Job 24115

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

REQUEST FOR PROPOSAL

STATE FEDERAL AID PROJECT NO. RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

0.484 Miles

PCC RECONSTRUCTION, STRUCTURES, GRADING, AGGREGATE BASE, PCC PAVING, SIGNALS, LIGHTING, STORM SEWER, LIFT STATION, WATERMAIN RELOCATION, RAILROAD SHOOFLY TEMPORARY TRACK, AND RAILROAD PERMANENT TRACK

ND 297, DEMERS AVE & 42ND STREET GRADE SEPARATION

GRAND FORKS COUNTY

BID OPENING: The bidder's proposal will be accepted via the Bid Express on-line bidding exchange at www.bidx.com until **09:30AM Central Time on February 27, 2026.**

Prior to submitting a Proposal, the Bidder shall complete all applicable sections and properly execute the Proposal Form in accordance with the specifications.

Proposal Form of:

_____
(Firm Name)

_____
(Address, City, State, Zipcode)

(For official use only)

PAGE INTENTIONALLY LEFT BLANK

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

The company, firm, corporation, or individual hereby acknowledges that it has designated a responsible person or persons as having the authority to obligate the company, firm, or individual, through electronic or paper submittal, to the terms and conditions described herein and in the contract documents. The designated responsible person submitting this proposal shall be hereafter known as the bidder. By submitting this proposal, the bidder fully accepts and agrees to all the provisions of the proposal. The bidder also certifies that the information given in this proposal is true and the certifications made in this proposal are correct.

The bidder acknowledges that they have thoroughly examined the plans, proposal form, specifications, supplemental specifications, special provisions and agrees that they constitute essential parts of this proposal.

The bidder acknowledges that all line items which contain a quantity shall have a unit price bid. Any line item which is bid lump sum shall contain a lump sum bid price.

The bidder acknowledges that they understand that the quantities of work required by the plans and specifications are approximate only and are subject to increases and decreases; the bidder understands that all quantities of work actually required must be performed and that payment therefore shall be at the prices stipulated herein; that the bidder proposes to timely furnish the specified materials in the quantities required and to furnish the machinery, equipment, labor and expertise necessary to competently complete the proposed work in the time specified.

NON-COLLUSION AND DEBARMENT CERTIFICATION

The bidder certifies that neither he/she, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid.

By submitting this proposal, the bidder certifies to the best of his/her knowledge and belief that he/she and his/her principles:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal Department or agency;
b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or perform a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph b. of the certification; and
d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or Local) terminated for cause or default

Where the prospective bidder is unable to certify to any of the statements in this certification, the bidder shall submit an explanation in the blanks provided herein. The explanation will not necessarily result in denial of participation in a contract:

Explanation:_____
_____
_____
_____

If the prequalified bidder's status changes, he/she shall immediately submit a new fully executed non-collusion affidavit and debarment certification with an explanation of the change to the Contract Office prior to submitting the bid.

Failure to furnish a certification or an explanation will be grounds for rejection of a bid.

BID LIMITATION (Optional)

The bidder who desires to bid on more than one project on which bids are to be opened on the same date, and who also desires to avoid receiving an award of more projects than the bidder is equipped to handle, may bid on multiple projects and limit the total amount of work awarded to the bidder on selected projects by completing the "Bid Limitation".

The Bid Limitation must be filled in on each proposal form for which the Bidder desires protection. Each such proposal must be covered by a proposal guaranty.

The bid limitation can be made by declaring the total dollar value of work OR total number of projects a bidder is willing to perform.

The Bidder desires to disqualify all of his/her bids on this bid opening that exceed a total dollar value of

$_____

OR

that exceed a total number of _____ projects.

The Bidder hereby authorizes the Department to determine which bids shall be disqualified.

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

PERMISSIBLE DISCOUNT (optional)

Only when invited to do so in the Request for Proposal by Special Provision, Bidders are permitted to offer a discount on a specific project (discount project) if they are awarded the contract on one or more additional projects bid at the same bid opening time and date. The bidder must present the proposal so that it can be considered with or without the discount. The bid or discount offered on the "discount project" will not affect the determination of the low bid of any other project.

When discounts are offered, they must be presented as a reduction in the unit price for one or more items of work in the specified proposal (discount project).

Space for Offering Discounts:

_____
_____
_____

Item No:_____

Description:_____

Unit:_____

Proposal Quantity:_____ Unit Price Reduction: $_____ Discount: $_____

Item No:_____

Description:_____

Unit:_____

Proposal Quantity:_____ Unit Price Reduction: $_____ Discount: $_____

Item No:_____

Description:_____

Unit:_____

Proposal Quantity:_____ Unit Price Reduction: $_____ Discount: $_____

Item No:_____

Description:_____

Unit:_____

Proposal Quantity:_____ Unit Price Reduction: $_____ Discount: $_____

TOTAL DISCOUNT_____

It is understood that the discount will only apply if awarded under the conditions as listed above and signed by the bidder.

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

PROPOSAL GUARANTY

A proposal guaranty is required. The proposal guaranty must comply with Section 102.09, "Proposal Guarantee" of the Standard Specifications.

TYPE OF PROPOSAL GUARANTY APPLIED TO THIS PROJECT (Check one):

_____ Annual Bid Bond*

_____ Single Project Bid Bond

_____ Certified or Cashier's Check

*Annual Bid Bond is required when submitting proposals electronically

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
001	103	0100	CONTRACT BOND	L SUM	1.				
002	107	0100	RAILWAY PROTECTION INSURANCE	L SUM	1.				
003	107	0140	RAILROAD COORDINATION	L SUM	1.				
004	107	0145	RAILROAD FLAGGING	DAY	1,600.				
005	108	0001	CRITICAL PATH METHOD SCHEDULE	L SUM	1.				
006	109	1000	E-TICKETING	L SUM	1.				
007	201	0330	CLEARING & GRUBBING	L SUM	1.				
008	201	0370	REMOVAL OF TREES 10IN	EA	42.				
009	201	0380	REMOVAL OF TREES 18IN	EA	67.				
010	201	0390	REMOVAL OF TREES 30IN	EA	3.				
011	202	0128	REMOVE AGGREGATE BASE	TON	13,036.				
012	202	0136	REMOVAL OF PAVEMENT	TON	72,146.				
013	202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES	EA	11.				
014	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	13,072.				
015	202	0210	REMOVAL OF MANHOLES	EA	16.				
016	202	0230	REMOVAL OF INLETS	EA	32.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
017	202	0231	REMOVE & RESET INLETS	EA	2.				
018	202	0286	REMOVAL OF FOUNDATIONS-ALL SIZES	L SUM	1.				
019	202	0288	EXCAVATION & DISPOSAL OF CONTAMINATED SOIL	CY	1,361.				
020	202	0312	REMOVE EXISTING FENCE	LF	56.				
021	202	0500	ACP WATERMAIN REMOVAL	LF	1,794.				
022	203	0101	COMMON EXCAVATION-TYPE A	CY	29,888.				
023	203	0109	TOPSOIL	CY	12,125.				
024	203	0113	COMMON EXCAVATION-WASTE	CY	95,659.				
025	203	0130	MUCK EXCAVATION	CY	400.				
026	210	0102	CLASS 1 EXCAVATION-SITE 1	L SUM	1.				
027	210	0103	CLASS 1 EXCAVATION-SITE 2	L SUM	1.				
028	210	0202	FOUNDATION PREPARATION-SITE 1	L SUM	1.				
029	210	0203	FOUNDATION PREPARATION-SITE 2	L SUM	1.				
030	210	0210	FOUNDATION FILL	CY	7,260.				
031	216	0100	WATER	M GAL	1,143.				
032	230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	48.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
033	251	0300	SEEDING CLASS III	ACRE	22.720				
034	251	1000	WETLAND SEED	ACRE	.590				
035	251	2000	TEMPORARY COVER CROP	ACRE	59.350				
036	253	0201	HYDRAULIC MULCH	ACRE	59.350				
037	255	0102	ECB TYPE 2	SY	645.				
038	255	0300	CONCRETE EROSION CONTROL BLANKET	SY	42.				
039	258	0100	CONCRETE SLOPE PROTECTION	SY	1,300.				
040	261	0112	FIBER ROLLS 12IN	LF	79,295.				
041	261	0113	REMOVE FIBER ROLLS 12IN	LF	37,964.				
042	265	0100	STABILIZED CONSTRUCTION ACCESS	EA	4.				
043	265	0101	REMOVE STABILIZED CONSTRUCTION ACCESS	EA	4.				
044	302	0100	SALVAGED BASE COURSE	TON	37,823.				
045	302	0120	AGGREGATE BASE COURSE CL 5	TON	7,366.				
046	302	0401	SALVAGE & RELAY AGGREGATE SURFACE COURSE	TON	6,243.				
047	430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	3,288.				
048	550	0305	9IN NON-REINF CONCRETE PVMT CL AE-DOWELED	SY	43,133.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
049	602	0500	BRIDGE SUBSTRUCTURE CONCRETE	CY	2,764.				
050	602	0510	BRIDGE DECK CONCRETE	CY	633.				
051	602	0520	BRIDGE BARRIER CONCRETE	CY	88.				
052	602	1120	SUPERSTRUCTURE CONCRETE	CY	421.				
053	602	1133	CONCRETE BRIDGE APPROACH SLAB	SY	424.				
054	602	1134	PILE SUPPORTED APPROACH SLAB	SY	420.				
055	602	1250	PENETRATING WATER REPELLENT TREATMENT	SY	2,927.				
056	604	3910	PRESTRESSED I-BEAM - MN45IN	LF	1,923.				
057	604	9550	PRESTRESSED CONCRETE FASCIA GIRDER	LF	192.				
058	612	0115	REINFORCING STEEL-GRADE 60	LBS	144,636.				
059	612	0116	REINFORCING STEEL-GRADE 60-EPOXY COATED	LBS	526,032.				
060	616	0360	STRUCTURAL STEEL	LBS	5,805.				
061	616	5890	STRUCTURAL STEEL	L SUM	1.				
062	616	7000	A36 STEEL-ROLLED	LBS	9,605.				
063	622	0020	STEEL PILING HP 10 X 42	LF	2,880.				
064	622	0040	STEEL PILING HP 12 X 53	LF	5,850.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
065	622	0060	STEEL PILING HP 14 X 73	LF	12,480.				
066	622	0068	STEEL PILING HP 14 X 89	LF	24,071.				
067	622	0076	STEEL PILING HP 14 X 117	LF	10,920.				
068	622	0260	GROUND STABILIZATION PILING 14 X 73	LF	4,620.				
069	622	0268	GROUND STABILIZATION PILING 14 X 89	LF	3,976.				
070	622	7001	DYNAMIC PILE TEST	EA	5.				
071	624	0123	PEDESTRIAN RAILING	LF	251.				
072	624	0124	PEDESTRIAN FENCE	LF	187.				
073	702	0100	MOBILIZATION	L SUM	1.				
074	704	0100	FLAGGING	MHR	562.				
075	704	1000	TRAFFIC CONTROL SIGNS	UNIT	8,344.				
076	704	1052	TYPE III BARRICADE	EA	20.				
077	704	1054	SIDEWALK BARRICADE	EA	7.				
078	704	1058	PEDESTRIAN WALKWAY	LF	524.				
079	704	1060	DELINEATOR DRUMS	EA	282.				
080	704	1067	TUBULAR MARKERS	EA	146.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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	704	1085	SEQUENCING ARROW PANEL-TYPE A	EA	3.				
082	704	1150	TEMPORARY TRAFFIC SIGNALS	EA	3.				
083	704	1500	OBLITERATION OF PAVEMENT MARKING	SF	576.				
084	704	2108	TEMPORARY CURB RAMP	EA	2.				
085	704	4011	PORTABLE CHANGEABLE MESSAGE SIGN	EA	4.				
086	704	5050	COVER SIGN	EA	1.				
087	706	0400	FIELD OFFICE	EA	1.				
088	706	0500	AGGREGATE LABORATORY	EA	1.				
089	708	1540	INLET PROTECTION-SPECIAL	EA	86.				
090	708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	86.				
091	709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	53,234.				
092	709	0110	GEOSYNTHETIC MATERIAL TYPE RG	SY	9,283.				
093	709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	156.				
094	709	0152	GEOSYNTHETIC MATERIAL TYPE R2	SY	15,130.				
095	709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	42.				
096	714	0210	PIPE CONC REINF 15IN CL III-STORM DRAIN	LF	1,485.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
097	714	0315	PIPE CONC REINF 18IN CL III-STORM DRAIN	LF	1,466.				
098	714	0330	PIPE CONC REINF 18IN CL V	LF	94.				
099	714	0620	PIPE CONC REINF 24IN CL III-STORM DRAIN	LF	1,113.				
100	714	0825	PIPE CONC REINF 30IN CL III-STORM DRAIN	LF	280.				
101	714	0840	PIPE CONC REINF 30IN CL V	LF	148.				
102	714	0910	PIPE CONC REINF 36IN CL III-STORM DRAIN	LF	64.				
103	714	0922	PIPE CONC REINF 36IN CL V	LF	116.				
104	714	1230	PIPE CONC REINF 54IN CL V	LF	10.				
105	714	2102	PIPE CONC REINF ARCH 22IN X 13IN CL III	LF	52.				
106	714	2119	PIPE CONC REINF ARCH 51IN X 31IN CL III-S DRAIN	LF	610.				
107	714	2130	PIPE CONC REINF ARCH 44IN X 27IN CL III	LF	158.				
108	714	4092	PIPE CONDUIT 12IN-STORM DRAIN	LF	139.				
109	714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	964.				
110	714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	128.				
111	714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	1,603.				
112	714	4112	PIPE CONDUIT 30IN-STORM DRAIN	LF	6.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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	714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	800.				
114	714	5010	PIPE CORR STEEL .064IN 15IN	LF	66.				
115	714	8018	PIPE STEEL SMOOTH WALL .469IN 36IN	LF	180.				
116	714	8025	PIPE BORING PIT BRACING	L SUM	1.				
117	714	9659	REMOVE & RELAY PIPE-ALL TYPES & SIZES	LF	288.				
118	714	9720	UNDERDRAIN PIPE PVC PERFORATED 4IN	LF	14,608.				
119	720	0110	RIGHT OF WAY MARKERS	EA	10.				
120	720	0125	ALIGNMENT MONUMENTS	EA	9.				
121	720	0130	IRON PIN R/W MONUMENTS	EA	20.				
122	720	0135	IRON PIN REFERENCE MONUMENTS	EA	7.				
123	722	0100	MANHOLE 48IN	EA	9.				
124	722	0110	MANHOLE 60IN	EA	17.				
125	722	0120	MANHOLE 72IN	EA	2.				
126	722	0130	MANHOLE 84IN	EA	3.				
127	722	0140	MANHOLE 96IN	EA	1.				
128	722	1100	MANHOLE RISER 48IN	LF	63.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
129	722	1110	MANHOLE RISER 60IN	LF	120.				
130	722	1120	MANHOLE RISER 72IN	LF	17.				
131	722	1130	MANHOLE RISER 84IN	LF	23.				
132	722	1140	MANHOLE RISER 96IN	LF	36.				
133	722	2490	MANHOLE STORM CONNECTION	EA	7.				
134	722	3510	INLET-TYPE 2	EA	46.				
135	722	3520	INLET-TYPE 2 DOUBLE	EA	19.				
136	722	3701	INLET SPECIAL-TYPE 2 48IN	EA	5.				
137	722	3713	INLET SPECIAL MOUNTABLE-TYPE B 48IN	EA	2.				
138	722	3761	INLET SPECIAL-TYPE 2 60IN	EA	3.				
139	722	3766	INLET SPECIAL-TYPE 2 72IN	EA	1.				
140	722	3773	INLET SPECIAL MOUNTABLE-TYPE B 72IN	EA	1.				
141	722	6140	ADJUST GATE VALVE BOX	EA	3.				
142	722	6200	ADJUST MANHOLE	EA	2.				
143	722	6201	ADJUST MANHOLE SPECIAL	EA	1.				
144	724	0110	BUTTERFLY VALVE & BOX 20IN	EA	3.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
145	724	0114	BUTTERFLY VALVE & BOX 30IN	EA	4.				
146	724	0210	FITTINGS-DUCTILE IRON	LBS	29,071.				
147	724	0270	REMOVE GATE VALVE & BOX	EA	10.				
148	724	0300	GATE VALVE & BOX 6IN	EA	1.				
149	724	0310	GATE VALVE & BOX 8IN	EA	1.				
150	724	0321	GATE VALVE & BOX 14IN	EA	2.				
151	724	0400	HYDRANT-INSTALL 6IN	EA	3.				
152	724	0430	REMOVE HYDRANT	EA	3.				
153	724	0670	TEMPORARY WATER SERVICE	L SUM	1.				
154	724	0810	WATERMAIN 6IN PVC	LF	15.				
155	724	0830	WATERMAIN 8IN PVC	LF	20.				
156	724	0853	WATERMAIN 20IN PVC	LF	2,553.				
157	724	0856	WATERMAIN 14IN	LF	791.				
158	724	0875	WATERMAIN 30IN	LF	1,583.				
159	724	0944	CONNECTION TO EXISTING MAIN	EA	11.				
160	724	5150	PIPE PVC 12IN SEWER	LF	133.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
161	724	6031	ABANDON WATER MAIN/SERVICE LINE	LF	124.				
162	744	0050	INSULATION BOARD	CF	1,086.				
163	748	0140	CURB & GUTTER-TYPE I	LF	9,034.				
164	748	0141	CURB & GUTTER-TYPE 1 SPECIAL	LF	833.				
165	748	0190	CURB & GUTTER-TYPE I 30IN	LF	12,191.				
166	748	1000	VALLEY GUTTER 36IN	LF	333.				
167	750	0020	PIGMENTED CONCRETE	SY	4,543.				
168	750	0115	SIDEWALK CONCRETE 4IN	SY	416.				
169	750	0125	SIDEWALK CONCRETE 5IN	SY	7,048.				
170	750	0210	CONCRETE MEDIAN NOSE PAVING	SY	114.				
171	750	1000	DRIVEWAY CONCRETE	SY	792.				
172	750	1021	DRIVEWAY CONCRETE 8IN REINFORCED	SY	156.				
173	750	2115	DETECTABLE WARNING PANELS	SF	374.				
174	752	0600	FENCE CHAIN LINK	LF	711.				
175	752	0850	ORNAMENTAL FENCE	LF	644.				
176	752	0911	TEMPORARY SAFETY FENCE	LF	3,742.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
177	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	468.				
178	754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	322.				
179	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	724.				
180	754	0210	GALV STEEL POST-STANDARD PIPE	LF	30.				
181	754	0592	RESET SIGN PANEL	EA	5.				
182	754	0593	RESET SIGN SUPPORT	EA	1.				
183	754	1100	CLASS AE CONCRETE-SIGN FOUNDATIONS	CY	1.				
184	754	1104	REMOVE SIGN FOUNDATION	EA	3.				
185	762	0110	EPOXY PVMT MK 4IN LINE-GROOVED	LF	5,132.				
186	762	0132	EPOXY PVMT MK 8IN LINE-GROOVED	LF	6,754.				
187	762	0135	EPOXY PVMT MK 24IN LINE-GROOVED	LF	696.				
188	762	0136	EPOXY PVMT MK MESSAGE-GROOVED	SF	876.				
189	762	0420	SHORT TERM 4IN LINE-TYPE R	LF	6,740.				
190	762	0422	SHORT TERM 6IN LINE-TYPE R	LF	210.				
191	762	0426	SHORT TERM 24IN LINE-TYPE R	LF	57.				
192	762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	8,124.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
193	762	0432	SHORT TERM 6IN LINE-TYPE NR	LF	195.				
194	762	0434	SHORT TERM 8IN LINE-TYPE NR	LF	68.				
195	762	0436	SHORT TERM 24IN LINE-TYPE NR	LF	51.				
196	764	0131	W-BEAM GUARDRAIL	LF	178.				
197	764	0145	W-BEAM GUARDRAIL END TERMINAL	EA	2.				
198	764	9010	ATTENUATING CRASH CUSHION TL-2	EA	3.				
199	770	0003	LIGHTING SYSTEM A	EA	1.				
200	770	0004	LIGHTING SYSTEM B	EA	1.				
201	770	0005	LIGHTING SYSTEM C	EA	1.				
202	770	0013	LIGHTING SYSTEM D	EA	1.				
203	770	0014	LIGHTING SYSTEM E	EA	1.				
204	770	1003	ORNAMENTAL LIGHT STANDARD	EA	18.				
205	770	4501	TEMPORARY LIGHTING SYSTEM	EA	1.				
206	770	4567	REMOVE LIGHTING SYSTEM	EA	1.				
207	770	9402	LIGHTING SYSTEM (AESTHETIC)	L SUM	1.				
208	772	2800	INTERIM TRAFFIC SIGNALS	EA	1.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
209	772	3125	REMOVE TRAFFIC SIGNAL SYSTEM	EA	1.				
210	772	9200	IT SYSTEM	EA	1.				
211	772	9811	TRAFFIC SIGNAL SYSTEM - SITE 1	EA	1.				
212	772	9812	TRAFFIC SIGNAL SYSTEM - SITE 2	EA	1.				
213	900	1000	TEMPORARY STREAM DIVERSION	EA	1.				
214	920	0090	LIFT STATION	EA	1.				
215	920	0100	PUMPING EQUIPMENT	L SUM	1.				
216	920	0199	PUMP HOUSE	EA	1.				
217	920	0265	OUTLET STRUCTURE	EA	1.				
218	930	3000	BRIDGE BENCH MARKS	SET	1.				
219	930	3040	BEARINGS (EXPANSION)	EA	20.				
220	930	3051	BEARINGS - TYPE I	EA	44.				
221	930	3052	BEARINGS - TYPE II	EA	44.				
222	930	8600	ELASTOMERIC BEARING PAD	SF	59.				
223	930	8700	3 IN EXPANSION JOINT	LF	188.				
224	930	9535	DECK DRAINAGE SYSTEM	L SUM	1.				

BID ITEMS

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

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
225	930	9537	ABUTMENT UNDERDRAIN SYSTEM	EA	4.				
226	970	0008	LANDSCAPE PREPARATION	SY	456.				
227	970	0060	PLANTING SOIL	CY	228.				
228	970	0074	WOOD MULCH	CY	38.				
229	970	1000	TREES	EA	8.				
230	970	1012	SHRUBS GROUP A	EA	233.				
231	980	0510	RAILROAD SUB-BALLAST	TON	13,707.				
			TOTAL SUM BID						

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

Type of Work: PCC RECONSTRUCTION, STRUCTURES, GRADING, AGGREGATE BASE, PCC PAVING, SIGNALS, LIGHTING, STORM SEWER, LIFT STATION, WATERMAIN RELOCATION, RAILROAD SHOOFLY TEMPORARY TRACK, AND RAILROAD PERMANENT TRACK

County: GRAND FORKS

Length: 0.4840 Miles

TIME FOR COMPLETION:

The undersigned Bidder agrees, if awarded the contract, to prosecute the work with sufficient forces and equipment to complete the contract work within the allowable time specified as follows:

WORKING DAY CONTRACT: **NA** working days are provided. The Department will begin charging working days beginning **NA** or the date work begins on the project site, whichever is earlier.

CALENDAR DAY CONTRACT: **NA** calendar days are provided. The completion date will be determined by adding **NA** calendar days to **NA** or the date work begins on the project site, whichever is earlier.

COMPLETION DATE CONTRACT The project completion date is **11/30/2027 *** . The Department provides a minimum of **NA** working days. The Department will begin charging working days beginning **NA** or the date work begins on the project site, whichever is earlier.

***REFER TO SP 411(24) FOR ADDITIONAL TIME AND LIQUIDATED DAMAGE REQUIREMENTS.**

Project: RCE-FTF-NHU-SU-6-297(014)000 (PCN-24115)

Type of Work: PCC RECONSTRUCTION, STRUCTURES, GRADING, AGGREGATE BASE, PCC PAVING, SIGNALS, LIGHTING, STORM SEWER, LIFT STATION, WATERMAIN RELOCATION, RAILROAD SHOOFLY TEMPORARY TRACK, AND RAILROAD PERMANENT TRACK

County: GRAND FORKS

Length: 0.4840 Miles

CONTRACT EXECUTION:

The undersigned Bidder agrees, if awarded the contract, to execute the contract form and furnish a contract bond within fifteen calendar days, as determined by NDCC Section 1-02-15, after date of notice of award, in accordance with the provisions of Sections 103.05 and 103.06 of the Standard Specifications.

AFFIDAVIT:

STATE OF _____)
) ss.
COUNTY OF _____)

The undersigned bidder, being duly sworn, does depose and say that they are an authorized representative of _____
CONTRACTOR NAME
of _____ , a
MAILING ADDRESS

☐ Individual ☐ Partnership ☐ Joint Venture ☐ Corporation

and that they have read, understand, acknowledge, and accept the entire proposal form; and that all statements made by said bidder are true and correct.

_____ , TITLE _____
BIDDER MUST SIGN ON THIS LINE

_____
TYPE OR PRINT SIGNATURE ON THIS LINE

Subscribed and sworn to before me this day.

_____
COUNTY

(Seal) _____ _____
STATE DATE

_____
NOTARY PUBLIC

My commission expires _____

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Job 24115, RCE-FTF-NHU-SU-6-297(014)000

PCC Reconstruction, Structures, Grading, Aggregate Base, PCC Paving, Signals, Lighting, Storm Sewer, Lift Station, Watermain Relocation, Railroad Shoofly Temporary Track, and Railroad Permanent Track

INDEX OF PROVISIONS

Road Restriction Permits

Hot Line Notice

Price Schedule for Miscellaneous Items dated January 2, 2026 (PS-1)

Required Contract Provisions Federal Aid Construction Contracts
(Form FHWA 1273 Rev. October 23, 2023)

SP Certified Payrolls, dated 3-7-24

SP Project Payment Reporting

NOTICE - Electrician

Labor Rates from U.S. Department of Labor dated January 30, 2026 (Mod. No. 1)

On-The-Job Training Program 2025

SSP 1 Temporary Erosion & Sediment Best Management Practices

SSP 5 Limitations of Operations

SSP 8 Federal Prohibition on Certain Technological Hardware

SSP 11 Domestic Material Procurement Preferences

SSP 12 Public Liability and Property Damage Insurance

SP 391(24) Landscaping and Streetscape Improvements

SP 392(24) Contaminated Work Area

SP 393(24) Drilled Shaft Foundations

SP 394(24) Temporary Water Diversion

SP 395(24) Utility Coordination

SP 396(24) Painting Over Galvanized Steel

SP 397(24) Hydraulic Mulch

SP 398(24) Soil Stabilizer

SP 399(24) Commercial Grade Hot Mix Asphalt

SP 400(24) Temporary Pedestrian Facilities

SP 401(24) Dispute Resolution

SP 402(24) Interconnect Cable

SP 403(24) Lift Stations

SP 404(24) Pumping Equipment

SP 405(24) Railroad Requirements

SP 406(24) Video Vehicle Detection System

SP 407(24) Buffer Tube Fan-Out Kit

SP 408(24) Fiber Optic Splice Closure

SP 410(24) Fiber Optic Termination Panel

SP 411(24) Interim Completion

SP 416(24) Architectural Form Liner

SP 521(24) E-Ticketing (Mandatory)

SP 599(24) Waterproofing

SP 601(24) Concrete Erosion Control Blanket (Cable Tied

SP 602(24) Clean Water State Revolving Fund (CWSRF)

INDEX OF PROVISIONS

SP 603(24) Maturity Curve

SP 604(24) Concrete Paving Grade Control

SP 605(24) Manufactured Construction Trackout Pad

SP 637(24) Bridge Decorative Lighting

SP 643(24) Pile Dynamic Analyzer (PDA) Testing & Analysis

SP 650(24) Concrete Thickness Determination

SP 651(24) Pipe Steel Smooth Wall 36 Inch Bored

SP 672(24) Electronic Document Submittal Procedure

PSP 94(24) Permits and Environmental Considerations

NOTICE

TO: All prospective bidders on all North Dakota Department of Transportation Highway Construction Projects.

Contractors moving construction equipment to NDDOT highway construction projects are subject to the Road Restriction Policy with the following modifications:

A. The contractor may purchase up to 10 single trip permits for each NDDOT highway construction project at a cost ranging from $20 to $70 each. These permits must be purchased from the Motor Carrier Division of the Highway Patrol at the central office of the NDDOT in Bismarck, North Dakota.

B. The $1 per mile fee will not be charged for Gross Vehicle Weights (GVW) exceeding 105,500 pounds, 105,500 pounds, and 105,000 pounds for highways Restricted by Legal Weights, 8 Ton, and 7 Ton highways respectively.

C. The $5 per ton per mile fee will be charged only for loads exceeding a GVW of 130,000 pounds, 120,000 pounds, 110,000 pounds and 80,000 pounds for highways Restricted by Legal Weights, 8 Ton, 7 Ton, and 6 Ton highways respectively.

D. The maximum weights per axle for each of the class restrictions still apply. If it is shown that more axles cannot be added, movement may be authorized; however, a $1 per ton per mile fee will be charged for all weight in excess of the restricted axle limits.

E. These construction equipment single trip permits apply to State and US Highways only.

F. The District Engineers and Highway Patrol will select the route of travel.

G. Contractors moving equipment to other than NDDOT highway construction projects are subject to all fees as shown in the Road Restriction Permit Policy.

H. Contractors must call the Highway Patrol prior to movement of all overweight loads on all State and US Highways.

NDDOT ROAD AND VEHICLE RESTRICTIONS Date Revised 05-22-10

ROAD RESTRICTION PERMITS

Permits shall be issued for the movement of non-divisible vehicles and loads on state highways which exceed the weight limits during spring road restrictions. The issuance of permits may be stopped or posted weights changed at any time based on the varying conditions of the roadways. Permits can be obtained from the Highway Patrol.

RESTRUCTION CLASSIFICATIONS WITH ALLOWABLE AXLE WEIGHTS AND GROSS VEHICLE WEIGHTS	PERMIT AND TON/MILE FEES
Highways Restricted by Legal Weight Single Axle -- 20,000 lbs. Tandem Axle -- 34,000 lbs. Triple Axle -- 48,000 lbs. 4 Axles or more -- 15,000 lbs. per axle Gross Vehicle Weight -- 105,500 lbs. Note: The above weights apply to state highways restricted by legal weights, other than interstate highways, in areas where road restrictions are in force. When the gross weight of an axle grouping exceeds 48,000 pounds, the $1 per ton per mile shall apply to all weight in excess of 15,000 pounds per axle.	Permit Fee: $20-$70 per trip Ton Mile Fee: 105,501 lbs. to 130,000 lbs. GVW -- $1 per mile Over 130,000 lbs. GVW – $1 per mile **plus** $5 per ton per mile for that weight exceeding 130,000 lbs. GVW Exceeding axle limits -- $1 per ton per mile
8-Ton: Single Axle -- 16,000 lbs. Tandem Axle -- 32,000 lbs. 3 Axles or more -- 14,000 lbs. per axle Gross Vehicle Weight -- 105,500 lbs.	Permit Fee: $20-$70 per trip Ton Mile Fee: 105,501 lbs. to 120,000 lbs. GVW -- $1 per mile Over 120,000 lbs. GVW – $1 per mile **plus** $5 per ton per mile for that weight exceeding 120,000 lbs. GVW Exceeding restricted axle limits -- $1 per ton per mile
7-Ton: Single Axle -- 14,000 lbs. Tandem Axle -- 28,000 lbs. 3 Axles or more -- 12,000 lbs. per axle Gross Vehicle Weight -- 105,500 lbs.	Permit Fee: $20-$70 per trip Ton Mile Fee: 105,500 lbs. to 110,000 lbs. GVW -- $1 per mile Over 110,000 lbs. GVW – $1 per mile **plus** $5 per ton per mile for that weight exceeding 110,000 lbs. GVW Exceeding restricted axle limits -- $1 per ton per mile
6-Ton: Single Axle -- 12,000 lbs. Tandem Axle -- 24,000 lbs. 3 Axles or more -- 10,000 lbs. per axle Gross Vehicle Weight -- 80,000 lbs.	Permit Fee: $20-$70 per trip Ton Mile Fee: $5 per ton per mile for all weight exceeding 80,000 lbs. GVW Exceeding restricted axle limits -- $1 per ton per mile
5-Ton: Single Axle -- 10,000 lbs. Tandem Axle -- 20,000 lbs. 3 Axles or more -- 10,000 lbs. per axle Gross Vehicle Weight -- 80,000 lbs.	No overweight movement allowed

SINGLE UNIT FIXED LOAD VEHICLES SUCH AS TRUCK CRANES AND WORKOVER RIGS

A. Permit Fee and Ton Mile Fee for Self-Propelled Fixed Load Vehicles.

1. Permit Fee: $25 per trip

2. $1 per ton per mile for all weight in excess of restricted axle limits or in excess of legal limits on state highways in areas where road restrictions are in force. When the gross weight of an axle grouping exceeds 48,000 pounds, the $1 per ton per mile shall apply to all weight in excess of 15,000 pounds per axle (see weight classification chart in section C.)

3. $5 **per ton per mile** for all movements exceeding the following gross vehicle weight limits:

   a. 105,500 lbs. GVW on unrestricted state highways, other than interstate highways, in areas where road restrictions are in force.
   b. 105,500 lbs. GVW on 8-ton highways.
   c. 105,500 lbs. GVW on 7-ton highways.
   d. 80,000 lbs. GVW on 6-ton highways.
   e. No overweight movement allowed on 5-ton highways

B. Permit Fees for Work-Over Rigs and Special Mobile Equipment Exceeding 650 but not 670 Pounds Per Inch Width of Tire.

1. Permit Fee:
   a. $50 per trip on work-over rigs up to 650 pounds per inch width.
   b. $75 per trip on work-over rigs that exceed 650 but not 670 pounds per inch width of tire.
2. The work-over rig shall be stripped to the most minimum weights.
3. A minimal number of state highway miles shall be used.
4. District engineer approval shall be obtained prior to movement when vehicle exceeds restricted axle weights by more than 5,000 pounds.
5. A validation number ending in TM must be obtained from the Highway Patrol prior to using a self-issue single trip movement approval form.
6. The ton mile shall be waived.

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION

"HOT LINE"

As part of its continuing investigation into Highway Construction Contract Bid Rigging and abuses in the Disadvantaged Business Enterprise Program, the Inspector General for the Department of Transportation (DOT) has established a "HOT LINE" to receive information from contractors, suppliers, or anyone with knowledge of such activities.

The toll-free "HOT LINE' telephone number is 1-800-424-9071 and will be manned during normal working hours (8 a.m. to 5 p.m. EST). This operation is under the direction of DOT's Inspector General. All information will be treated confidentially and anonymity will be respected.

CALL
Inspector General's 'HOT LINE'
Toll Free 1-800-424-9071
Washington, DC Area:
202-366-1461
Fax: 202-366-7749

WRITE
Inspector General
Post Office Box 23178
Washington, DC 20026-0178

Email: hotline@oig.dot.gov

The field office address and telephone number for NORTH DAKOTA is:

CHICAGO REGIONAL OFFICE

Special Agent-in-Charge
Commercial: 312-353-0106
111 N. Canal St., Suite 677
Chicago, Illinois 60606

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PRICE SCHEDULE FOR MISCELLANEOUS ITEMS (PS-1)

The Contractor agrees to accept the following unit prices for each listed item of work and or material when no project contract unit price exists for that item. Materials and construction methods used in performing maintenance and restoration work for 107. 08 Haul Roads shall meet the requirements of the relevant specifications.

Each price listed will be full compensation for the cost of labor, material, and equipment necessary to provide the item of work and/or material, complete in place, including (but not limited to) royalty, disposal of unsuitable material, equipment rental, sales tax, use tax, overhead, profit, and incidentals.

Each listed item is referenced to the Standard Specifications by Section number and Section name.

Spec	Code	Specification Section No.	Section Name	Item	Price
100	9950	704.04 C.5	Temporary Traffic Control	Flagging	$61.00 per MHR
100	9951	216.04	Water	Water	$35.00 per M Gal
100	9952	430.04 G & I.3	HMA – Bituminous Materials	Patching – Machine Placed	$250.00 per Ton
100	9952	430.04 G & I.3	HMA – Bituminous Materials	Patching – Hand Placed	$270.00 Per Ton
100	9954	302.04 B	Aggregate Base and Surface Course	Aggregate Base CL 13	$40.00 per Ton [1]
100	9955	203.01 C	Rock Excavation	Rock Excavation	$30.00 per CY
100	9956	203.01 D	Shale Excavation	Shale Excavation	$9.25 per CY
100	9957	203.01 E	Muck Excavation	Muck Excavation	$10.50 per CY
100	9958	203.01 G & 203.05 G.3	Excavation and Embankment	Overhaul	$0.08 per CY-Sta
100	9960	420.04 E	Bituminous Seal Coat	Blotter Sand	$40.00 per Ton [1]
100	9962	260.06	Silt Fence	Cleaning Silt Fence	$5.00 per LF
100	9963	261.06	Fiber Rolls	Cleaning of Fiber Rolls	$5.00 per LF
100	9964	260.06	Silt Fence	Removal of Silt Fence [2]	$5.00 per LF
100	9965	261.06	Fiber Rolls	Removal of Fiber Rolls [2]	$5.00 per LF

[1] Price Includes haul up to 10 miles. Payment for haul exceeding 10 miles will be according to Section 109.03 E, “Force Account.” The haul distance for aggregate base will be based on the average haul. The haul distance for blotter sand will be from the point where the haul begins to the point where it enters the project.

[2] This is only for pre-existing items that were not installed under the Contract.

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

CONTRACT SPECIAL PROVISION
MANDATORY USE OF
AUTOMATED CERTIFIED
PAYROLL

All contractors on NDDOT federal-aid projects, including city/county projects, must file weekly Certified Payrolls, as required under Davis-Bacon and Related Acts (DBRA). **The NDDOT requires the use of LCPtracker, a paperless online system for entering and filing these certified payrolls. Certified payrolls in paper form will no longer be accepted, and all contractors must file their payroll electronically.**

After award, the Prime Contractor (Prime) must:

1. Designate an individual as Prime Approver for the project. The Prime Approver will oversee DBRA payroll for all subcontractors of all tiers on the project. A contractor may inform the NDDOT Civil Rights Division (CRD) that the same individual will be Prime Approver on all projects. CRD will set up the Prime Approver Account for the project. Thereafter, the Prime Approver will have the responsibility to use the Account to approve all payroll on the project. Until payroll is approved by the Prime Approver, it cannot be viewed by the NDDOT and it is not deemed submitted to the NDDOT.

2. The prime contractor has the responsibility to assign subcontractors within the LCPtracker system to the project and to ensure that all subcontractors are aware of the necessity to file payrolls electronically and are set up within the system. Any subcontractor not on Approved Subcontractor List or the Qualified Contractor List must register and be placed one of these lists before entry of the subcontractor into LCPtracker. These lists may be found at: https://www.dot.nd.gov/construction-and-planning/construction-and-contractor-resources/contractor-information. Only Prime Approvers or the CRD may enter subcontractors into LCPtracker.

3. The prime contractor has the responsibility to see that all required payrolls are filed by subcontractors of all tiers. If payroll is rejected or project staff otherwise requests a correction of payroll by any subcontractor on the project, the prime contractor has a responsibility to see that corrected payroll is submitted.

4. For further information on certified payroll, go to the NDDOT Labor Compliance Program (Davis-Bacon)/LCPtracker page at: https://www.dot.nd.gov/about-nddot/civil-rights/labor-compliance-program-davis-bacon. On this page, contractors will find a Getting Started on LCPtracker Guide and a Prime Approver Guide. Recorded trainings are also available on this page for both contractors and prime approvers. Contractors can obtain an LCPtracker user name and password by calling the NDDOT Civil Rights Division at (701) 328- 2605 or (701) 328-2576.

CONTRACT SPECIAL PROVISION
MANDATORY USE OF ONLINE
PROJECT PAYMENT REPORTING

A. DESCRIPTION

This Special Provision (SP) replaces Section 109.04 D, "Prompt Payment"

This SP details the requirements for Contractors to document payment to all tiers of DBE subcontractors and suppliers and all non-DBE subcontractors. For the purposes of this SP, the term "payee" will be used to denote all tiers of DBE subcontractors and suppliers as well as all tiers of non-DBE subcontractors.

The Department utilizes the Certification and Compliance System (CCS) for this purpose. The direct web address to this system is https://dotnd.diversitycompliance.com/

B. PROMPT PAYMENT REQUIREMENTS

Within 20 calendar days of receiving payment from the Department, pay all payees their portion of the payment less applicable retainage, not to exceed 2 percent. If the Contractor does not make prompt payment, the payee may notify the Engineer.

The Contractor may withhold payment to a payee for just cause. If withholding payment from a payee, immediately provide written notification to the payee and the Engineer with the reasons for withholding the payment. If the Engineer determines the Contractor is withholding payment with just cause, interest will not accrue.

If the Engineer determines the Contractor is withholding payment without just cause, beginning on the 21st calendar day after the Contractor's receipt of payment from the Department interest will accrue for the payee at the rate provided by NDCC 13-01.1-02. Additionally, the Department may withhold all payments to the Contractor until the Contractor properly pays the payee and agrees to make all future payments to payees as required by the contract.

The Department will apply these prompt payment procedures to all payees, in accordance with 49 CFR 26.29.

C. REPORTING REQUIREMENTS

1. General.

Create a vendor account with CCS if one does not exist. Create a user for each employee who will use the system and identify the main user. The main user will receive communications from the Department.

2. Utilization Plan.

Complete a Utilization Plan (UP) and submit it for approval in CSS within 14 days of being notified the UP is available, or contract execution, whichever is later. The Department may grant an extension upon written request from the Contractor.

List all payees with the UP and at the proper tier. Ensure payees are completing their requirements and provide assistance as necessary.

The Department's Civil Rights Division will review the UP, verify the DBE participation is reported correctly, and approve the UP or return it for updates. If the UP is returned it will contain a note describing the necessary updates. Complete changes and resubmit within 7 days of receiving a returned UP.

a. Non-Account Holders.

If a payee does not already have an account within CSS when creating the UP send the information listed below to the compliance officer via CSS:

- Company name;
- Mailing address;
- Phone number;
- Contact person's name; and
- Contact person's email address.

The NDDOT will then set up a vendor account within CCS for the payee and notify the contractor when they are available to add to the UP.

b. Additional Payees.

If a payee is added after the initial UP is approved, submit a request for the payee to be added via the "Subs" tab inside CCS. Complete this process before the payee is due payment.

3. Payments.

Once the UP is approved, the UP is locked in and contractor progress payments will be reported, and the monthly auditing process begins. An audit is the term used in the system to refer to a monthly period while the project is active.

