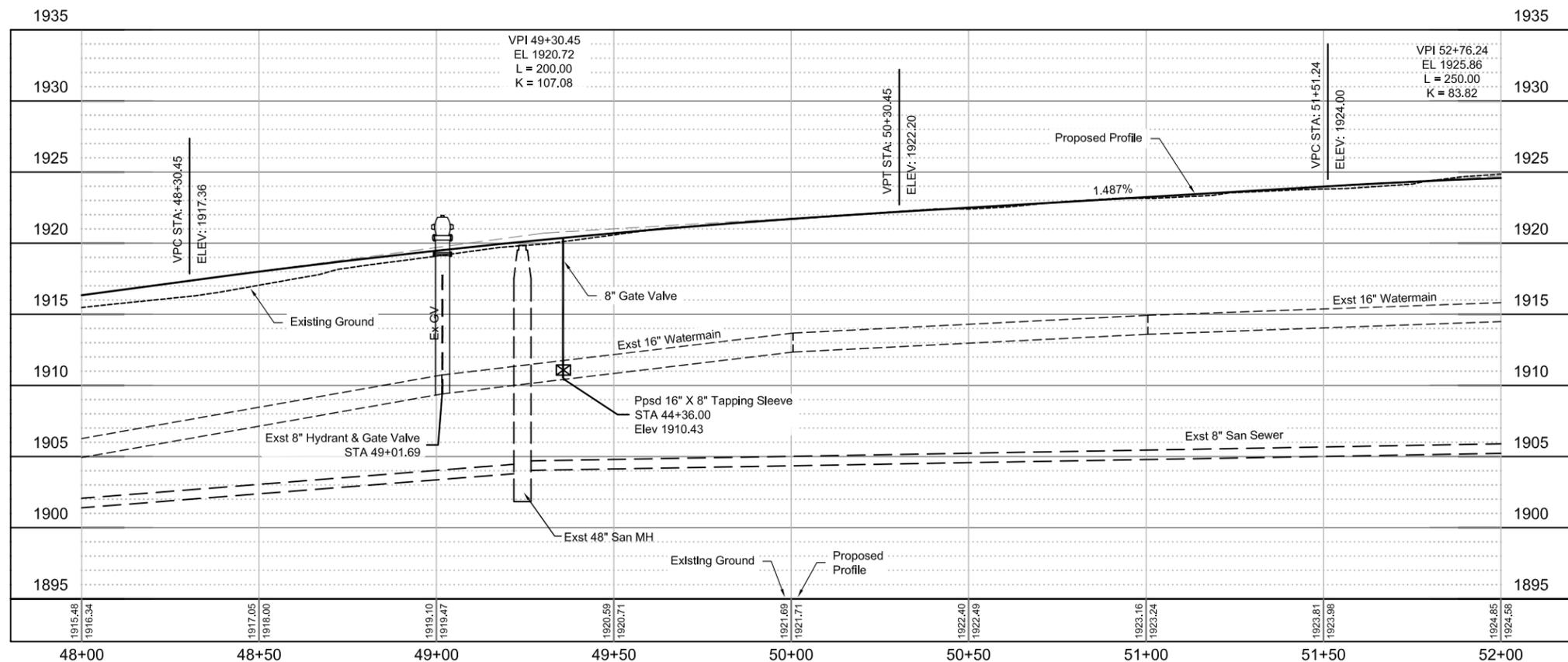
Doris M. Flurer
4200 N. Washington Street
Bismarck, ND 58501

Revised 9/25/15

STATE	PROJECT NO.	SEC. NO.	SHEET NO.
ND	NHU-1-981(101)111	55	7



MANHOLE REPAIR Sta 49+24, 70' Lt	1 EA
ADJUST UTILITY APPURTENANCE Sta 48+60, 6' Lt (GATE VALVE BOX) Sta 49+01, 8' Rt (GATE VALVE BOX) Sta 49+29, 90' Lt (CURB STOP)	1 EA 1 EA 1 EA
HYDRANT-RELOCATE Sta 49+02	1 EA
WATERMAIN 8IN Sta 49+02, 12' Rt to Sta 49+02, 24' Rt	12 LF
NON-PARTICIPATING FITTINGS-DUCTILE IRON Sta 49+36, 91' Lt (8IN CAP)	45 LBS
GATE VALVE & BOX 8IN Sta 49+36, 12' Lt	1 EA
WATERMAIN 8IN Sta 49+36, 12' Lt to 49+36, 91' Lt	79 LF
WATER SERVICE CONNECTION 2IN Sta 49+36, 88' Lt	1 EA
CONNECTION TO EXISTING MAIN Sta 49+36, 9' Lt	1 EA



This document was originally issued and sealed by Brad Krogstad Registration Number PE-5786, on 9/24/15 and the original document is stored at the City of Bismarck

Rev'd. Scale: 1:40 Hor, 1:10 Ver

NORTH WASHINGTON STREET
CITY OF BISMARCK
BISMARCK, NORTH DAKOTA

N Washington St Storm Sewer
Sta 48+00 to 52+00

KLJ

DRWN BY JKS	CHK'D BY GJS	PROJECT NO. 1412129	DATE 09/2014
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