Contractors must report any payments for all payees for each audit period. A payment may be marked as final and if the payee agrees to the final payment no other reporting will be required on that payee. Payments of $0 must be reported or the audit will be considered incomplete. Audits are available in subsequent months, meaning the January audit period will open in February. Payments not reported within 30 days will be considered past due. Audits containing past due payments must be unlocked by a system administrator.

4. Payment Discrepancies.

Payees are required to confirm payments or open a Discrepancy (dispute original submission) within 30 days of the payment being recorded. Payments not confirmed nor disputed within 30 days will be auto-confirmed by the system administrators and the ability to dispute that payment will no longer be available. Contractors are to ensure the payees on their project are timely confirming/disputing payments.

Attempts should be made to resolve Discrepancies between the two parties. CCS provides functionality for each party to comment publicly or privately (private comments are visible to system administrators only). If the parties cannot come to a resolution, the Department will make a resolution. The Department may request additional information, if applicable, before making a resolution.

5. **Certification and Compliance System Assistance.**
   A user manual for UP's and recording project payments is available within the system. The user manual and other training is offered by navigating to it once logged in. A UP does not have to be assigned to an entity to view the guide or attend system training.

   For further assistance, contact the Civil Rights Division for DBE related inquiries and the Construction Services Division for all other inquiries.

01242023

NOTICE:

All employees of contractors performing electrical work outdoors as part of a highway construction project must be classified and compensated under the applicable Line Construction rates. Electrical work that is performed exclusively within a commercial building structure, such as a rest area facility, must be classified and compensated under the Electrician rates. Contractors are prohibited from classifying employees engaged in any phase of electrical work on highway construction projects as power equipment operators or laborers and should be classified and compensated in either the line construction or electrician rates.

Apprentices in Line Construction

Apprentices in Line Construction must be classified and paid as Apprentice Linemen, with wages based on a percentage of the journeyman rate that corresponds to their current level of training in the apprenticeship program. When performing work as an Apprentice Lineman, the employee must receive the correct apprentice wage and fringe benefits.

If an Apprentice Lineman is assigned duties that fall under a different line construction classification—such as Groundman—they must be reclassified and paid accordingly for the duration of that work.

Contractors are responsible for:

- Monitoring the progress of employees enrolled in the U.S. Department of Labor (DOL) Lineman/Electrical Apprenticeship Program.
- Uploading all approved apprenticeship documents under the eDocuments tab in LCPtracker.
- Updating the employee's profile within LCPtracker to reflect their apprentice status and current training level.
- Notifying the LCPtracker Administrator once the documents and profile updates are complete, so the apprenticeship submission can be reviewed and approved.

As an apprentice advances in their program, it is the contractor's responsibility to update the system and notify the LCPtracker Administrator to ensure accurate wage classification and compliance.

For assistance or questions concerning Davis-Bacon Wages and Requirements, go to:

https://www.dot.nd.gov/about-nddot/civil-rights/labor-compliance-program-davis-bacon

Or contact:

Civil Rights Division
North Dakota Department of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700
Phone: 701-328-2605 Email: civilrights.nd.gov

LABOR RATES FROM U.S. DEPARTMENT OF LABOR

NDDOT's *Davis-Bacon Wage and Payroll Requirements Handbook* is available at:
https://www.dot.nd.gov/about-nddot/civil-rights/labor-compliance-program-davis-bacon

U.S. DEPARTMENT OF LABOR

STATE	COUNTY	
NORTH DAKOTA	STATEWIDE	ND20260006 Page 1

DATE OF DECISION
01-16-2026

01-30-26(Mod.1)

	Basic Hourly Rates	Fringe Benefits Payments H & W/Pensions
CARPENTERS	$38.70	$ 9.00
CEMENT MASONS/FINISHERS	38.70	9.00
LINE CONSTRUCTION:		
Lineman	55.35	10.71 + 25%
Cable Splicer	55.35	10.71 + 25%
Line Equipment Operator	47.00	10.46+ 25%
Groundman	31.32	14.69 + 15%
ELECTRICIANS:		
Electrician	55.35	10.71 + 25%
Cable Splicer	55.35	10.71 + 25%
(Adams, Billings, Bottineau, Bowman, Burke, Divide, Dunn, Emmons, Golden Valley, Grant, Hettinger, McHenry, McKenzie, Mclean, Mercer, Mountrail, Oliver, Pierce, Renville Rolette, Sheridan, Sioux, Slope, Ward and Williams Counties)		
Electrician	55.35	10.71 + 25%
Cable Splicer	55.35	10.71 + 25%
(Barnes, Benson, Cavalier, Dickey, Eddy, Foster, Grand Forks, Griggs, Kidder, La-Moure, Logan, Mcintosh, Nelson, Pembina, Ramsey, Ransom, Richland, Sargent, Steele, Stutsman, Towner, Traill, Walsh, and Wells Counties)		
Electrician	55.35	10.71 + 25%
Cable Splicer	55.35	10.71+ 25%
(Burleigh, Morton and Stark Counties)		
Electrician	37.41	16.75
(Cass County)		
WELDERS:		
Receive rate prescribed for craft performing operation to which welding is incidental		

	Basic Hourly Rates	Fringe Benefits Payments H & W/Pensions
LABORERS:		
Group 1 General Construction Laborers: Sack Shaker (cement and mineral filler); pipe handler; drill runner tender; salamander heater and blower tender; light truck; pickup driver; flaggers; pilot car drivers.	$30.90	$ 3.40
Group 2 Semi Skilled Laborer: bulk cement handler; conduit layer, telephone or electrical, form setter (pavement); gas electric or pneumatic tool operator; chipping hammer; grinders and paving breakers (tamper-dirt); concrete vibrator operator; chain saw operator; Concrete saw operator, concrete curing man (not water); bituminous worker (shoveler, dumper, raker and floated); kettleman (bituminous or lead); concrete bucket signalman; power buggy operator; brick and mason tender; muti-plate pipelayer; culvert pipe layers; carpenters tenders.	31.15	3.40
Group 3 Caisson Worker: Bottom Man (Sanitary sewer, storm sewer, water and gas liners); Concrete Mixer Operator (one bag capacity); Mortar Mixer.	31.30	3.40
Group 4 Drill Runner (includes Wagon Chum or Air Track); Pipe Layers (sanitary sewer, storm sewer, water, and gas lines); Powderman; gunite and sandblast; Nozzleman; Rein forcing Steel Sellers/Tiers: Concrete Finisher Tender.	32.05	3.40
POWER EQUIPMENT OPERATORS:		
Group 1 All Cranes 60 tons and over; Cranes doing piling, sheeting, dragline/clam work; Derrick (Guy and Stiff); Gentry Crane Operator; Helicopter Operator; Mole Operator or Tunnel Mucking Machine; Power Shovel;3-1/2 CY and over; Traveling Tower Crane.	36.65	22.45
Group 2 All Cranes 59 tons and under; Backhoe Operator 3 CY. and over; Creter Crane; Dredge Operator 12” and over; Equipment Dispatcher; Equipment Foreman; Finish Dozer; Finish Motor Grader; Front End Loader Operator 8 CY. and over; Master Mechanic (when supervising 5 or more Mechanics); Mon-O-Rail Hoist Operator; Power Shovel up to and including 3 CY; Tugboat.	35.25	22.45

POWER EQUIP.OPERATORS: (CONT.)	Basic Hourly Rates	Fringe Benefits Payments H & W/Pensions
Group 3 Asphalt Paving Machine Operator; Asphalt Plant Operator; Automated Grade Trimmer; Backhoe Operator, 1 CY. up to and including 2-1/2 CY.; Boom Truck Hydraulic 8 tons and over; Cableway Operator; Concrete Batch Plant Operator (electronic or manual); Concrete Mixer Paving Machine Operator; Concrete Paver Bridge Decks; Concrete Pump; Concrete Spreader Operator and Belt Placer; Crushing Plant Operator; Dozer Operator; Dredge Operator or Engineer 11" and under; Drill Rigs, Heavy Duty Rotary or Churn or Cable Drill; Front End Loader Operator, 3-1/2 CY up to and including 7-1/2 CY; Gravel Washing and Screening Plant Operator; Lazer-Screed Operator; Locomotive, all types; Mechanic or Welder(Heavy Duty); Motor Grader Operator; Pavement Breaker (Non-Hydro Hammer Type, Pipeline Wrapping, Cleaning and Bending Machine Operator); Power Actuated Auger and Horizontal Boring Machine Operator 6" and over; Refrigeration Plant Engineer; Rota Milling Machine (SurfacePlaner) 43" and over; Scraper Operator; Slip Form Concrete Paving Operator; Tandem Pushed Quad 9 or similar; Tractor with Boom Attachment; Trenching Machine Operator 100 H.P. and over.	$35.00	$22.45
Group 4 Articulated/Off Road Hauler; Asphalt Dump Person(Controls the spread of asphalt); Asphalt Paving Screed Operator; Backhoe, up to and including 1/2 CY; Boring Machine Locator; Console Board Operator; Curb Machine Operator; Distributor Operator (Bituminous); Forklift Operator; Front End Loader,1-1/2 CY up to and including 3 CY; Fuel/ Lube Truck Operator; Grade Person(Responsible for establishing and determining grade through instrumentation); Gravel Screening Plant Operator (not Crushing or Washing); Greaser; Hydro Vac and Hydro Excavator self propelled; Longitudinal Float and Spray Operator; Micro Surfacer Machine; Motor Grader Operator (Haul Roads); Paving Breaker HydroHammer Type; Pugmill Operator; Push Tractor; Roller, Steel and Rubber on Hot Mix Asphalt Paving; Rotomilling Machine (Surface Planer), up to and including 42"; Rumble Strip Machine; Sand and Chip Spreader; Self-Propelled Sheepsfoot Packer with or without Blade Attachment; Self Propelled Traveling Soil Stabilizer; Sheepsfoot Packer with Dozer Attachment 100 H.P. and over; Shouldering Machine; Slip Form, Curb and Gutter Operator; Slurry Seal Machine; Tamping Machine Operator; Tie Tamper and Ballast Machine; Trenching Machine Operator, 46 H.P. up to and including 99 H.P.; Truck Mechanic; Tub Grinder; Well Points.	34.85	22.45
Group 5 Boom Truck, A-Frame or Hydraulic 2 tons up to and including 7 tons; Broom Self-Propelled; Concrete Saw (power operated); Cure Bridge Operator; Front End Loader Operator, less than 1-1/2 CY; Mobile Cement Mixer-Non-Truck; Power Actuated Auger and Horizontal Boring MachineOperator up to and including 5"; Roller (on other than hot mix asphalt		

	Basic Hourly Rates	Fringe Benefits Payments H & W/Pensions
POWER EQUIP.OPERATORS: (CONT.)		
Group 5 (CONT.) paving); Oilers; Vibrating Packer Operator (Pad Type) (Self Propelled); Water Spraying Equipment-Self Propelled; Skidsteer Operator with attachments.	$34.00	$22.45
Group 6 Assistant/Apprentice Operator; Brakeman or Switchman; Dredge or Tugboat Deckhand; Drill Truck Gravel/Testing Operator; Form Trench Digger (Power); Gunite Operator Gunall; Paint Machine Striping Operator; Pickup Sweeper, 1 CY and over Hopper Capacity; Scissor Jack {Self -Propelled) Platform Lift; Straw Mulcher, Blower and straw press; Stump Chipper Operator; Tillage Equipment Operator; Tractor Pulling Compaction or Aerating Equipment and no till drills; Trenching Machine Operator up to and including 45 H.P.	33.20	22.45
TRUCK DRIVERS:		
Single-Axle Truck	33.84	19.28
Tandem- and Tri-Axle Truck	33.96	19.28
Tandem- and Tri-Axle Semi, Lowboy	34.27	19.28
Off Road Heavy Duty End Dumps 20 Yards and Under	34.27	19.28
Euclid, Over 20 Yards	35.79	19.28

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses [29 CFR, 5.5 (a) (1) (iii)].

HIGHWAY CONSTRUCTION PROJECTS

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022.

Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually.

Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (NDDOT)
ON-THE-JOB TRAINING SPECIAL PROVISION

The bidder's signature on the proposal sheet indicates the bidder agrees to take part in the On-the-Job Training (OJT) Program and to follow the OJT Program Manual and Special Provision. Contractors that fail to do so will be subject to suspension of progress payments or sanctions up to and including revocation of bidding privileges.

OJT is training conducted in a highway construction work environment designed to enable minority, female, and economically disadvantaged individuals to learn a bona fide skill and qualify for a specific occupation through demonstration and practice.

After a training program and trainee candidate have been approved, the contractor begins training its regular employee according to the approved program. The goal of this training is to retain the trainee as a permanent employee within the ND Highway Construction industry. OJT involves individuals at the entry level. Training is designed to help participants reach their fullest potential and become self-sufficient in the job.

I. POLICY STATEMENT

The purpose of the OJT Program is to provide training in the highway construction industry for minority, female, and economically disadvantaged individuals, from this time known as the targeted group. Pursuant to 23 Code of Federal Regulations Part 230, Subpart A, Appendix B - Training Special Provisions, this program provides for on-the-job training aimed at developing journey-level workers in skilled trades.

The Contractor shall take all necessary and reasonable steps to ensure that minorities and women have the opportunity to compete for and participate as trainees or apprentices and to develop as journey-level workers employed in the skilled trades.

Contractors should select a training program(s) based on their company’s employment/staffing needs as stated in the OJT Program Manual.

II. INTRODUCTION/PROGRAM BACKGROUND

The OJT Program was originally prepared through the cooperative efforts of the Associated General Contractors of North Dakota (AGC); the Federal Highway Administration (FHWA); the North Dakota Department of Transportation (Department); and, other program stakeholders.

Successful operation of the OJT Program requires contractors to follow uniform and basic training procedures, keep records of trainee progress, and report each trainee's completion or termination.

III. ASSIGNED OJT POSITIONS

A. Trainee positions are assigned based only on federal highway dollars awarded to contractors from April to March. Trainee assignments are not project specific; that means the contractor may train program participants on any project where training opportunities exist within the state of North Dakota.

The number of trainee positions assigned will be determined by formula based on calculations involving particular project specification numbers on applicable projects. Once the formula calculations are determined the OJT Program Administrator completes a further analysis based on number of trainees per contractor, contractor work type,

location, past assignments, etc.

The types of projects NOT applicable in the calculation to assign trainee positions are:

- County-only or state-only funded projects
- Emergency relief, concrete pavement repair (CPR), electrical, rest area, signing, striping projects
- Projects subject to Tribal Employment Rights Ordinances (TERO)
- Projects not let as part of NDDOT bid openings

B. Contractors will receive the number of positions assigned and links to resources necessary for completion of program requirements via email.

C. The number of trainee positions assigned to each contractor will increase proportionately, as shown below, for any applicable federally funded projects awarded to them.

For all federal highway dollars awarded from April to March the following year:

8,000,000	to 16,000,000	1	trainee
16,000,001	to 24,000,000	2	trainees
24,000,001	and above	3	trainees

A maximum of three (3) trainee positions in a federal fiscal year will be assigned to any prime contractor regardless of dollar amount. Carryover positions from a prior construction season are not included in the three trainee maximum, e.g., a contractor with one carryover and three assigned positions may have a total four trainees.

Contractors assigned OJT positions are required to attend one-on-one meetings with the OJT Program Administrator and the OJT Supportive Services Consultant in early spring. The meeting is conducted virtually via Microsoft TEAMS. At this meeting any changes to the program and other important information will be shared and the contractor will have an opportunity to ask any questions they may have.

Failure to follow the OJT Special Provision and OJT Program Manual may result in suspension of progress payments or sanctions up to and including revocation of bidding privileges.

IV. FUNDING

The Department will establish an OJT fund annually from which contractors may bill the Department directly for eligible trainee hours. The funds for payment of trainee hours on federal-aid projects will be made available based on 23 USC 504(e) to a maximum of $100,000. The funds for payment of trainee hours on state-aid only projects will be allocated to a maximum of $10,000.

V. ONLINE RESOURCES

SFN 60226 Request for On-the-Job Training Program and Trainee Approval:
http://www.dot.nd.gov/forms/sfn60226.pdf

SFN 51023 Voucher for On-the-Job Training Program Hourly Reimbursement:
http://www.dot.nd.gov/forms/sfn51023.pdf

SFN 62136 On-The-Job Training (OJT) Program Dependent Child Care Reimbursement:
https://www.dot.nd.gov/forms/sfn62136.pdf

Davis-Bacon and Related Acts (DBRA) Handbook:
https://www.dot.nd.gov/manuals/civilrights/davisbacon.pdf

VI. APPROVALS REQUIRED

A. Requests for Approval of Training Programs and Trainee Candidates must be submitted to Civil Rights Division (CRD). Contractors must request and receive program and trainee candidate approval in order to pay trainees less than the established Davis-Bacon wage for the job classification concerned. **No training program hours will count toward the fulfillment of an assigned trainee position or be eligible for reimbursement without prior approval.** No retroactive approval will be granted.

1. Submit SFN 60226 *Request for On-the-Job Training Program and Trainee Approval* with each trainee's employment application. http://www.dot.nd.gov/forms/sfn60226.pdf and the pre-approved training curriculum for each trainee position assigned by April 1 or within fifteen (15) calendar days of notification.

2. Submit *SFN 7857 Application for Eligibility* directly to Job Service North Dakota (JSND) for approval of an economically disadvantaged individual for participation in the OJT Program.

B. Pre-approved curriculum: NDDOT's OJT Program Manual contains pre-approved training curriculum for a number of skilled trade positions. Contractors should select a training program(s) based on their company's employment/staffing needs.

C. Customized curriculum: To request a training curriculum not included in the pre-approved curriculum, submit a written request for approval by NDDOT Civil Rights Division.

The request must include:

- A training curriculum, including the classification requested, minimum number of hours required, and type of training the individual will receive to achieve journey-level worker status.
- A minimum wage scale.

If approved, each new classification must comply with the provisions specified in the OJT Program Manual. No hours worked prior to approval will be credited toward completion of the customized training program. Training programs for classifications not covered by the Davis-Bacon and Related Acts (DBRA) will be considered on a limited basis.

The contractor may commence its "customized" training as of the date of the written approval.

D. Union apprenticeship and on-the-job training programs registered with the Bureau of Apprenticeship and Training (BAT), U.S. Department of Labor, may be used for trainee positions assigned under the OJT Program, provided the trainees or apprentices are minority, female, or economically disadvantaged. Nonminority males not certified as economically disadvantaged may only be used when the contractor has requested and received approval, from the Department, for additional trainee positions. The apprenticeship indenture agreements serve as the trainee's job application and must be provided prior to any hours being credited toward OJT Program completion.

E. Power Equipment Operators:

The contractor may train an individual on a combination of equipment if each piece of equipment falls within the same groups of power equipment operators identified in the training curricula (groups 1-3 and groups 4-6). These power equipment operator groups are referenced to the federal DBRA wage rates contained in the contract proposal. As an example, a "utility operator" may receive training on a broom, a front-end loader less than 1½ cubic yards, or other piece of equipment that is used around a paver if each piece falls within either groups 1-3 or groups 4-6. When multiple wage rates apply, the trainee's wage will be based on the equipment being operated at the time or on the highest of the applicable wage rates.

Use of the classification "pickup machine operator (asphalt dump-person)" as a group 4 power equipment operator is considered standard industry practice. The classification is defined as: "Operates the controls on the pickup machine that runs in front of the paver, trips the levers on the dump trucks, and balances the loads for the paver. The pickup machine operates on similar principles as a shouldering machine."

F. Contractors not qualifying for the OJT Program, or contractors desiring to train more than the allotted number of trainees, may apply to the Department for additional trainee positions. Approval of additional positions will be at the sole discretion of the Department. The Department will take into consideration whether there is enough work for the trainee to successfully complete the curriculum and whether the contractor will be exceeding the allowable ratio of trainees to journey-workers (generally considered to be one trainee or apprentice to every three to five journey-workers).

The additional positions may be filled by individuals outside of the targeted groups. The contractor may pay the reduced training rates to additional trainees outside of the targeted groups but will not receive hourly reimbursement for any individuals not directly assigned by NDDOT.

VII. NDDOT'S RESPONSIBILITIES

A. The NDDOT OJT supportive services (OJTSS) consultant will monitor excerpts from the weekly certified payrolls or LCP Tracker for NDDOT projects submitted with the monthly vouchers for reimbursement. On contracts where certified payrolls are not required and not available for supporting documentation, contractors may enter trainee wages, hours in training, and the project control number(s) (PCN) in a spreadsheet to support their reimbursement vouchers. In this case, contractors should work with OJTSS to assure that all information required for payment is provided.

B. The OJTSS will review Daycare Reimbursement Forms and make recommendations to CRD on approvals. CRD approves any reimbursements and the OJTSS will process any payments. OJTSS tracks funds available/expended in order to stay within the limit of available funds that season/year. OJTSS Daycare reimbursements are made using OJTSS funding, which may be limited or unavailable year to year.

C. The OJTSS consultant will assess when the trainees have completed the specified number of hours and their wages are increased accordingly. The OJTSS consultant will also assure that applicable fringe benefits are paid either directly to the trainees or for the trainee into approved plans, funds, or programs.

D. The OJTSS consultant is charged with visiting trainees and monitoring their progress under the OJT Program. To facilitate the on-site visits, the OJTSS consultant will contact contractors for the location of the trainees weekly.

VIII. CONTRACTOR'S RESPONSIBILITIES

A. Consistently demonstrate efforts to recruit, hire, and train candidates for the OJT Program.

B. Assign each trainee to a particular person–either a supervisor or an employee proficient in the skills to be trained–who shall see that the trainee is given timely, instructional experience. This person must be familiar with the OJT Program, keep proper records, and ensure completion of the required training hours in accordance with the training curriculum.

C. Appoint a company employee who will be available and responsive to weekly contacts by the OJTSS consultant. OJTSS monitors the status of assigned trainee positions (e.g., program and trainee approvals, trainees' progress, etc.). The OJTSS consultant will contact the individual listed on the company's approved SFN 60226 Request for OJT Trainee Approval. This person must reply to communications from the Department and the OJTSS consultant in a timely manner.

D. Must have trainees available to the OJTSS consultant for at least two on-site visits during the construction season. The OJTSS consultant will be provided a private location to meet with the trainee and the trainee will be allowed as much time away from the project as necessary to complete the on-site visit.

E. Make the trainer and project superintendent available to the OJTSS consultant for at least two on-site visits each construction season.

F. Make trainees aware they are formally enrolled in the OJT program.

G. Inform trainees on availability of Daycare Reimbursement Program while in an approved training curriculum and assist them with completing the required paperwork, if applicable.

H. Identify trainees on the payroll excerpts, for example: "grp. 4 roller operator trainee." This includes trainees in job classifications not covered by DBRA. Handwritten notes are appropriate for identification.

I. Notify the Department when a trainee completes the number of hours required to graduate from the OJT Program. The Department will issue the trainee a confirmation letter as proof of the graduate's successful training program completion.

J. Notify the Department to "propose graduation" or discontinue the training period of a trainee who has completed 90% or more of their hours and thereafter advance the trainee to journey-worker status.

K. Elect to upgrade proficient trainees from one power equipment operator group or truck driver group to another, with the approval of CRD. Fewer hours are required to complete the upgraded position.

Minimum number of hours required:

Power Equipment Operator Groups 4-6 to Groups 1-3 = 400 hrs.
Class C Truck Driver to Class B = 200 hrs.
Class B Truck Driver to Class A = 200 hrs.

Depending on the variety of experience the trainee has gained under the previous curriculum, the difference in the hours may be deducted from the actual operation of the piece of equipment or truck. The contractor will need to review the trainee's past performance to make this determination.

K. May hire commercial driver's license (CDL) holders as truck driver trainees. Those having over-the-road driving experience, with little or no highway construction experience, may be considered to have completed the Class C truck driver training

curriculum and, therefore, are eligible to be upgraded to a Class B truck driver trainee, with the approval of CRD.

L. May transfer trainees from one project to another to complete the OJT Program. If transfers are made, CRD must be notified and provided with the name of the trainer.

M. May train trainees on municipal, private, or other non-highway work. These training hours must be paid at the OJT minimum wage scale to count toward their OJT Program completion; however, no program reimbursement will be made for those hours. Payrolls of employees trained on non-NDDOT projects must be provided to prove appropriate wages are paid.

N. Must train trainees on projects within North Dakota. Cannot train trainees on projects located outside of the state lines. The OJTSS consultant must be able to visit the trainee twice during their program. It is unreasonable for the OJTSS consultant to make these visits outside of the state.

O. May delegate or reassign trainee positions to subcontractors, with the acceptance of the subcontractors and the approval of CRD. The prime contractor must verify that the trainee will be able to accumulate enough hours to complete his or her training program. If approved, the subcontractor must obtain training program and trainee approval from CRD before the trainee begins work under the OJT program. Program reimbursement will be made directly to the prime contractor. The trainee position will remain the responsibility of the prime contractor.

P. May use trainees on projects subject to TERO requirements as part of the core crew. The training hours will count toward overall OJT Program completion; however, no program reimbursement will be made for those hours unless it is a NDDOT let project.

Q. Must not use one trainee to simultaneously fill multiple trainee positions

R. May use a trainee on a piece of equipment in groups 1-3 or groups 4-6 for one assigned trainee position, then once that trainee has completed the program, the trainee may be trained on a different piece of equipment in groups 1-3 or groups 4-6 to fulfill a second assigned trainee position. When a trainee is used for a second time within a group, the contractor must pay that trainee at the higher wage rate as described in paragraph B under Wage Rates (page 8).

IX. CLASSROOM TRAINING

A. Classroom training may be used to train employees. Each classroom training curriculum must be approved by CRD if the contractor wishes to count the classroom hours as training hours and be reimbursed.

Submit a proposed classroom training curriculum to CRD for approval. Define the type of training the individual will receive, classroom training curriculum, and the minimum number of hours required. The Department will determine the number of hours of credit each trainee will receive toward their training. No retroactive approval will be granted.

Contractors will be reimbursed for classroom training hours after the trainee has completed 40 hours of work on highway construction projects.

Reimbursement for classroom training will be limited to 40 hours per trainee per construction season.

B. The minimum wage scale to be used for classroom training will be that of the first federal-aid highway construction project on which the trainee will be employed. If the trainee is already employed on a federal-aid highway construction project, the trainee will be paid in accordance with the minimum wage scale applicable to that project. However, if the first project on which the trainee will be employed is a state funded only contract, the minimum wage scale to be used for the classroom training will be that of the appropriate DBRA wage in effect at the time of award of the state funded contract.

X. WAGE RATES

A. When the contractor is submitting the trainee's hours toward training program, wages paid shall in no case be less than that of those stated in the approved curriculum. A trainee working on a non-federal aid project, must be paid the DBRA wage rate in effect at the time of award for the type of work the trainee is performing as a trainee. Current and prior labor rates can be found on the NDDOT website at: https://www.dot.nd.gov/divisions/civilrights/laborcompliance.htm

B. The minimum wage rates shall not be less than 80% of the journey-worker rate for the first two quarters of training, 85% of the journey-worker rate for the third quarter, and 90% of the journey-worker rate for the fourth quarter.

- Under the power equipment operator training curricula only, once a trainee has completed a training curriculum in either groups 1-3 or groups 4-6, the contractor may enroll the trainee in another training curriculum on a different piece of equipment in either groups 1-3 or groups 4-6.
- The minimum wage rate under the trainee's second program shall not be less than 85% of the journey-worker rate for the first two quarters of training, 90% of the journey-worker rate for the third quarter, and 95% of the journey-worker rate for the fourth quarter.
- For the purpose of the OJT Program, a quarter is 25% of the hours the trainee works toward completion of their approved program. The first two quarters of a 550-hour training curriculum would end after 275 hours, the third quarter after 138 hours, and the fourth after 137 hours.

C. At any time hours are being attributed toward the completion of the approved training program, trainees shall be paid full fringe benefit amounts, where applicable, in accordance to DBRA requirements. DBRA requirements can be found on the NDDOT website at https://www.dot.nd.gov/divisions/civilrights/laborcompliance.htm

D. At the completion of the OJT Program, the trainee shall receive the wages of a skilled journey-worker.

XI. RECRUITMENT AND SELECTION

A. Prerequisites:

Trainees must possess basic physical fitness for the work to be performed, dependability, willingness to learn, ability to follow instructions, and an aptitude to maintain a safe work environment. Trainees must be a North Dakota resident during their training program.

B. Licenses:

Truck driver trainees must possess appropriate driver permits or licenses for the

operation of Class A, B, and C trucks. When an instructional permit is used in lieu of a license, the trainee must be accompanied by an operator who:

1. Holds a license corresponding to the vehicle being operated;
2. Has had at least one year of driving experience; and
3. Is occupying the seat next to the driver.

C. Recruitment:

1. Place notices and posters setting forth the contractor's Equal Employment Opportunity (EEO) Policy and the availability of the OJT Program in areas readily accessible to employees, applicants for employment, and potential employees.
2. Employ members of the targeted group (minority, female, or economically disadvantaged individuals) for all trainee positions assigned in accordance with the OJT Program. Additional positions requested by the contractor may be filled by individuals outside of the targeted groups.
3. Conduct systematic and direct recruitment through public and private employee referral sources.
4. Screen present employees for upgrading to higher skilled crafts. A present employee may qualify as a trainee; however, no work hours will be reimbursed or counted toward program completion prior to training program and trainee approval by CRD.

D. Selection:

1. Hire and enroll OJT trainee candidates who qualify as an individual in the targeted group.
2. Select a training program(s) based on their company’s employment/staffing needs.
3. Individuals in the targeted group having experience in the selected curriculum may be eligible to participate in the OJT Program providing they:
    - are not or have not been journey-workers in the selected curriculum, and/or
    - have not been previously trained in the selected curriculum.

E. Daycare Reimbursement Program:

Approved trainees may apply for the OJT Daycare Reimbursement Program and be eligible for up to $3,500 in reimbursement of daycare costs. The trainee must be the legal primary custodial guardian of the dependent(s) they are requesting reimbursement for. Dependent(s) must reside at the same address as the trainee for more than 50% of the calendar year. Proof of cost and other documentation will be required to be submitted with the OJT Dependent Child Care Reimbursement Form.

- Availability of program and eligible funds dependent on FHWA funding annually
- Once funding for the program has been expended for the year no further reimbursements are available
- W-9 will be required prior to any reimbursement
- Only daycare services provided during the dates/times the trainee is being trained in their approved OJT program will be reimbursed.

F. Completion Bonus Program:

Trainees that successfully complete their approved program may be eligible for a $500 completion bonus. These funds are provided directly from NDDOT to the trainee once

completion is determined.

- Availability of program and eligible funds dependent on FHWA funding annually
- Once funding for the program has been expended for the year no further funds are available
- W-9 will be required prior to any payment
- Any voluntary positions and/or carryover positions are not eligible

G. Commercial Drivers License (CDL) Program Reimbursement:

Individuals that qualify may request reimbursement for tuition costs in an approved CDL Program upon completion up to $6,000.

- Availability of program and eligible funds dependent on FHWA funding annually
- Once funding for the program has been expended for the year no further funds are available
- Pre-approval form and completion form required
- Periodic check-ins with instructors conducted to ensure compliance
- W-9 will be required prior to any reimbursement
- Only CDL Programs within ND on NDDOTs approved program list are available for reimbursement

XII. BASIS OF PAYMENT

A. Contractors will be paid $4.00 for each hour of training in accordance with the OJT Program Manual.

B. Reimbursement will be made directly to the contractor. Complete SFN 51023 Voucher for On-the-Job Training Program Hourly Reimbursement for each trainee. LCPtracker must be utilized on NDDOT projects for reporting certified payrolls. The OJTSS consultant will be verifying hours submitted on NDDOT projects through this online reporting system. For non-NDDOT projects the firm must attach excerpts from the weekly certified payrolls showing the trainee's hours, rate of pay, and how applicable fringe benefits were paid. Vouchers without excerpts from payrolls will not be paid until the excerpts are provided. If the excerpts from the payrolls are not provided within one week, the voucher will not be paid, and the trainee's hours will not be credited toward completion.

C. On contracts where certified payrolls are not required and not available for supporting documentation, contractors may enter trainee wages, hours in training, and the project control number(s) (PCN) in a spreadsheet to support their reimbursement vouchers. In this case, contractors should work with OJTSS to assure that all information required for payment is provided.

D. Submit completed vouchers to CRD for approval and processing by the fifteenth (15^{th}) calendar day of every following month the trainee is employed under the OJT Program.

Regardless, all vouchers for trainee hours worked on state funded only projects from July 1 to June 30 must be received by CRD no later than July 15 in order to be

reimbursed. All vouchers for trainee hours worked on federally funded projects from October 1 to September 30 must be received by CRD no later than October 15 in order to be reimbursed. This is due to state and federal end-of-the-year budget fiduciary requirements.

XIII. FAILURE TO PROVIDE THE TRAINING OR HIRE THE TRAINEE AS A JOURNEY-WORKER

A. The contractor is required to consistently demonstrate efforts to recruit, hire, and train candidates for the OJT Program.

B. If the contractor does not show in a timely manner good faith efforts to recruit, hire, and train candidates in the targeted group, the Department may withhold progress payments

C. If payments have been made, the Department will deduct the amount paid from the contractor's progress payment.

D. No payment shall be made to a contractor for failure to provide the required training or failure to hire the trainee as a journey-worker when such failure is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this OJT Program Special Provision.

E. Hiring a trainee to begin training as soon as feasible after start of work is evidence of a contractor's good faith efforts to comply with the OJT Program requirements. Additional evidence supporting a contractor's good faith efforts would be to keep the trainee employed as long as training opportunities exist in the approved work classification or until the trainee has completed his or her training program.

F. It is not required that all trainees be employed for the entire length of the construction season. A contractor will have fulfilled its responsibilities under this OJT Special Provision if it has provided acceptable training to the number of trainees assigned.

XIV. UNFILLED OR INCOMPLETE TRAINEE POSITIONS

A. By October 1, provide written explanation of the firm's good faith efforts for unfilled or incomplete trainee assignments to CRD. CRD will decide, on a case-by-case basis, whether to carry the assigned positions over to the next construction season.

B. Positions carried over from the previous construction season must be among the first positions filled at season startup. To notify CRD of the trainee's rehiring, submit *SFN 60226 Request for On-the-Job Trainee Approval*, marking 'Check if Carryover Trainee' in the Approved Training Program section of the form. There is no need for the training position or a returning trainee to be re-approved.

C. Sanctions, up to and including revocation of bidding privileges, may be imposed on the contractor for failure to provide sufficient explanation and documentation for reasons assigned trainee positions when unfilled or incomplete.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

GENERAL

Install, maintain, and remove appropriate Temporary Erosion and Sediment Control Measures (ESCMs).

Definitions:

A. Temporary Erosion and Sediment Control Measures are to be installed and maintained before and during the term of the land disturbance activity. These items are removed when permanent erosion and sediment ESCMs are installed.

B. Permanent Erosion and Sediment Control Measures are to be installed and maintained once the project is completed so that the applicable permits can be terminated.

In some instances, individual temporary and permanent erosion and sediment ESCMs for a site may consist of identical ESCMs. In these cases, the temporary erosion and sediment ESCMs may be used as the permanent erosion and sediment ESCMs if they meet the following criteria:

1. The ESCM was installed correctly,
2. Is in a functional condition,
3. Has had all accumulated sediment removed.

C. The Stormwater Pollution Prevention Plan (SWPPP) is the document that identifies potential sources of sediment or other pollution from construction activity and ensures practices are used to reduce the contribution of pollutants from construction site runoff.

D. Contractor Controlled Areas are project areas not included in the contract, but are obtained and solely controlled by the Contractor (e.g., concrete or asphalt batch plants, concrete washout areas, equipment staging yards, material storage areas, excavated material disposal areas, Contractor furnished borrow areas, etc.).

E. Maintenance is any action taken to keep an ESCM in working condition. These actions may consist of repairing failures of the ESCM itself.

F. Noncompliance is any action or inaction that violates the regulations imposed by the applicable permits or the requirements of this special provision and other contract documents. Failure of an ESCM does not necessarily constitute noncompliance as long as the ESCM is repaired, replaced or supplemented within the timelines established in the applicable permits and no sediment is discharged from the site or into a water of the state.

CONSTRUCTION REQUIREMENTS

A. General.

Develop a SWPPP specific to the project. The creation of the SWPPP is a cooperative effort between the NDDOT who creates the project plan sheets and the Contractor who creates a complete SWPPP which incorporates the plan sheets and the Contractor's means and methods. The project plan sheets by themselves do not meet the requirements of a complete SWPPP and should not be considered as such. The Contractor has the flexibility to modify the design and implementation of the temporary erosion and sediment controls to match the Contractor's means and methods and/or field conditions. These changes must be documented in the SWPPP and meet all regulatory requirements.

B. Permits.

Obtain appropriate permit coverage for the activities conducted in Contractor Controlled Areas. A permit will be required for these areas regardless of their size. The NDDOT will have no responsibility for these areas. Provide copies of the completed and signed Notice of Intent submitted for permit coverage to the Engineer before activities in these areas commence. Do not commence activities in these areas until after permit coverage has begun. Provide copies of Permit Coverage Letters for these areas to the Engineer within 7 days of receiving them from the regulating agency.

C. Submittals.

1. **Preconstruction**

   Provide, at the preconstruction conference, documentation of any Subcontractor hired for erosion control showing that the Subcontractor's on-site supervisor is certified through the NDDOT Erosion & Sediment Control Construction (ESCC) Certification Training. This certification must be maintained by the Subcontractor's onsite supervisor through the term of the contract. The Engineer will provide a verification of their certification through the NDDOT ESCC Certification Training at the preconstruction conference and will maintain that certification through the term of the contract.

   For projects covered by an Environmental Protection Agency (EPA) Construction General Permit, provide at the preconstruction conference, the documentation of EPA construction inspection certification for all individuals conducting inspections under this permit.

2. **Changes to the Erosion Control Plan.**

   Provide immediate written notification to the Engineer of proposed changes to the erosion control plan or SWPPP. The Engineer will review the proposed changes and determine if they are adequate. Documentation of maintenance and inspections that does not affect the erosion control plan or SWPPP does not require approval by the Engineer.

3. **Inspection Reports**

   Provide copies of all inspections, documentation, record keeping, maintenance, remedial actions, and repairs required by the applicable permits to the Engineer. Provide inspection and maintenance reports within 3 working days after an inspection has been conducted.

D. Construction.

Install a rain gauge to monitor rainfall amounts as required by the appropriate permit.

Install perimeter erosion and sediment ESCMs according to the plans/SWPPP before site disturbance.

Do not rely on perimeter ESCMs as the sole method of controlling erosion. As the project progresses, install temporary erosion and sediment ESCMs within the perimeter ESCMs to control erosion resulting from the construction of the project.

Change the location of temporary erosion and sediment ESCMs to fit the field conditions.

Use temporary erosion and sediment ESCMs to prevent contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.

Update the SWPPP as work progresses, or as directed by the Engineer. Update the SWPPP to show changes due to revisions in work schedules or sequence of construction. Update the site map to reflect erosion and sediment ESCMs that have been installed, changed, or removed.

Install stabilization ESCMs (mulch, seeding and mulch, etc.) in areas that have been disturbed where work has temporarily or permanently ceased following the timelines established in the applicable permits. If implementation of stabilization is precluded by snow cover, undertake such measures as soon as conditions allow or perform winter stabilization techniques.

Coordinate temporary erosion and sediment ESCMs with the construction of permanent erosion and sediment ESCMs to provide continuous erosion control. Do not install temporary erosion and sediment ESCMs when permanent erosion and sediment ESCMs are able to be installed. Once the permit is terminated or transferred to the Department, the maintenance of the permanent erosion and sediment ESCMs becomes the responsibility of the NDDOT.

E Maintenance.

Maintain the effectiveness of the temporary erosion and sediment ESCMs as long as required to contain sediment runoff. Inspect the temporary erosion and sediment ESCMs and complete the inspection and maintenance reports every 14 days and within 24 hours of a rainfall event of 0.25 inch or more. During prolonged rainfall (more than 1 day), conduct an inspection within 24 hours of the first day of the event and within 24 hours after the end of the event. Inspections are required only during normal business hours.

Correct any deficiencies in the ESCMs within the timelines established in the applicable permits. If conditions do not permit access to the ESCM, corrective actions can be taken by installing additional ESCMs. Correct the original deficiencies as soon as conditions allow access to their location without causing additional damage to the slopes. In the inspection logs, document the conditions that prohibit access.

F. Removal.

Remove the temporary devices when directed by the Engineer or when permanent erosion and sediment controls are installed.

Erosion and Sediment Control Supervisor.

A. General.
Designate an erosion and sediment control supervisor. Provide the name and contact information for the supervisor at the preconstruction meeting. If this erosion and sediment control supervisor becomes unavailable on the project, designate a replacement supervisor. Notify the Engineer if this supervisor changes and provide the contact information for the new supervisor.

B. Qualifications.
Provide a supervisor that is an employee of the Prime Contractor and has the following qualifications:

1. Familiar with installation, maintenance, and removal of ESCMs and the requirements of the erosion and sediment control plans, applicable permit requirements, specifications, plans and this provision;

2. Competent to supervise personnel in erosion and sediment control operations; and

3. Certified through the NDDOT ESCC Certification Training and maintain that training throughout the term of the contract. The EPA construction inspection course cannot take the place of the NDDOT ESCCC. No other certifications may take the place of this requirement.

C. Duties.
The supervisor's duties shall include the following:

1. Provide erosion and sediment control as required by the SWPPP, Plans, and Specifications.

2. Be on the site to supervise the installation, operation, inspection, maintenance, and removal of the erosion and sediment ESCMs.

3. Update the SWPPP as work progresses to show changes due to revisions in work schedules or sequence of construction, or as directed by the Engineer. Update the site map to reflect erosion and sediment ESCMs that have been installed, changed, or removed.

4. Propose changes to improve erosion and sediment control.

5. Be accessible to the job site within 24-hours.

6. Provide the Engineer with documentation of all erosion and sediment control activities and inspections as required above.

EROSION AND SEDIMENT CONTROL INSPECTOR FOR EPA CONSTRUCTION GENERAL PERMIT

For projects covered by EPA Construction General Permit, provide individuals conducting the Erosion and Sediment Control Inspections that have taken the EPA Construction inspection

course developed for this permit. These individuals must have passed the exam or hold a valid construction inspection certification or license from an equivalent program.

The NDDOT ESCC certification cannot take the place of EPA construction inspection certification. Only third-party training that is listed as EPA approved on the EPA website will be considered equivalent.

Provide the names of any individuals who will be conducting the Erosion and Sediment Control inspections on EPA projects. Notify the Engineer if this person changes and provide the new contact information.

The EPA Construction Inspection Certification or License must be active for the duration of the project.

PERFORMANCE

Correct all areas of noncompliance within 24 hours after notification of noncompliance. If corrective actions are not taken within 24 hours, the Engineer may:

1. Assess a contract price reduction of $500 per day per instance;

2. Have deficiencies corrected by another Contractor and deduct the cost of the work from the monies due or to become due to the Contractor;

3. Suspend all work; or

4. Withhold payment on other contract items/pay estimates.

These actions will be applied until deficiencies have been corrected.

METHOD OF MEASUREMENT

ESCM items will be measured as specified in the “Method of Measurement” portion of the appropriate section of the specifications.

BASIS OF PAYMENT

A. General.

ESCM installation will be paid for at the contract unit price for erosion and sediment control for the appropriate items and sections. The plans will detail the required ESCMs for temporary and permanent installations. The same bid items may be used for temporary and permanent ESCMs.

ESCM item removal will be paid for at the contract unit price for “Remove _____”in the appropriate section of the specifications.

Include the costs for labor, materials, maintenance, equipment, disposal, adherence to the permit, and SWPPP modifications in the respective pay items.

B. Replacement of ESCMs.

When the Engineer directs the replacement of temporary erosion and sediment ESCMs that are no longer functional because of deterioration or functional incapacity and those items were

installed as specified in the Contract or as directed by the Engineer, the Department will pay for replacement ESCMs

No payment will be made for replacing temporary erosion and sediment ESCMs that the Engineer determines are ineffective because of improper installation, lack of maintenance, or the Contractor's failure to pursue timely installation of permanent erosion and sediment ESCMs as required in the Contract.

No payment will be made for replacing temporary erosion and sediment ESCMs due to contractor operations. Include the cost to move Flotation Silt Curtain as work progresses in the price bid for "Flotation Silt Curtain".

C. Removal of Sediment.

Removal of sediment from silt fence and fiber rolls will be paid for at the price listed in the "Price Schedule PS-1."

D. Contractor Controlled Areas.

Erosion and sediment controls for Contractor Controlled Areas are the responsibility of the Contractor and will not be paid for by the Department.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LIMITATIONS OF OPERATIONS

DESCRIPTION

Section 108.05, “Limitations of Operations” is no longer valid. Use this Special Provision in its place.

108.05 LIMITATION OF OPERATIONS

A. General.

Perform the work in a manner and sequence that minimizes interference to traffic, and with due regard to the location of detours and provisions for handling traffic. Do not begin work to the prejudice or detriment of work already started; the contract may require a section of roadway to be finished before starting additional sections if the opening of the section is essential to public convenience.

If the prosecution of the work is discontinued, provide the Engineer at least 24-hours notice before resuming operations.

B. Holidays.

Unless the contract allows work on holidays, perform work on holidays only with the Engineer’s prior written approval. Submit a written request to the Engineer by noon 2 business days before the requested holiday.

C. Nighttime Operations and Extended Hours.

1. General.

When performing work in low light conditions, implement proper safety precautions and provide adequate lighting for the performance and inspection of the work.

The following operations are exempt from the definitions of extended hours and nighttime operations:

- Pavement coring;
- Concrete joint cutting; and
- Temporary traffic control.

Work conducted less than 1 hour after sunset and less than 1 hour before sunrise is considered extended hours. All other operations conducted under darkness fall under nighttime operations.

2. Nighttime Operations.

Unless the contract allows for nighttime operations, perform work at night only with the Engineer’s prior written approval.

Submit a written request to the Engineer before anticipated nighttime operations. Allow up to 7 calendar days for the Engineer to review the request. The Engineer may deny the request or delay approval if it would require additional staffing considerations. If nighttime

operations require the Engineer to hire additional forces, nighttime operations may not be allowed for up to 30 days from the receipt of the request.

When requesting to perform nighttime operations, include a plan to ensure the safety of all individuals on the project site, including the Contractor's and subcontractor's workers, Department representatives, and the traveling public.

The Department bears no liability for costs or delays resulting from the Engineer's approval, rejection, or delay for staffing purposes of a request to perform nighttime operations.

3. Extended Hours.

Extended hours are allowed before sunrise with verbal notice given to the Engineer the previous day. Extended hours are allowed after sunset with verbal notice given to the Engineer that same day.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

STANDARD SPECIAL PROVISION

FEDERAL PROHIBITION ON CERTAIN TECHNOLOGICAL HARDWARE

DESCRIPTION

This Special Provision details technological items that are prohibited from use on Department contracts. The contents of this SP take precedent over requirements regarding affected equipment in all other contract documents.

CONTRACT REQUIREMENTS

Equipment, services, and systems using telecommunications equipment or services are prohibited from containing equipment produced by:

- Huawei Technologies Company;
- ZTE Corporation; and
- Any subsidiary or affiliate of the named entities.

Video surveillance and telecommunications equipment are prohibited from containing equipment produced by:

- Hytera Communications Corporation;
- Hangzhou Hikvision Digital Technology Company;
- Dahua Technology Company; and
- Any subsidiary or affiliate of the named entities.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

STANDARD SPECIAL PROVISION

DOMESTIC MATERIAL PROCUREMENT PREFERENCES

DESCRIPTION

Replace Section 106.08, “Buy America”, with the following:

DOMESTIC MATERIAL PROCUREMENT FOR INFRASTRUCTURE PROJECTS

A. General.

Provide materials from domestic material sources when articles, materials, or supplies are permanently incorporated into the work.

The requirements of this SP are not applicable to equipment, tools, and temporary items.

Domestic material procurement requirements do not apply to items used by the Contractor to facilitate construction that are not required to be permanently installed as part of the contract requirements, but that are left in place upon completion of the work at the convenience of the Contractor.

The definitions and requirements in this SP have been assembled based on the following Federal requirements:

- Iron and steel requirements are based on 23 CFR Part 635, “Buy America requirements”;
- Manufactured products are based on 23 CFR Part 635 “Buy America requirements”; and
- Construction materials are based on 2 CFR Part 184, “Buy America Preferences for Infrastructure Projects” (BABA).

B. Certifications.

All certifications are submitted by the prime Contractor. When submitting certifications for materials that are subject to the requirements of this provision, the prime Contractor shall include a signed letter stating that the submitted documentation is the documentation that was received by the prime Contractor for material incorporated into the work. The prime Contractor’s signature on the Department’s Certificate of Compliance form meets this requirement.

C. Determination of Material Category.

1. General.

Only a single category of requirements will apply to an item.

Exceptions:

1) Precast concrete items are classified as manufactured products, however components of these items that consist wholly or in part of iron, steel, or a combination of both must meet the requirements of Section C.2, “Iron or Steel Products” of this provision.

2) Cabinets or enclosures for intelligent transportations systems or other electronic hardware systems classified as manufactured products that consist wholly or in part of iron, steel, or a combination of both must meet the requirements of Section C.2, “Iron or Steel Products” of this provision.

Some contract items are composed of multiple components that may fall into different categories. Individual components will be categorized based on their nature when they arrive at the work site. In cases where the classification of an item is in question or dispute, the Engineer’s determination of the classification will be binding.

Exception:
Items that comprise a kit will be considered based on their status as a whole product and classified as either iron or steel products or as manufactured products. A kit is a product intended for incorporation into the project whose parts are acquired from a single manufacturer or supplier and delivered to the work site as separate components but are then assembled to form a single product at the work site.

2. Iron or Steel Products.
Iron or steel products are defined as articles, materials, or supplies that consist wholly or predominantly of iron, steel, or a combination of both.

Predominantly iron or steel or a combination of both means the cost of the iron and steel components exceeds 50 percent of the total cost of all components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

3. Manufactured Products.
Manufactured products are defined as articles, materials, or supplies that have been:

- Processed into specific form or shape; or
- Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.

If the cost of iron and steel components of a manufactured product exceed 50 percent of the total cost of the product, the iron and steel must meet the requirements of Section C.2, “Iron or Steel Products” of this provision. The remaining components are then exempt from any domestic procurement preference.

4. Construction Materials.
Construction materials are materials that consist primarily of:

- Non-ferrous metals;
- Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Fiber optic cables (including drop cable);
- Optical fiber;
- Lumber;
- Engineered wood; or
- Drywall.

Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization.

5. Other Materials

If articles, materials or supplies do not meet any of the definitions in sections C.2, C.3, or C.4, there are no requirements for domestic manufacturing. This includes the following items that are specifically categorized as other (excluded) materials per BABA Section 70917(c) of the Infrastructure Investment and Jobs Act of 2021:

Cement and cementitious materials;
Aggregates such as stone, sand, or gravel; or
Aggregate binding agents or additives.

D. Steel and Iron Certification.

1. General.

Ensure all manufacturing processes, including applications of coatings, occur in the United States. A coating includes all processes required to apply the coating to a product to protect or enhance the value of the product.

2. Bulk Manufactured Steel and Iron Materials.

In addition to the requirements of Section 106.01 C, “Certificate of Compliance”, submit a contractor’s Certificate of Compliance stating that the iron and steel products listed in Table 1 are of domestic origin.

Table 1

Mailbox supports	Cable Fence Materials
Chain Link Fence Materials	Barbed Wire Fence Materials
Guardrail Components	Woven Wire Fence Materials
Culvert Markers	Delineators
Perforated Tube Sign Supports and Related Materials	

3. Other Steel and Iron Products.

For steel and iron products that are not listed in Table 1, submit a manufacturer’s Certificate of Compliance as specified in Section 106.01 C, “Certificate of Compliance”.

4. Foreign or Uncertified Steel and Iron.

These requirements allow the use of steel and iron products produced and manufactured outside the United States, or steel and iron products that cannot be certified as manufactured in the United States, of a total value less than 0.1 percent of the original contract amount, or $2,500, whichever is greater.

The total value is that shown to be the cost of the steel and iron products as delivered to the project site.

Document the cost of:

- Foreign steel and iron products, plus
- Steel and iron products which cannot be certified as manufactured in the United States.

Submit the documentation of foreign and uncertified steel and iron products with the required certifications.

E. Manufactured Products.

Manufactured products are acceptable under this provision if the product was manufactured in the United States. For the purposes of this provision, “manufactured in the United States” means that the final assembly of the product occurred in the United States.

F. Construction Materials.

1. General.

Each material classified as a construction material has a specific standard for the material to be considered in compliance with this provision.

Except as specifically provided, only a single standard under this section should be applied to a single construction material.

2. Non-Ferrous Metals.

For non-ferrous metals, all manufacturing processes from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.

3. Plastic and Polymer-Based Products.

For plastic and polymer-based products; including polyvinylchloride, composite building materials, and polymers used in fiber optic cables; all manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.

4. Glass.

For glass; including optic glass; all manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.

5. Fiber Optic Cable.

For fiber optic cable; including drop cable; all manufacturing processes, from the initial ribboning if applicable, through buffering, fiber stranding and jacketing, occurred in the United States.

All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.

6. Optical Fiber.

For optical fiber, all manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.

7. Lumber.

For lumber, all manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.

8. **Drywall.**
   For drywall, all manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.

9. **Engineered Wood.**
   For engineered wood, all manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

DESCRIPTION

This SP replaces Section 107.14 Public Liability and Property Damage Insurance.

107.14 Public Liability and Property Damage Insurance.

A. General Requirements.

Submit to the Department the certificates of insurance effecting the requirements in this section for the Commercial General Liability and Commercial Automobile Liability Insurances with the contract and the contract bond in accordance with Section 103.06, "Execution and Approval of Contract."

Provide insurance policies executed by a corporation qualified and authorized to write the policies in the State of North Dakota. The State reserves the right to obtain complete, certified copies of all required insurance documents, policies, or endorsements at any time.
Secure and maintain insurance in full force and effect before starting the work and until completion of all work required and accepted by the Department or owner. The policies shall provide 30 calendar days notice to the Department or the owner of any intent to cancel or materially alter such insurance.

Failure to maintain the insurance as required constitutes a material breach of contract. The Department or the owner may, after giving 5 business days notice to the Contractor to correct the breach, immediately terminate the Contractor in accordance with Section 108.08, "Termination of the Contract for Default," and procure or renew such insurance and pay all premiums. The Department or the owner may demand repayment of premium costs by the Contractor, or may offset the premium costs against funds due the Contractor from the Department or the owner.

B. Insurance Requirements.

Secure and maintain in full force and effect during the term of the contract the following insurance coverages:

1. Commercial General Liability for limits not less than $2,000,000 combined single limit per occurrence and aggregate for bodily injury, property damage, personal injury and completed operations/product liability. Provide products and completed operations coverage for a period of one year following final acceptance of the work. Provide coverage with the aggregate limit applied separately to occurrences at the location or project described in this contract. Provide a policy including a "stop-gap" Employers Liability endorsement to cover the employer's liability for injury to employees falling outside the State Worker's Compensation Law.

2. Commercial Automobile Liability for limits not less than $2,000,000 combined single limit per accident for bodily injury and property damage.

3. Workers Compensation coverage as required by the State of North Dakota.

The General Liability and Automobile policies shall provide an additional insured endorsement in favor of the State of North Dakota and the Owner and shall contain a “Waiver of Subrogation” to waive any right of recovery that the Insurance company may have against the State and the Owner. The coverage required under this agreement shall be primary for the State and the Owner, and shall not be affected by any other insurance or coverage obtained by the State or the Owner on their own behalf.

Any right of the State to receive indemnification and insurance shall not give rise to a duty on the part of the State to exercise its rights or status for the benefit of the owner, or any other person or entity.

C. Subcontractor.

If subletting a portion of the contract, the Contractor shall obtain insurance protection in accordance with Section 107.14.B, “Insurance Requirements,” to provide liability coverage to protect the Contractor, State, and owner for work undertaken by the subcontractor. Ensure public liability and property damage insurance coverage in accordance with Section 107.14.B, “Insurance Requirements,” for all parties performing work under the contract.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LANDSCAPE AND STREETSCAPE IMPROVEMENTS

RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

A. 258.100 CONCRETE SLOPE PROTECTION

B. 624.123 PEDESTRIAN RAILING

C. 624.124 PEDESTRIAN FENCE

D. 750.020 PIGMENTED CONCRETE

E. 752.850 ORNAMENTAL FENCE

F. 770.1003 ORNAMENTAL LIGHT STANDARD

G. 970.008 LANDSCAPE PREPARATION

H. 970.060 PLANTING SOIL

I. 970.1009 LANDSCAPE PLANTINGS

A. 258.100 CONCRETE SLOPE PROTECTION

258.01 DESCRIPTION

This work consists of placing cast-in-place concrete slope protection.

258.02 EQUIPMENT

Equipment	Section
Concrete Equipment	155
Air Compressor	156.01
Fogger	156.02

258.03 MATERIALS

Material	Section
AE-3 Concrete	802
Preformed Expansion Joint Filler	826.02
Joint Sealant	826.02 A.2
Reinforcing Steel	836.02
Steel Welded Reinforcement, Plain, for Concrete	836.03 B
Pigmented Concrete	750.04

258.04 CONSTRUCTION REQUIREMENTS

A. General.

Refer to NDDOT Section 258, Concrete Slope Protection. Unless noted otherwise, the provisions in this section are in addition to those provided in Section 258.

Furnish, store, prepare, apply and cure all materials according to product

manufacturer's directions.

B. Integral Color
Provide pigment meeting below criteria

Color	Pigment Basis-of-Design
AMS-STD-595A 36424 Medium Gray, Gray	SikaColor-100 P U20 (Smoke), Davis Colors Sandstone 5237, or Approved Equal

C. Submittals.
Submit the following to the Engineer for approval a minimum of 10 working days before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Product data including manufacturer's technical information and application instructions for each material proposed for use.

D. Surface Preparation.
Remove vegetation and deleterious material. Compact all loose material.

Wet surfaces prior to placing concrete. Do not place concrete on soft subgrade or in standing water.

E. Placing Concrete.
Place and consolidate concrete using methods that prevent segregation and sagging.

Place a construction joint at the end of the panel if placement of concrete is stopped for more than 30 minutes.

Construct transverse tooled joints in the surface of plastic concrete. Maintain the transverse tooled joints during finishing operations until the concrete has hardened.

Finish the surface so there are no irregularities greater than 0.75 inch in 10 feet.

F. Application.
Cure concrete as specified in Section 550.04 I, "Curing Concrete", with the following exception:

1. Cure the concrete for a period of at least 5 days. Suspend curing when the pavement has attained the minimum strength specified.

Apply cure at a minimum rate of 1 gallon per 150 square feet of pavement in one or two coats. If applying two coats, apply the second coat within 30 minutes of the first coat.

1. Prevent infiltration of curing compound into joints that require sealing.
2. Immediately apply curing compound to the sides of concrete pavement exposed due to the removal of forms during the curing period.

3. Immediately reapply curing compound to areas damaged within the curing period.

Apply the final cure within 30 minutes of screeding the concrete. Use wetted fabric cure or an impervious membrane cure. Obtain the Engineer's approval prior to changing cure methods.

1. The Engineer will suspend paving operations if cure is not properly applied.

2. If hairline cracking develops before placing the curing cover, modify curing procedures to present loss of moisture. Cease concrete placing and mixing if hairline cracking continues.

Sealing Joints: Clean and dry joints before applying joint sealant. Use an air compressor to clean the joints.

1. Apply joint sealant when the air temperature is within the ranges specified by the sealant manufacturer.

2. Fill joints with sealant from the bottom up.

258.05 METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place, as specified in Section 109.01, "Measurement of Quantities".

258.06 BASIS OF PAYMENT

Bid Item	**Unit**
258.100 Concrete Slope Protection	Square Yard (SY)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

B. 624.123 PEDESTRIAN RAILING

624.01 DESCRIPTION

This work consists of providing all labor, equipment, and materials required to furnish and install 1'-4" high railing mounted to concrete barrier between the on-bridge shared use path and traffic lanes on the DeMers Avenue Bridge.

624.02 EQUIPMENT

Intentionally left blank.

624.03 MATERIALS

Use painted galvanized steel for all elements and hardware. Galvanize and paint the steel elements after fabrication.

Material	Section
Structural Steel	834.01
Paints, Oils, and Thinners	852
Galvanizing	854
Epoxy Resin Adhesive	806.02
Steel Anchor Base Plates	ASTM A 36
Bolts and Anchor Bolts	ASTM FF 3125, Grade A 325 or ASTM A 449

624.04 CONSTRUCTION REQUIREMENTS

A. General.
Grind or field weld joints to provide a smooth appearance.

Field verify all dimensions for accuracy before submitting work drawings. Submit work drawings to Engineer for review before beginning fabrication.

B. Submittals.
Submit the following to the Engineer a minimum of 8 weeks before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Product data including manufacturer's technical information and application instructions for each material proposed for use.
2. Dimensioned drawings illustrating pedestrian railing layout; including proposed welds, bolts and connection types.

C. Application.
Use self-locking nuts for bolts.

Place bolt heads on the side of the fence adjacent to pedestrians.

Use one of the following methods to install the 0.5 inch wedge bolts for anchor base plates:

- Drill and place the bolt in epoxy mixed according to the epoxy manufacturer's recommendations. Use epoxy that meets the requirements of Section 806.02 "Epoxy Resin Adhesives"; or
- Place the bolt into the plastic concrete.

624.05 METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place pedestrian railing, as specified in Section 109.01, "Measurement of Quantities".

624.06 BASIS OF PAYMENT

Bid Item	Unit
624.123 Pedestrian Railing	Linear Feet (LF)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

Authored by: Bolton & Menk, Inc.

C. 624.124 PEDESTRIAN FENCE

624.01 DESCRIPTION

This work consists of providing all labor, equipment, and materials required to furnish and install pedestrian fencing mounted to the south side of the DeMers Avenue Bridge as noted in plans.

624.02 EQUIPMENT

Intentionally left blank.

624.03 MATERIALS

General.

Use painted galvanized steel for all elements and hardware. Galvanize and paint the steel elements after fabrication.

Material	Section
Structural Steel	834.01
Paints, Oils, and Thinners	852
Galvanizing	854
Grouts and Epoxy	806
Fence	860
Epoxy Resin Adhesive	806.02
Steel Anchor Base Plates	ASTM A 36
Bolts and Anchor Bolts	ASTM FF 3125, Grade A 325 or ASTM A 449

624.04 CONSTRUCTION REQUIREMENTS

A. General.

Grind or field weld joints to provide a smooth appearance.

Field verify all dimensions for accuracy before submitting work drawings. Submit work drawings to Engineer for review before beginning fabrication.

B. Submittals.

Submit the following to the Engineer a minimum of 8 weeks before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Product data including manufacturer's technical information and application instructions for each material proposed for use.
2. Dimensioned drawings illustrating pedestrian railing layout; including proposed welds, bolts and connection types.

C. Application.

Use self-locking nuts for bolts.

Place bolt heads on the side of the fence adjacent to pedestrians.

Use one of the following methods to install the 0.5 inch wedge bolts for anchor base plates:

1. Drill and place the bolt in epoxy mixed according to the epoxy manufacturer's recommendations. Use epoxy that meets the requirements of Section 806.02 "Epoxy Resin Adhesives"; or
2. Place the bolt into the plastic concrete.

624.05 METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place pedestrian fencing, as specified in Section 109.01, "Measurement of Quantities".

624.06 BASIS OF PAYMENT

Bid Item	Unit
624.124 Pedestrian Fence	Linear Feet (LF)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

D. 750.020 PIGMENTED CONCRETE

750.01 DESCRIPTION

This work consists of providing all labor, equipment, and materials required to furnish and install pigmented (integral color) concrete as listed below and as shown in plans and details.

750.02 EQUIPMENT

Equipment	Section
Concrete Equipment	155
Air Compressor	156.01
Fogger	156.02

750.03 MATERIALS

A. General.

Item	Section
Concrete Class AE	802
Impervious Membrane Cure	810.01 B
Preformed Expansion Joint Material	826.02 C or F
Reinforcing Steel, Dowel Bars, and Tie Bars	836

B. Integral Color.

Provide pigment meeting the table below:

Location	Color	
	AMS-STD-595A	Pigment Basis-of-Design

Concrete Slope Protection	36424 Medium Gray, Gray	SikaColor-100 P U20 (Smoke), Davis Colors Sandstone 5237, or Approved Equal
Boulevard	36424 Medium Gray, Gray	SikaColor-100 P U20 (Smoke), Davis Colors Sandstone 5237, or Approved Equal
Raised Medians	36424 Medium Gray, Gray	SikaColor-100 P U20 (Smoke), Davis Colors Sandstone 5237, or Approved Equal
DeMers Ave. Raised Median, east of 42nd St connector	-	Solomon Colors Number 413 Terra Cotta, Davis Colors Terra Cotta pigment number 10134, or Approved Equal*

*Color of new concrete to match existing pigmented concrete in immediately adjacent median. Pigment selection to be modified as appropriate to meet this requirement.

Final color selection will be made based on approved test panel.

C. Curing.
Use a clear, all resin-based curing compound meeting the requirements of ASTM C 309 Type 1-D.

750.04 CONSTRUCTION REQUIREMENTS

A. General
Refer to NDDOT Section 750. Unless noted otherwise, the provisions in this section are in addition to those provided in Section 750.

Add colored admixture to the mix according to manufacturer's written instructions in pre-measured bags, not by weight of cement content.

Add pigment to the concrete at a ratio recommended by the manufacturer while the mixer is operating at mixing speed and uniformly blend the pigment into the concrete.

Supplemental admixtures shall not be used unless approved by manufacturer.

Do not add calcium chloride to mix.

B. Submittals.
Submit the following to the Engineer a minimum of 6 weeks before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Manufacturer's technical data sheets for the following:
    a. Colored admixture;
    b. Powder antiquing release agent;
    c. Curing and sealing compound.
2. Design Mixes for each type of integrally colored concrete.

3. Samples for Confirming selection of pigments: Manufacturer's color charts showing range of available colors showing similar shading to identified pigment preference in the Integral Color chart included in this specification.

C. Delivery, Storage and Handling.
Deliver colored admixtures in original, unopened packaging and store under dry conditions.

D. Pigmented Concrete Test Panels.
Place and finish two test panels for each unique pigment color: a 2-foot x 10-foot and 6-foot x 6-foot area, at location on Project selected by Engineer.

For accurate color, the quantity of concrete mixed to produce the sample should not be less than 3 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mix truck) and should always be in full cubic yard increments. Discard excess material according to local regulations.

Construct test panels using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in sample panels.

Retain samples of cements, sands, aggregates and color additives used in mock-up as basis for remaining work.

Accepted test panel shall remain through completion of the work to serve as visual standard for pigmented concrete work for the project.

Multiple test panels may be required until standards are deemed acceptable by the Engineer.

Remove test panels when directed by Engineer.

750.05 METHOD OF MEASUREMENT
The Engineer will measure, completed and in-place pigmented concrete as specified in Section 109.01, “Measurement of Quantities”.

750.06 BASIS OF PAYMENT

Bid Item	Unit
750.020 Pigmented Concrete	Square Yard (SY)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

E. 752.850 ORNAMENTAL FENCE

752.01 DESCRIPTION
This work consists of providing all labor, equipment, and materials required to furnish and install ornamental fencing mounted to concrete on bridge and abutments as noted in plans.

752.02 EQUIPMENT
Intentionally left blank.

752.03 MATERIALS

General.
Use painted galvanized steel for all elements and hardware. Galvanize and paint the steel elements after fabrication.

Material	Section
Structural Steel	834.01
Paints, Oils, and Thinners	852
Galvanizing	854
Grouts and Epoxy	806
Fence	860
Epoxy Resin Adhesive	806.02
Steel Anchor Base Plates	ASTM A 36
Bolts and Anchor Bolts	ASTM FF 3125, Grade A 325 or ASTM A 449

752.04 CONSTRUCTION REQUIREMENTS

A. General.
Grind or field weld joints to provide a smooth appearance.

Field verify all dimensions for accuracy before submitting work drawings. Submit work drawings to Engineer for review before beginning fabrication.

B. Submittals.
Submit the following to the Engineer a minimum of 8 weeks before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

3. Product data including manufacturer's technical information and application instructions for each material proposed for use.
4. Dimensioned drawings illustrating pedestrian railing layout; including proposed welds, bolts and connection types.

C. Application.
Use self-locking nuts for bolts.

Place bolt heads on the side of the fence adjacent to pedestrians.

Use one of the following methods to install the 0.5 inch wedge bolts for anchor base plates:

3. Drill and place the bolt in epoxy mixed according to the epoxy manufacturer's recommendations. Use epoxy that meets the requirements of Section 806.02 "Epoxy Resin Adhesives"; or
4. Place the bolt into the plastic concrete.

752.05 METHOD OF MEASUREMENT
The Engineer will measure, completed and in-place ornamental fencing, as specified in Section 109.01, “Measurement of Quantities”.

752.06 BASIS OF PAYMENT

Bid Item	Unit
752.850 Ornamental Fence	Linear Feet (LF)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

F. 770.1003 ORNAMENTAL LIGHT STANDARD

770.01 DESCRIPTION
This work consists of furnishing and installing ornamental lighting standards to support TYPE B luminaires per Section 140, Note 770-P02.

770.02 EQUIPMENT
Intentionally left blank.

770.03 MATERIALS

Material	Section
Steel Anchor Base Plates	ASTM A 36
Galvanizing	854
Highway Lighting	895

A. Work Drawings.
Submit work drawings a maximum of 20 days after the date of contract execution.

Provide the dimensions, type of material, and functional characteristics of the equipment to be installed.

1. Poles and anchor plates;
2. Base covers;
3. Luminaires per Section 140 notes;
4. All necessary calculations and drawings used in the design of the light standard.

B. Anti-Seize Lubricants
Use an anti-seize lubricant on all metal screw and bolt connections.

770.04 CONSTRUCTION REQUIREMENTS

A. General.
All electrical installations must be either performed by or supervised by an electrician licensed by the ND State Electrical Board. Perform all work to meet the requirements of the National Electrical Code, the North Dakota State Electrical Board, the local

utility company, and the ordinances established by the local municipality.

B. Submittals.
Submit the following to the Engineer for approval a maximum of 20 calendar days of execution of the Contract.

1. Product data, including manufacturer's technical information and application instructions for each material proposed for use.

C. Light Standards.

1. General.
Install mast arms perpendicular to the roadway centerline.

2. Anchor Nut Tightening.
Plumb the light standard with leveling nuts. Adjust the leveling nuts on assembled light standards before 10:00 a.m.

Tighten the anchor nuts securely. Install nuts so a minimum of two threads are exposed above the nuts. Torque bolts in a multi-directional slip base as specified by the manufacturer. Tighten top and leveling nuts of the anchor bolts according to the following steps:

a. Bring all leveling nuts to full bearing on the bottom of the base plate. Keep the bottom of the leveling nut as close to the concrete base as practicable, and not more than one inch above the top of the concrete base. Thread leveling nuts onto the anchor bolt to provide a minimum of two threads projection of the bolt above the top nut when in its tightened position.

b. Generously add beeswax or equivalent to the top nut bearing face and top nut internal threads prior to placement on the anchor bolt. Tighten all nuts to a 'snug' condition. The Department defines 'snug' as the tightness attained by the full effort of a person using a wrench with a length equal to 14 times the diameter of the anchor bolt (minimum wrench length shall be 18 inches.)

Apply the full effort required to achieve a 'snug' tight condition as close to the end of the wrench as possible and continue until the nut stops rotating. Tighten by learning back, pulling firmly, and using one's entire body weight on the end of the wrench (with feet braced to present slipping.)

Accomplish snug tightening in a minimum of two separate passes of tightening. Sequence tightening by tightening in each pass the opposite side nut, to the extent possible, until all the nuts in that pass have been snugged.

c. Check the 'snug' tightness of the nut in the presence of the Engineer after completing nut snugging but prior to commencing step (d) below.

Check the 'snug' tightness of the nuts (top and leveling) by applying a torque to the nut according to Table 770-01.

Table 770-01

Bolt Diameter (inches)	Torque (foot-pounds)
1	100
1-1/4	200
1-1/2	300
1-3/4	400
2	500
2-1/4	700
2-1/2	800

d. After step (b), ensure that the top nut and leveling nuts are in full bearing on the base plate. If any gap exists between the nut and the base plate, insert a beveled washer between the nut washer and the base plate to eliminate the gap. Use a stainless-steel Type 304 washer of the same diameter as the hardened washer, which is beveled so that the gap between the nut and the base plate is eliminated. Retighten all nuts according to step (a) and (b) above if beveled washers are added.

e. Tighten all top nuts an additional 1/3 turn using a hydraulic wrench. Tighten all of the nuts in two separate passes of equal increment turns. Use a sequent of tightening in each pass so that the opposite side nut, if possible, shall be subsequently tightened until all the nuts in that pass have been turned. Do not allow the leveling nut to rotate during top nut tightening.

f. Check the tightness of the nuts in the presence of the Engineer a minimum of 48 hours after completed step (d). Apply torque to the nut in accordance with Table 770-02.

Table 770-02

Bolt Diameter (inches)	Torque (foot-pounds)
1	300
1-1/4	630
1-1/2	1,120
1-3/4	1,820
2	2,770
2-1/4	4,010
2-1/2	5,550

The Engineer will tap each nut (top and leveling) with a 24-ouce ball peen hammer to check for looseness. A tight nut produces as sharp ringing sound, and a loose nut produces a dull sound.

The Engineer will tap each washer on one side while placing one hand on the other side of the washer. If the washer moves, the nut is not properly tightened.

The Engineer will use a wrench with a length equal to 14 times the diameter of the anchor bolt (minimum 18 inches) to check the tightness of each nut. If the Engineer is able to rotate a nut as a result of the application of a person's full effort on the end of the wrench, the nut is not properly tightened. If the Engineer finds any nut or washer to be loose as a result of the above acceptance procedure, tighten such loose nuts according to the steps above. If any nuts require tightening after the initial installation, remove and reinstall nuts and washers and, if necessary, remove and re-erect the entire structure at no cost to the Department.

3. **Rodent Protection.**
   Install rodent protection continuously around the inside of the lower plate to prevent rodents from entering the base through the space between the concrete foundation and the lower plate. Protection may consist of wire mesh with opening sized of 1/4 inch or less, Xcluder wrap, Halek Solutions rodent intrusion guard, or an approved equal. If using wire mesh, secure the mesh to the anchor bolts and lower plate.

770.05 METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place ornamental light standards, as specified in Section 109.01, "Measurement of Quantities".

770.06 BASIS OF PAYMENT

Bid Item	Unit
770.1003 Ornamental Light Standard	Each (EA)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

G. 970.008 LANDSCAPE PREPARATION

970.01 DESCRIPTION

This work consists of performing landscape preparation for planting beds.

970.02 EQUIPMENT

Intentionally left blank.

970.03 MATERIALS

A. Planting Soil.
This work is in preparation for placement of 970.060 Planting Soil.

B. Compost.
Compost is considered incidental to 970.060 Planting Soil.

C. Mulch.
Mulch is considered incidental to Landscape Preparation and shall meet the following criteria:

- Mulch to be natural hardwood wood chips or bark chips installed to provide a minimum of 3 inches thick covering, over the entire planting area. Mulch containing foreign material will be rejected.

970.04 CONSTRUCTION REQUIREMENTS

A. General.
The contractor shall not begin planting operations, nor deliver any planting stock to the project site until all other work has been completed in the area of proposed plantings, as determined by the Engineer.

Protect structures, utilities, sidewalks, pavements, turf areas, existing plants and other facilities from damage caused by landscape preparation operations. Any damage to adjacent facilities and structures shall be restored at no additional cost to the project.

B. Competency Test.
Coordinate with the Engineer to schedule and perform a competency test with the Grand Forks City Forester before proceeding with planting bed preparation work to demonstrate acceptable topsoil, compost, and soil cultivation.

A satisfactory competency test demonstrates proper soil cultivation including incorporation of additives and compaction levels, and installation of protection materials and mulching.

C. Application.

1. Eradicate any existing turf or weeds in areas of proposed plantings using a non-selective herbicide.
2. Coordinate with project excavation operations to remove soil from planting bed areas in preparation for topsoil import. Remove and dispose of excavated soil.
3. Loosen surface of subgrade to a minimum of 6.0 inch depth to ensure a positive bond between subgrade and topsoil.
4. Remove stones larger than 2.5 inches in any dimension, along with sticks, roots, grubbing or other extraneous matter.
5. All planting areas to be positively drained to designated surface water collection points.
6. Obtain Engineer’s acceptance of finish grading prior to installing mulch. Restore areas disturbed after finish grading efforts.
7. Place hardwood mulch to a uniform depth of 3.0 inches. Finished grade of planting soil and mulch together should be flush or slightly under the planter bed

edge so mulch is contained within the planter.

970.05 METHOD OF MEASUREMENT
The Engineer will measure, completed and in-place landscape preparation, as specified in Section 109.01, “Measurement of Quantities”.

970.06 BASIS OF PAYMENT

Bid Item	**Unit**
970.008 Landscape Preparation	Square Yard (SY)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

H. 970.060 PLANTING SOIL

970.01 DESCRIPTION
This work consists of installing planting soil as listed below and as shown in plans and details.

970.02 EQUIPMENT
Intentionally left blank.

970.02 MATERIALS

A. Topsoil Import - Special.
Provide topsoil import for planter bed areas consisting mostly of loam ranging into sand clay loam, sandy loam, silt loam and clay loam soils as a plant growing medium in accordance with the table below.

Planting Bed Topsoil Import Requirements		
Requirement	Range	Test Method
Material Passing the ¾ in	100%	ASTM D 422
Material passing No. 4	>90%	---
Clay	5%-30%	ASTM D 422
Silt	10%-50%	ASTM D 422
Sand	20%-70%	ASTM D 422
Organic Matter	3%-20%	ASTM D 2974
pH	6.1-7.5	ASTM G 51
Soluble salts	≤ 0.15 siemens/m	---

B. Compost.
Provide compost to blend into topsoil as a plant growing medium for landscape planting beds in accordance with the table below.

Compost is considered incidental to 970.060 Planting Soil.

Compost Requirements	
Requirement	Range
Organic matter content	≥ 30 %
C/N ratio	6:1 – 20:1
pH	5.5 – 8.5
Moisture content	35% – 55%
Bulk density	700 lb per cu. yd – 1,600 lb per cu. yd
Inert material	< 3% at 0.15 in
Soluble salts	≤ 10 mmho per cm
Germination test	80% – 100%
Screened particle size	≤ ¾ in [19 mm]

970.04 CONSTRUCTION REQUIREMENTS

A. General.
Delivery of planting soil shall abide by stipulations of 970.008 Landscape Preparation.

B. Submittals.
Submit the following to the Engineer a minimum of 30 working days from when materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Test results for topsoil indicating compliance with requirements listed in the Materials Section of this specification.
2. Test results for compost indicating compliance with requirements listed in the Materials Section of this specification.

C. Application.

1. Place topsoil import over scarified subgrade in 6.0 inch lifts to a total depth of 18.0 inches for planting bed areas.
2. Place 4.0 inches of compost on topsoil import and incorporate thoroughly by tilling.
3. Grade planting soil to a uniform surface with uniformly fine texture. Roll and rake to remove ridges and fill depressions to meet finish grades.

970.05 METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place planting soil as specified in Section 109.01, “Measurement of Quantities”.

970.06 BASIS OF PAYMENT

Bid Item	Unit
970.060 Planting Soil	Cubic Yard (CY)

Such payment is compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

I. 970.1009 LANDSCAPE PLANTINGS

970.01 DESCRIPTION
This work shall consist of furnishing, installing, maintaining, and guaranteeing nursery-grown trees, shrubs, and perennials. All plants shall be prepared, planted, mulched, watered, guaranteed, and maintained as specified herein.

970.02 EQUIPMENT
Intentionally left blank.

970.03 MATERIALS

A. Plant Materials.
Plants to be installed include those listed in the Master Plant Schedule as well as any depicted on landscape planting plans.

All plant materials to meet minimum requirements of size and grade of the latest edition of the American Standard Nursery Stock ANSI Z60.1.E. In addition, all plant materials shall meet the size, quantity and varieties listed on the Master Plant Schedule.

All plants to be free of injurious insects, insect eggs, bores and forms of infestation, plant diseases, moldy or dried roots, damage to trunk, bark, branches, leaders, root system or leaders. All plants to be free of defects, disfiguring knots, sunscald injuries, and frost cracks. All plants to be free of rodent damage to bark and buds.

B. Mulch.
Mulch to meet requirements of 970.008 Landscape Preparation specification.

C. Planting Soil.
Backfill for plant material to meet 970.060 Planting Soil specification requirements.

D. Staking Materials.
Stakes shall be wood or metal – approximately 1-5/8 inch X 1-5/8 inch X 6 foot for wood and 1 inch X 1 inch X 6 foot for metal.

Staking wire shall be 14 gauge minimum, and soft drawn. Lock-tite plant ties may be used in place of the hose and wire guying noted in the drawing in this specification section.

E. Wrap.
Tree wrap shall be manufactured, loose-fitting, plastic tree wrap.

F. Water.
Water to be free of substances harmful for plant growth. Contractor to provide water, equipment, methods of transportation, water tanker, hoses, sprinklers and the application of water.

Tree watering bags or other slow-release watering devices are acceptable and are considered incidental to the cost of the tree.

970.04 CONSTRUCTION REQUIREMENTS

A. General.

Planting shall take place in the spring planting season of April 15 to June 15, the fall planting season of September 15 to November 15, or such other planting times as the City Forester may approve in writing.

A schedule of all plants including sizes, quantities, and other requirements is shown in the plans. The planting plan will govern in the event of a discrepancy between quantities shown in the schedule and plan.

Tree plantings shall be in accordance with plans and specifications. The Contractor shall be responsible for locating all underground utilities or obstructions affecting proposed planting sites.

Use flags or lathe to mark the location of all plants in accordance with plans. Trees are to be marked individually. Stake the outline of bedded plants or shrub groups and the individual plant locations for the quantity on the plans.

Notify Engineer to review plant location markings at least 7 days prior to proposed planting installation date.

Installation of landscape plantings shall not begin, nor will any planting stock be delivered to the Project site, until all other work has been completed in the area of proposed planting installation.

Each planting pit shall be backfilled with the appropriate planting soil placed in layers around roots. Each layer shall be tamped carefully in a manner to avoid injury to the roots or disturb the position of the tree. The hole shall be watered when the planting pit has been backfilled approximately 3/4 full of planting soil to settle the soil around plant roots, After water has been absorbed, the planting pit shall be filled with planting soil, tamped lightly to grade and watered thoroughly. Any further settlement shall be brought to grade with additional planting soil.

Contractor shall wrap each tree upon planting. This shall be considered incidental to the Landscape Plantings (Trees) item.

B. Submittals.

Submit the following to the Engineer a minimum of 20 working days before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Material cutsheets for proposed staking materials.
2. Material cutsheet for proposed tree wrap.

C. Excavation of Planting Pit.

Excavation of planting pits shall be per the Grand Forks Park Board Tree Planting Diagram below.

D. Planting.

All container and balled and burlapped root systems to be moist at time of planting.

Carefully remove plant root system from container prior to planting to limit disturbance to root systems.

Place plants centered, erect, and with desired orientation in planting pit with the root crown matching existing grade.

After plant placement, cut twine, wire, wire mesh, and burlap, fold from sides of ball and remove from planting pit. Remove all ties and wrap from branches, except plant identification.

E. Staking.

Contractor is required to maintain all plants in an upright, plumb condition. Staking to be completed after the first watering of plant material has been complete for all single stem plants over 1.0-inch caliper. Clump form plants are not be staked.

All stakes will be a minimum of 7.0-foot length and be uniform in shape, size, and color. Staking straps will be ¾-inch or larger mesh or woven material designed specifically for tree staking. Gromets, where applicable to receive wire, will be metal.

Locate stakes uniformly from trunk. Set posts vertically into unexcavated soil at a minimum 2.0-foot depth or until firm providing a required post height above grade. Stakes shall securely support the tree.

Secure staking straps a minimum of 4.0-feet above grade or between one-half to two-thirds distance from grade to treetop below the first set of branches. Straps will go around the trunk from each stake. Secure straps to the stakes with a slight tension, allowing the trunk to move 2.0-inch in each direction.

Contractor will remove all staking and strap assembly material from all plants at the end of the warranty period and shall remove these materials from site.

F. Watering.

Contractor is responsible for ensuring plantings have adequate water during the Plant Establishment Period. After initial “watering in", every plant should receive water to supplement rainfall events throughout the growing season to maintain soil moisture on a weekly basis per the guidelines of the following table.

Plant Type	Average Amount of Water Per Application
Machine Transplanted Trees (3" caliper plus)	50 to 100 Gallons
Balled & Burlapped Trees	20 Gallons ±
Bare Root Trees	15 Gallons ±
Balled & Burlapped Shrubs	10 Gallons ±
Bare Root or Container Shrubs	7 Gallons ±

G. Inspection and Acceptance.

Inspection and acceptance for plantings shall be per the following:

1. Acceptance of Initial Plantings.
    a. Repair, replace and/or return to original condition any damaged plantings outside planting limits without additional compensation.
    b. Plant stock acceptance
    c. Completion of a competency test
    d. Installation of individual plants
    e. Acceptance with water, tree protection, mulching, proper drainage, pruning, staking and guying, and clean up.

2. Final Acceptance.
    a. Engineer will perform a final inspection of the plantings during the spring or fall planting window when all plantings have been installed to establish 'Planting Acceptance'. This will initiate the one-year plant establishment (warranty) period.
    b. Contractor will be required to bring into compliance any plantings identified as being defective during the Planting Acceptance review.

H. Guarantee.

Contractor to warrant plant materials per the following requirements:

1. Delays in completion of planting operations which extend plantings into more than one planting season shall extend the Warranty Period accordingly.
2. Coordinate with the Engineer to determine which plants need replacing. Replace dead, defective, or missing plants and materials in accordance with initial installation requirements, including plants lost due to accidents, vandalism, theft, rodent damage, damage caused by the Contractor, or as ordered by the Engineer, at no additional cost to the project.
3. Conduct plant replacement operations during the month of May or September, based on the start of the Warranty Period.
4. Submit a summary report of proposed plant replacements to the Engineer at least 7 calendar days prior to plant replacement operations. Include an attachment using copies of plan sheets identifying proposed replacement quantities and locations on the project.

5. Provide replacement plants and materials that are equal to or better than the initial material required by the Contract.

970.05 METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place landscape plantings as specified in Section 109.01, “Measurement of Quantities”.

970.06 BASIS OF PAYMENT

Bid Item	**Unit**
970.1000 Trees	Each (EA)
970.1012 Shrubs Group A	Each (EA)

Such payment is considered full compensation for furnishing all materials, submittals, equipment, labor, and incidentals to complete the work as specified herein.

Payment for plant materials will be made at specific intervals after installation of all plantings in the landscape plan, including all cleanup and associated incidental work is complete, and following ‘Planting Acceptance’ of initial plantings. Fifty percent (50%) will be distributed after initial planting and review to establish ‘Planting Acceptance’, twenty-five percent (25%) on July 1 following planting acceptance and acknowledging acceptance of proper plant care maintenance, and twenty-five percent (25%) on September 15 of that year upon acceptance of proper plant care maintenance and final acceptance of plantings. Contractor to keep detailed records of maintenance activities and notify the Engineer 24 hours in advance of maintenance activities in order to receive full payment for each period. Submit maintenance records to the Engineer prior to the partial payment dates listed to receive payment.

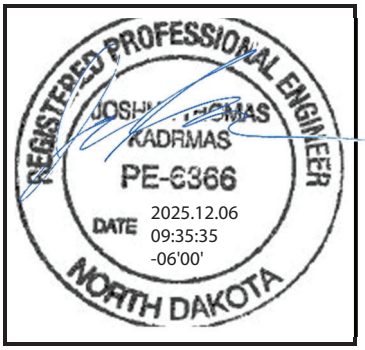
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CONTAMINATED WORK AREA

RCE-FTF-NHU-SU-6-297(014)000 – PCN 24115

I hereby certify that this specification was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of North Dakota.



All construction within the Contaminated Areas of this project shall be in accordance with these provisions. In addition to requirements for the management and disposal of contaminated materials, this provision includes engineering controls to protect buried utilities installed within these areas.

Attachment A: Work Site Contamination Testing, Reporting, and Disposal

As noted in the Modified Phase I Environmental Site Assessment, ND297 (Demers Avenue) & 42nd Street Grade Seperation,2203-00291, ND 297 (Demers Avenue) & 42nd Street, Grand Forks, North Dakota dated January, 7th, 2023, multiple environmental considerations and historical RECs are present along the project alignment. Environmental investigations were conducted in 2024 and 2025 with the findings summarized in the Environmental Investigation Report, ND 297 (Demers Avenue) & 42nd Street Grade Separation, RCE-FTF-NHU-SU-6-297(014)000; PCN 24115, ND 297 (Demers Avenue) & 42nd Street, Grand Forks, North Dakota, dated July 7, 2025 (Phase II ESA). Based on the findings of the Phase II ESA, elevated levels of naturally occurring heavy metals in the soil and/or groundwater are anticipated to be encountered in the subsurface at multiple locations within the project extent.

Contaminated Areas are anticipated to be discontinuous in the subsurface due to the multiple sources identified in the Phase I ESA and Phase II ESA. In general, the Contaminated Areas are located in the areas noted on plan sheets in Section 11 and 175. The contaminated material is anticipated to be encountered during the removal, replacement, and installation of buried utilities and other excavation or subsurface disturbance below the existing grade. Note that soil excavated from adjacent to the Contaminated Areas may also exhibit field indicators of contamination. Other areas within the project where visible staining, odors, or debris are encountered shall also be considered as Contaminated Areas and subject to the handling described in this Provision.

For more information about the site conditions, please refer to the following supplemental information available on the NDDOT Bid Opening Plans and Proposals website: http://www.dot.nd.gov/dotnet/eplans/default.aspx. Review and familiarize yourself with this information.

1. Modified Phase I Environmental Site Assessment, ND297 (Demers Avenue) & 42nd Street Grade Seperatiom,2203-00291, ND 297 (Demers Avenue) & 42nd Street, Grand Forks, North Dakota dated August 17th, 2023
2. Environmental Investigation Report, ND 297 (Demers Avenue) & 42nd Street Grade Separation, RCE-FTF-NHU-SU-6-297(014)000; PCN 24115, ND 297 (Demers Avenue) & 42nd Street, Grand Forks, North Dakota, dated July 7, 2025

Soils excavated adjacent to the areas listed have the potential to contain elevated levels of naturally occurring heavy metals and can only be reused at sites that have similar concentrations of these metals and only with prior approval from the North Dakota Department of Environmental Quality Division of Waste Management (NDEQ). Proposals submitted to NDEQ for review will need to include:

1. The amount of soil to be reused
2. The location of the reuse site
3. What the soil will be used for
4. The duration the soil will remain at the reuse site

Approval for offsite reuse is not guaranteed. NDEQ reserves the right to request additional information during the review process. All costs associated with gaining reuse approval will be the responsibility of the Contractor.

Contractor shall be mindful of the weather forecast and changing weather conditions and be prepared to adjust construction activities accordingly. Any sediment that accumulates within a Contaminated Area shall be handled in the same manner as the contaminated soil. Any water that accumulates within a Contaminated Area is considered Contact Water. Contact Water shall be managed in accordance with the construction Stormwater Pollution Prevention Plan (SWPPP) and in coordination with the City of Grand Forks Municipal Separate Storm Sewer System (MS4).

The Contractor shall be responsible for obtaining all necessary permits and completing all required documentation reports for discharge of contaminated water. If the permitting authority requires the Contractor to obtain a permit, the Contractor shall submit the permit application to the Engineer for review and approval prior to submitting the application to the permitting authority. The Contractor shall submit any required discharge reports to the Engineer for review and approval prior to submitting the report to the permitting authority.

Adhere to the SWPPP and prevent to the maximum degree practicable stormwater run-on and the entry of stormwater into open excavations.

No payment will be made for treatment of Contact Water created due to failure to implement successful management practices of the stormwater. Under no circumstances will compensation be made for treatment of stormwater diverted into excavation areas.

The original document is stored at the North Dakota Department of Transportation.

ATTACHMENT A
WORK SITE CONTAMINATION TESTING, REPORTING, AND DISPOSAL

DESCRIPTION

Work described in this provision includes testing for contaminants in excavated soil, documentation of any residual contaminants left in-place, and reuse or disposal of contaminated soil.

EQUIPMENT

Environmental Consultant shall provide a Photoionization Detector (PID) that has the following:

1. Electrodeless discharge lamp of 10.6 eV;
2. Response time of 3 seconds to 90% reading;
3. Detection range of 1000 ppm isobutylene equivalent with auto-ranging;
4. Sensitivity of 1 ppm isobutylene;
5. Accuracy of 1 to 10%;
6. Temperature range of -20°C to +50°C; and
7. Humidity range of 0 to 95% relative humidity, noncondensing.
8. PID will not become property of the NDDOT at the end of project.

CONSTRUCTION REQUIREMENTS

A. SCREENING AND CLASSIFYING CONTAMINATED AREAS

1) Contractor shall notify the Engineer no less than five (5) working days prior to beginning or resuming the excavation or subsurface disturbance below the existing pavement section and adjacent to the Contaminated Areas noted on plan sheets in Section 11 and 175. This notice is to allow the Engineer time to arrange for the City of Grand Forks / North Dakota Department of Transportation (COGF/NDDOT)'s Environmental Consultant to be at the site to observe and document the excavation, handling and disposal of the contaminated soil. The contamination identified on the plan sheets has limited odors or observable indicators of its presence in the field. As such, field delineation of contamination will be dependent on the boundaries established in the plan set and observations made by the Environmental Consultant. At the discretion of the Engineer, additional samples may be collected for chemical analysis to further delineate and reduce the extent of a Contaminated Area.

2) Other areas within the project where visible staining, odors, or debris are encountered shall also be considered as Contaminated Areas. If contaminated soil or debris is encountered elsewhere on the Project, the Contractor shall halt work and immediately notify the Engineer.

3) Contractor shall not excavate any contaminated materials or soil until the Engineer has given approval to the Contractor to resume work in the Contaminated Area and only when the COGF/NDDOT's Environmental Consultant is present. Contaminated materials or soils shall not be excavated beyond the limits shown on the plan sheets, or as approved by the Engineer.

4) Abandoned pipe and other debris encountered will be screened for suspect asbestos-containing materials by an asbestos inspector, certified by the State of North Dakota. Asbestos cement pipe (ACP) is considered a Category II nonfriable asbestos-containing

material (ACM) if the pipe remains in good condition and can be disassembled with hand tools. If encountered, ACP will be wrapped in plastic to contain asbestos waste and prevent further damage until the ACP is disposed of properly. A contractor would not be required to be a licensed asbestos contractor if using hand tools and handling the ACP in this manner. If the ACP is kept in good condition, a waste shipment record is not required. If more than 3 linear feet of ACP is disturbed or removed using mechanical grinders or cutters, the ACP is in a damaged or friable condition, or additional regulated asbestos-containing materials (RACM) are encountered, these materials must be removed by a licensed contractor and individuals certified to do asbestos abatement. This material must be removed in accordance with the North Dakota Air Pollution Control Rules.

5) The Environmental Consultant will observe, and screen excavated soil from the Contaminated Areas with a PID to determine the presence and extent of impacted materials, what soils need to be disposed of, and what soils can be incorporated back into the project. The Environmental Consultant will take screening tests as necessary to assess the extent of contamination. The Environmental Consultant will record the location, depth, time, and result of the screening tests in the daily logs.

   a) Grossly Contaminated Material exceeds one or more NDEQ Commercial/Industrial risk-based values, contains free product, extensive debris, or have PID readings >100 parts per million (ppm). This material is not eligible for re-use and will be disposed of at a permitted solid waste facility. Grossly Contaminated Materials have been identified in the Contaminated Area shaded red on the plan sheet in Section 175 and associated with Boring SB R-14 due to the level of arsenic reported in the sample collected from this boring. Remove, contain, and properly dispose of unsuitable soil in accordance with this provision. Only contaminated soil disturbed by the roadway or utility construction will require disposal. No over-excavation of contaminated soil will be required.

   b) Restricted Re-Use Soil is defined as soil in which concentrations of metals and other contaminants are greater than the NDEQ's most conservative risk-based values but are less than Commercial/Industrial risk-based values, have PID readings between 10 to 100 ppm, and have inert debris less than 5% by volume. This soil within the areas outlined in green on Figure 3 may be eligible for re-use in locations approved by the Engineer. Restricted Re-use Soil is also described as Regulated Soil. If structurally suitable, Restricted Re-use Soils may reused onsite. Off Site reuse of excess Restricted Re-use Soil will require coordination and prior approval from the NDEQ.

   c) Uncontaminated Material is soil excavated from areas outside of designated Contaminated Areas that is free of visible staining, odors, or debris, and has PID readings <10 ppm. Uncontaminated Material will not have any onsite or offsite reuse restrictions from an environmental standpoint.

6) Upon approval from the Engineer, a Contaminated Area can be provisionally eliminated from further requirements once the full extent of subsurface disturbance has been screened, and all Grossly Contaminated Material has been removed. However, if further disturbance is necessary beyond that extent of the initial screening or new contamination is discovered, these requirements will be reinstated.

B. NDEQ Notification

1) The NDEQ is to be notified on or prior to the preconstruction meeting prior to any excavation taking place. The Phase I ESA and Phase II ESA referenced in the supplemental documents have already been submitted to NDEQ as a notice of historical releases.

2) At the completion of the project, the Environmental Consultant will prepare a summary report for submittal to NDEQ that document the field activities and observations, the nature and extent of any encountered contamination left onsite, and the quantities and locations of offsite disposal of contaminated materials.

C. Documentation, Sampling, and Backfilling of Contaminated Areas

1) Contaminated Areas will not be backfilled until the residual contamination (visible debris, staining, or PID readings >10 pm) remaining in the excavation side wall or base has been documented by the Environmental Consultant.

2) In areas where Grossly Contaminated Material is encountered the Environmental Consultant will record PID readings from both sidewalls and the base every 25 feet along the excavation trench and collect one sidewall or base sample from the most visibly impacted area adjacent to each lot. If new or more elevated levels of contamination are encountered additional samples may be collected for chemical analysis. Chemical analysis will include:

   a) Eight Resource Conservation Recovery Act (RCRA) metals using EPA Methods 6010 and 7471

   b) Additional parameters may be added, as directed by NDEQ, based on a review of the field observations and the available property history.

D. Offsite Disposal or Reuse

1) Grossly Contaminated Material or Restricted Re-Use Soil designated for offsite disposal or reuse shall be segregated, removed, and transported to a location approved by NDEQ, for temporary staging and/or final disposal. Additional chemical analysis, if required by the NDEQ or receiving facility will be the responsibility of the Contractor.

2) Grossly Contaminated Material identified during the previous investigations may be disposed of at the Grand Forks Landfill as daily cover. The landfill, at their discretion, may take additional material depending on their needs. Contact information for the Grand Forks Landfill is:

   Sharon Lipsh
   Public Works Operations Director
   City of Grand Forks
   724 North 47TH Street
   Grand Forks, ND 58203
   slipsh@grandforksgov.com
   (701) 738-8740

3) Restricted Re-use Soil designated for offsite reuse must be disposed of at a site that has similar concentrations of these metals and only with prior coordination and authorization from NDEQ. Contact information for the NDEQ is:

   Robin Beyer, Manager
   Hazardous Waste Program
   Division of Waste Management
   4201 Normandy Street
   Bismarck, North Dakota 58503
   rbeyer@nd.gov
   (701) 328-5149

4) The Contractor shall provide written confirmation of the soil acceptance from the NDEQ and receiving facility to the Engineer prior to excavation in Contaminated Areas.

5) The contractor shall provide copies of all shipping papers (manifests) and scale tickets for each load and type of materials to the Engineer daily while material is being hauled from Contaminated Areas.

E. Transportation.

1) A Waste Transporter Permit is required to haul contaminated material offsite. A Waste Transporter Permit can be obtained by contacting the NDEQ's Division of Waste Management. The Waste Transporter Permit shall be provided to the Engineer prior to hauling contaminated material offsite. Transport of the contaminated material within the project boundaries does not require a Waste Transporter Permit. Cover loads of contaminated soil during hauling.

F. Securing Contaminated Areas and Temporary Stockpiling.

1) Cover exposed excavation in Contaminated Areas at the end of each workday, in a manner that will prevent storm water runoff and sedimentation from exiting the Contaminated Area. Excavated Contaminated Materials that cannot be immediately placed in the final location or transported offsite must be stockpiled as described below.

   a) The Engineer shall approve the location of the stockpile(s) on the Project. Contractor shall maintain segregation of contaminated soil from separate contaminated areas as separate stockpiles, unless approved otherwise by the Engineer.

   b) Each stockpile must be placed on either an impervious surface or at least 10 mil impermeable plastic sheeting. Cover and securely anchor the contaminated stockpile, at the end of each workday, in a manner that will prevent erosion from wind and precipitation events, and prevent contact with run-on or runoff precipitation.

   c) Contractor shall surround stockpile(s) with temporary fencing, if Engineer determines that additional security measures are necessary.

   d) The Contractor shall be responsible for the maintenance of the stockpile cover (and fencing if installed) for the duration of the Contract or until all contaminated materials are removed. The contractor shall inspect the stockpile(s) a minimum of once per week and as part of regular stormwater permit inspections.

e) If Contractor elects to move a secured stockpile to a new location because the stockpile is in the way of construction, the cost of moving and re-stockpiling the material shall be incidental.

METHOD OF MEASUREMENT

The Engineer will measure contaminated materials as specified in Section 109.01, “Measurement of Quantities.” Payment will be made under the following bid items for excavating, segregating, and offsite disposal of the material identified as Grossly Contaminated Material or Restricted Re-Use Soil. For the purposes of this pay item, one cubic yard (EV) equals 1.6 tons.

COMMON EXCAVATION-WASTE represents Restricted Re-Use Soil, as defined above, and disposed of or reused off Site in coordination and with approval of NDEQ. This bid item includes Contractor costs for excavating, segregating, hauling and off-Site disposal or reuse, including any associated fees. All costs associated with gaining reuse approval will be the responsibility of the Contractor. Contractor shall provide weight tickets noting the material and the tonnage as basis of measurement.

EXCAVATION & DISPOSAL OF CONTAMINATED SOIL represents Grossly Contaminated Soil, as defined above, and disposed of at the Grand Forks Landfill as daily cover. This bid item includes Contractor costs for excavating, segregating, hauling and disposal, including landfill tipping fees. Contractor shall provide weight tickets noting the material and the tonnage as basis of measurement.

BASIS OF PAYMENT

Spec	Code	Pay Item	Unit
202	288	EXCAVATION & DISPOSAL OF CONTAMINATED SOIL	CY (EV)
202	0113	COMMON EXCAVATION-WASTE	CY (EV)

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified. No additional compensation will be made for additional testing required for an alternate disposal facility or stockpiling of contaminated material.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

DRILLED SHAFT FOUNDATIONS FOR TRAFFIC SIGNALS

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This work is constructing reinforced concrete shafts cast in cylindrically excavated holes that extend into soil or rock to support the structure and externally applied loads at the locations and to the lines and grades shown in the plans.

EQUIPMENT

Item	Section
Concrete Equipment	155

MATERIALS

A. General.

Item	Section
Portland Cement Concrete	802
Water	812
Grade 60 Concrete Reinforcement	836.02

B. Portland Cement Concrete Mix Design.

Develop concrete mix designs for Class AE concrete from Table 802-01 with materials conforming to Section 802.01, but with the following revisions and additions:

a. Mix will contain 25-35% Supplementary Cementitious Material meeting the requirements in Section 802.
b. Maintain a minimum concrete slump of 8 inches throughout placement of concrete for the entire Drilled Shaft.
c. Provide Size 5 concrete aggregate
d. Provide concrete admixtures Type A, B, D, F and/or G as classified under ASTM C494 that meet the requirements of AASHTO M 194 to achieve the required concrete workability and slump throughout concrete placement.

C. Steel Reinforcing Bar Cage Centralizers, Boots and Base Plates.
Provide non-corrosive commercially manufactured devices for properly aligning, centering and supporting steel rebar cages in Drilled Shaft excavations.

Use feet (bottom supports) made of plastic or concrete. Skids or chairs constructed of steel or other corrosive materials will not be allowed.

D. Casing.
Permanent Casing is not allowed unless it is called out in the plans. Sono-tube or paper tube concrete forms are not allowed to be left in place permanently.

If temporary casing is used, ensure that it meets the following requirements:

- Clean
- Watertight
- Smooth wall
- Steel
- Cylindrical
- Strong enough to resist damage and deformation from transportation and handling, installation and extraction stresses, and all pressures and forces acting on the casing.

F. Slurry.
If slurry is used it must meet the following requirements:

1. General.
Use water meeting the requirements of Section 812, “Water”.

Use Slurry samples with temperature of at least 40 degrees when performing tests indicated in Table 1, Table 2, or Table 3.

2. Mineral Slurry
Provide a manufactured mineral slurry that is composed of predominantly clay minerals and water. Prepare and maintain the slurry according to the manufacturer’s recommendations, as seen in Table 1, and the quality control plan specified in Construction Requirements A, “Drilled Shaft Construction Submittal”.

Table 1
Quality Requirements for Mineral Slurry

Property	Test	Requirement
Density (pcf)	Mud Weight (Density) American Petroleum Institute (API) 13B-1, Section 1	63 to 75
Viscosity (seconds/quart)	Marsh Funnel and Cup API 13B-1, Section 2.2	28 to 50
pH	Glass Electrode, pH Meter, or pH Paper	8 to 11
Sand Content (percent) immediately prior to placing concrete	Sand Content API 13B-1, Section 5	4.0 max

3. Synthetic Slurry.
Prepare and maintain synthetic slurry according to the manufacturer's recommendations, as seen in Table 2, and the quality control plan specified in the Construction Requirements A, "Drilled Shaft Construction Submittal".

Table 2		
Quality Requirements for Synthetic Slurry		
Property	Test	Requirement
Density (pcf)	Mud Weight (Density) API 13B-1, Section 1	≥ 64
Viscosity (seconds/quart)	Marsh Funnel and Cup API 13B-1, Section 2.2	32 to 135
pH	Glass Electrode, pH Meter, or pH Paper	8 to 11.5
Sand Content (percent) immediately prior to placing concrete	Sand Content API 13B-1, Section 5	1.0 max

4. Water Slurry.
Use Water without site soils when the drilled shaft is cased the entire length of the hole and there is no upward flow that could affect basal stability of the shaft excavation. Prepare and maintain the slurry according to the requirements of Table 3.

Table 3		
Quality Requirements for Water Slurry		
Property	Test	Requirement
Density (pcf)	Mud Weight (Density) API 13B-1, Section 1	65 max
Sand Content (percent)	Sand Content API 13B-1, Section 5	1.0 max

CONSTRUCTION REQUIREMENTS

A. Drilled Shaft Construction Submittal.
Provide a Drilled Shaft Construction Submittal, for Engineer's and NDDOT Geotechnical Section's review, comprised of the following components:

- Construction Experience/Personnel;
- Concrete Mix Designs;
- Drilled Shaft Installation Plan; and
- Slurry Manufacturer's Technical Representative (if slurry is proposed)

Submit the document to the Engineer and the NDDOT Geotechnical Section for approval according to Section 105.08, "Work Drawings".

1. Construction Experience/Personnel
   Provide the name and experience record of the Contractor, Superintendent, and driller(s)/operators that will be performing the Drilled Shaft work.

2. Concrete Mix Designs

a. Meet the requirements of 802.01.

b. Batch Plant Qualifications
   (1) Use a National Ready Mixed Concrete Association (NRMCA) certified plant for concrete operations.
   (2) Provide the following information:
      (a) Plant's name
      (b) Address
      (c) Phone Number
      (d) Distance and travel time to site
   (3) Do not change concrete mix designs and supplier unless new batch plant qualifications and mix designs are submitted to Engineer.

3. Drilled Shaft Installation Plan

Develop a Drilled Shaft Installation Plan with the following information:

a. Proposed overall construction operation sequence.
b. Description, size, and capacities of proposed drilling equipment, including but not limited to cranes, drills, auger, bailing buckets, final cleaning equipment, and drilling unit. Describe equipment suitability to the anticipated site conditions and work methods. Include a project history of the drilling equipment demonstrating the successful use of the equipment on drilled shafts of equal or greater hole size in similar soil/rock conditions. Include specific details of drilled shaft excavation and cleanout methods.
c. Contingency plan that addresses methods to complete the drilled shafts in the event of equipment breakdowns and potential problems related to the subsurface conditions at the site.
d. Details of the method(s) proposed to ensure drilled shaft stability (i.e., prevention of caving or bottom heave using temporary casing, slurry, or other means) during excavation (including pauses and stoppages during excavation), reinforcing steel cage placement and concrete placement.
e. Description and details of the storage and disposal plan for excavated material.
f. Details of concrete placement, including proposed operational procedures for pumping methods, and a sample uniform yield form for plotting the approximate volume of concrete placed versus the depth of shaft for all shaft concrete placement. This form should include the depth and diameter of the shaft, along with the expected amount of concrete needed for the shafts and the amount of concrete that was actually placed.
g. Copies of all permits, agreements, and manifests.
h. Temporary Casing Plan
   If temporary casing is proposed, provide a Temporary Casing Plan that includes the following information:
      (1) Casing dimensions.
      (2) Method of installation.
      (3) Method of extracting the temporary casing and maintaining shaft reinforcement in proper alignment and location.
      (4) Means for maintaining workable concrete (slump) during casing extraction.
i. Slurry Work Plan
   If slurry is proposed, provide a Slurry Work Plan that includes the following information:

(1) Slurry mix design, listing and describing all additives and their specific purpose in the slurry mix, with a discussion of their suitability to the anticipated subsurface conditions along with the procedures for mixing, using, and maintaining the slurry.
(2) Description and details of the storage and disposal plan for drilling slurry. Include permit applications and approved permits required for slurry storage and disposal.
(3) Description of methods to be used to control and contain slurry within the NDDOT right-of-way.
(4) The name(s) of the Contractor's personnel assigned to the project and trained by the slurry manufacturer in the proper use of the slurry. Include a copy of a signed training certification letter from the slurry manufacturer for each trained Contractor's employee listed, including the date of the training.
(5) Detailed plan for quality control of the selected slurry including:
    (a) Tests to be performed and methods to be followed.
    (b) Tester's name and qualifications.
    (c) Minimum and/or maximum slurry material property requirements that ensure the slurry functions as intended, with consideration of the anticipated subsurface conditions and shaft construction methods, and in accordance with the slurry manufacturer's recommendations and these Special Provisions.
    (d) Include the following tests in the slurry quality control plan:
    Mineral Slurry: See Table 1
    Synthetic Slurry: See Table 2
    Water Slurry: See Table 3

4. Slurry Manufacturer's Technical Representative
If slurry other than Water Slurry is proposed, provide or arrange for technical assistance in the use of the slurry. Submit the following to the Engineer:

a. The name and contact information for the Slurry Manufacturer's Technical Representative assigned to the project
b. The frequency of scheduled visits to the project site by the Slurry Manufacturer's Technical Representative.

B. Suspension of Work.
The Engineer will suspend drilled shaft construction if methods listed and described on the approved Drilled Shaft Construction Submittal are substituted or changed without resubmittal of an updated Drilled Shaft Construction Submittal. The Contractor is fully liable for the additional costs resulting from the suspension of work, and no adjustments in contract time resulting from the suspension of work will be allowed.

C. Drilled Shaft Excavation.

1. Drilled Shaft Excavation Operations

a. General

(1) Excavate the drilled shaft shafts to the required depth as shown in the Plans and in conformance with the approved Drilled Shaft Construction Submittal. Check

the plumbness, alignment and dimensions of the shaft during drilling or excavation of the shaft. Correct any deviation exceeding the allowable Construction Tolerances with a procedure approved by the Engineer.

(2) Construct shafts so that the center at the top of the shaft is within 6 inches horizontally of the plan position in the horizontal plane unless approved by the Engineer.
(3) Construct shafts at the plan elevation for the top of the shaft, unless the Engineer approves alternate elevation.
(4) Vertical alignment of shafts to be within 1.5 percent measured from vertical plane.
(5) Perform drilled shaft excavation operations, including casing installation and removal, such that the soil adjacent to the shaft is not disturbed for the full height of the shaft. Disturbed soil is defined as soil whose geotechnical properties have been changed from those of the original in situ soil, and whose altered condition adversely affects the structural integrity of the drilled shaft or the interface between the drilled shaft and the soil.
(6) Excavate in a continuous operation until the excavation of the shaft is completed, except for pauses and stops as noted below, using approved equipment.
(7) Pauses are not allowed during this excavation operation, except for casing splicing, tooling changes, slurry maintenance, and removal of obstructions. Stops are shaft excavation operation interruptions not conforming to this definition.
(8) Notify the Geotechnical Section of significant variations, changes, revisions and updates to the Drilled Shaft Construction Submittal, as they are approved by the Engineer.

b. Stops in shaft excavation

(1) Do not exceed stops longer than 16 hours for uncased or partially cased excavations.
(2) Do not exceed stops longer than 65 hours for fully cased excavations, excavations in rock or excavations with casing seated into rock.
(3) For stops exceeding the time durations specified above in excavations where mineral or synthetic slurry is not present, stabilize the excavation using one or more of the following methods:

(a) Uncased Excavations
- Install casing in the hole to the depth of the excavation before the end of the work day. The outside diameter of the casing shall not be smaller than 6 inches less than either the plan diameter of the shaft or the actual excavated diameter of the hole, whichever is greater.
- Sound the annular space between the casing and excavation prior to removing the casing and resuming shaft excavation. If the sounding operation indicates that caving has occurred, do not remove the casing nor resume shaft excavation until stabilizing the excavation in conformance with the Drilled Shaft Installation Plan.
- Backfill the hole with granular material to the ground surface

(b) Cased Excavations
- Backfill the hole with granular material to a minimum of 5 feet above the bottom of temporary casing.

(4) During stops, stabilize the shaft excavation to prevent bottom heave, caving, head-loss, and loss of ground. The Contractor bears full responsibility for

selection and execution of the method(s) for stabilizing and maintaining the shaft excavation. Stabilize the shaft in conformance to the Drilled Shaft Installation Plan.

(5) If slurry is present in the shaft excavation, maintain the minimum level of drilling slurry throughout the stoppage to the greater of the following elevations:
- No lower than water level outside the drilled shaft.
- Elevation necessary to maintain a stable hole.

Prior to recommencing shaft excavation operations, recondition the slurry to the required slurry properties.

c. Collect and dispose of excavated soil and drilled shaft spoils without allowing erosion or runoff to disperse soil outside the NDDOT right-of-way, and in accordance with Sections 107.01, “Laws to be Observed”, and 107.17, “Removed Material”. Provide copies of all documentation of the transport and final disposal of the soils and drilled shaft spoils to the Engineer.

d. Contain all water, including water slurry, for disposal outside of NDDOT Right-of-Way.

2. Bottom of Shaft Excavation

a. Use appropriate means such as a cleanout bucket or air lift to clean the bottom of the excavation of all shafts. Ensure that no more than 2 inches of loose or disturbed material is present at the bottom of the shaft prior to placing concrete.

b. Sound the bottom of the excavated shaft with an airlift pipe, a steel tape with a heavy weight of at least 1 pound attached to the end of the tape, or other means acceptable to the Engineer to determine that the shaft bottom is at the depth shown in the plans.

c. After observing the Contractor inspecting each shaft for acceptable cleanliness and depth, the Engineer will approve each shaft prior to the Contractor proceeding with construction.

D. Casing.

Temporary Casing may be furnished and installed to maintain a stable excavation or to facilitate construction. Provide a casing with an outside diameter that is equal to or greater than the specified diameter of the shaft. Completely remove temporary casing after shaft construction is complete without deforming and causing damage to the completed shaft and without disturbing the surrounding soil. As the temporary casing is withdrawn, maintain the concrete and slurry (if used) inside the casing at a level sufficient to balance the hydrostatic pressure outside the casing.

E. Slurry Installation Requirements.

1. General

Use slurry, in accordance with this Special Provision, to maintain a stable excavation during excavation and concrete placement operations.

2. Slurry Technical Assistance

a. Slurry Manufacturer’s Technical Representative does the following:
(1) Provides technical assistance and training for the use of the slurry
(2) Be at the site prior to addition of the slurry into the first drilled hole requiring slurry
(3) Remain at the site during the construction of at least the first shaft excavated to

adjust the slurry mix to the specific site conditions

b. After the Slurry Manufacturer's Technical Representative is no longer present at the site, the Contractor's employee(s) who received training by the slurry manufacturer will provide technical assistance for testing, mixing, maintaining and adjusting the slurry mix in accordance with the manufacturer's requirements and this Special Provision throughout the remainder of shaft slurry operations.

3. Minimum Level of Slurry in Excavation
   Use of slurry in a shaft excavation requires the following:

   a. Sustain the height of the slurry as required to provide and maintain a stable hole to prevent bottom heave, caving, or sloughing of all unstable zones.
   b. Maintain a slurry level in the shaft above the groundwater level equal to or greater than the following:
      (1) 5 feet or more for mineral slurries
      (2) 10 feet or more for synthetic slurries
      (3) 10 feet or more for water slurries

4. Slurry Sampling and Testing
   a. When synthetic slurry is used, keep a written record of all additives and concentrations of the additives in the synthetic slurry. Provide these records to the Engineer once the slurry system has been established in the first concrete on the project. Provide revised data to the Engineer if changes are made to the type or concentration of additives during construction.
   b. Sample and test all slurry in the presence of the Engineer, unless otherwise directed. Record the date, time, names of the persons sampling and testing the slurry, and the results of the tests. Submit a copy of the recorded slurry test results to the Engineer at the completion of each shaft. Provide a copy of the recorded slurry test results during construction of each shaft when requested by the Engineer. To verify that the slurry conforms to the specified slurry material properties, collect and test slurry samples at the frequency specified in Table 4.
   c. Do not place concrete until the slurry samples taken at mid-height and within 2 feet of the bottom of the drilled shaft excavation conform to the specified slurry material properties.
   d. Table 4 below summarizes the slurry sampling and testing requirements at different stages of drilled shaft construction.

TABLE 4

Shaft Construction Stage	Slurry Sample Locations	Action
At beginning of drilling shift and every 4 hours during drilling.	At mid-height and within 2 feet of the bottom of the shaft excavation.	Adjust slurry mix, agitate, re-circulate, and clean slurry as required to achieve conforming test results. Retest slurry within two hours of nonconforming test results.

After cleaning the bottom of the excavation and immediately prior to placing the rebar cage.	At mid-height and within 2 feet of the bottom of the shaft excavation.	Adjust slurry mix, agitate, re-circulate, and clean slurry as required to achieve conforming test results before placing rebar cage in the excavation.
Within 30 minutes of starting concrete placement.	At mid-height and within 2 feet of the bottom of the shaft excavation.	Adjust slurry mix, agitate, re-circulate, and clean slurry as required to achieve conforming test results before placing concrete.

5. Maintain the slurry properties by doing the following:
    a. Cleaning
    b. Recirculating
    c. Removing sand
    d. Replacing slurry

6. Maintenance of a Stable Drilled Shaft Excavation with Slurry
   Demonstrate to the satisfaction of the Engineer that stable conditions are being maintained. If the Engineer determines that stable conditions are not being maintained, take immediate action to stabilize the shaft. Submit a revised Drilled Shaft Installation Plan within 2 days, which addresses the problem and prevents future instability. The Engineer will review the revised Drilled Shaft Installation Plan within 10 days. Do not continue with shaft construction until the damage that has occurred is repaired and until receiving the Engineer's approval of the revised Drilled Shaft Installation Plan narrative.

7. Disposal of Slurry and Slurry Contaminated Spoils
   Dispose of the slurry and slurry-contaminated spoils off-site as specified in the Drilled Shaft Installation Plan submittal, and in accordance with Sections 107.01, "Laws to be Observed", and 107.17, "Removed Materials'. Provide copies of all documentation of the transport and final disposal of the slurry and slurry-contaminated spoils.

F. Assembly and Placement of Reinforcing Steel.

1. Steel Reinforcing Bar Cage Assembly

    a. Rigidly brace the reinforcing cage to retain its configuration during handling and construction. No individual or loose bars will be permitted. Support shaft reinforcing bar cages on a continuous surface to the extent possible. Locate all rigging connections at primary handling bars. Internal bracing is required at each support and lift point.
    b. Position and securely fasten the reinforcement to provide the minimum clearances as shown on the Plans, and to ensure no displacement of the reinforcing steel bars in position throughout the concrete placement operation.

2. Steel Reinforcing Bar Cage Centralizers

   Place reinforcing steel centralizers at each longitudinal space plane at the quarter points around the circumference of the steel reinforcing bar cage, and at a maximum longitudinal spacing of either 2.5 times the shaft diameter or 20 feet, whichever is less. Position and securely fasten the centralizers to provide the minimum concrete cover as

shown on the Plans, and to maintain proper positioning of the cage during placement of the concrete.

3. Steel Reinforcing Cage Bottom Supports

   Install prefabricated feet (bottom supports) to maintain the clearance shown on the Plans.

G. Placing Concrete.

1. Concrete Placement Requirements

   a. General

      (1) Notify the Engineer 24 hours before placing concrete. Do not give the notice until all preparations are complete.
      (2) Obtain the Engineer's approval to place concrete if the air temperature is expected to fall below 40 degrees Fahrenheit during the curing period specified in 602.04.F "Curing Concrete". Submit a written request that includes provisions for maintaining the required curing temperatures. The Engineer's acceptance of the written request does not relieve the Contractor of the obligation to remove and replace concrete that is damaged due to not maintaining concrete temperature within the required range during the curing period.
      (3) Begin concrete placement as soon as possible after completion of drilled shaft excavation, testing slurry (if applicable), placement of the reinforcing steel cage, and inspection and approval by the Engineer to proceed.
      (4) Place concrete in one continuous operation to the top of the shaft.
      (5) During concrete placement, monitor and minimize the difference in the level of concrete inside and outside of the steel reinforcing bar cage so that the difference is no greater than 1 foot.
      (6) Remove excess concrete and contaminated concrete above the top elevation of the shaft to expose fresh concrete and smooth any high spots.
      (7) After the shaft concrete is placed, the top of the reinforcing steel cage will be no more than 6 inches above and no more than 3 inches below plan position.
      (8) The top elevation of the shaft will be no more than 1 inch above or 3 inches below the plan elevation.

   b. Concrete Placement in Dry Hole

      A hole will be considered dry if there is less than 3 inches of water in the hole at the time of concrete placement.

      Deposit the concrete through the center of the reinforcement cage by a method that prevents segregation of aggregates and splashing of concrete on the reinforcement cage. Place the concrete such that the free-fall is vertical down the center of the shaft without hitting the sides of the excavation, the steel reinforcing bars, or the steel reinforcing bar cage bracing.

   c. Concrete Vibration Requirements
      For concrete placed in a dry hole, vibrate the upper 5 feet of the drilled shaft in accordance with the following:

Consolidate the concrete using an internal or external vibrator. Ensure the vibration does not displace reinforcing steel or forms. Vibrate for a sufficient duration and intensity to thoroughly consolidate the concrete without causing segregation.

Use vibrators capable of visibly affecting the concrete mixture a distance of at least 18 inches from the vibrator.

Do not apply vibration directly to reinforcement that extends into non-plastic sections or layers of concrete. Do not use vibrators for moving concrete in the forms.

If temporary casing is used, remove it before vibration.

d. Concrete Placement in Wet Hole (Tremie Method)

A hole will be considered wet when there are more than 3 inches of water in the bottom of the hole at the time of concrete placement. Place the concrete at the bottom of the shaft by pressure feed using a concrete pump and a watertight tremie pipe having a minimum diameter of 4 inches.

Concrete placement by gravity feed is not allowed.

Include a device to seal out water at the discharge end of the tube on the tremie pipe while it is first filled with concrete. Alternatively, use a plug or pig manufactured for use in concrete tremie pipes that is inserted at the top of the tremie pipe and travels through the tremie to keep the concrete separated from the water and slurry.

Completely fill the tremie pipe and hopper with concrete prior to allowing the plug or pig to discharge from the end of the tremie pipe.

Keep tremies full of concrete during placement. Keep the lower end of the tremie at least 5 feet into the concrete throughout the pour.

Over-pump the concrete in the shaft until uniform concrete (visually free from slurry, soil and laitance) reaches the top elevation of the shaft.

If the underwater concrete placement operation is interrupted, the Engineer may require the Contractor to prove by core drilling or other tests that the shaft contains no voids or horizontal joints.

If testing reveals voids or joints, repair or replace the shaft at no expense to the Department. Responsibility for coring costs, and calculation of time extension, will be in accordance with Section 109.03, “Compensation for Contract Revisions”.

2. Uniform Yield Form

Complete a uniform yield form for all shafts, consistent with the sample form submitted as part of the approved Drilled Shaft Construction Submittal. Submit the completed form to the Engineer within 24 hours of completing the concrete placement in the shaft.

3. Protection of Fresh and Curing Concrete from Vibration

Do not operate heavy equipment within 15 feet of a newly poured shaft for 24 hours, or until the concrete has reached a minimum compressive strength of 1800 psi.

4. Concrete Compressive Strength Testing

   Concrete must meet a minimum compressive strength of 3,000 psi at 7 days.

5. Rejection of Shafts and Revisions to Concrete Placement Operations

   If the Engineer determines that the concrete placed for a given shaft is structurally inadequate (e.g., results of compressive strength testing), the shaft will be rejected. Suspend subsequent placement of concrete until written changes to the methods of shaft construction needed to prevent future structurally inadequate shafts have been submitted to the Engineer and the Engineer's written approval of the submittal has been received.

H. Concrete Field Testing.

Concrete sampling, frequency, and testing procedures will be made by the Engineer in accordance with Section 772 of the NDDOT "Field Sampling and Testing Manual" with the following revisions:

- Complete a minimum of one test per day for the following:
  - ND T 119, "Slump of Hydraulic Cement Concrete"
  - ND T 152, "Air Content of Freshly Mixed Concrete by Pressure Method"
  - ND T 121, "Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete"
  - ND T 23 "Making and Curing Concrete Specimens in the Field"

I. Coring Drilled Shaft and Remedial Action Plan.

1. At the Engineer's request, drill a core hole in any questionable quality shaft, determined by observation of the Engineer, to explore the shaft condition.
2. Prior to beginning of coring, submit the method and equipment that will be used to drill and remove cores from the shaft concrete, and receive the Engineer's written approval. Use either a conventional double-tube, swivel-type core barrel with split liners or wireline barrel with slit inner liners. Use a new diamond coring bit. Replace the coring bit and core barrel as necessary to achieve a high percentage of core recovery. Obtain core samples in accordance with ASTM D 2113 to 5 feet below the bottom elevation of the possible defect or as directed by the Engineer. Obtain core samples with a minimum diameter of 3.0 inches. Preserve all core in wooden core boxes, identified as to location and depth, and make available for inspection by the Engineer.
3. If a flaw or defect is confirmed, submit a proposed remedial action plan with supporting calculations and work drawings for correcting the shafts. Submit all remedial correction procedures and designs to the Engineer for approval. Do not begin repair operations until receiving the Engineer's approval of the remedial action plan
4. If no defect is encountered, the Department will pay for all coring and grouting costs.
5. All materials and work necessary, including engineering analysis, testing, evaluations and redesign, to investigate and affect corrections for shaft flaws, defects or to replace the shaft shall be furnished to the Engineer's satisfaction at no additional cost to the Department.

METHOD OF MEASUREMENT
Drilled Shafts will not be measured separately and will be based on Plan Quantities.

BASIS OF PAYMENT
Include all costs to construct the drilled shafts within the contract unit price for the following items:

Item No.	Pay Item	Pay Unit
772-9811	Traffic Signal System – Site 1	EA
772-9812	Traffic Signal System – Site 2	EA

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION (SP)

TEMPORARY WATER DIVERSION

PROJECT RCE-FTF-NHU-SU-6-297(014)000 – PCN 24115

DESCRIPTION

Diversions are used to temporarily reroute surface water or restrict flows to allow for the construction activities to take place.

This work consists of constructing and maintaining a temporary diversion to allow for the installation of dual 31-inch x 51-inch RCP Archpipe centerline crossing at Station 712+00 at the intersection of 42nd Street and 7th Avenue and the installation of dual 26-inch x 43-inch RCP Archpipe centerline crossing at Station 714+20 on 43rd Street in Grand Forks.

This work is in conjunction with the requirements of Standard Special Provision (SSP) 1 "Temporary Erosion and Sediment Best Management Practices," and the Construction General Permits.

ATTACHMENTS

Appendix A: 2-Year 24 hour Flow.

MATERIALS

Item	Section
Geosynthetic Type R1	858

Where R1 material is specified according to the design, alternative materials may be used if the alternative material has a lower permittivity and higher strength than Geosynthetic Type R1.

CONSTRUCTION REQUIREMENTS

A. Plan.

1. **General.**
   Review, modify, and obtain all appropriate permits before work commences on the diversions.

   Design, construct, operate, and remove temporary diversions to prevent soil/water interaction.

2. **Plan Submittal.**
   Submit a design for the diversion that includes work drawings and include the submittals with the Storm Water Pollution Prevention Plan (SWPPP).

3. **Design.**
Design the temporary diversion to withstand the 2 year event shown in Appendix A, prevent soil/water interaction, and meet the following:
    - If flow occurs while the diversion is in place, a portion of the flow must be passed as water accumulates in order to maintain flows downstream;
    - Maintain downstream water quality equal to the upstream water quality; and
    - Include provisions that will prevent the accumulation of job site sediment in the diversion.

B. Diversion Components.

1. **General.**
Construction of the diversion may entail using the components listed below or other methods approved by the Engineer.

Isolate the work area using dikes or other methods even when no water is present. Construct the diversion before beginning work on the structure.

Install diversion measures before beginning work on the structure.

2. **Stockpiles.**
Strip and stockpile topsoil from areas where the temporary diversion will be constructed and installed. Do not place stockpiles between the diversion and the work area. Stabilize stockpiles placed within 200 feet of the diversion and work area within 24 hours of construction of the stockpile.

3. **Dike.**
Construct upstream and downstream dikes to isolate the work area. Construct dikes using one or more of the following materials:
    - Sandbags;
    - Sheet piles;
    - Soil wrapped with Geosynthetic Type R1;
    - Water filled bladder;
    - Impermeable containers; or
    - Prefabricated dams.

4. **Work Area Dewatering.**
Operate the dewatering system within the work area to prevent any change in the water quality of the water body. Before beginning dewatering of the work area, provide an inlet control system that limits sediment from entering the system and provide a stabilized discharge from the dewatering system.

Inlet control systems may include:
    - Surface skimmers;
    - Aggregate filled perforated containers; or
    - Inlet filter sock.

Stabilized discharges may include:
    - Dewatering basin;
    - Sediment bag; or

- Filtering through vegetation.

Design and operate the discharge so that there is no visible sediment plume present in the water body and the discharge causes no additional erosion or sediment.

Do not discharge water directly to the water body or the diversion.

5. Culvert Installation.

a. General.
Provide positive drainage from the upstream to downstream ends of the culvert and install energy dissipation measures at culvert outlets.

b. Culvert Through Existing Structure.
Install pipes through the existing structure.

Construction may include using the following steps:
(1) Install a temporary culvert through the structure.
(2) Anchor and seal the installed pipes at the upstream impervious dike.
(3) Extend the installed pipes through the downstream impervious dike.

c. Culvert Diversion.
Install a temporary pipe crossing under the roadway near the existing structure.

6. Channels.
Construct channels with side slopes that are 2:1 or flatter with a channel bottom of sufficient width. Cover disturbed slopes and channel bottom with a channel liner of Geosynthetic Material, Type R1.

Overlap splices and joints of the channel liner installed where water could flow at least 36 inches.

Secure the liner using methods that will ensure that the liner will not be disturbed by the design flows shown in Appendix A. Potential methods of securing the liner may include:
- Staples;
- Pins;
- Sandbags; or
- Riprap.

Patch damaged areas of channel liner. Place a patch that overlaps the damaged area by 36 inches on all sides. Secure the patch with pins or staples.

Install fiber rolls or silt fence along the top of the channel to prevent any sediment or debris from entering the channel.

Connect the downstream end of the channel before connecting the upstream end of the channel to the existing water body.

7. Diversion Pumping.
Place an inlet control system at pump inlets. An inlet control system may include:

- Surface skimmers;
- Aggregate filled perforated containers; or
- Inlet filter sock.

Route the discharge hose through the structure or work area.

Design and operate the discharge so that no visible sediment plume is present in the water body and so the discharge causes no additional erosion of the water body.

C. Diversion Removal.

1. General.
Do not begin removal of the temporary diversion until the construction activities relating to the structure are complete and all permanent erosion and sediment control devices are in place. Remove the diversion in a manner that prevents soil/water interaction.

Remove all materials used to construct the diversion.

Restore the area affected by the temporary diversion to the same condition that existed before construction.

2. Downstream Dike.
Remove the downstream dike first. Stabilize the areas above the waterline where the downstream dike was located.

3. Upstream Dike.

a. General.
Remove the upstream dike to restore normal flow through the structure before removal of any devices used to create the diversion.

Stabilize the areas above the waterline where the upstream dike was located.

b. Suspended Pipe.
Remove the suspended pipe at the same time as removing the upstream dike.

c. Channel and Pipe Diversion.
Remove the upstream dike and construct a dike to prevent water from entering the channel or pipe diversion.

4. Pipe.
Remove pipe after the stream has been restored to normal flow.

5. Channel.
Backfill temporary channels outside of the roadway embankment as specified in Section 203.04 G.3, “Compaction Control, Type B”. When backfilling roadway embankment areas, benching of slopes will be required as specified in Section 203.04 G.1, “General”.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Pay Item	Pay Unit
Temporary Stream Diversion	Each

The Engineer will pay for the stream diversion according to Table 1.

Table 1	
Work Completed	**Percent of Contract Unit Price**
Stream Diversion Installed	75
Restoration of the Diversion	25

Include the cost for installation, maintenance, and removal of erosion control devices used in conjunction with the stream diversion in the contract unit price for “Temporary Stream Diversion”. Section 4, “Basis of Payment” in SSP 1 does not apply to erosion control devices used in conjunction with stream diversions.

Such payment is full compensation for designing, furnishing all equipment, material, labor, and other incidentals to complete the work as specified.

Appendix A

2 Year 24 Hour Flow			
Station	Structure Number	Existing Structure Type	Min Discharge (cfs)
43rd Street - 714+20	Double 26x43 Arch	RCP	46
42nd Street SB - 712+00	Double 31x51 Arch	RCP	54

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

UTILITY COORDINATION

PROJECT – RCE-FTF-NHU-SU-6-297(014)000, PCN 24115

DESCRIPTION

This work consists of coordinating the construction schedule with third party utility companies owning facilities within the project limits, verifying the location of those facilities during construction, and resolving issues with those utilities.

The requirements in this Special Provision replace the requirements of Section 105.03, “Cooperation With Utility Owners”.

ATTACHMENTS

Appendix A – Utility Coordination Table
Appendix B – Utility Exhibits

DEFINITIONS

Abandon Utility (AU): Utility Encounter that was originally a Conflict, but relocated before bidding. The line is still represented in the Exhibits to make the Contractor aware of its location. See the Utility Coordination Table for final details.

Conflict: A utility in need of relocation or adjustment for the construction to proceed in that area.

Protect in Place (PIP): A utility that does not need relocation, but needs precautions to protect the utility during construction activities.

Proposed Resolution (PR): A proposed location of a future Utility Encounter. The Utility Owner is in the process of moving the Utility to this Proposed location. PIP activities may still be required in the proposed location.

Utility Encounter (UE): A Conflict or Protect in Place situation involving an existing third party owned utility.

UTILITY COMPANY CONTACTS

UTILITY COMPANY	CONTACT NAME	PHONE NUMBER	EMAIL
Bluepeak Fiber (BLUFIB)	Ryan Lynch	701-213-2622	ryan.lynch@mybluepeak.com
Burlington Northern Santa Fe Railroad (BUNSFR)	Sawyer Mosser Daniel Peltier	763-782-3057	Sawyer.Mosser@BNSF.com Daniel.Peltier@BNSF.com
Convenience Store (CONSTO)	Joel Geil	952-830-8884	Joel.geil@circlek.com
CenturyLink/Lumen (CENLIN)	Trevor Christenson	701-770-5574	trevor.a.christenson@lumen.com
CenturyLink/Lumen (CENLIN)	Adam Kramer	701-556-3307	adamk@master-construction.net
Magellan Pipeline Co. (MAPICO)	Paul Klabunde	701-793-8377	paul.klabunde@oneok.com
Midco (MIDCO)	Scott Pede	701-335-4230	scott.pede@midco
Midco (MIDCO)	Jason Venem	701-739-0299	jason.venem@midco.com
North Dakota Department of Transportation (NDDOT)	Jason Peterson	701-787-6558	jpeterson@nd.gov
Nodak Rural Electric Coop (NORUEC)	Cole Johnson	701-795-6750	cjohnson@nodakelectric.com
University of North Dakota (UND)	Todd Garman	701-777-5458	todd.garman@und.edu
University of North Dakota (UND)	Robert Hodek	701-777-4134	robert.hodek@und.edu
Xcel Energy - Electric (XCEENE)	Kyle Christenson	701-795-5229	kyle.c.christenson@xcelenergy.com
Xcel Energy - Gas (XCEENE)	Brennen Wilkens	701-795-5218	brennen.wilkens@xcelenergy.com
City of Grand Forks	David Kuharenko	701-799-8267	dkuharenko@grandforksgov.com

CONTRACTOR RESPONSIBILITIES

A. Responsibilities.

The responsibilities for utility coordination include the following:

- Conduct the preconstruction utility coordination meeting;
- Main point of contact for all utility companies;

- Maintain a schedule for utility activities;
- Hold weekly utility meetings in addition to the weekly planning and reporting meeting and report on the utility meetings at the weekly planning and reporting meeting;
- Follow up with any utility companies that do not show up to construction meetings;
- Coordinate work efforts of the utility companies, revise work schedules and traffic control as necessary to ensure adequate cooperation between UE and construction work;
- Develop and update the utility coordination plan;
- Provide a weekly written summary for contacts and meetings to the Engineer; and
- Coordinate with all of the other parties to update the project schedule specified in Section 108.03, “Progress Schedule”.

B. Utility Coordination Plan.

Develop a utility coordination plan with each utility company that includes the phasing and scheduling requirements for UE.

C. Record of Utility Outage Notifications.

Request a copy of notifications that utility companies provide to customers for service outages. Maintain copies of all notifications until the Contractor signs the final estimate.

D. Utility Coordination Schedule.

Create and maintain a construction schedule that includes timelines for the phasing of utility coordination work. Include information contained in the contract documents and information obtained during coordination discussions with utility owners. Written agreements between the Contractor and a utility company will govern over information contained in contract documents; however, the agreements must be signed by the NDDOT, Contractor and Utility Company to be effective. Written agreements are considered contract revisions, however they are not eligible for additional compensation or additional time unless agreed to separately by the Engineer.

The Utility Coordination Table contains information related to the utility coordination requirements at each area designated as a UE. The timelines included on the Table may be longer than shown if the Contractor requests multiple resolutions simultaneously. Adjust work schedules as required to accommodate utility resolutions.

Revisions to the construction schedule due to a utility company or companies non-conformance with agreed upon schedules or failure to reasonably coordinate work efforts with the Contractor will be considered excusable, non-compensable delays as specified in Section 108.06, “Determination of and Extensions to the Contract Time”.

Failure by the Contractor to reasonably coordinate schedules with a utility company or companies for UE identified in the contract, or failure to document coordination efforts will be considered non-excusable delays as specified in Section 108.06, “Determination of and Extensions to the Contract Time”.

CONSTRUCTION REQUIREMENTS

A. General.

The vertical and horizontal utility locations shown in the plans are approximate. Plan locations should not be interpreted as exact for bidding or construction purposes. The locations of utility lines are available at the specific locations included in the Utility Pothole Report.

Utility facilities shown on the plans, if any, are for reference purposes only and may not constitute an exhaustive representation of all utility facilities within the project. Notify the North Dakota One Call System (811) before starting the work, so they may locate and mark all utility facilities within the project. Receive utility locates for Department-owned, publicly-owned, and privately-owned utility facilities, whether on or off the One Call System.

Comply with Chapter 49-23 of the NDCC in determining the location of underground utilities.

B. Utilities Identified in Plans.

Coordinate UE work with the affected utility owners. Maintain continuous communication with the Engineer, affected subcontractors, and affected utility owners until UE will no longer affect or be affected by the Contractor.

Cooperate with utility owners in relocating and adjusting utility facilities to minimize interruption to service and duplication of work by utility owners.

The Contract documents show all known UE for the project.

If a UE identified as a Protect in Place is determined to be a Conflict during construction, the Engineer will make necessary revisions to the Contract as specified in Section 104.02, “Contract Revisions”. These types of changes will be considered excusable, compensable delays as specified in Section 108.06, “Determination of and Extensions to the Contract Time”.

C. Utilities Encountered During Work.

1. General.

Neither of the cases discussed in this subsection relieve the Contractor of liability that may arise under provisions of the NDCC.

2. Unidentified Utility Encounters.

The Department will bear costs associated with revisions to the work as specified in Section 104.02 B, “Differing Site Conditions” only if the Engineer determines that all of the following conditions exist:

- a UE exists that was not designated in the plans; and
- the UE is in a location that affects the prosecution of the work to construct the project as designed.

3. Utility Encounters Created Due to Actions Performed by the Contractor.

If a new UE is created due to actions performed by the Contractor for the Contractor’s convenience; the Contractor shall account for and protect the affected facilities. Before performing these actions, the Contractor shall coordinate with the utility owner. The Department will not make additional payments to the Contractor nor the utility owner for

UE created in this manner and will not provide additional time to the Contractor for completing the work.

If utility companies incur costs, the Department will not participate in those costs and will not make payment to the Contractor for those costs.

D. Utility Coordination Meetings.

1. Preconstruction Utility Meeting.
Arrange the meeting with the utility owners, the Contractor and affected subcontractors, local agency representatives, and the Engineer to occur no later than two weeks after the preconstruction meeting. At the meeting, provide an agenda and a tentative construction schedule for planning UE work; after the meeting, publish minutes and distribute a copy to all meeting attendees within 48 hours of the conclusion of the meeting.

2. Weekly Utility Coordination Meeting.
Organize a weekly meeting to discuss utility coordination efforts with utility companies and affected subcontractors, local authorities, the Engineer and others who may have an interest in utility coordination efforts. Hold the weekly utility coordination meeting immediately before the weekly planning and reporting meeting. Publish minutes and distribute copies to all meeting attendees within 48 hours of the conclusion of the meeting.

The intent of this meeting is to disseminate information regarding ongoing and upcoming UE work and to ensure that all affected parties are collaborating and sharing information related to that work.

Provide a summary of the discussion at the weekly planning and reporting meeting.

E. Fire Hydrants.
Before starting work that affects a fire hydrant, coordinate with the local fire authority to determine if provisions need to be in place before starting the work. If provisions are necessary, obtain the approval of the local fire authority before beginning the work affecting the fire hydrant.

F. Damage and Interruptions.
If the Contractor causes damage to utility facilities, the Contractor is responsible for the costs of restoring or repairing the damaged utility facility to a condition equal to or better than the condition existing before the damage occurred. Immediately notify the utility owner of the damage or, if the owner is unknown, the One Call System. Do not conceal, attempt to conceal, or make repairs to the utility facilities until approved by the utility owner. If this damage causes interruption to utility service, continuously coordinate with the utility owner until the service is fully restored.

The Department will not pay the Contractor for the cost to restore utility facilities or repair damage to utility facilities and will consider any delays resulting from this damage to be non-excusable in accordance with Section 108.06, “Determination of and Extensions to the Contract Time.”

G. Utility Criteria.

The Utility Coordination Table and Utility Exhibits contain specific information related to each UE location.

The following are specialized notes that could not fit in the comments column of Appendix A – Utility Coordination Table.

Bluepeak Fiber

I. BLUFIB. Applies to: BLUFIB-1, BLUFIB-2

Notes for **BLUFIB-1** and **BLUFIB-2:** Both lines are buried in orange 1 ¼" duct with 48ct fibers inside. Bury depth is approximately 36".

Removal of existing sidewalk and aggregate. Construct proposed shared use path and aggregate, grading and seeding into tie in on existing ground. Installation of double culvert under new pavement for S 43rd Street.

Contractor is to protect existing buried Fiber Optic in place. Contractor to notify the utility company 2-weeks prior to working in this area.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24" of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

Burlington Northern Santa Fe Railroad

I. BUNSFR. Applies to: BUNSFR-1, BUNSFR-2, BUNSFR-3, BUNSFR-4, BUNSFR-5

Removal of railroad and road crossing, building railroad bridge, DeMers bridge, and excavation for 42nd Street underpass. Removal of railroad signals and infrastructure. Construct railroad bypass (shoofly) and vehicular bypass for DeMers Avenue traffic.

Buried electric will be abandoned in place after removal of the signals, gate arms, and bungalow.

See **Section 170c** for Order of Operation – Shoofly & Mainline Railroad Construction.

- Removals by BNSF:
  - Removal of track (everything above ballast)
  - Removal of cantilever signal & structure (except for foundation)
  - Removal of bungalow near 42nd
  - Removal of 42nd Street crossing gates and overhead signal structure

- New Construction (shoofly & mainline) by BNSF:
  - Realignment of Track 3
  - Stick signal installation (including foundations)
  - Track (ballast, ties, tie plates, rail, OTM)
  - Labor and material to compete tie-ins

Once shoofly tracks are built, the signal system will be installed by BNSF and will operate through the shoofly steel rails.

Contractor to verify Burlington Northern Santa Fe Railroad has completed everything described above within the project limits.

- Removals by Contractor:
  - Stripping of topsoil for shoofly
  - Removal of sub ballast and ballast where needed
  - Common excavation
  - Removal of signal foundations (including cantilever foundation)
  - BNSF signal & telecom cables (if any) will be abandoned in place

- New Construction (shoofly & mainline) by Contractor:
  - Trackbed construction associated with Track 3 realignment
  - Trackbed construction (subgrade prep, fabric and geogrid, embankment, sub ballast, topsoil and seeding)
  - Any drainage items (still TBD)
  - BNSF assistance during tie-ins

Removals of main tracks and construction of temporary shoofly tracks will occur in phases 1A and 1B of construction with a timeframe of Spring 2026 through early Summer 2026.

The railroad bridge and mainline track will be constructed in Phase 2. Construction timeframe is Summer 2026 through Spring 2027.

NDDOT is to coordinate with BNSF throughout the construction of the project and relay relevant information to the Consultant company.

Convenience Store

I. CONSTO. Applies to: CONSTO-1, CONSTO-2, CONSTO-3, CONSTO-4

Installation of proposed storm sewer, culverts, roadway, and driveway entrances for S 43rd Street. Removal of existing roadway (S 43rd Street) , curb and gutter, driveway entrance to Convenience Store.

Contractor to notify Convenience Store 2-weeks prior to working in these areas. Contractor to protect Private Sanitary Sewer FM 3” HDPE and Storm CB while working in the area.

Depth of Sanitary Sewer FM is anticipated to be below watermain transmission line.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24” of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

II. CONSTO. Applies to: CONSTO-5

Abandoned 3” HDPE Sanitary Sewer FM.

42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals.

Any line exposed shall be disposed to complete excavation work to finished grade. Use a certified cap if removal is necessary.

CenturyLink / Lumen

I. CENLIN. Applies to: CENLIN-2, CENLIN-4, CENLIN-6, CENLIN-9, CENLIN-10

Buried copper line, approximately 36” deep is within grading limits for proposed reconstruction of DeMers Avenue.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor is to verify with CenturyLink/Lumen 2-weeks before construction if line has been abandoned and can be removed. CenturyLink / Lumen agreed to abandon their buried copper line and 2 pedestals before construction begins in the Spring of 2026. Any abandoned line exposed shall be disposed. Cost for disposal is incidental to bid items.

Contractor should be aware of a possible 4” PVC conduit that is buried with the existing copper line when performing excavation work. Copper line may or may not be buried inside this conduit.

II. CENLIN. Applies to: CENLIN-5, CENLIN-7

Buried copper line, approximately 36” deep is just outside of grading limits for proposed reconstruction of N 42nd St (**CENLIN-5**). Buried copper line outside of grading limits of Proposed Watermain near James Ray Drive (**CENLIN-7**).

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor to protect existing buried copper line in place. Contractor to notify the utility company 2-weeks prior to working in this area.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24” of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

III. CENLIN. Applies to: CENLIN-1, CENLIN-3, CENLIN-8, CENLIN-11, CENLIN-12, CENLIN-13

Abandoned / non-working buried copper lines and 1 pedestal and vault according to map provided by CenturyLink.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Utility Company will leave buried copper lines abandoned in place.

Contractor to notify utility company 2-weeks prior to working in these areas. Contractor shall expose the line at any locations and remove abandoned line as needed to complete work. Any abandoned line exposed shall be disposed. Cost for disposal is incidental to bid items.

Magellan Pipeline Co.

I. MAPICO. Applies to: MAPICO-1

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Magellan's pipeline is outside of project limits and will have no impact on the proposed work. However, due to the proximity, a Magellan representative will need to be on site for any work near the facilities.

Contractor is to notify Magellan 2-weeks before work begins to DeMers Avenue on the East side of 42nd Street near Magellan's Pipeline.

Midcontinent Communications

I. MIDCO. Applies to: MIDCO-5, MIDCO-6, MIDCO-7, MIDCO-8, MIDCO-9, MIDCO-10, MIDCO-11, MIDCO-12

Buried 144 Ct fiber optic line is within grading limits for proposed reconstruction of DeMers Avenue. Two Separate conduits running South to North along 42nd Street.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor is to give a 2-week notice to Midco before beginning construction. Contractor is to verify that Midco has disconnected and abandoned their fiber. Once the utility line has been relocated, the contractor will remove any remaining earthwork and finish the excavation to finished grade. Any line exposed shall be disposed. Cost of disposal is incidental to bid items.

Midco has agreed to relocate their facilities outside of project limits along I-29 to avoid conflicts with proposed improvements. Relocation is anticipated to occur during the Fall of 2025.

Existing fiber line is anticipated to be buried up to 35ft underneath DeMers and RR tracks.

Protect -in-place once utilities have been relocated.

II. MIDCO. Applies to: MIDCO-2, MIDCO-4

Buried 144 Ct fiber optic line is within grading limits for proposed reconstruction of DeMers Avenue.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

I-29 on and off ramps and proposed storm sewer will be reconstructed during phase 5A of the project.

Midco will complete relocations of the fiber and vault during the Fall of 2025 before construction begins in 2026.

Notification timelines if Midco has not completed relocation:

- When the contractor initially starts working in this area they will need to give Midco a 1-week notice
- After notification from the contractor, Midco will need to 2 Days to a week to complete the relocation of their fiber.

Protect -in-place once utilities have been relocated.

III. MIDCO. Applies to: MIDCO-1

Buried 144 Ct fiber optic line and vault is within grading limits for proposed reconstruction of DeMers Avenue.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor is to notify Midco 1-week prior to them beginning work. Contractor is to protect existing lines and vault in place.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24” of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

North Dakota Department of Transportation

I. NDDOT. Applies to: NDDOT-C-1

Removing existing sidewalk and aggregate. Installing new sidewalk and aggregate along ND 297 / DeMers Avenue.

Contractor is to Protect Buried Electric in Place.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24" of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

Nodak Rural Electric Cooperative

II. NORUEC. Applies to: NORUEC-1

Notes for **NORUEC-1:** Buried electric is a 3-phase line and buried approximately 48" below existing ground.

Installation of proposed storm sewer, culverts, roadway, and driveway entrances for S 43rd Street. Removal of existing roadway (S 43rd Street), curb and gutter, driveway entrance to Cenex.

Contractor to protect existing buried electric in place. Contractor is to notify Nodak 2-weeks prior to working in this area.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24" of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

University of North Dakota

I. UND. Applies to: UND-2, UND-3, UND-4, UND-5, UND-6, UND-7, UND-8, UND-9, UND-10, UND-11, UND-12, UND-13, UND-14, UND-15, UND-17, UND-18, UND-19, UND-22, UND-26, UND-27, UND-28, UND-29, UND-30, UND-31, UND-32, UND-33, UND-34, UND-35

Golf Course irrigation and electrical lines.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

See **Section 40** Removals for Golf Course Removals.

Golf course will close starting spring of 2026 through fall of 2027.

Contractor is to give 2-weeks of notice to UND before they begin work.

Contractor will disconnect the irrigation and electrical lines for the golf course sprinkler system within project limits. Once the utility lines have been disconnected, they will be abandoned in place and the contractor will have to go back to remove any remaining earthwork and finish the excavation to finished grade. Any line exposed shall be disposed. Cost of disposal is incidental to bid items.

II. UND. Applies to: UND-1, UND-23, UND-24, UND-25

8” PVC Watermain.

See **Section 55c** for proposed watermain adjustments and **Section 40** Removals for watermain removals.

New 20” PVC Watermain will be installed within NW quadrant of the project and buried under N 42nd Street. Existing 8” watermain will be removed / abandoned.

Todd Garman will be the point of contact for operating valves and hydrants when water shut off is needed.

Contractor is to notify UND 2-weeks before work begins.

Contractor will provide temporary water service and additional testing required to connect proposed 20” PVC watermain to existing UND 8” PVC watermain.

After existing 8” PVC watermain is disconnected, these conflicts will be abandoned in place.

III. UND. Applies to: UND-20, UND-21

8” VCP Sanitary Sewer and 18” RCP Storm Sewer.

See **Section 55c** for proposed watermain adjustments.

New 20” PVC Watermain will be installed within NW quadrant of the project.

UND confirmed depth of Sanitary Sewer and Storm Sewer is in the correct locations on plans.

Contractor is to notify UND 2-weeks before work begins near these conflicts.

Existing Sanitary and Storm Sewer is to be protected in place by the contractor while installing proposed 20” PVC watermain underneath.

Xcel Energy

I. XCEENE-G, Applies to: XCEENE-G-1, XCEENE-G-2, XCEENE-G-3, XCEENE-G-5

2” PE yellow gas main is within grading limits for proposed reconstruction of DeMers Avenue.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor is to protect existing buried 2” gas main in place. Contractor to notify the utility company 2-weeks prior to working in this area.

The depths of the lines are anticipated to be 3 to 4ft deep. Material is 2” PE yellow plastic, line underneath railroad tracks could be in in steel casing.

Pothole area to identify depth of gas lines. Contractor shall verify depth of line in any locations where more than 1ft of cut from existing grade is needed.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24” of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

II. XCEENE-G, Applies to: XCEENE-G-4, XCEENE-G-6

2” PE yellow gas main is within grading limits for proposed reconstruction of DeMers Avenue and 42nd Street.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Xcel will abandon existing lines **XCEENE-G-4** and **XCEENE-G-6** after installation of new line in the fall of 2025. Xcel will need to install stop valve fittings and drain lines of gas.

Contractor is to give a 2-week notice to Xcel and verify utility company has abandoned and drained the gas lines prior to working in this area. Contractor to remove and dispose of the abandoned gas lines. Cost of removal will be incidental to bid items.

Protect-in-place once utilities have been relocated.

III. XCEENE-E, Applies to: XCEENE-E-7, XCEENE-E-8, XCEENE-E-9, XCEENE-E-12, XCEENE-E-13, XCEENE-E-15, XCEENE-E-17, XCEENE-E-19, XCEENE-E-20, XCEENE-E-21, XCEENE-E-25

Overhead power line is within grading limits for proposed 42nd Street and DeMers Avenue grade separation.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Xcel plans to install a new 3-phase feeder pole line along BNSF ROW heading NW after obtaining an easement from UND Aerospace. All poles will need anchor guys. Once the new line is installed and tied in, the existing pole line will be removed. Underground feeder lines (**XCEENE-E-25**) that run along the existing pole line heading East will be abandoned in place.

During Phases 1A and 1B, power poles – **XCEENE-E-13**, **XCEENE-E-19**, and **XCEENE-E-20** will be protected in place to continue providing power for BNSF and City signals in addition to City lighting.

XCEENE-PR12.1 is the proposed transformer pad mounted feed point that will provide temporary power to the RR bungalow, city lights and signals.

Xcel anticipates performing work during late May to early June 2026. Xcel will need keep the North South pole line operational for at least 2-weeks while installing new proposed power poles and then switching power over to new line.

Contractor is to give Xcel a 2-week notice before beginning work in these areas. Contractor is to verify that Xcel has removed power poles before beginning construction of shoofly tracks. Contractor will also need to verify Xcel has installed their temporary buried electric for traffic and BNSF signals and city lighting.

Line will be removed prior to construction. If it is not removed, the contractor will need to work around the poles and stay 10ft away until Xcel Energy has their lines relocated. Once Xcel Energy relocates their lines, the contractor shall remove any posts or infrastructure, along with remaining dirt to bring elevations to the finished grade. Cost for disposal is incidental to bid items.

Protect in place once lines have been relocated.

IV. XCEENE-E, Applies to: XCEENE-E-10, XCEENE-E-11, XCEENE-E-16, XCEENE-E-24, XCEENE-E-25

Buried electric lines are within grading limits crossing under proposed reconstruction of 42nd Street.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor is to give Xcel a 2-week notice before beginning work in these areas. Contractor is to verify that Xcel has installed temporary and permanent electric before beginning construction of shoofly tracks.

Contractor to remove and dispose of the abandoned electric lines. Cost of removal will be incidental to bid items.

Xcel will need to install underground electric (**XCEENE-PR10.1** and **XCEENE-PR16.1**) to the West underneath N 42nd St and connect with the existing line supplying power to the West side RR equipment. This should happen before Phases 1A and 1B.

A feed line (**XCEENE-PR11.3**) from **XCEENE-E-13** will be installed to provide power to the proposed transformer (**XCEENE-PR12.1**). 2 other lines (**XCEENE-PR11.1** and **XCEENE-PR11.2**) will be installed to provide temporary power to the RR Bungalow, and City lights/signals. This should happen before Phases 1A and 1B.

A permanent underground feeder will need to be installed by Xcel (**XCEENE-PR25.1**) to provide power to the new transformer before the North to South pole line running along N 42nd Street is removed.

Xcel plans to abandon buried electric lines **XCEENE-E-10**, **XCEENE-E-11**, **XCEENE-E-16**, and **XCEENE-E-25**, in addition with an electric locker (**XCEENE-E-24**).

Xcel anticipates performing work during late May to early June 2026. Xcel will need to keep the North South pole line operational for at least 2-weeks while

installing new proposed power poles and then switching power over to new line.

V. XCEENE-G, Applies to: XCEENE-G-23

2” PE yellow gas main is within grading limits for proposed reconstruction of DeMers Avenue.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

Contractor is to give Xcel a 2-week notice. Contractor will need to remove pavement and expose grade before Xcel can perform their relocation. This work will occur during phases 5B and 5C of the project.

After notification from the contractor, Xcel will need 1-week to complete the vertical adjustment.

The depths of the lines are anticipated to be 3 to 4ft deep. Material is 2” PE yellow plastic, line underneath railroad tracks could be in in steel casing.

Pothole area to identify depth of gas lines. Contractor shall verify depth of line in any locations where more than 1ft of cut from existing grade is needed.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24” of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

Protect gas main in place once adjustment is completed.

VI. XCEENE-E, Applies to: XCEENE-E-14, XCEENE-E-18, XCEENE-E-22, XCEENE-E-26

Buried Electric and 2 power poles are withing grading limits for proposed reconstruction of 42nd Street and DeMers Avenue grade separation.

ND 297 / DeMers Avenue and 42nd Street will be completely reconstructed including excavation for underpass, new base and pavement, installation of new storm sewer system, water main, ADA ramps, shared use path, new lighting system, temporary shoofly tracks and bypass, and new traffic signals. Work will also include construction of new roadway and railroad bridges, lift station, and storm water dry basins.

The contractor will protect existing power poles in place and underground electric crossing under N 42nd Street. The underground feeder line (**XCEENE-E-26**) will also need to be protected in place when BNSF access road is built.

Contractor is to follow North Dakota One Call excavation requirements and is to manually excavate within 24” of the outer edges of any underground facility on a horizontal plane as located and marked by the owner or operator (According to North Dakota Century Code 49-23).

Rev. 2024-05-08

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
BLUFIB-1	2	708+81	40.1	LT	to	709+88	39.9	LT	LT	OCL_43RD	105.3	FT	-6 (Storm Sewer)	Level 2	See Special Provision Note: l.BLUFIB.	Bluepeak Fiber	Buried Fiber Optic	X	
BLUFIB-2	3	714+18	53.5	LT	to	714+42	52.4	LT	LT	OCL_43RD	24.0	FT	-1 (Double Culvert)	Level 2	See Special Provision Note: l.BLUFIB.	Bluepeak Fiber	Buried Fiber Optic	X	
BUNSFR-1	5,6	1920+06	55.0	LT	to	1927+72	59.7	RT	Crossing	SOUTH SHOOFLY	765.5	FT	-29 (Excavation for Underpass	Level 4	See Special Provision Note l. BUNSFR	Burlington Northern Santa Fe Railway	Buried Electric Line		X
BUNSFR-2	5	1920+06	75.4	LT	to	1921+62	66.6	LT	LT	SOUTH SHOOFLY	176.0	FT	-29 (Excavation for Underpass	Level 4	See Special Provision Note l. BUNSFR	Burlington Northern Santa Fe Railway	Buried Electric Line		X
BUNSFR-3	5	1920+02	115.7	LT	to	1920+99	117.3	LT	LT	SOUTH SHOOFLY	142.5	FT	-29 (Excavation for Underpass	Level 4	See Special Provision Note l. BUNSFR	Burlington Northern Santa Fe Railway	Buried Electric Line		X
BUNSFR-4	4,5	1913+29	39.2	RT	to	1920+05	58.7	LT	Crossing	SOUTH SHOOFLY	674.2	LF	-29 (Excavation for Underpass	Level 4	See Special Provision Note l. BUNSFR	Burlington Northern Santa Fe Railway	Buried Electric Line		X
BUNSFR-5	4	1913+60	57.4	RT	to	1914+04	28.9	RT	RT	SOUTH SHOOFLY	192.6	FT	-3 (Shoofly Tracks)	Level 4	See Special Provision Note l. BUNSFR	Burlington Northern Santa Fe Railway	Buried Electric Line		X
CONSTO-1	7	709+93	165.0	RT	to	710+19	44.7	LT	Crossing	OCL_43RD	254.5	FT	-5 (Storm Sewer)	Level 2	See Special Provision Note l. CONSTO	Convenience Store	Sanitary Force Main	X	
CONSTO-2	8	714+10	51.4	LT	to	714+45	51.6	LT	LT	OCL_43RD	34.9	FT	+3	Level 2	See Special Provision Note l. CONSTO	Convenience Store	Sanitary Force Main	X	
CONSTO-3	8	716+05	47.4	LT	to	716+58	47.0	LT	LT	OCL_43RD	52.8	FT	-1 (Driveway)	Level 2	See Special Provision Note l. CONSTO	Convenience Store	Sanitary Force Main	X	
CONSTO-4	8	716+55	53.9	LT	to	-	-	-	LT	OCL_43RD	1.0	EA	-1 (Driveway)	Level 2	See Special Provision Note l. CONSTO	Convenience Store	Storm Catch Basin	X	
CONSTO-5	8	206+23	69.7	RT	to	206+21	189.9	LT	Crossing	OCL_297EB	259.7	FT	-2	Abandoned	See Special Provision Note ll. CONSTO	Convenience Store	Abandonded Sanitary Force Main		X
CENLIN-1	9,10,11,14	200+03	29.8	LT	to	216+79	58.3	LT	LT	OCL_297EB	1677.6	FT	-25 (Excavation for Underpass)	Abandoned	See Special Provision Note lll. CENLIN	Centurylink	Buried Copper Line		X
CENLIN-2	10,14	208+27	30.2	RT	to	211+13	42.1	RT	RT	OCL_297EB	290.6	FT	-16 (Excavation for Untderpass)	Level 4	See Special Provision Note: l.CENLIN.	Centurylink	Buried Copper Line / 4" PVC Conduit		X

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
CENLIN-3	10,14,15,16	718+60	84.2	LT	to	728+06	37.2	LT	LT	OCL_42nd_SB	946.6	FT	-20 (Excavation for Underpass)	Abandoned	See Special Provision Note lll. CENLIN	Centurylink	Buried Copper Line		X
CENLIN-4	10,12,13,14	705+13	51.7	LT	to	717+63	60.4	LT	LT	OCL_42nd_SB	1253.6	FT	-16 (Excavation for Untderpass)	Level 4	See Special Provision Note: I.CENLIN.	Centurylink	Buried Copper Line / 4" PVC Conduit		X
CENLIN-5	15,16	727+16	39.2	LT	to	728+06	35.3	LT	LT	OCL_42nd_SB	90.6	FT	-1.5	Level 2	See Special Provision Note: ll.CENLIN.	Centurylink	Buried Copper Line	X	
CENLIN-6	10	207+44	65.8	RT	to	208+27	30.2	RT	RT	OCL_297EB	108.2	FT	-7 (Storm Sewer)	Level 4	See Special Provision Note: I.CENLIN.	Centurylink	Buried Copper Line / 4" PVC Conduit		X
CENLIN-7	15	538+91	17.8	RT	to	539+18	20.3	RT	RT	PPSD_20IN_Line	30.3	FT	-8 (Water Main)	Level 2	See Special Provision Note: ll.CENLIN.	Centurylink	Buried Copper Line	X	
CENLIN-8	10,14	716+29	25.2	LT	to	718+60	84.2	LT	LT	OCL_42nd_SB	245.8	FT	-20 (Excavation for Underpass)	Abandoned	See Special Provision Note lll. CENLIN	Centurylink	Buried Copper Line		X
CENLIN-9	10,14	211+15	54.3	RT	to	-	-	-	RT	OCL_297EB	1.0	EA	-16 (Excavation for Untderpass)	Level 4	See Special Provision Note: I.CENLIN.	Centurylink	Telephone Pedestal		X
CENLIN-10	10	208+27	29.3	RT	to	-	-	-	RT	OCL_297EB	1.0	EA	-7 (Removal of Existing Storm Sewer)	Level 4	See Special Provision Note: I.CENLIN.	Centurylink	Telephone Pedestal		X
CENLIN-11	11,14	718+70	88.6	RT	to	719+70	68.4	RT	RT	OCL_42nd_SB	106.5	FT	-20 (Excavation for Underpass)	Abandoned	See Special Provision Note lll. CENLIN	Centurylink	Buried Copper Line		X
CENLIN-12	11,14	719+63	75.7	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-20 (Excavation for Underpass)	Abandoned	See Special Provision Note lll. CENLIN	Centurylink	Vault		X
CENLIN-13	11,14	719+70	68.4	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-20 (Excavation for Underpass)	Abandoned	See Special Provision Note lll. CENLIN	Centurylink	Telephone Pedestal		X
MAPICO-1	17	225+86	56.2	LT	to	225+86	48.6	RT	Crossing	OCL_297EB	105.2	FT	-2	Level 1	See Special Provision Note l. MAPICO	Magellan Pipeline Co.	Gas Main	X	
MIDCO-1	18,27	200+89	44.4	RT	to	203+00	45.9	RT	RT	OCL_297EB	250.1	FT	-1 to +2	Level 2	See Special Provision Note lll. MIDCO.	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-2	18,27	203+00	45.9	RT	to	205+31	49.1	RT	RT	OCL_297EB	235.3	FT	-7 (Storm Sewer)	Level 4	See Special Provision Note ll. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
MIDCO-PR2.1	18,27	203+00	45.9	RT	to	205+35	49.0	RT	RT	OCL_297EB	276.3	FT	-	Proposed Level 2	See Special Provision Note ll. Resolution for MIDCO-2	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-4	18,27	205+31	49.1	RT	to	-	-	-	RT	OCL_297EB	1.0	EA	-1 to +2	Level 4	See Special Provision Note ll. MIDCO.	Midcontinent Communications	Fiber Optic Vault		X
MIDCO-PR4.1	19,27	206+63	49.7	RT	to	-	-	-	RT	OCL_297EB	1.0	EA	-	Proposed Level 1	See Special Provision Note ll. Resolution for MIDCO-4	Midcontinent Communications	Fiber Optic Vault	X	
MIDCO-5	18,19,22,27	205+31	49.1	RT	to	211+02	56.6	RT	RT	OCL_297EB	572.5	FT	-7 (Storm Sewer)	Level 4	See Special Provision Note I. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X
MIDCO-PR5.1	18,19,27	205+35	49.0	RT	to	206+63	49.7	RT	RT	OCL_297EB	127.6	FT	-	Proposed Level 2	See Special Provision Note I. Resolution for MIDCO-5	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-PR5.2	25	-	-	-	to	-	-	-	-	OCL_297EB	587.9	FT	-	Proposed Level 1	See Special Provision Note I. Resolution for MIDCO-5	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-6	20,21,22,26,27	704+56	56.9	RT	to	715+30	70.7	RT	RT	OCL_42nd_SB	1073.3	FT	-10.5 (Water Main)	Level 4	See Special Provision Note I. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X
MIDCO-PR6.1	25	-	-	-	to	-	-	-	-	-	400.2	FT	-	Proposed Level 1	See Special Provision Note I. Resolution for MIDCO-6	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-7	19,20,21,22,23,24, 26,27	705+08	32.7	LT	to	728+09	30.3	LT	LT	OCL_42nd_SB	2307.6	FT	-15 (Excavation for Underpass)	Level 4	See Special Provision Note I. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X
MIDCO-PR7.1	25,26	-	-	-	to	-	-	-	-	-	3992.1	FT	-	Proposed Level 1	See Special Provision Note I. Resolution for MIDCO-7	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-8	19,22,26,27	715+29	40.2	LT	to	715+30	70.7	RT	Crossing	OCL_42nd_SB	110.9	FT	-10	Level 4	See Special Provision Note I. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X
MIDCO-PR8.1	26	-	-	-	to	-	-	-	-	-	1288.1	FT	-	Proposed Level 1	See Special Provision Note I. Resolution for MIDCO-8	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-9	19,22,26,27	715+29	40.2	LT	to	-	-	-	LT	OCL_42nd_SB	1.0	EA	-7	Level 4	See Special Provision Note I. MIDCO.	Midcontinent Communications	Fiber Optic Pedestal		X
MIDCO-PR9.1	27	-	-	-	to	-	-	-	-	-	124.9	FT	-	Proposed Level 1	See Special Provision Note I. Resolution for MIDCO-9	Midcontinent Communications	Buried Fiber Optic	X	

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
MIDCO-10	19,22,27	715+29	40.2	LT	to	718+69	80.0	LT	LT	OCL_42nd_SB	347.2	FT	-15 (Excavation for Underpass)	**Level 4**	See Special Provision Note I. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X
MIDCO-PR10.1	27	-	-	-	to	-	-	-	-	-	1641.0	FT	-	**Proposed Level 1**	See Special Provision Note I. Resolution for MIDCO-10	Midcontinent Communications	Buried Fiber Optic	X	
MIDCO-11	19,22,23,27	720+85	76.0	LT	to	-	-	-	LT	OCL_42nd_SB	1.0	EA	-10 (Excavation for Underpass)	**Level 4**	See Special Provision Note I. MIDCO.	Midcontinent Communications	Fiber Optic Pedestal		X
MIDCO-PR11.1	27	-	-	-	to	-	-	-	-	-	400.0	FT	-	**Proposed Level 1**	See Special Provision Note I. Resolution for MIDCO-11	Midcontinent Communications	Fiber Optic Pedestal	X	
MIDCO-12	19,22,23,27	720+83	75.7	LT	to	725+07	47.2	LT	LT	OCL_42nd_SB	424.7	FT	-10 (Excavation for Underpass)	**Level 4**	See Special Provision Note I. MIDCO.	Midcontinent Communications	Buried Fiber Optic		X
MIDCO-PR12.1	24,27	-	-	-	to	731+77	36.9	LT	LT	OCL_42nd_SB	1144.2	FT	-	**Proposed Level 1**	See Special Provision Note I. Resolution for MIDCO-12	Midcontinent Communications	Buried Fiber Optic	X	
NDDOT-C-1	28	200+01	22.1	RT	to	200+23	30.4	RT	RT	OCL_297EB	24.9	FT	-2	**Level 2**	See Special Provision Note I. NDDOT	North Dakota Department Of Transportation	Buried Electric Line	X	
NORUEC-1	29	708+75	38.7	LT	to	709+74	41.5	LT	LT	OCL_43RD	99.6	FT	-2	**Level 2**	See Special Provision Note I. NORUEC	Nodak Rural Electric Cooperative	Buried Electric Line	X	
UND-1	30	537+51	58.9	LT	to	538+45	35.1	LT	LT	PPSD_20IN_Line	54.8	FT	-4	**Level 4**	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-2	31	801+88	85.9	RT	to	805+08	287.3	LT	Crossing	OCL_7th_WB	393.6	FT	-9 (Excavation of Storm Sewer for 7th Avenue South)	**Level 4**	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-3	31	802+27	44.4	LT	to	-	-	-	LT	OCL_7th_WB	1.0	EA	-9 (Excavation of Storm Sewer for 7th Avenue South)	**Level 4**	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-4	31	801+99	41.0	RT	to	-	-	-	RT	OCL_7th_WB	1.0	EA	-9 (Excavation of Storm Sewer for 7th Avenue South)	**Level 4**	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-5	31	802+67	124.7	RT	to	803+28	107.1	RT	RT	OCL_7th_WB	111.0	FT	-3.5 (Excavation for 7th Avenue South)	**Level 4**	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-6	31	802+79	103.3	RT	to	803+96	77.8	LT	Crossing	OCL_7th_WB	216.1	FT	-9 (Excavation of Storm Sewer for 7th Avenue South)	**Level 4**	See Special Provision Note I. UND	University of North Dakota	Buried Electric Line		X

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
UND-7	31	802+91	83.9	RT	to	-	-	-	RT	OCL_7th_WB	1.0	EA	-3.5 (Excavation for 7th Avenue South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-8	31	803+82	91.0	RT	to	803+96	77.8	LT	Crossing	OCL_7th_WB	169.4	FT	-8 (Excavation of Storm Sewer for 7th Avenue South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Buried Electric Line		X
UND-9	31	803+73	94.4	RT	to	807+16	78.6	LT	Crossing	OCL_7th_WB	389.6	FT	-8 (Excavation of Storm Sewer for 7th Avenue South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-10	31	802+65	129.9	LT	to	804+65	7.9	LT	LT	OCL_7th_WB	193.3	FT	-3.5 (Excavation for 7th Avenue South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-11	31	803+96	77.8	LT	to	807+42	26.0	RT	Crossing	OCL_7th_WB	321.2	FT	-5.5 (Excavation of Storm Sewer for 7th Avenue South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Buried Electric Line		X
UND-12	31	807+05	104.7	RT	to	807+16	78.6	LT	Crossing	OCL_7th_WB	183.7	FT	-8 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-13	31	807+40	113.2	RT	to	807+75	226.0	LT	Crossing	OCL_7th_WB	341.4	FT	-8 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Water Line		X
UND-14	31	807+42	26.0	RT	to	-	-	-	RT	OCL_7th_WB	1.0	EA	-5.5 (Excavation of Storm Sewer for 7th Ave South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-15	31	807+16	78.6	LT	to	-	-	-	LT	OCL_7th_WB	1.0	EA	-8 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-17	31	805+96	77.8	LT	to	805+95	93.9	RT	Crossing	OCL_7th_WB	258.8	FT	-4 (Excavation of Storm Sewer for 7th Ave South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Buried Electric Line		X
UND-18	31	803+96	77.8	LT	to	805+19	102.0	RT	Crossing	OCL_7th_WB	217.1	FT	-5 (Excavation of Storm Sewer for 7th Ave South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Buried Electric Line		X
UND-19	31	803+96	77.8	LT	to	804+91	98.6	RT	Crossing	OCL_7th_WB	200.1	FT	-5 (Excavation of Storm Sewer for 7th Ave South)	Level 4	See Special Provision Note I. UND	University of North Dakota	Buried Electric Line		X
UND-20	30	539+34	23.5	LT	to	539+64	21.5	RT	Crossing	PPSD_20IN_Line	54.4	FT	-7.5 (Proposed Water Main)	Level 2	See Special Provision Note III. UND	University of North Dakota	Sanitary Sewer	X	
UND-21	30	538+93	22.5	LT	to	539+26	18.7	RT	Crossing	PPSD_20IN_Line	50.5	FT	-7.5 (Proposed Water Main)	Level 2	See Special Provision Note III. UND	University of North Dakota	Storm Sewer	X	

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
UND-22	31	803+96	77.8	LT	to	807+75	226.0	LT	LT	OCL_7th_WB	391.9	FT	-8 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Buried Electric Line		X
UND-23	30	538+45	35.1	LT	to	538+73	7.4	LT	LT	PPSD_20IN_Line	39.7	FT	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note ll. UND	University of North Dakota	Water Line		X
UND-24	30	538+45	35.1	LT	to	-	-	-	LT	PPSD_20IN_Line	1.0	EA	0	Level 4	See Special Provision Note ll. UND	University of North Dakota	Sprinkler Valve		X
UND-25	30	538+24	14.6	LT	to	538+45	35.1	LT	LT	PPSD_20IN_Line	29.0	FT	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note ll. UND	University of North Dakota	Water Line		X
UND-26.1	31	553+71	7.6	LT	to	-	-	-	LT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Head		X
UND-26.2	31	554+18	38.7	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Head		X
UND-26.3	31	553+70	91.5	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Head		X
UND-26.4	31	553+26	43.6	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Head		X
UND-27.1	31	553+53	93.6	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Valve		X
UND-27.2	31	553+54	92.2	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Valve		X
UND-28	31	553+63	39.3	LT	to	553+63	39.3	LT	LT	PPSD_20IN_Line	297.7	FT	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Water Line		X
UND-29	31	802+65	129.9	LT	to	-	-	-	LT	OCL_7th_WB	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Head		X
UND-30	31	802+94	119.0	LT	to	-	-	-	LT	OCL_7th_WB	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Valve		X
UND-31	31	803+93	80.4	LT	to	-	-	-	LT	OCL_7th_WB	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note l. UND	University of North Dakota	Sprinkler Valve		X

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
UND-32	31	555+19	23.1	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-33	31	555+55	78.4	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
UND-34	31	555+96	141.9	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Valve		X
UND-35	31	553+20	164.1	RT	to	-	-	-	RT	PPSD_20IN_Line	1.0	EA	-7.5 (Proposed Water Main)	Level 4	See Special Provision Note I. UND	University of North Dakota	Sprinkler Head		X
XCEENE-G-1	33,39	207+44	64.7	RT	to	208+51	43.0	RT	RT	OCL_297EB	134.5	FT	-2	Level 2	See Special Provision Note: I.XCEENE.	Xcel Energy	Gas Main	X	
XCEENE-G-2	33,39	208+54	65.5	LT	to	208+58	196.7	LT	LT	OCL_297EB	136.2	FT	-3	Level 2	See Special Provision Note: I.XCEENE.	Xcel Energy	Gas Main	X	
XCEENE-G-3	33	1924+13	45.6	RT	to	1924+91	63.9	RT	RT	SOUTH SHOOFLY	79.5	FT	-3	Level 2	See Special Provision Note: I.XCEENE.	Xcel Energy	Gas Main	X	
XCEENE-G-4	33,36,39	208+51	43.0	RT	to	211+09	54.3	RT	RT	OCL_297EB	258.4	FT	-14 (Excavation for Underpass)	Level 4	See Special Provision Note: II.XCEENE.	Xcel Energy	Gas Main		X
XCEENE-PR4.1	37,39	709+33	37.7	LT	to	715+94	51.9	LT	LT	OCL_43RD	639.0	FT	-	Proposed Level 2	See Special Provision Note II. Resolution for XCEENE-G-4	Xcel Energy	Gas Main	X	
XCEENE-G-5	34,35	705+14	44.4	LT	to	709+96	18.5	LT	LT	OCL_42nd_SB	479.1	FT	-3	Level 2	See Special Provision Note: I.XCEENE.	Xcel Energy	Gas Main	X	
XCEENE-G-6	33,35,36,37,38,39	709+90	18.3	LT	to	717+50	64.4	LT	LT	OCL_42nd_SB	771.8	FT	-14 (Excavation for Underpass)	Level 4	See Special Provision Note: II.XCEENE.	Xcel Energy	Gas Main		X
XCEENE-PR6.1	33,39	715+94	51.9	LT	to	208+51	43.0	RT	LT/RT	OCL_43RD / OCL_297EB	208.8	FT	-	Proposed Level 2	See Special Provision Note II. Resolution for XCEENE-G-6	Xcel Energy	Gas Main	X	
XCEENE-E-7	33,36	720+15	93.8	RT	to	727+65	65.0	RT	RT	OCL_42nd_SB	754.1	FT	-12 (Excavation for Underpass)	Level 4	See Special Provision Note: III.XCEENE.	Xcel Energy	Overhead Electric		X
XCEENE-PR7.1	33,37	723+15	246.8	RT	to	727+65	65.0	RT	RT	OCL_42nd_SB	500.0	FT	-	Proposed Level 2	See Special Provison Note: III.XCEENE. Resolution for XCEENE-7	Xcel Energy	Overhead Electric	X	

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
XCEENE-E-8	33,36	1919+98	11.7	LT	to	-	-	-	LT	SOUTH SHOOFLY	3.0	EA	-12 (Excavation for Underpass)	**Level 4**	See Special Provision Note: lll.XCEENE.	Xcel Energy	Electric Meters		X
XCEENE-PR8.1	32	1914+80	57.0	RT	to	-	-	-	RT	SOUTH SHOOFLY	3.0	EA	-	**Proposed Level 2**	See Special Provison Note: lll.XCEENE. Resolution for XCEENE-8	Xcel Energy	Electric Meter	X	
XCEENE-E-9	32,33	1914+80	57.3	RT	to	1919+99	11.7	LT	Crossing	SOUTH SHOOFLY	523.6	FT	-12 (Excavation for Underpass)	**Level 4**	See Special Provision Note: lll.XCEENE.	Xcel Energy	Overhead Electric		X
XCEENE-PR9.1	32,33,36	1914+80	57.3	RT	to	1918+58	288.3	RT	RT	SOUTH SHOOFLY	468.9	FT	-	**Proposed Level 2**	See Special Provison Note: lll.XCEENE. Resolution for XCEENE-9	Xcel Energy	Overhead Electric	X	
XCEENE-E-10	33,36	720+00	80.1	LT	to	720+30	82.1	RT	Crossing	OCL_42nd_SB	165.0	FT	-14 (Excavation for Underpass)	**Level 4**	See Special Provision Note: lV.XCEENE.	Xcel Energy	Buried Electric Line		X
XCEENE-PR10.1	33,36	1919+49	91.4	RT	to	1921+67	82.8	RT	RT	SOUTH SHOOFLY	231.0	FT	-	**Proposed Level 2**	See Special Provison Note: lV.XCEENE. Resolution for XCEENE-10	Xcel Energy	Buried Electric Line	X	
XCEENE-E-11	33,36	1919+99	36.6	RT	to	1920+10	4.7	RT	RT	SOUTH SHOOFLY	33.6	FT	-3 (Shoofly Tracks)	**Level 4**	See Special Provision Note: lV.XCEENE.	Xcel Energy	Buried Electric Line		X
XCEENE-PR11.1	33,36	1919+49	91.4	RT	to	1920+10	59.5	LT	Crossing	SOUTH SHOOFLY	163.3	FT	-	**Proposed Level 2**	See Special Provison Note: lV.XCEENE. Resolution for XCEENE-11	Xcel Energy	Buried Electric Line	X	
XCEENE-PR11.2	33,36	1919+49	91.4	RT	to	1919+93	11.5	LT	Crossing	SOUTH SHOOFLY	112.2	FT	-	**Proposed Level 2**	See Special Provison Note: lV.XCEENE. Resolution for XCEENE-11	Xcel Energy	Buried Electric Line	X	
XCEENE-PR11.3	33,36,37	1919+49	91.4	RT	to	1919+97	215.0	RT	RT	SOUTH SHOOFLY	136.7	FT	-	**Proposed Level 2**	See Special Provison Note: lV.XCEENE. Resolution for XCEENE-11	Xcel Energy	Buried Electric Line	X	
XCEENE-E-12	33,36	1919+99	36.6	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-12 (Excavation for Underpass)	**Level 4**	See Special Provision Note: lll.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR12.1	33,36	1919+49	91.4	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-	**Proposed Level 2**	See Special Provison Note: lll.XCEENE. Resolution for XCEENE-12	Xcel Energy	Proposed Transformer	X	
XCEENE-E-13	33,37	722+41	83.7	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-7.5 (Removal of existing Watermain)	**Level 4**	See Special Provision Note: lll.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR13.1	33,37	724+63	148.3	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-	**Proposed Level 2**	See Special Provison Note: lll.XCEENE. Resolution for XCEENE-13	Xcel Energy	Power Pole	X	

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
XCEENE-E-14	37	327+61	91.7	LT	to	327+63	29.0	RT	Crossing	OCL_42nd_NB	120.8	FT	-3	Level 2	See Special Provision Note: VI.XCEENE.	Xcel Energy	Buried Electric Line	X	
XCEENE-E-15	33	1916+55	24.0	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-3 (Shoofly Tracks)	Level 4	See Special Provision Note: III.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR15.1	32,33	1915+83	81.6	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-	Proposed Level 2	See Special Provison Note: III.XCEENE. Resolution for XCEENE-15	Xcel Energy	Power Pole	X	
XCEENE-E-16	33,36	1921+74	6.0	LT	to	1925+24	63.7	RT	Crossing	SOUTH SHOOFLY	356.6	FT	-14 (Excavation for Underpass)	Level 4	See Special Provision Note: IV.XCEENE.	Xcel Energy	Buried Electric Line		X
XCEENE-PR16.1	33,36	1921+67	82.8	RT	to	1925+24	63.7	RT	RT	SOUTH SHOOFLY	364.1	FT	-	Proposed Level 2	See Special Provison Note: IV.XCEENE. Resolution for XCEENE-16	Xcel Energy	Buried Electric Line	X	
XCEENE-E-17	33,36	1918+29	4.6	LT	to	-	-	-	LT	SOUTH SHOOFLY	1.0	EA	-3 (Shoofly Tracks)	Level 4	See Special Provision Note: III.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR17.1	33	1917+42	168.7	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-	Proposed Level 2	See Special Provison Note: III.XCEENE. Resolution for XCEENE-17	Xcel Energy	Power Pole	X	
XCEENE-E-18	32	1914+80	57.1	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-3 (Shoofly Tracks)	Level 2	See Special Provision Note: VI.XCEENE.	Xcel Energy	Power Pole	X	
XCEENE-E-19	33,37	724+20	73.3	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-7.5 (Removal of existing Watermain)	Level 4	See Special Provision Note: III.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR19.1	37	726+21	80.0	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-	Proposed Level 2	See Special Provison Note: III.XCEENE. Resolution for XCEENE-19	Xcel Energy	Power Pole	X	
XCEENE-E-20	37	726+02	67.5	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-3	Level 4	See Special Provision Note: III.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR20.1	37	726+21	80.0	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-	Proposed Level 2	See Special Provison Note: III.XCEENE. Resolution for XCEENE-20	Xcel Energy	Power Pole	X	
XCEENE-E-21	33,36	1919+97	12.4	LT	to	-	-	-	LT	SOUTH SHOOFLY	1.0	EA	-14 (Excavation for Underpass)	Level 4	See Special Provision Note: III.XCEENE.	Xcel Energy	Power Pole		X
XCEENE-PR21.1	33,37	723+15	246.7	RT	to	-	-	-	RT	OCL_42nd_SB	1.0	EA	-	Proposed Level 2	See Special Provison Note: III.XCEENE. Resolution for XCEENE-21	Xcel Energy	Power Pole	X	

Utility Coordination Table Appendix A of SP 395(24)

RCE-FTF-NHU-SU-6-297(014)000 PCN 24115

UE ID# UR ID# PR ID#	Utility Coordination Exhibits	Beginning Point			to	Ending Point			LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	UTILITY ENCOUNTER TYPE (UE)	
		Sta.	Offset (FT)	RT/LT		Sta.	Offset (FT)	RT/LT										Protect in Place	Conflict
XCEENE-E-22	37	327+63	29.0	RT	to	-	-	-	RT	OCL_42nd_NB	1.0	EA	-3	Level 2	See Special Provision Note: VI.XCEENE.	Xcel Energy	Power Pole	X	
XCEENE-G-23	33,39	208+51	43.0	RT	to	208+54	65.5	LT	Crossing	OCL_297EB	108.5	FT	-7.5 (New Watermain / Storm Sewer Drain)	Level 3	See Special Provision Note: V.XCEENE.	Xcel Energy	Gas Main		X
XCEENE-E-24	33,36	1920+10	4.7	RT	to	-	-	-	RT	SOUTH SHOOFLY	1.0	EA	-3 (Shoofly Tracks)	Level 4	See Special Provision Note: IV.XCEENE.	Xcel Energy	Electric Locker		X
XCEENE-E-25	32,33,36	1914+79	53.4	RT	to	1918+30	4.6	LT	Crossing	SOUTH SHOOFLY	357.6	FT	-3 (Shoofly Tracks)	Level 4	See Special Provision Note: IV.XCEENE.	Xcel Energy	Buried Electric Line		X
XCEENE-PR25.1	33,37	722+11	110.5	RT	to	727+65	65.0	RT	RT	OCL_42nd_SB	562.2	FT	-	Proposed Level 2	See Special Provison Note: IV.XCEENE. Resolution for XCEENE-25	Xcel Energy	Buried Electric Line	X	
XCEENE-E-26	32	1914+31	62.1	RT	to	1914+79	53.4	RT	RT	SOUTH SHOOFLY	47.4	FT	-3 (BNSF Access Road)	Level 2	See Special Provision Note: VI.XCEENE.	Xcel Energy	Buried Electric Line	X	

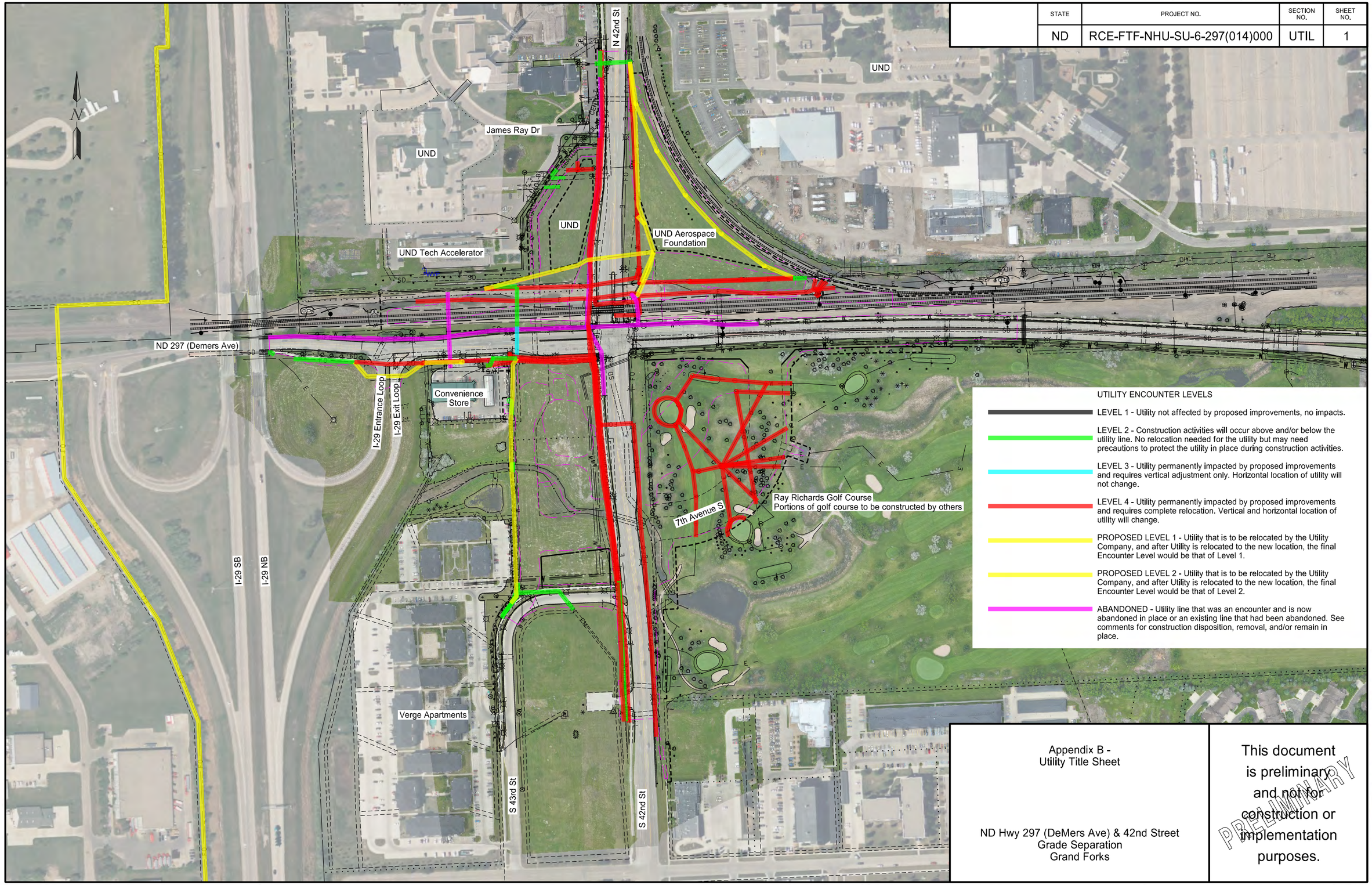
UTILITY COMPANY INFORMATION

UTILITY COMPANY	CONTACT NAME	PHONE NUMBER	EMAIL
Bluepeak Fiber (BLUFIB)	Ryan Lynch	701-213-2622	ryan.lynch@mybluepeak.com
Burlington Northern Santa Fe Railroad (BUNSFR)	Sawyer Mosser Daniel Peltier	763-782-3057	sawyer.mosser@BNSF.com daniel.peltier@BNSF.com
Convenience Store (CONSTO)	Joel Geil	952-830-8884	joel.geil@circlek.com
Centurylink/Lumen (CENLIN)	Trevor Christenson	701-770-5574	trevor.a.christenson@lumen.com
Centurylink/Lumen (CENLIN)	Adam Kramer	701-556-3307	adamk@master-construction.net
Magellan Pipeline Co. (MAPICO)	Paul Klabunde	701-793-8377	paul.klabunde@oneok.com
Midco (MIDCO)	Scott Pede	701-335-4230	scott.pede@midco.com
Midco (MIDCO)	Jason Venem	701-739-0299	jason.venem@midco.com
North Dakota Department of Transportation (NDDOT)	Jason Peterson	701-787-6558	jpeterson@nd.gov
Nodak Rural Electric Coop (NORUEC)	Cole Johnson	701-795-6750	cjohnson@nodakelectric.com
University of North Dakota (UND)	Todd Garman	701-777-5458	todd.garman@und.edu
University of North Dakota (UND)	Robert Hodek	701-777-4134	robert.hodek@und.edu
Xcel Energy - Electric (XCEENE)	Kyle Christenson	701-795-5229	kyle.c.christenson@xcelenergy.com
Xcel Energy - Gas (XCEENE)	Brennen Wilkens	701-795-5218	brennen.wilkens@xcelenergy.com
City of Grand Forks	David Kuharenko	701-799-8267	dkuharenko@grandforksgov.com

UTILITY ENCOUNTER LEVEL DESIGNATIONS

UE LEVEL	DESCRIPTION
Level 1	Utility not affected by proposed improvements, no impacts.
Level 2	Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activities.
Level 3	Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.
Level 4	Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.
Proposed Level 1	Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.
Proposed Level 2	Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.
Abandoned	Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	1



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activities.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Appendix B -
Utility Title Sheet

ND Hwy 297 (DeMers Ave) & 42nd Street
Grade Separation
Grand Forks

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:17:35 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\01_Utility Title Sheet.dgn

© 2025 Microsoft Corporation © 2025 Maxar ©CNES (2025) Distribution Airbus DS

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	2

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Appendix B -
Utility Coordination Exhibits

Bluepeak Fiber - BLUFIB

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	3

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Bluepeak Fiber - BLUFIB

Grand Forks, ND

42nd St. & DeMers Ave, Grade Separation
43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:17:59 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\Bluepeak Fiber_Utilities_Exhibits.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	4

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Note: See Section 170c for Shoofly & Mainline Railroad Construction Plans

Appendix B -
Utility Coordination Exhibits

Burlington Northern Sante Fe Railroad - BUNSFR

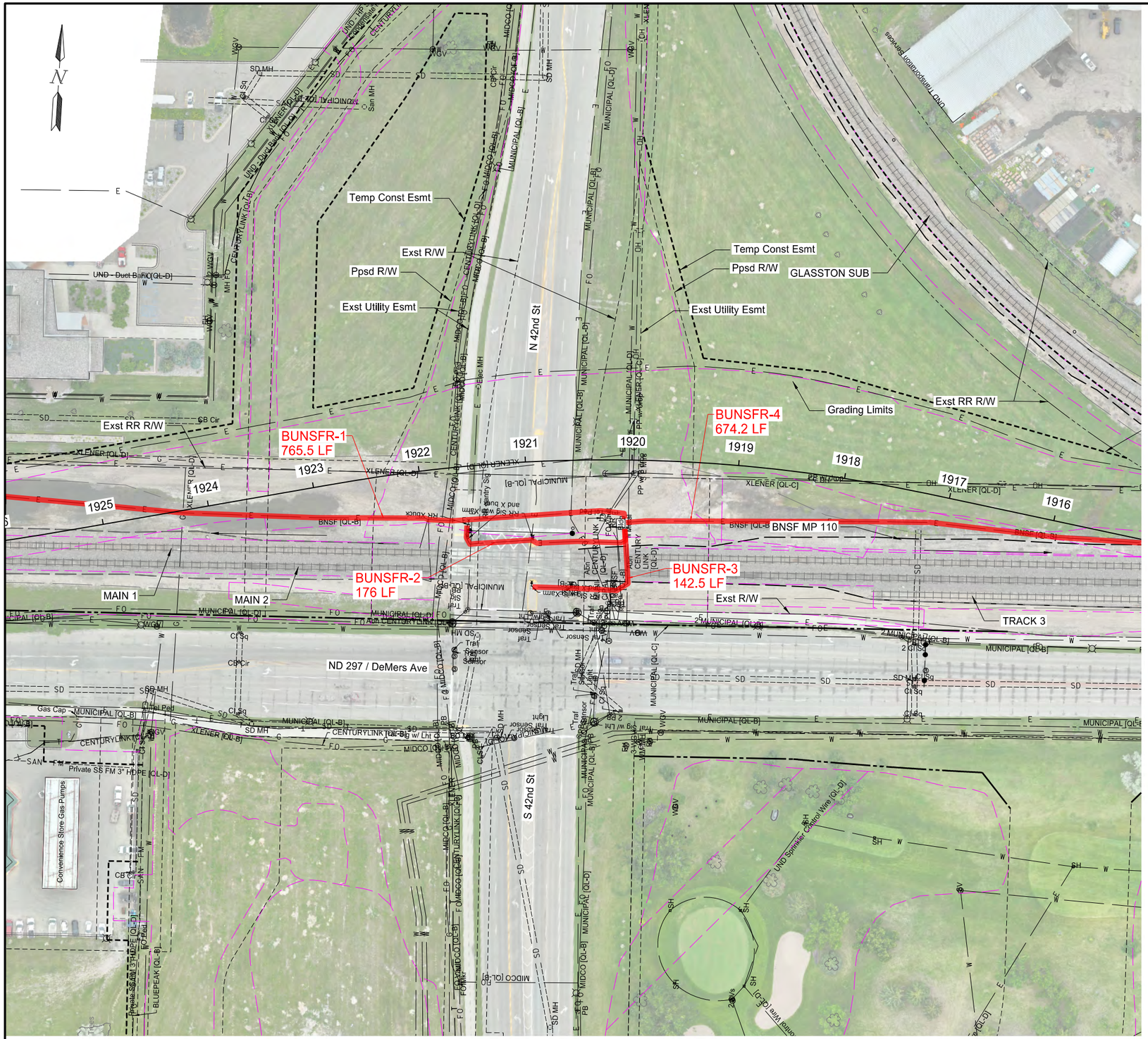
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
South Shoofly Tracks

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	5



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Note: See Section 170c for Shoofly & Mainline Railroad Construction Plans

Appendix B -
Utility Coordination Exhibits

Burlington Northern Santa Fe Railroad - BUNSFR

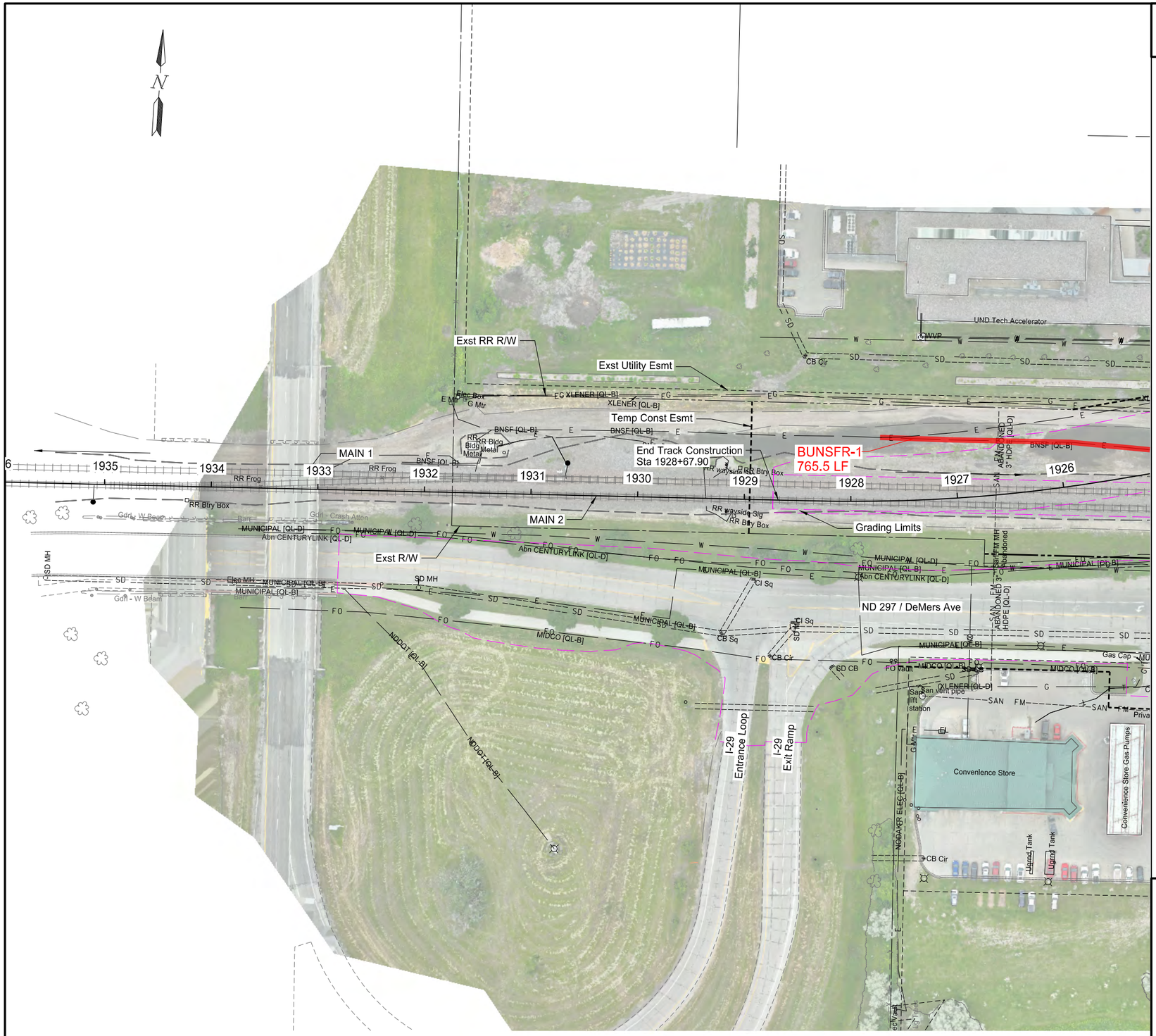
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
South Shoofly Tracks

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	6



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Note: See Section 170c for Shoofly & Mainline Railroad Construction Plans

Appendix B -
Utility Coordination Exhibits

Burlington Northern Sante Fe Railroad - BUNSFR

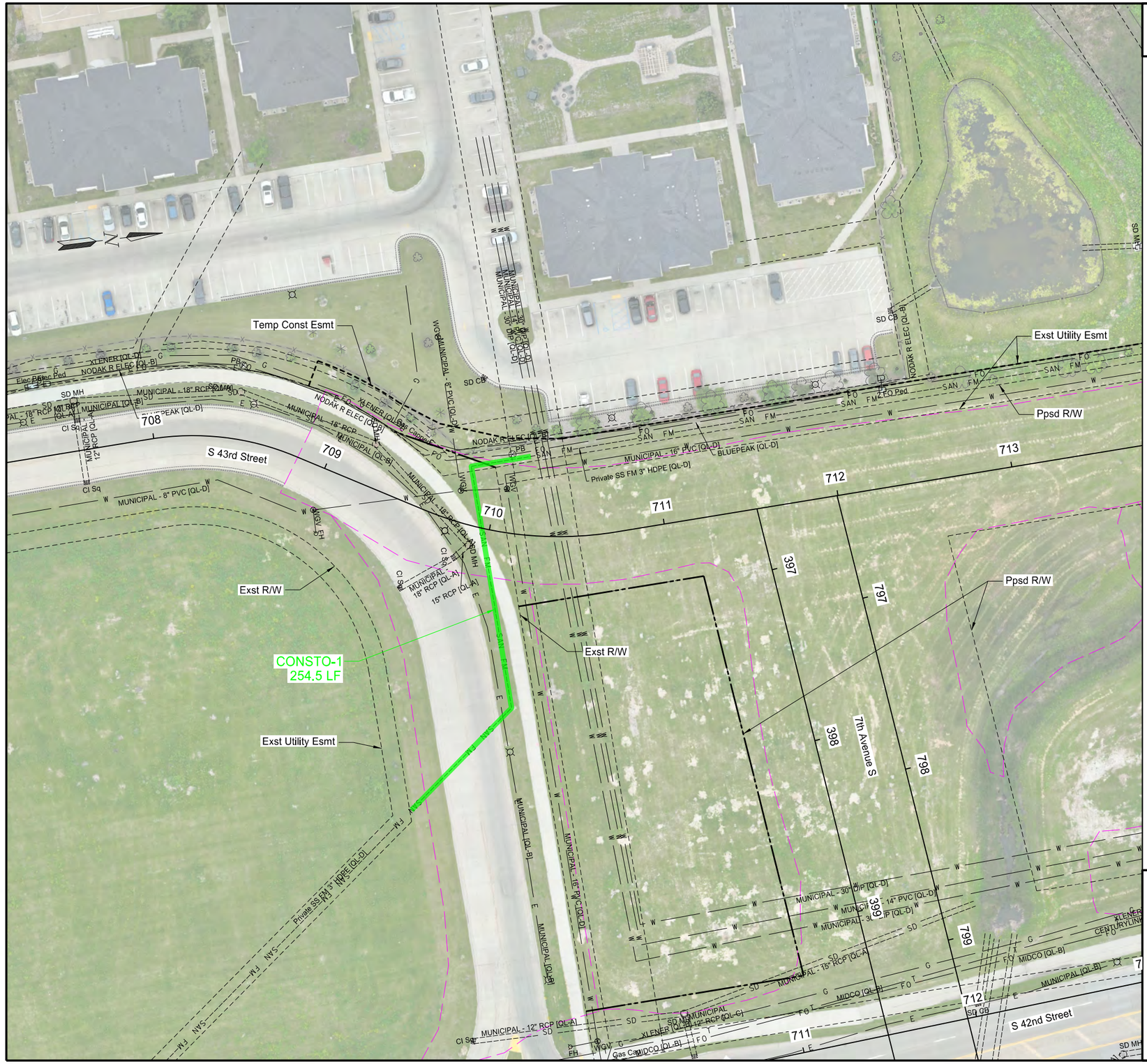
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
South Shoofly Tracks

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	7



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Convenience Store - CONSTO

Grand Forks, ND

42nd St. & DeMers Ave, Grade Separation
43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	8

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Convenience Store - CONSTO

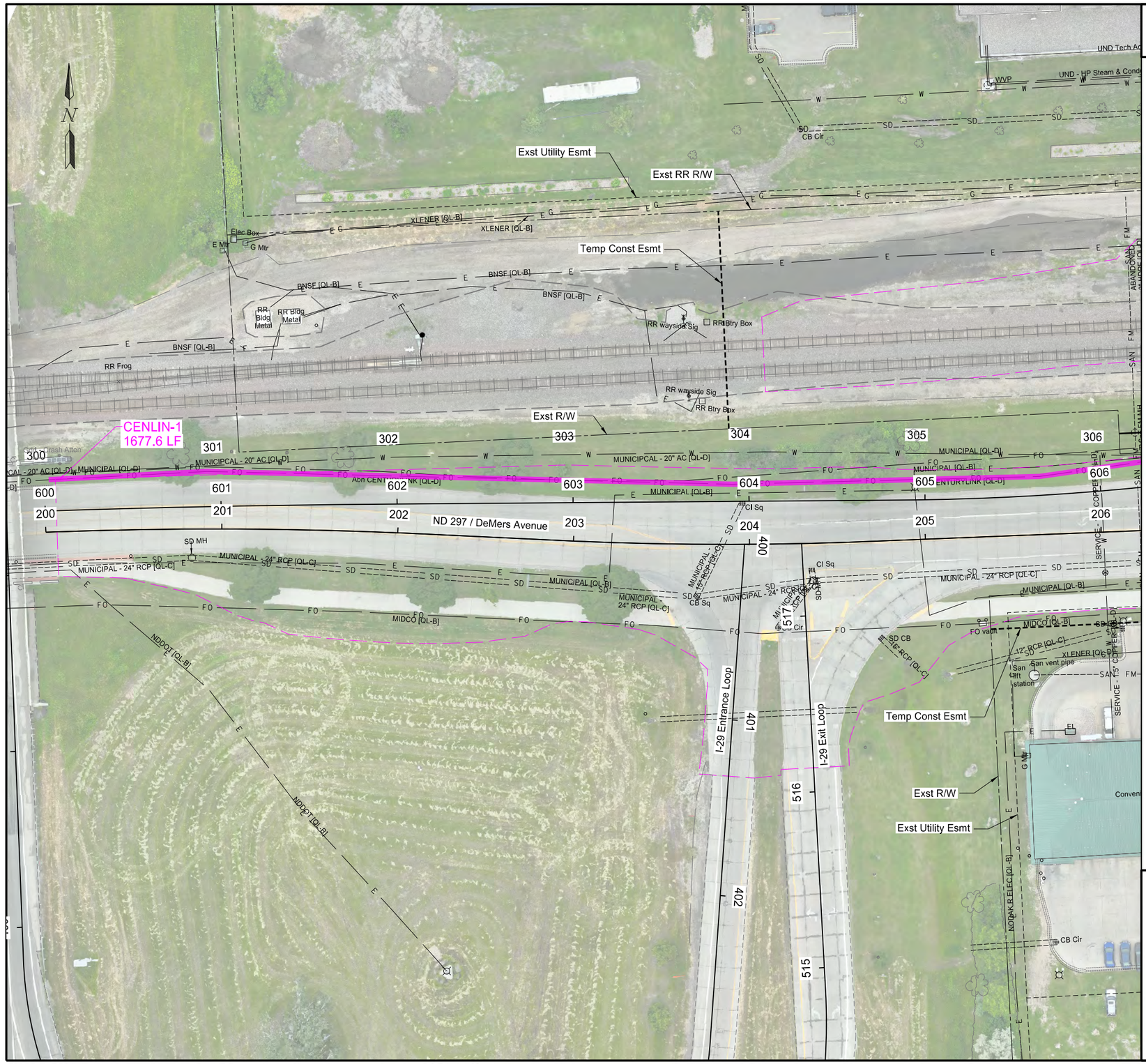
Grand Forks, ND

42nd St. & DeMers Ave, Grade Separation
43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	9



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	10

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

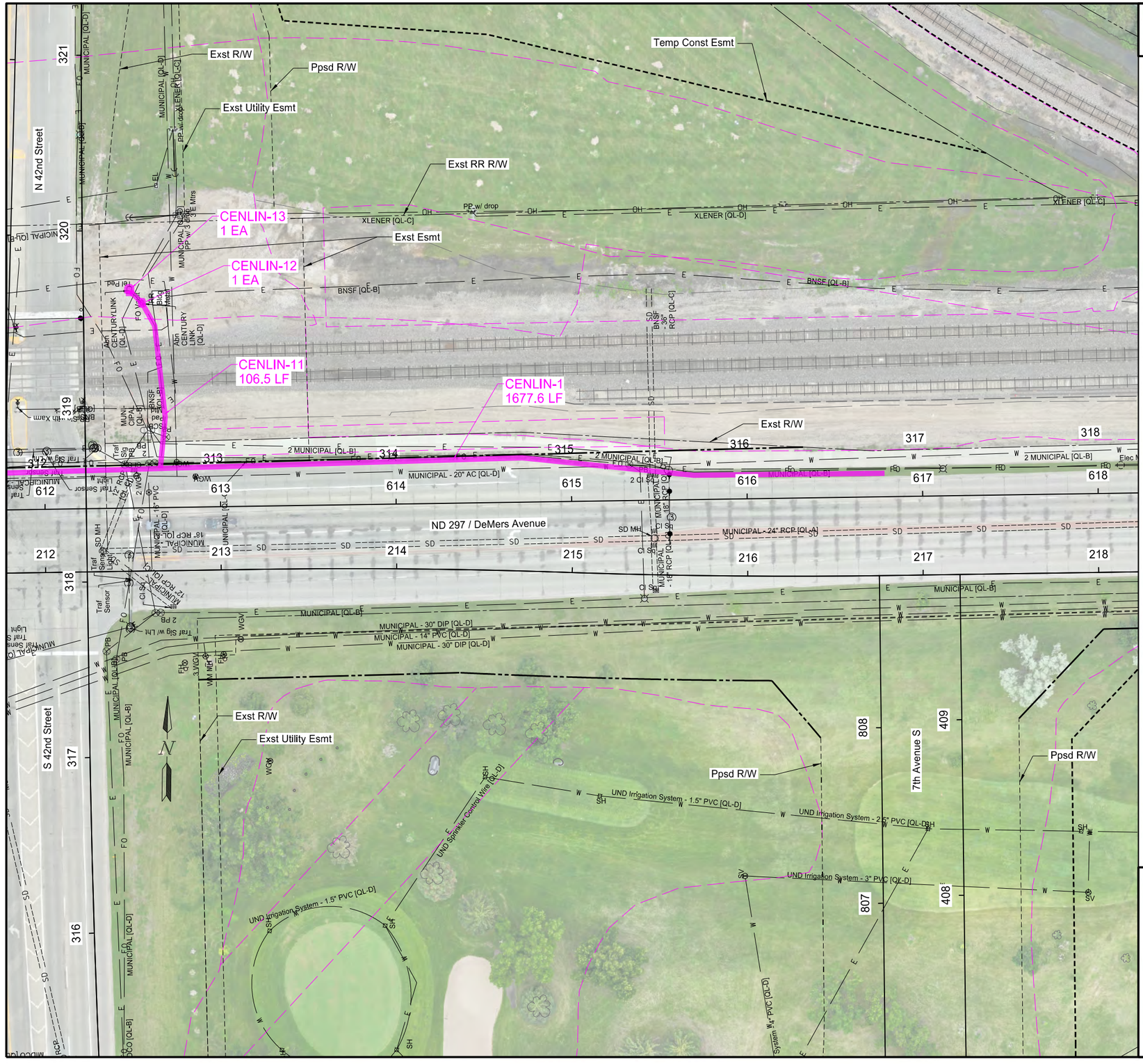
42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:18:27 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\07-13_Century Link.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	11



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	12

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

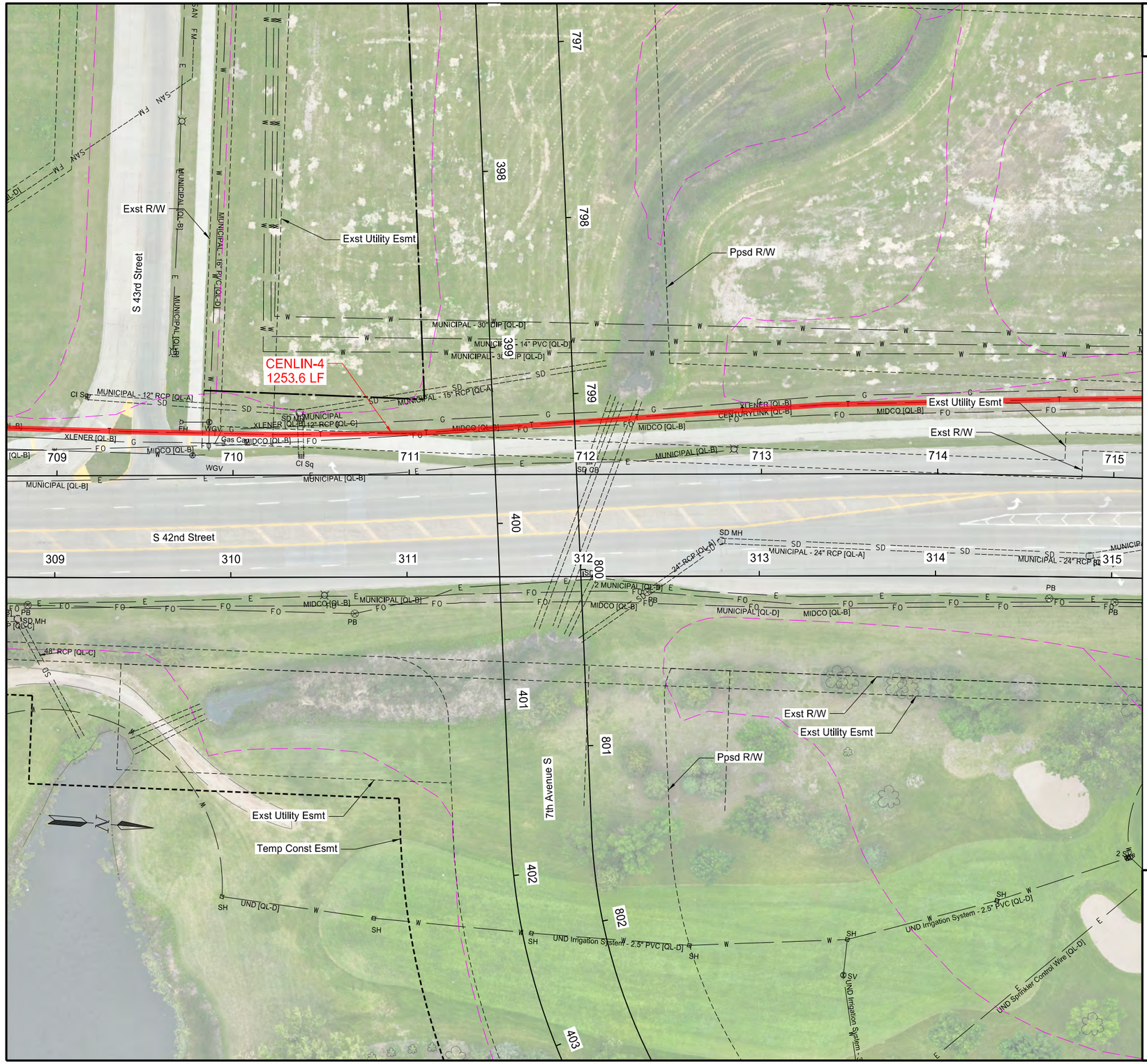
42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:18:35 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\07-13_Century Link.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	13



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	14

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

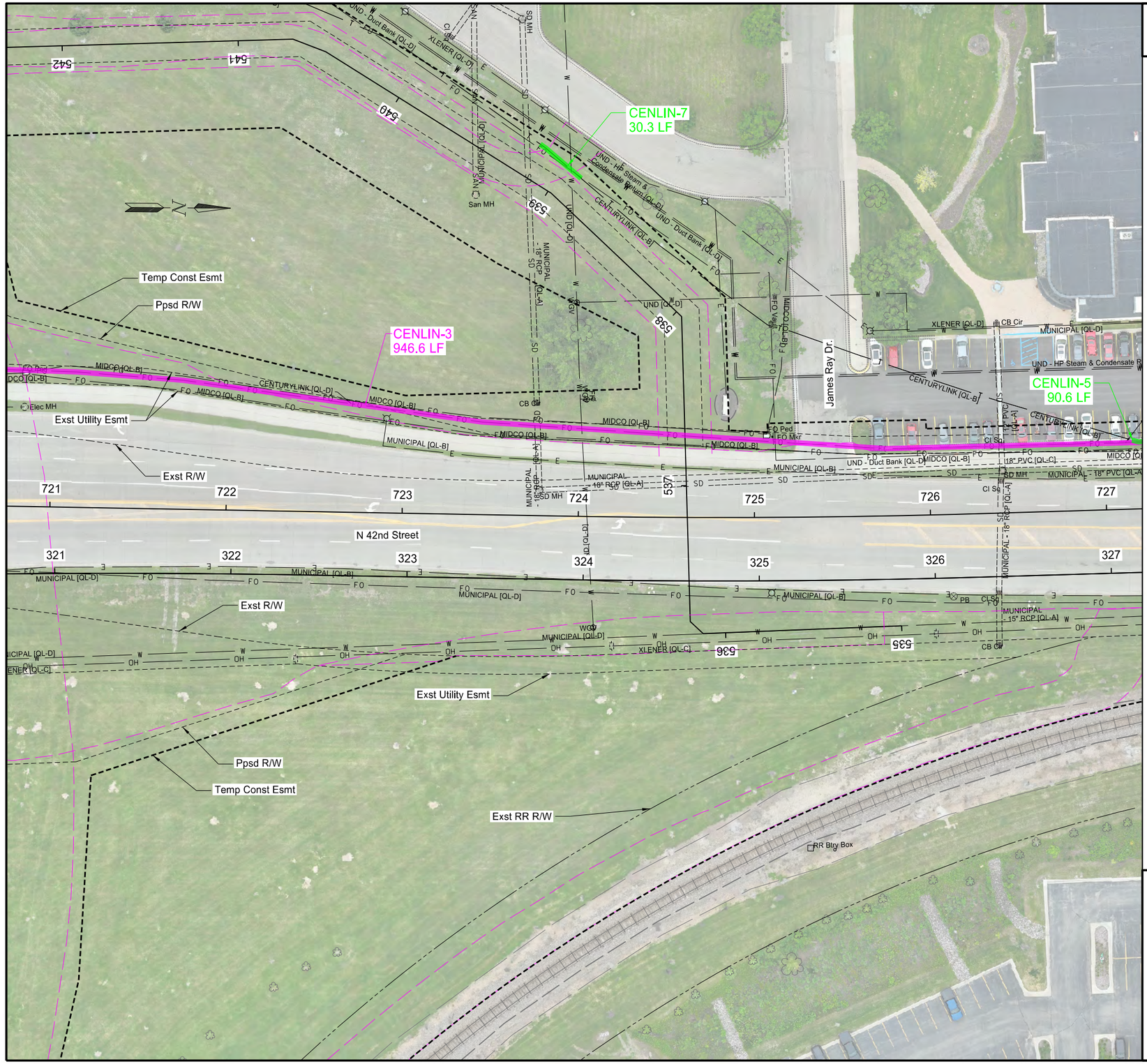
42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:18:38 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\07-13_Century Link.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	15



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

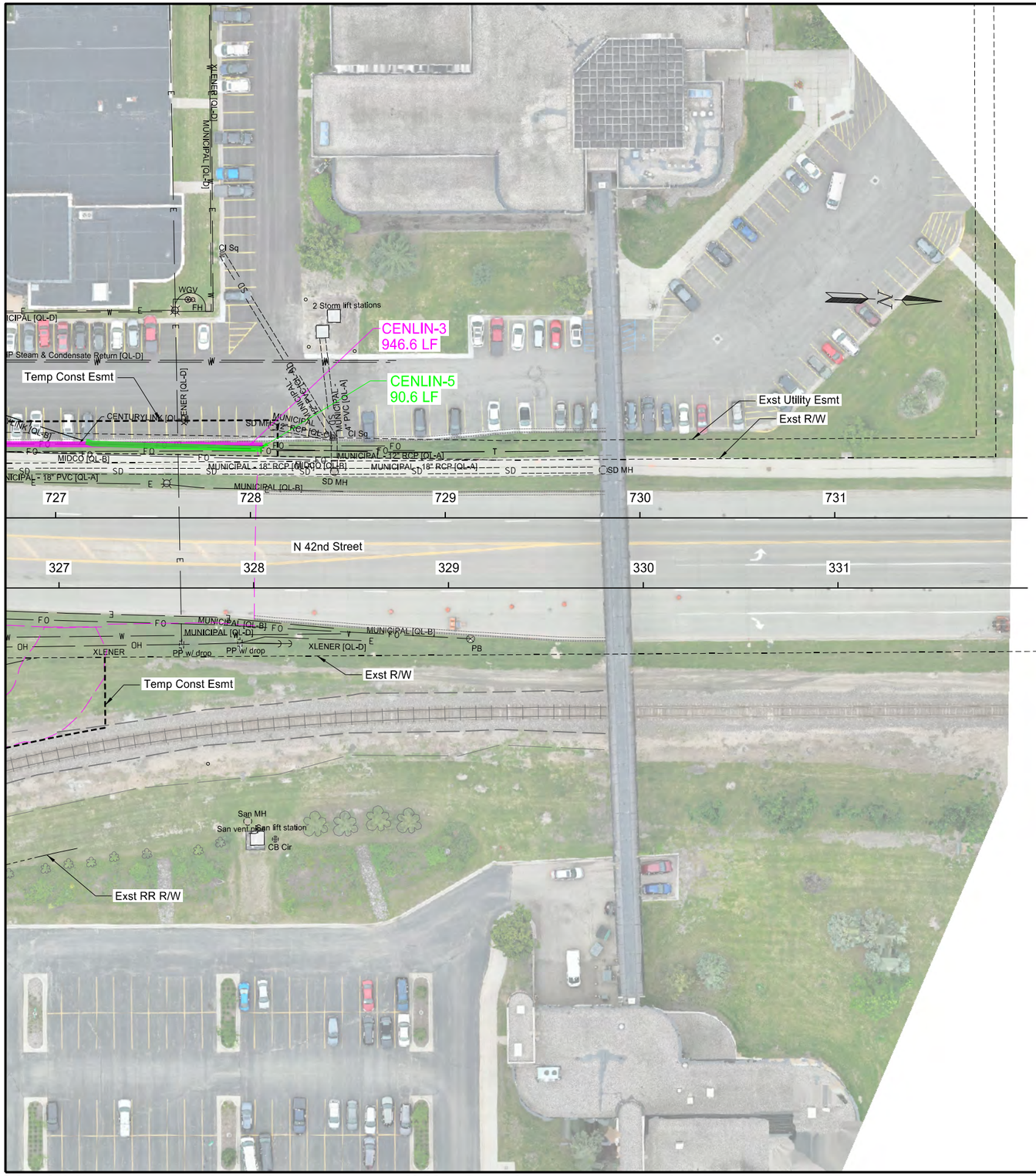
CenturyLink - CENLIN

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	16

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

CenturyLink - CENLIN

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	17

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Magellan Pipeline Co. - MAPICO

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	18

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

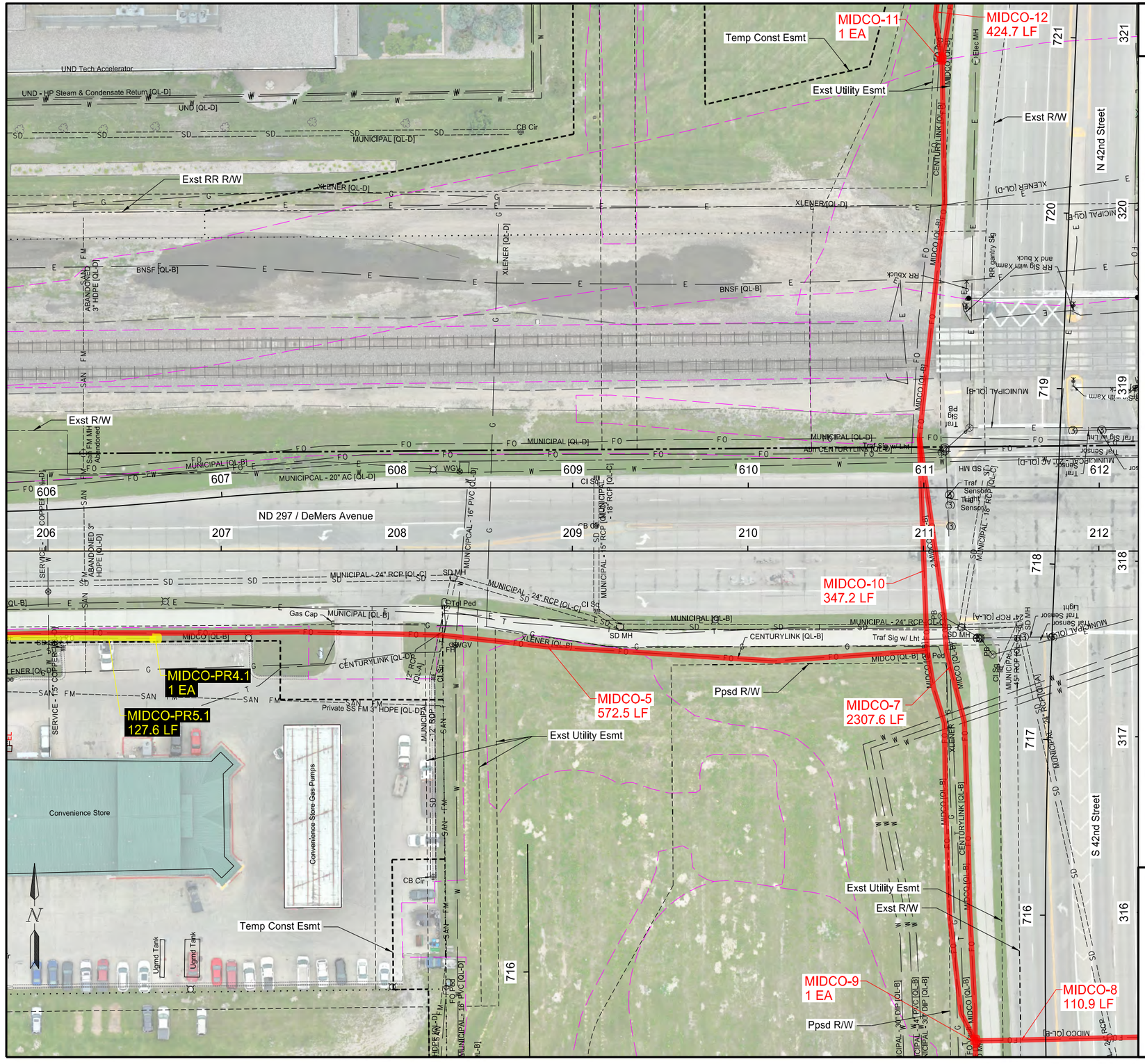
42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:18:49 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\15-21_Midco.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	19



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	20

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:18:51 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\15-21_Midco.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	21

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

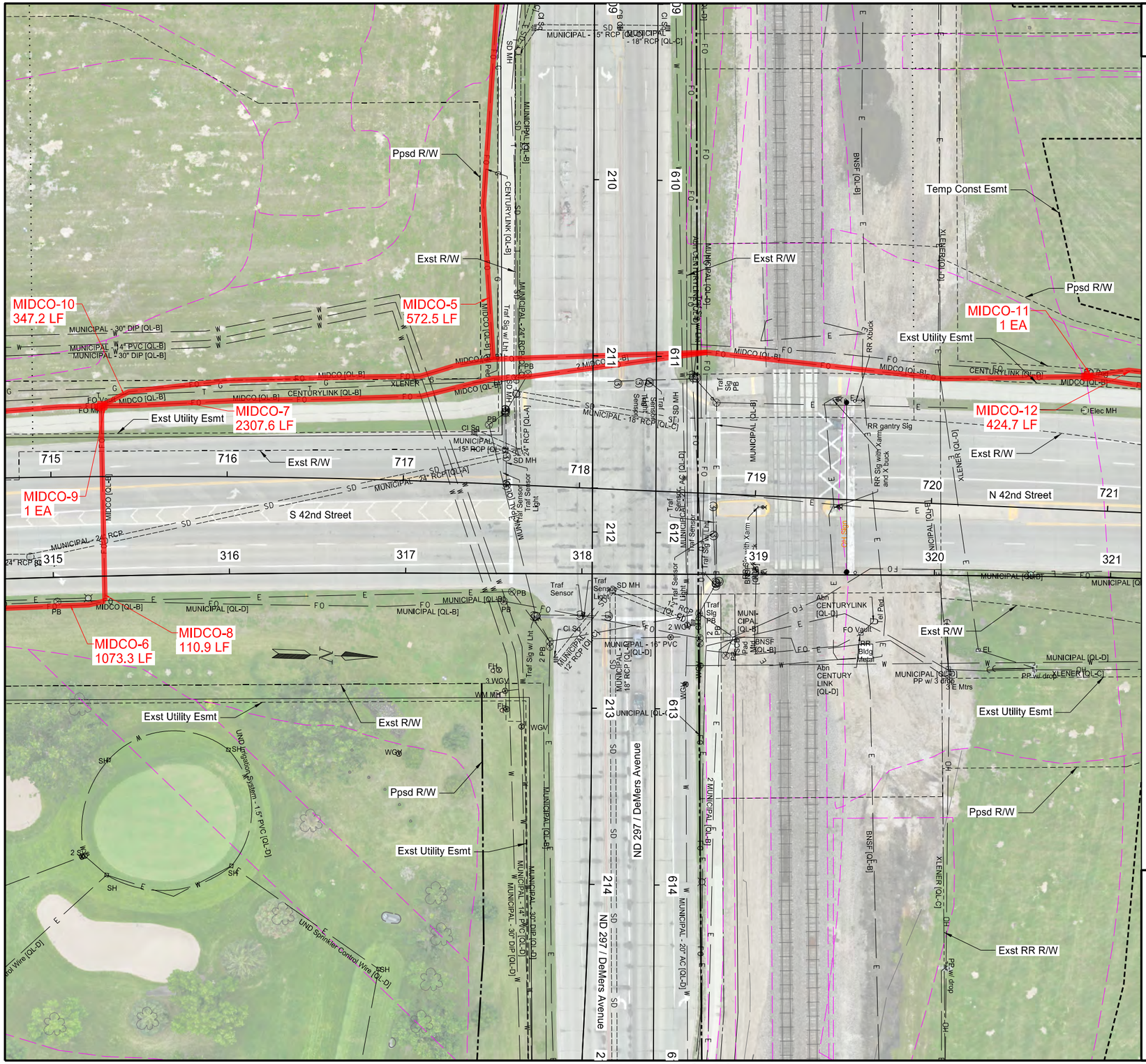
42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:18:52 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\15-21_Midco.dgn

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	22



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

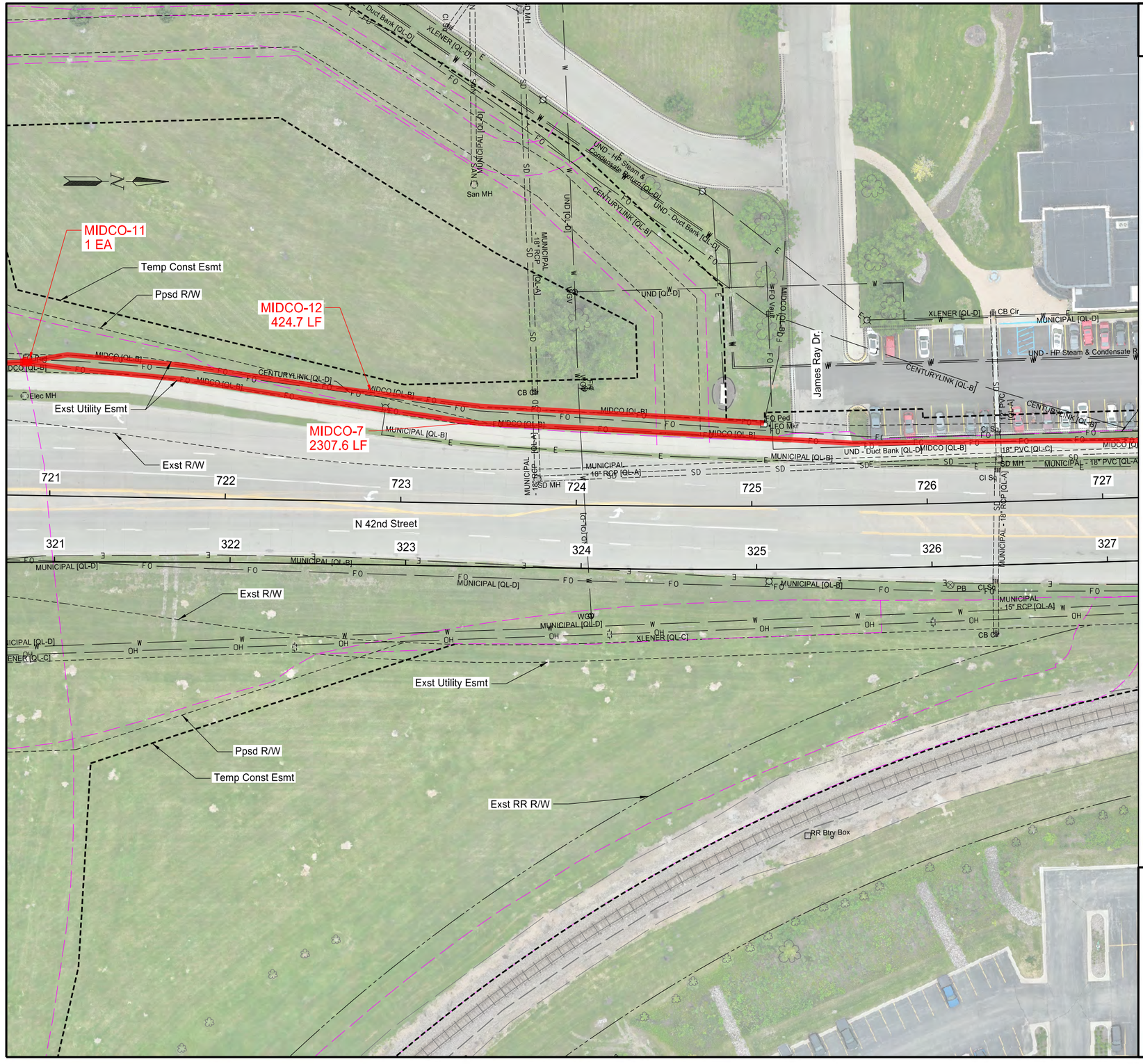
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	23



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

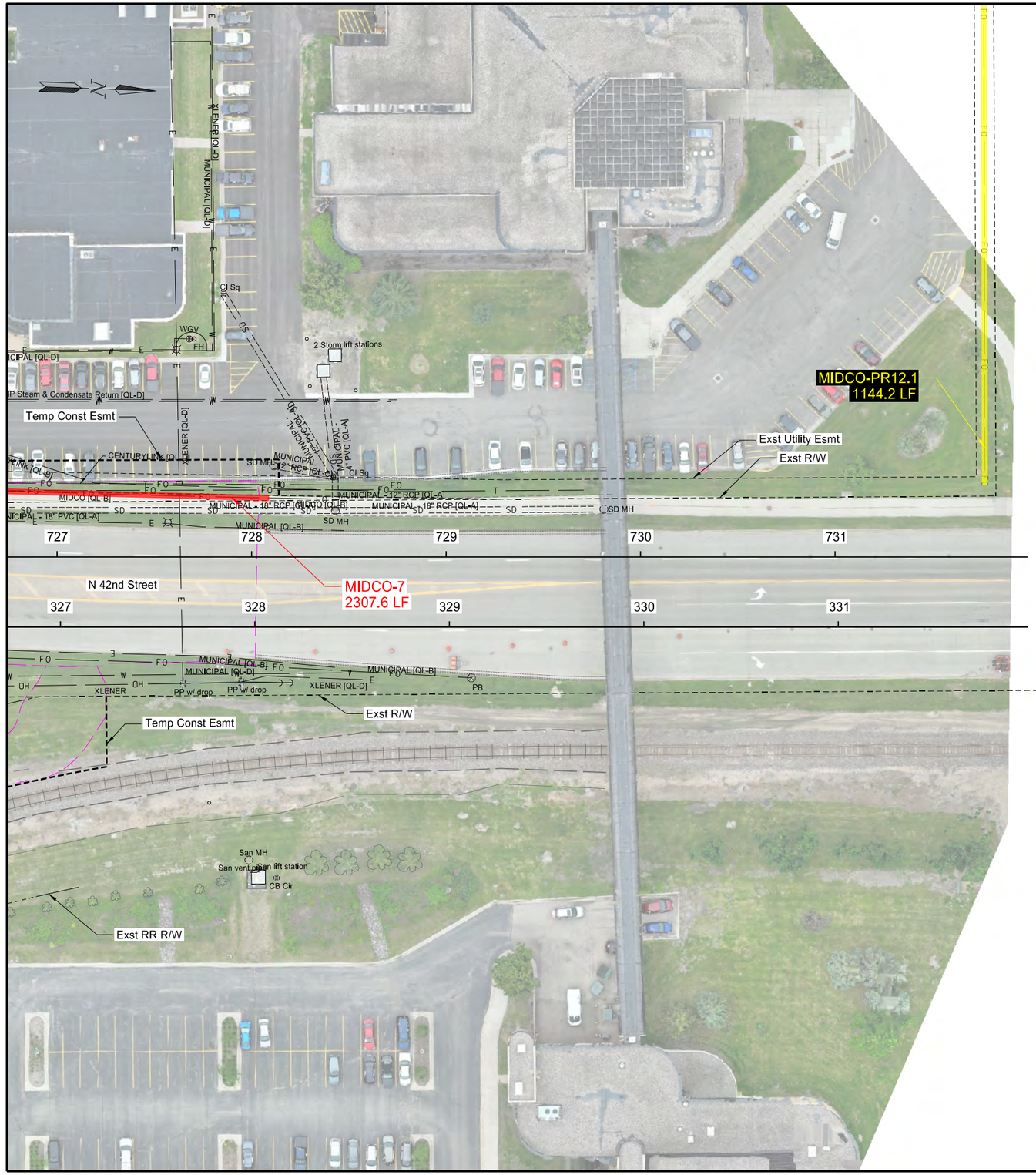
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	24



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	25

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utiity in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

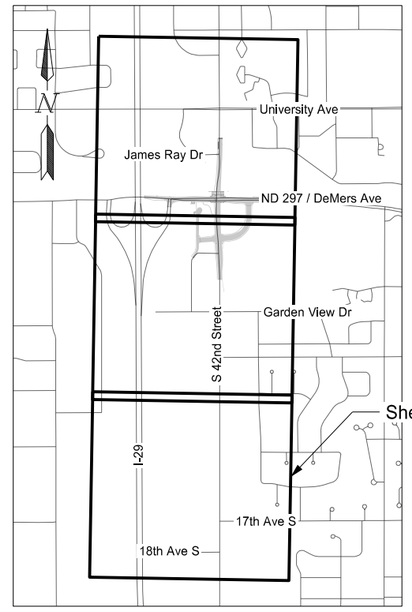
PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits



Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
I-29 - Relocation Route

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

© 2025 Microsoft Corporation © 2025 Maxar ©CNES (2025) Distribution Airbus DS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	26

MIDCO-2
235.3 LF

MIDCO-9
1 EA

MIDCO-8
110.9 LF

MIDCO-6
1073.3 LF

7th Avenue S

MIDCO-PR8.1
1288.1 LF

Reference Pt 140

43rd Street

MIDCO-7
2307.6 LF

S 42nd Street

Exst R/W

Exst Esmt

Exst R/W

Exst R/W

Exst Esmt

Exst Esmt

Exst R/W

Garden View Dr

Exst Esmt

I-29 SB

I-29 NB

11th Aveune S

MIDCO-PR7.1
3992.1 LF

Alerus Center

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utiilty in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

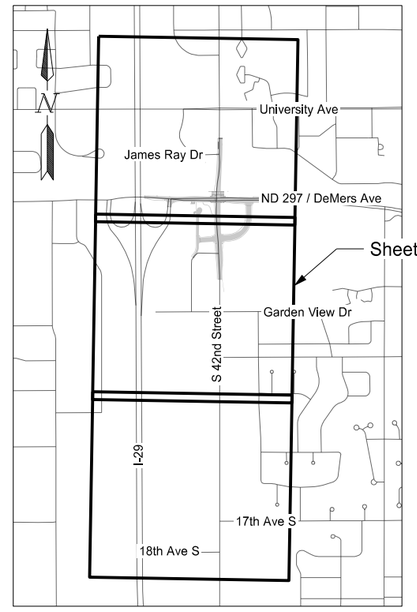
PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits



Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

42nd St. & DeMers Ave, Grade Separation
I-29 - Relocation Route

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

© 2025 Microsoft Corporation © 2025 Maxar ©CNES (2025) Distribution Airbus DS

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	27

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utiity in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

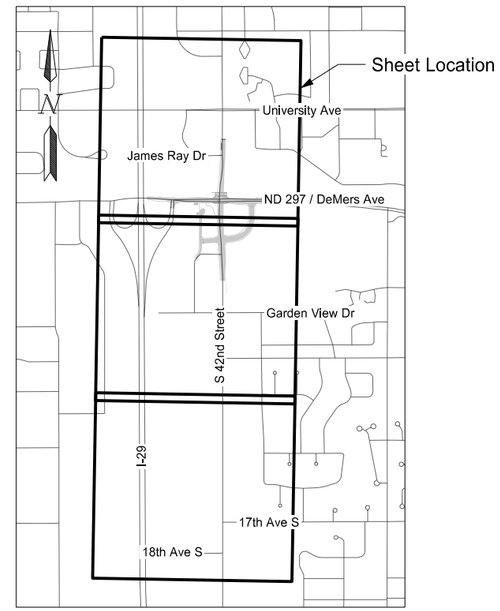
PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits



Appendix B -
Utility Coordination Exhibits

Midcontinent Communications - MIDCO

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
I-29 - Relocation Route

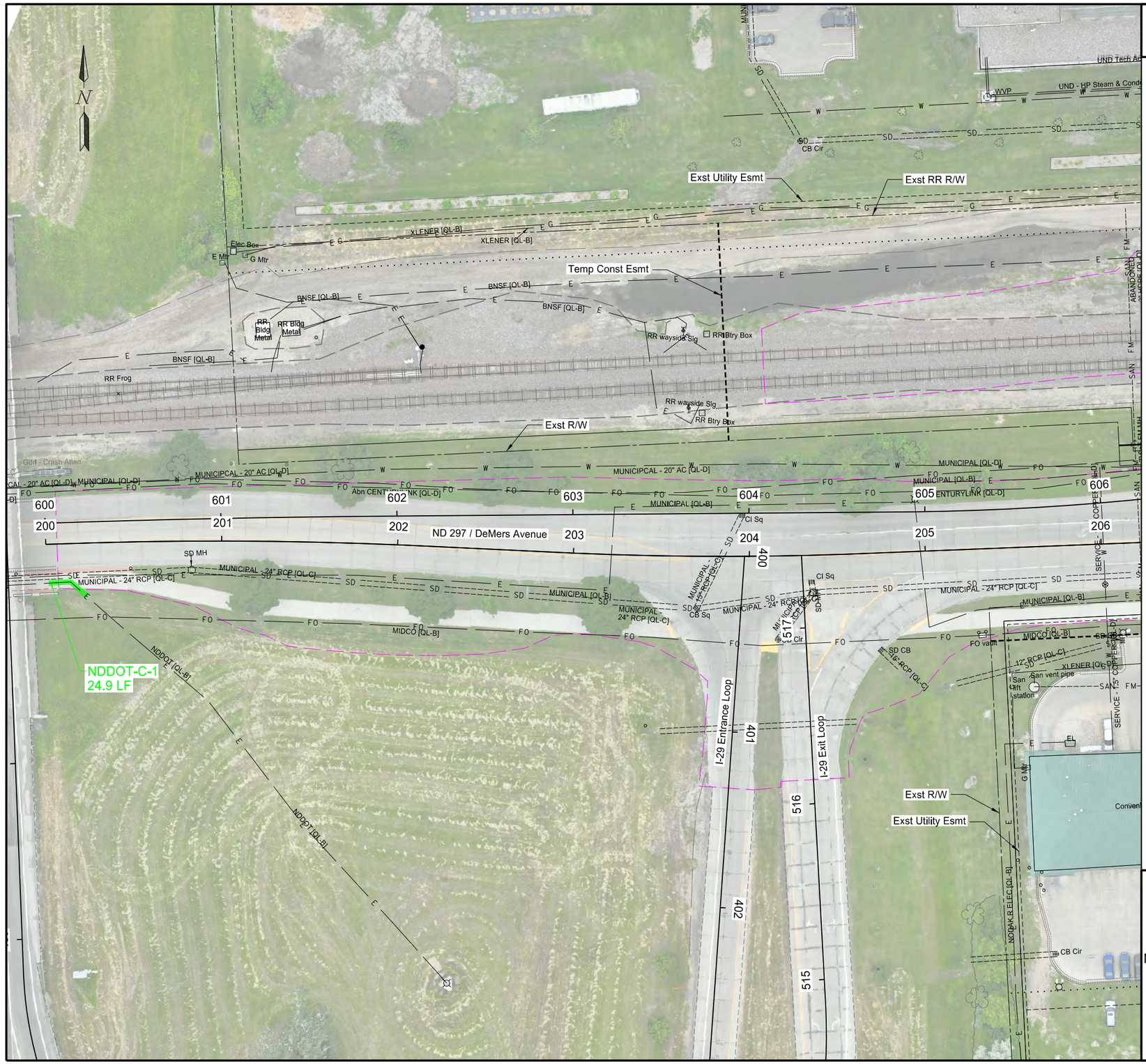
This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:19:13 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\060PP_003_Midco Relocation Route.dgn

© 2025 Microsoft Corporation © 2025 Maxar ©CNES (2025) Distribution Airbus DS

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	28



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

North Dakota Department of Transportation - NDDOT

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
ND 297 / DeMers Avenue

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	29

NORUEC-1
99.6 LF

Temp Const Esmt

Exst Utility Esmt

Ppsd R/W

Exst R/W

S 43rd Street

S 42nd Street

7th Avenue S

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Nodak Rural Electric Cooperative - NORUEC

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	30

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Note: See Section 55c for Proposed Watermain adjusments.
See Section 40 Removals for Watermain Removals.

Appendix B -
Utility Coordination Exhibits

University of North Dakota - UND

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:19:30 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\24-25_UND.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	31

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Note: See Section 40 Removals for Golf Course Removals.

Appendix B -
Utility Coordination Exhibits

University of North Dakota - UND

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
7th Avenue South

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:19:33 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\24-25_UND.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	32

XCEENE-PR15.1
1 EA
XCEENE-PR9.1
468.9 LF
XCEENE-E-9
523.6 LF
XCEENE-E-18
1 EA
XCEENE-PR8.1
3 EA
GLASSTON SUB
Exst RR R/W
Begin Track Construction
Sta 1911+25.47
Temp Const Esmt
XCEENE-E-25
357.6 LF
XCEENE-E-26
47.4 LF
Grading Limits
Exst R/W
TRACK 3
MAIN 1
MAIN 2
ND 297 / DeMers Ave
Ppsd R/W
N

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend
Grading Limits

Appendix B -
Utility Coordination Exhibits

Xcel Energy - XCEENE

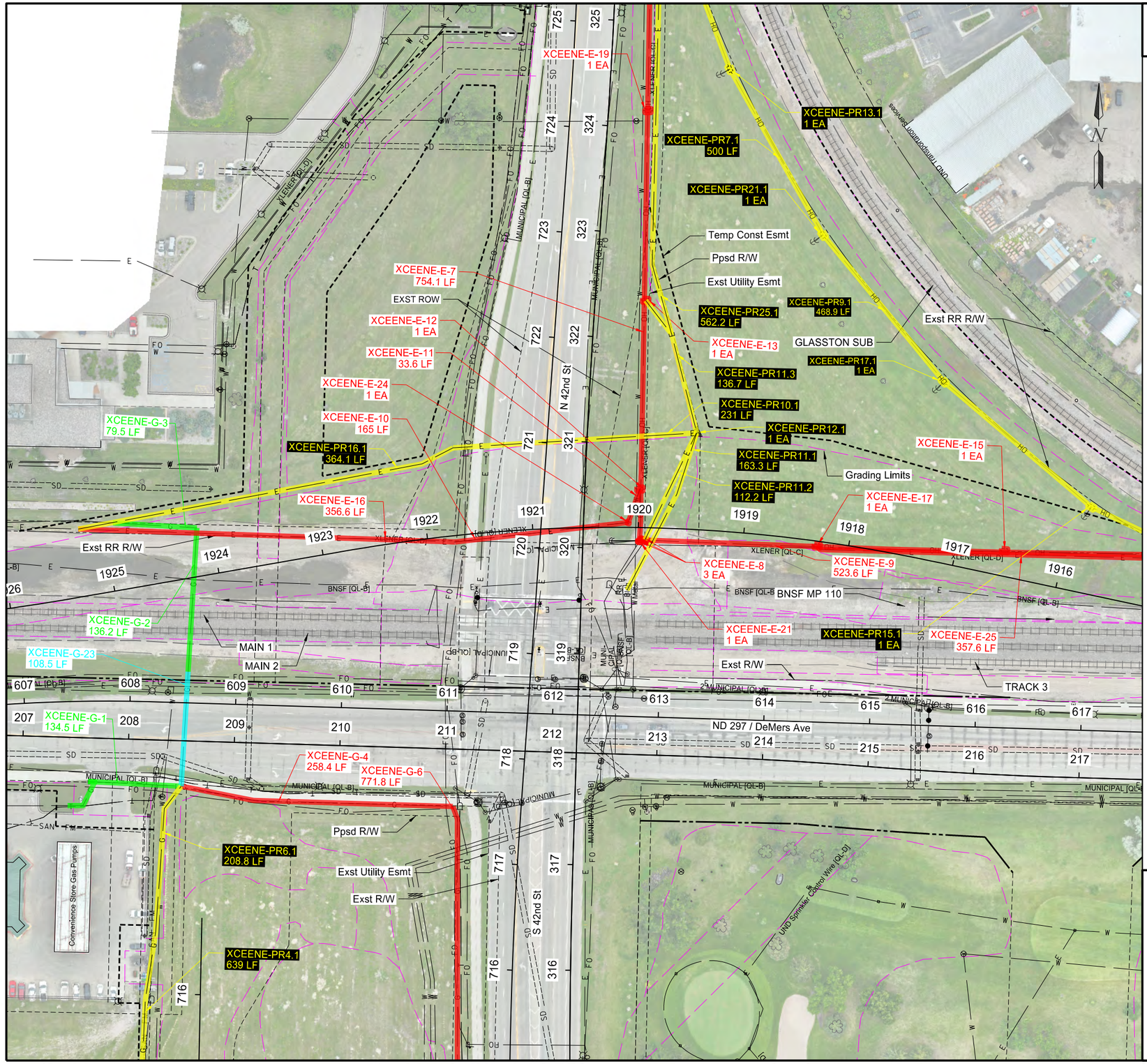
Grand Forks, ND

42nd St. & DeMers Ave, Grade Separation
South Shoofly Tracks

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	33



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Xcel Energy - XCEENE

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
South Shoofly Tracks

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	34

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Xcel Energy - XCEENE

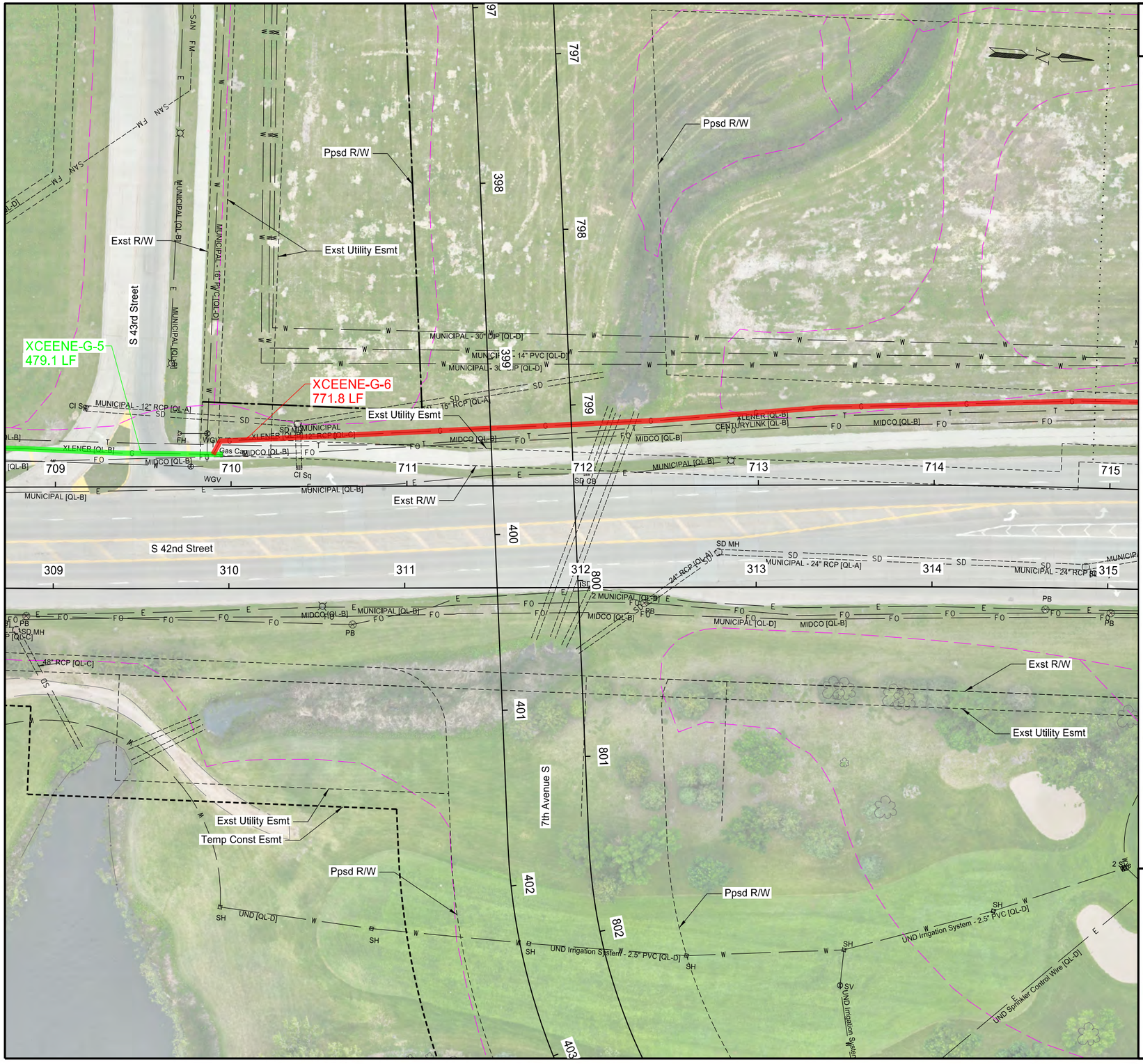
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	35



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Xcel Energy - XCEENE

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	36

XCEENE-G-6
771.8 LF

XCEENE-G-4
258.4 LF

XCEENE-E-16
356.6 LF

XCEENE-PR16.1
364.1 LF

XCEENE-E-10
165 LF

XCEENE-E-24
1 EA

XCEENE-E-11
33.6 LF

XCEENE-PR10.1
367.8 LF

XCEENE-E-7
754.1 LF

XCEENE-E-12
1 EA

XCEENE-E-21
1 EA

XCEENE-E-8
3 EA

XCEENE-PR11.3
136.7 LF

XCEENE-PR11.1
163.3 LF

XCEENE-PR11.2
112.2 LF

XCEENE-PR12.1
1 EA

XCEENE-E-9
523.6 LF

XCEENE-E-17
1 EA

XCEENE-E-25
357.6 LF

Exst R/W

Exst Utility Esmt

Ppsd R/W

Temp Const Esmt

Exst RR R/W

S 42nd Street

N 42nd Street

ND 297 / DeMers Avenue

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination

Xcel Energy - XCEENE

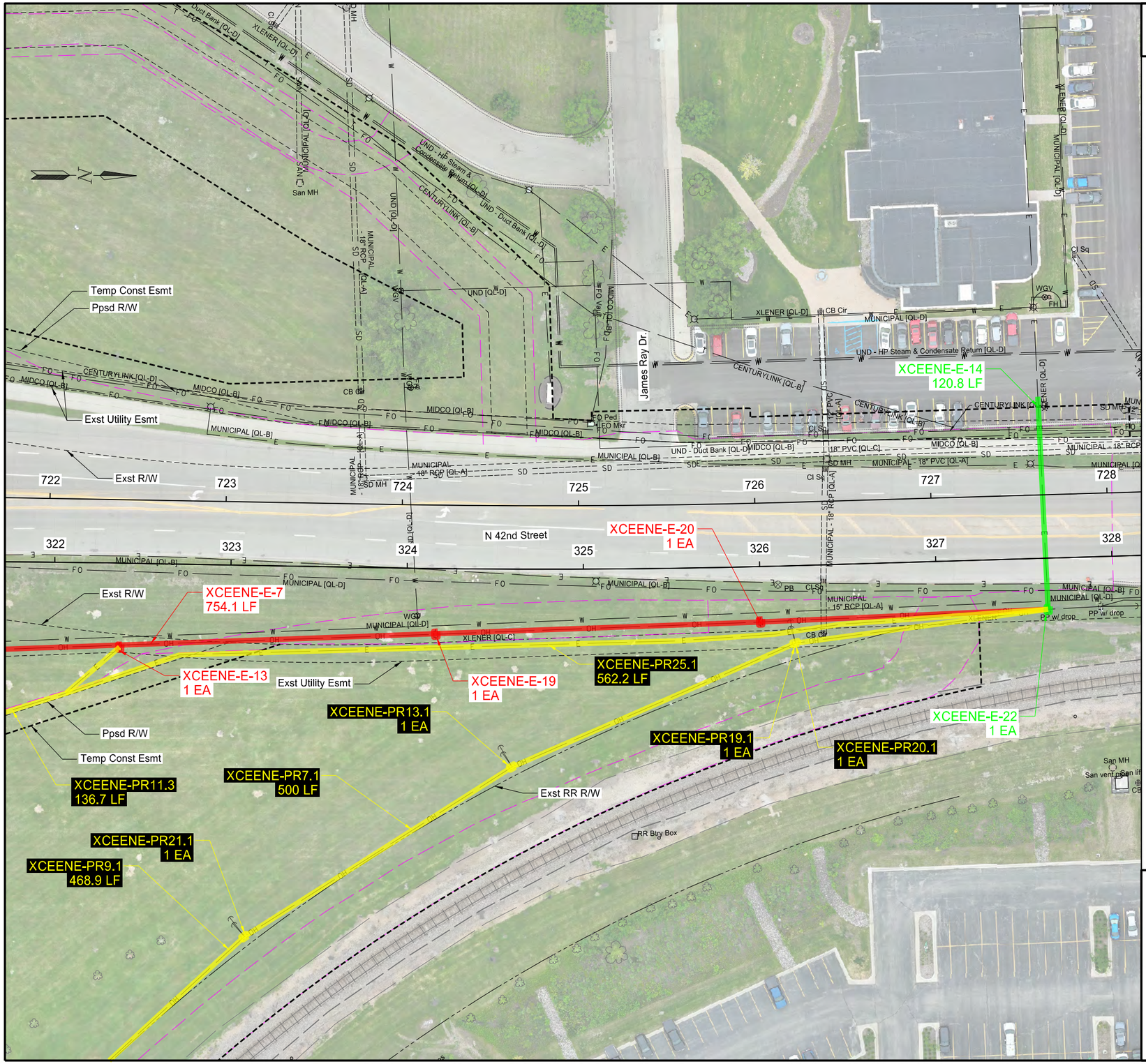
Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	37



UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B -
Utility Coordination Exhibits

Xcel Energy - XCEENE

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
42nd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	38

Legend

Grading Limits

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Appendix B -
Utility Coordination Exhibits

Xcel Energy - XCEENE

Grand Forks, ND

42nd St. & DeMers Ave. Grade Separation
S 43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	RCE-FTF-NHU-SU-6-297(014)000	UTIL	39

UTILITY ENCOUNTER LEVELS

LEVEL 1 - Utility not affected by proposed improvements, no impacts.

LEVEL 2 - Construction activities will occur above and/or below the utility line. No relocation needed for the utility but may need precautions to protect the utility in place during construction activites.

LEVEL 3 - Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.

LEVEL 4 - Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

PROPOSED LEVEL 1 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 1.

PROPOSED LEVEL 2 - Utility that is to be relocated by the Utility Company, and after Utility is relocated to the new location, the final Encounter Level would be that of Level 2.

ABANDONED - Utility line that was an encounter and is now abandoned in place or an existing line that had been abandoned. See comments for construction disposition, removal, and/or remain in place.

Legend

Grading Limits

Appendix B-
Utility Coordination Exhibits

Xcel Energy - XCEENE

Grand Forks, ND

42nd St. & DeMers Ave, Grade Separation
S 43rd Street

This document is preliminary and not for construction or implementation purposes.

PRELIMINARY

12/2/2025 3:20:01 PM Connor.Kontz H:\NDDOT\24M000368000\CAD\ORD\NDDOT-24M000368000\Utilities\NDDOT SP Utility Plans\28-30_Xcel Energy.dgn

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PAINTING OVER GALVANIZED STEEL

PROJECT – RCE-FTF-NHU-SU-6-297(014)000, PCN 24115

GENERAL

This work consists of the surface preparation and painting of galvanized steel.

MATERIALS

Use a shop applied two coat paint system consisting of a polyamide epoxy primer and an aliphatic polyurethane finish coat. Provide the system from a single manufacturer. Provide components that are recommended for use as part of a two-coat system.

Use a paint system formulated by the manufacturer for use over galvanized steel.

A. Epoxy Primer.

Use a chemically-curing polyamide epoxy primer that is a two component and chemically-curing.

Use primer capable of being spray applied to the manufacturer's recommended Dry Film Thickness (DFT) in one coat without sagging or mud cracking. After mixing the primer shall be smooth, uniform, and free of lumps or coarse particles.

Formulate the color of the primer to produce a distinct contrast with the galvanized surface and the finish coat.

Provide an epoxy primer that meets the material properties shown in Table 1.

Table 1
Paint Properties

Total Solids, percent by volume	54% min
Pot life at 77°F	4 hours min
VOC content	3.5 lbs/gal max
Curing Time for Recoating[1]	24 hours max
[1]When applied at the manufactures' recommended thickness at 77°F and 50% relative humidity.	

B. Finish Coat.

Use a compatible two-component, aliphatic polyurethane finish coat with a weather resistant finish and the gloss and color as specified below and in the plans.

Pay Item	Color
Pedestrian Railing	AMS-STD-595A 30108 (Red Brown, Walnut Brown)
Pedestrian Fence	AMS-STD-595A 30108 (Red Brown, Walnut Brown)
Ornamental Fence	AMS-STD-595A 30108 (Red Brown, Walnut Brown)
Traffic Signal	AMS-STD-595A 17038 (Black, AMS Black) or FED-STD-595 37038 Gloss Black
Ornamental Light Standard	*C9 Textured Rust* metal finish by structura

Use paint with a finish coat that meets the material properties shown in Table 1.

C. Certification and Acceptance.

Before the use of the paint system, provide a Certificate of Compliance as specified in Section 106.01 C, “Certificate of Compliance” and the following:

1. Manufacturer Contact Information;
2. Product Data Sheets;
3. Manufacturer's Application Instructions;
4. Material Safety Data Sheets;
5. A 3” x 5” Color Chip card for the colors specified; and
6. Compatibility statement.

D. Packaging and Labeling.

Provide a label on each container that contains:

- The name of manufacturer;
- The brand name;
- The lot number of the paint;
- Complete instructions for the use of the paint;
- The shelf life of the components; and
- The post life of the mixture.

CONSTRUCTION REQUIREMENTS

A. Surface Preparation.

Prepare the surface according to ASTM D 6386. Do not quench the surface if the galvanized coating will be applied within 48 hours.

Do not use chromate conversion coatings.

B. Coating Application.

Apply paint when environmental conditions, such as temperature, humidity, and dew point, are within the manufacturer's recommended range.

Apply coating in a uniform, even coat and worked into all corners and crevices. Use a brush on surfaces inaccessible to spray applications. On surfaces inaccessible to spray, the coating may be applied with a brush.

The DFT of the coating system will be in accordance with the manufacturer’s recommendations. Remove surface coating from areas outside the manufacturer’s specified range in a manner that protects the underlying galvanized coating and also prepares the surface for recoating.

C. Field Repair of Damaged Painted Coating.

1. Surface Preparation.
Remove areas of damaged coating down to the galvanized surface. Take care not to damage the underlying galvanized coating. Feather edges of cleaned repair areas to ensure a smooth finish.

2. Paint System Application.
Do not allow paint materials to come in contact with surfaces not intended to be painted. Provide a means to protect traffic from spattering paint materials if necessary. Prevent deleterious material form adhering to freshly painted surfaces.

Paint may be applied using spray, brush, or roller. Apply paint only when environmental conditions, such as temperature, humidity, and dew point, are within the manufacturer's recommended range.

D. Field Repair of Damaged Galvanized Coating.
Repair damaged galvanized coatings according to Section 854.02, "Damaged Galvanized Coatings".

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Include the cost of work described in this Special Provision in the contract unit price for "Pedestrian Railing", "Pedestrian Fence", "Ornamental Fence", "Ornamental Light Standard, and "Traffic Signal System – Site 1 & Site 2".

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

HYDRAULIC MULCH STABILIZATION

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This work consists of hydraulic mulching for temporary or permanent stabilization.

MATERIALS

A. Hydraulic Mulch.

Use hydraulic mulch free of germination or growth inhibiting factors. Provide hydraulic mulch free of toxins.

Provide hydraulic mulch with fibers capable of absorbing water and allowing infiltration to the underlying soil without restricting emergence of seedlings.

B. Tackifier.

Use a tackifier consisting of one of the following:

1. Water soluble natural proteins, vegetable gums, or guar gums blended with gelling and hardening agents. Guar gum based tackifier shall consist of a minimum of 95 percent guar gum by weight with the remainder consisting of dispersing and cross-link additives.

2. Water soluble blend of hydrophilic polymers, viscosifiers, sticking aids and other gums.

CONSTRUCTION REQUIREMENTS

A. General.

Uniformly cover areas of disturbed ground where construction activities have temporarily or permanently ceased.

Uniformly cover seeded areas with mulch within 24 hours of initiating seeding.

Protect traffic, signs, structures, and other objects from being marked or splattered by the material.

B. Hydraulic Mulch.

1. General.

Use mulch that is evenly dispersed and suspended in agitated water. Apply at a rate of 2,000 lbs per acre with a minimum of 95 percent coverage of the seedbed.

2. **Anchoring.**
   Use tackifier on areas where temporary stabilization is required for slopes that are steeper than 3:1. Mix tackifier with the mulch and apply at the rate recommended by the manufacturer.

METHOD OF MEASUREMENT

The Engineer will measure, completed and in place, as specified in Section 109.01, “Measurement of Quantities”.

BASIS OF PAYMENT

Pay Item	Pay Unit
Hydraulic Mulch	Acre, Square Yard

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

TEMPORARY SOIL STABILIZER

PROJECT 6-0297(014)000 – PCN 24115

DESCRIPTION

This work consists of hydraulic applying soil stabilizer for temporary stabilization.

MATERIALS

A. Soil Stabilizer.

Use soil stabilizer from the list below or an approved equal:

Product	Manufacturer
StarTak 600 Applied at a rate of 150 Lb/Acre	Chemstar Products Company Minneapolis, MN Phone: 1-800-328-5037 www.chemstar.com
M-Binder Applied at a rate of 150 Lb/Acre	Ecology Controls Carpinteria, CA Phone: 1-805-684-0436 www.ssseeds.com
FiberRX Applied at a rate of: Slope None to 4:1 50 Lb/Acre 3:1 60 Lb/Acre 2:1 70 Lb/Acre 1:1 or steeper 80 Lb/Acre	Hydrostraw, LLC Manteno, IL Phone: 1-800-545-1755 hydrostraw.com
Enviropam Applied at a rate of 9 Lb/Acre	Innovative Turf Solutions, LLC Cincinnati, OH Phone: 1-513-317-8311 www.innovativeturfsolutions.com
HydraTack, Tack Plus, Tack-P, or Tack-P Plus Applied at a rate of 30 Lb/Acre	Innovative Turf Solutions, LLC Cincinnati, OH Phone: 1-513-317-8311 www.innovativeturfsolutions.com
FI-1045 Hydrobond or FI-1046 Hydrobond Applied at a rate of 15 Lb/Acre	JRM Chemical, Inc. Cleveland, OH Phone: 1-216-475-8488 www.soilmoist.com

Product	Manufacturer
HF5000 Tack Applied at a rate of 60 Lb/Acre	Rantec Corporation Ranchester, WY Phone: 1-307-655-9565 www.ranteccorp.com
R-Tack Applied at a rate of 150 Lb/Acre	
SpecTac Applied at a rate of: Slope None 30 to 80 Lb/Acre 4:1 50 to 100 Lb/Acre 3:1 80 to 120 Lb/Acre 2:1 100 to 170 Lb/Acre	
Super Tack Applied at a rate of 60 Lb/Acre	
EarthGuard SFM Applied at a rate of 60 LB/Acre (approx. 6 Gallons/Acre)	Terra Novo Inc. Bakersfield, CA Phone: 1-661-747-5956 www.terranovo.com

B. Tracer Material.
Provide tracer material that consists of a hydraulic mulch that contains a green dye.

Provide tracer material that is free of the following:
- Toxins; and
- Germination or growth inhibitors.

CONSTRUCTION REQUIREMENTS

A. General.
Uniformly cover areas of disturbed ground where construction activities have temporarily ceased with a minimum of 95 percent coverage of the disturbed area.

Hydraulically apply soil stabilizer with tracer material in accordance with the manufacturer's application instructions and at the rate specified in the list of approved soil stabilizers.

Protect traffic, signs, structures, and other objects from being marked or splattered by the material.

B. Tracer Material.
Include enough trace material for it to be easily visible for the inspector and installer. Use tracer material that is evenly dispersed and suspended in agitated water and Soil Stabilizer mix.

METHOD OF MEASUREMENT
The Engineer will measure, completed and in place, as specified in Section 109.01, "Measurement of Quantities".

BASIS OF PAYMENT

Pay Item	Pay Unit
Soil Stabilizer	Acre, Square Yard

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

COMMERCIAL GRADE HOT MIX ASPHALT

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This work consists of supplying a Commercial Grade Hot Mix Asphalt that meets the requirements of Section 430, “Hot Mix Asphalt (HMA)”, with the following revisions.

MATERIALS

Add the following to the end of Section 430.03 “Materials”.

F. Commercial Grade Hot Mix Asphalt.

Provide commercial grade asphalt that meets the requirements of the FAA 43 or better designations in Section 430.03 C, “Superpave Mix Properties”.

The requirements of the following sections will not be applied to commercial grade asphalt:

- Section 430.04 B, “Engineer’s Quality Assurance Plan”;
- Section 430.04 C.2, “Determination of Specific Gravity”; and
- Section 430.04 E, “QC Testing”.

Section 430.04 D “Mix Design” is replaced with the follwing requirements:

Submit a mix design that was previously approved under another Department contract. Include the project number and PCN of the previous project.

If using a stationary plant, use a mix design previously approved by the Department within the last year. Include the date that the mix design was approved.

If a previously approved mix design is not available, submit a new mix design to the Engineer at least 10 calendar days before placement of material. The Engineer will request materials to use in mix design verification before approving the mix design.

CONSTRUCTION REQUIREMENTS

A. Contractor Personnel.

Replace Section 430.04 A “Contractor Quality Control (QC) with the following:

Provide personnel meeting the requirements of NDDOT Technical Certification Program for the following tests:

- ND T 2 – Sampling of Aggregates; and
- NDDOT 5 Sampling and Splitting Field Verification of Hot Mix Asphalt (HMA) Samples.

B. Engineer's Acceptance Testing:
Replace Section 430.04 M "Acceptance" with the following:

The Engineer will perform acceptance tests at the frequency shown in Table 1. At times directed by the Engineer, obtain aggregate samples from the cold feed belt according to ND T 2.

Table 1	
Testing Frequencies	
Test/Assessment	**Minimum Testing Requirements**
ND T 11 Materials Finer than No. 200 Sieve	1 per production day.
ND T 27 Sieve Analysis of Fine and Coarse Aggregate	1 per production day
ND T 304 Fine Aggregate Angularity	1 per production day
ND T 166 Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	1 per project
ND T 209 Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt	1 per project

The Engineer will determine the percentage of air voids when determining the maximum theoretical density. Provide mix with between 2 and 6 percent air voids, when calculated on the Maximum Density Worksheet (SFN 50289).

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Pay Item	Pay Unit
Commercial Grade Asphalt Hot Mix Asphalt	Ton

Include the cost of aggregate, asphalt cement, prime coat, class 44 blotter sand, tack coat and fog coat in the contract unit price for "Commercial Grade Asphalt."

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

TEMPORARY PEDESTRIAN FACILITIES

PROJECT 6-0297(014)000 – PCN 24115

DESCRIPTION

This work consists of constructing temporary pedestrian facilities for use while permanent facilities are impacted by the project work.

MATERIALS

A. Pedestrian Channelization.

Provide pedestrian channelization that meets the following requirements:

- Interlocked with a 1” maximum gap between devices;
- Upper rail with a smooth continuous guide handrail positioned 32 to 38 inches above the walkway;
- A smooth lower edge on the pedestrian side of the wall to allow sight impaired cane tapping positioned based on the following requirements:
  - The bottom edge is less than 2 inches above the walkway; and
  - The top edge a minimum of 6 inches above the walkway
- Openings in the bottom of the wall to allow for water passage;
- Support legs that do not impede the clear walkway;
- In compliance with NCHRP Report 350 or MASH Test Level 3 (TL3);
- Channelization portions are orange or white, or a combination of orange and white, in color.

B. Temporary Pedestrian Surfacing.

Compacted aggregate is not an acceptable surface.

CONSTRUCTION REQUIREMENTS

A. General.

Provide surfaces for temporary pedestrian facilities with the following characteristics:

- Stable;
- Firm;
- Weather resistant; and
- Non-slip.

B. Pedestrian Walkway.

1. General

Pedestrian walkways consist of two components; pedestrian channelization and temporary pedestrian surfacing.

Move and reset the pedestrian walkway as needed for multiple phases of construction.

2. **Pedestrian Channelization.**
   Install pedestrian channelization as follows:
   - Place pedestrian channelization to delineate a clear, temporary pedestrian walkway directing pedestrians through the work area;
   - Provide a minimum, continuous, clear width of 48 inches;
   - Where the clear width of a temporary pedestrian walkway is less than 60 inches, provide passing spaces at maximum intervals of 200 feet that have minimum dimension of 60 × 60 inches.

3. **Temporary Pedestrian Surfacing.**
   Place temporary surfacing to match the widths detailed in Section 2, “Pedestrian Channelization” in the Construction Requirements portion of this special provision.

   Place temporary surfacing with a maximum cross slope of 2 percent and maximum running slope of 5 percent. Construct and maintain the surface with no vertical discontinuities greater than 0.25 inches, and free of barriers to wheelchair use.

C. Temporary Curb Ramp.
Construct curb ramps with a clear width of 48 inches. Construct ramps with a slope of 12:1 or flatter. Maintain a clear turning platform above and below the ramp of at least 48 × 48 inches.

Maintain a maximum curb ramp and turning platform cross-slope of 50:1 (2%) on parallel curb ramps.

Maintain 0.5-inch maximum width lateral joints or gaps between surfaces and maximum 0.5-inch surface height changes.

Maintain water flow in the gutter system.

METHOD OF MEASUREMENT

A. Pedestrian Walkway.
The Engineer will measure “Pedestrian Walkway” along the centerline of the walkway and make 90 degree turns when measuring around corners. If multiple phases of construction cause the walkway to be moved or reset, the Engineer will pay for the greatest length of walkway used at one time.

B. Temporary Curb Ramp.
The Engineer will measure “Temporary Curb Ramp” based on each curb ramp installed and will pay for the maximum number of curb ramps in place at one time.

BASIS OF PAYMENT

The contract item “Temporary Curb Ramp” includes both parallel and perpendicular curb ramps.

Pay Item	Pay Unit
Pedestrian Walkway	Linear Foot
Temporary Curb Ramp	Each

Include all costs to furnish, install, maintain, relocate, replace, and remove pedestrian channelization and temporary pedestrian surfacing in the contract unit price for “Pedestrian Walkway.”

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

SP 401(24) Dispute Resolution Board

Special Provision (SP) 401(24) Dispute Resolution Board has not been received as of 2/2/2026. When the SP is received it will be added by Addendum to the proposal.

Authored By NDDOT ETS

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

INTERCONNECT CABLE

PROJECT RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

1. DESCRIPTION

This special provision establishes the technical and installation requirements for fiber optic cable intended for duct installation. It is designed to ensure reliable communication between Intelligent Transportation System (ITS) equipment through a compliant interconnection system that meets the specified minimum standards.

2. GENERAL.

Include all labor, equipment, and materials necessary to install the interconnect cable and connections. Ensure the communication link is complete and fully operational between all required network devices.

Use a single cable consisting of 24 single mode fibers suitable for outside plant operations. Install a tracer wire with all the fiber cable installed. Refer to the plans for the number of each fiber.

A. Fiber Optic Cable Specification

Install a fiber cable designed for duct applications to ensure communication between all ITS devices. Cables include the following features:

- Dielectric construction
- Loose-tube design
- Dry block or fully dry (gel-free) configuration
- Polyethylene jacket (high or medium density)
- Reinforced with aramid yarn (Kevlar)

Ensure the optical specifications comply with RUS 7 CFR 1755.900 (PE-90) and Telcordia GR-20 standards:

- Utilize 8.3/125 μm single mode fiber with zero water peak
- Meet the following attenuation thresholds:
  - Less than or equal to 0.4 dB/km at 1310 nm
  - Less than or equal to 0.32 dB/km at 1383 nm
  - Less than of equal to 0.3 dB/km at 1550 nm

Meet the following mechanical performance requirements:

- Do not exceed a maximum tensile load of 2700 N (600 lbf)
- Maintain a minimum bend radius of 40 times the cable diameter under load (no less then 18 inches), and 20 times the diameter under no load
- Ensure operational temperature range from -40° C to +70° C

Obtain and submit manufacturer's documentation for attenuation and bandwidth for each fiber on each fiber reel within 5 business days of delivery. Perform pre-installation testing of all fibers using Optical Time Domain Reflectometer (OTDR)

B. Splicing requirements

1. Splicing is only permitted in a termination panel or splice enclosure.

2. Maximum splice loss of 0.10 dB per fusion splice.

3. Maximum loss of 0.50 dB for each type of connector at the bulkhead. This includes the connector loss and the fusion splice on the connector.

C. Fiber Optic Connectors.

1. Install “LC” Type connectors on all bulkhead terminations.

2. The ITS device locations shall be provided with a rack mounted patch panel frame, as noted on the plans, with capacity to terminate all fibers entering or exiting the location.

3. All fibers connected to equipment and the remaining fibers in the bundle shall be terminated at a Fiber Patch Panel which shall have a label for each individual fiber.

3. WORK DRAWINGS

Submit working drawings in accordance with specification 105.08 “Plans and Work Drawings.” Additionally, include a complete, indexed set of work drawings with the following:

A. Complete details of all components and sections showing all materials.

B. A listing of all applicable North Dakota DOT, UL and AASHTO specifications.

C. Name of the manufacturer and supplier.

4. TESTING

End-To-End Conformance Testing using an Optical Time Domain Reflectometer (OTDR). The contractor shall test each fiber of each cable run, including the breakout cables, and provide results of the test and the reel packing label test results from the manufacturer to NDDOT. All losses are assumed to be a bi-directional average. If the individual cable runs do not match the test results of the packing label test results less the connection and splice losses, the cable shall be replaced at the Contractor’s expense.

Approved single-mode fiber tests at 1310 NM and 1550 NM and need to within the following standards:

- 0.5 dB loss for each type of connector at the bulkhead
- 0.1 dB loss for each fusion splice
- 0.1 dB loss per 600 feet for 1310 NM and 0.1 dB loss per 750 feet for 1550 NM

5. INSTALLATION REQUIREMENTS

A. Install cable to the manufacturer's recommendation.

B. Include a single No.14 AWG unspliced, insulated copper conductor running the full length and parallel to any fiber that is not installed in an existing conduit system with the tracer wire already installed. The purpose of this conductor is for locating the fiber. This is included in the price bid for "IT FIBEROPTIC CABLE".

C. Identify and record the foot mark of the incoming and outgoing cable at each hand-hole. Place a label with this information in the hand-hole. Provide a summary of all identifying marks to DOT of the footages of the cable of the incoming and outgoing cable of each hand-hole. The identifying mark shall be recorded, and a label shall be placed in the hand-hole.

D. Leave a minimum of 80 feet of cable slack in each hand-hole. Leave additional slack at strategic locations as needed. At splice enclosure locations, leave a minimum of 80 feet of slack at each cable end. NDDOT will provide specific requirements on a case-by-case basis.

6. METHOD OF MEASUREMENT

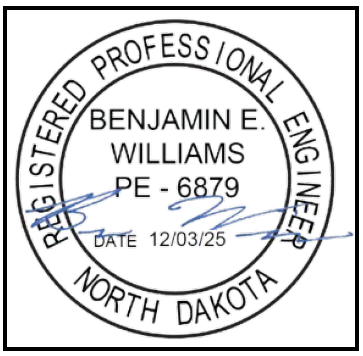
Include the interconnect cable in the item "IT SYSTEM." Do not measure separately for payment. Include labor, equipment, and materials to install the fiber cable. Consider connectors, drop cable, and tracer wire incidental to the linear feet of fiber cable installed.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LIFT STATIONS

PROJECT 6-297(014)000 – PCN 24115



DESCRIPTION

A. Construction of the Lift Station as shown in the plan drawings and including:

1. Cast-in-place back wall.
2. Precast concrete control building, base slab, top slab, and wet well wall sections.
3. All process piping for the Lift Station.
4. Sections covered in these special provisions include:
    a. General.
    b. Materials.
    c. Method of Measurement.
    d. Basis of Payment.

B. Refer to SP 404(24) “Pumping Equipment” for pumping equipment specifications.

GENERAL

A. Instrumentation and Control

1. Responsibility and Coordination
    a. The Owner will provide programable logic controller (PLC) programming, process control programming, operator interface terminal (OIT) programming and SCADA programming.

b. Provide a complete, fully functional system. Ensure all installation, adjustment, and startup procedures result in a working system. Assume full responsibility and additional costs due to unauthorized deviations from plans or specifications.
c. Use a single manufacturer for all instrumentation and control equipment, including all cabinets, modules, components and devices necessary for sensing, control and telemetry functions. Assume responsibility for providing, installing, and starting up the system. Notify the Engineer 10 working days before startup.
d. Verify wiring requirements with the Control Systems Manufacturer. Mount and wire all devices unless otherwise specified. Use required cables and follow installation instructions from the control supplier.

2. Approved Control System Manufacturers

a. The following control system manufacturer(s) are approved to provide equipment for this project:
   1) Primex / SJE
      a) 13005 6th Ave. N., Suite 100
      b) Plymouth, MN 55441-4528
      c) (763) 559-0568
   2) Wunderlich-Malec
      a) 5501 Feltl Road
      b) Minnetonka, MN 55343
      c) (952) 933-3222
   3) Integrated Process Solution, Inc.
      a) 34696 412th St. SE
      b) Fosston, MN 56542
      c) (218) 435-1703

3. Approval Data and Drawings

a. Provide control panel drawings per City of Grand Forks standards. A typical standard set of drawings will be provided upon request. Review drawings for compliance and coordinate changes with the Engineer. Do not deviate from the I/O schedule unless justified and approved. Wire all spare I/O points to field terminals.
b. Submit the following work drawings for Engineer approval:
   1) Dimension, wiring, and piping drawings for field and pipeline mounted equipment.
   2) Any other necessary documentation.
c. Upon approval, construct panels and provide control equipment per drawings.
d. Provide four (4) complete 3-ring bound sets and an electronic pdf of the following information:
   1) Individual operating and maintenance instruction bulletins for each piece of equipment.
   2) Complete parts list for each control panel and parts list of field devices.

4. Control System Scope

a. Provide an automatic pump control system, telemetry system and all components for operations.
b. House the systems in Supervisory Control Panel (SCP) Cabinets.
c. Ensure the SCP:
   1) Starts and stops pumps

2) Controls speed
3) Transmits alarm signals
4) Contains a single PLC and all required modules

5. U.L Approval

a. Provide Underwriter Laboratories (U.L.) components. If unavailable, note in work drawings.

B. Electrical

1. Responsibility and Coordination

a. All material, equipment, and work shall conform to requirements of the following standards.
1) American National Standards Institute (ANSI).
2) Insulated Power Cable Engineers Association (IPCEA).
3) National Electric Code (NEC).
4) National Electrical Contractors Association (NECA).
5) National Electrical Manufacturer's Association (NEMA).
6) National Electric Safety Code (NESC).
7) National Fire Protection Associations (NFPA).
8) Underwriter's Laboratories (UL).
9) Uniform Building Code (UBC).
b. Report any code/specification conflicts before starting work. Do not perform in violation of codes/specifications. Assume full responsibility and cost for violations.
c. Obtain and pay for all certificates and inspections.
d. Meet the requirements of the local utility company.
e. Install all minor features to ensure systems and complete and reliable. Investigate site conditions and provide necessary accessories. Make minor adjustments as required by Engineer at no additional cost.
f. Treat wet wells as Class 1, Division 1 locations.
g. Include all utility and service charges in the bid.

C. Generator

1. References

a. ANSI/NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
b. ANSI/NEMA MG 1 - Motors and Generators.
c. ANSI/NFPA 70 - National Electrical Code.
d. ANSI/NFPA 110 - Emergency and Standby Power Systems.
e. ANSI/NEMA AB 1 - Molded Case Circuit Breakers.

2. System Description

a. Provide a 480/277 Volt, 3 phase, engine generator set. Ensure a single manufacturer provides the complete set of a standard model or series. Do not use custom assemblies.
b. The standby (or maximum or intermittent) rating of the unit shall not exceed the fuel rate limit of the engine and be based on twenty-four (24) hours of standby operation

at rated speed and rated voltage with an ambient temperature of 110 degrees F. measured two (2) feet from the end bearing housing of the generator in line with the shaft. The standby rating shall be no greater than 10% more than the prime rating. The rating shall be adjusted for the elevation of the installation if necessary. The rating shall be at 0.8 power factor.

c. The submittal shall include the efficiency of a similar production generator and the fuel utilization of a similar production engine after 4 hours of continuous operation at prime rated load. The data shall be based on #2 diesel fuel with an octane rating of 40. The fuel utilization data shall be certified by the engine manufacturer and the generator efficiency certified by the generator manufacturer. Certification by other parties will not be accepted.
d. Engine generator system to provide source of standby continuous power.
e. System Capacity: 200 kW, 250 kVA at an elevation of 3,000 feet above sea level, and ambient temperature between -35 and 110 degrees F.
f. Operation: In accordance with ANSI/NFPA 110.

3. Submittals

   a. Submit work drawings showing plan and elevation views with critical points dimensioned, fuel consumption rate curves at various loads, and electrical diagrams including schematic and interconnection diagrams.
   b. Submit product data showing dimensions, weights, ratings, and internal wiring diagrams for engine, generator, control panel, battery, battery rack, battery charger, exhaust silencer, vibration isolators, fuel tank and radiator.
   c. Submit manufacturer's installation instructions.

4. Operations and Maintenance Data

   a. The system manufacturer’s authorized dealer shall Provide four sets of manuals and books listed below for each unit under this contract:
      1) Operating instructions with description and illustration of all engine and generator controls.
      2) Parts books that illustrate and list all assemblies, sub-assemblies and components, except standard fastening hardware (nuts, bolts, washers, etc).
      3) Preventative maintenance instructions on the complete system that cover daily, weekly, monthly, biannual, and annual maintenance requirements and include a complete lubrication chart.
      4) Routine test procedures for all electronic and electrical circuits and for the main AC generator.
      5) Troubleshooting chart covering the complete generator set showing description of trouble, probable cause and suggested remedy.
      6) Wiring diagrams and schematics showing function of all electrical components.
      7) All manuals and books described above shall be contained in rigid plastic binders along with an electronic pdf copy.

5. Warranty

   a. Provide manufacturers 5-year warranty with zero-dollar deductible for all parts and all labor from date of project completion.

6. Maintenance Service

    a. Provide parts and labor service and maintenance of packaged engine generator system for two years from date of final acceptance. At the end of each year:
        1) Change engine oil filter.
        2) Change engine oil if required by hours of operation.
        3) Change engine fuel filters.
        4) Change engine air filter.
        5) Perform oil analysis and report.
    b. Do not use extra materials (listed below) for this work

7. Extra Materials

    a. Provide one set of tools required for preventative maintenance of the engine generator system. Package tools in adequately sized lockable metal toolbox permanently attached to generator skid.
    b. Provide one additional set of each fuel, oil, and air filter elements required for the engine generator system.

D. Load Bank

1. Manufacturer's Qualifications

    a. The load bank shall be a product of a firm regularly engaged in the design and manufacture of generator load banks. The load bank manufacturer shall demonstrate at least five years' experience, with at least twenty-five completed installations of load banks, similar or equal to the load banks specified herein.

E. Coatings

1. References

    a. Refer to the latest version of referenced publications unless otherwise specified.
        1) SSPC: The Society for Protective Coatings (SSPC):
            a) SSPC-SP13/NACE No. 6 Surface Preparation of Concrete;
        2) ASTM International (ASTM):
            a) ASTM D-4263 Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method;
            b) ASTM G-210 Standard Practice of Operating the Severe Wastewater Analysis Testing Apparatus.

2. Submittals

    a. Product Data: For each product specified, submit manufacturer's specifications including application recommendations and other data needed to prove compliance with the specified requirements.

3. Quality Assurance

    a. If any requirements of this specification conflict with a referenced standard, the more stringent requirement shall apply.

b. Applicator qualifications
   1) Prior to preconstruction, provide a list of 5 successful projects completed within the past 5 years with the products specified herein and project contact information (Engineer, Owner and General Contractor).
c. Use only products of the approved Manufacturer. Use products of one manufacturer in any one resurfacing system with compatible materials. Provide same material product for touch-up as for original material.
d. Make available all locations and phases of the work for access by the Engineer or other personnel designated by the Engineer. Provide ventilation and egress to safely access the coating work areas for inspection. Inspection by the Engineer or others does not limit the Contractor's responsibilities for quality control inspection and testing as specified herein or as required by the Manufacturer's instructions.

MATERIALS

A. Door

1. Provide door and frame products from the following manufacturers, or approved equal:

   a. Fenestra Corporation;
   b. Curries, Inc.;
   c. Steel Craft;
   d. Next Door Company;
   e. P.S. Doors; or,
   f. Approved Equal.

2. Door Frame

   a. Material: 16-gauge galvanized steel.
   b. Jam width: 10 inch or as shown on Drawings.
   c. Stop: Square or rectangular in cross section.
   d. Reinforcement: Provide reinforcing for hinges and locks.
   e. Blocking and Anchors: Provide at least 3 anchors per jamb.
   f. Insulation: Completely fill all voids with urethane insulation.
   g. Corners: Weld and grind smooth.

3. Walk-in Door

   a. Door: 1-3/4 inches thick, flush, insulated.
   b. Material: 16-gauge galvanized steel.
   c. Reinforcing: Not to exceed 24 inches center-to-center. Reinforce for hinges, handles, locks and others as required.
   d. Insulation: Completely fill all voids with urethane insulation.
   e. Vertical edge seams to be welded full height and ground smooth.
   f. Door bottom to have 16-gauge inverted channel, top to have 16-gauge flush channel.

4. Hardware

   a. Dry Side Door Locks: Stainless Steel Corbin Russwin Model ML2059 with Lustra LSB satin stainless-steel finish with cast lever and rose or approved equal. Lever

action handle on exterior and interior side. Configure exterior key lock to operate dead bolt and latch bolt. Ensure Interior lever handle retracts latch bolt and dead bolt. Keep exterior handle always rigid, interior handle always free.

b. Hinges: Three hinges of Stanley FBB199 stainless steel, McKinney T4A3386 stainless steel or equal per door.
c. Cylinder: Provide Medeco cylinder for lock. Match existing City Medeco key.
d. Door stop and holder: Provide door stop model No 476 by Rockwood Manufacturing Co., DCI 3267X or approved equal.

5. Weather Seal

a. Use the following products or approved equals:

1) Weather Strip:
   a) Sealeze J140
   b) Reese 970
2) Threshold:
   a) Reese S425A
   b) Sealeze T512C
3) Sweep:
   a) Reese 967C
   b) Sealeze D480
4) Finish: Mill finished aluminum.

6. Door Finish

a. Use factory-primed galvanized doors and frames compatible with finish coat.
b. Prime interior surfaces of door frame before assembly.

B. Roofing

1. Metal Shingles

a. Install interlocking, pre-corrugated, pressure-formed, aluminum-zinc alloy-coated steel panels per ASTM A 792/A 792M, with multiple vertical ribs forming 2 flat steps, each of which have raised and lowered pan sections.

b. Thickness: 28-gauge, 0.0149 inch (0.378 mm).

c. Finish: Ceramic-coated, colored-stone chip finish.

d. Dimensions:
   1) Overall Panel Size: 14-1/8 inches (359 mm) wide by 52-3/8 inches (1,330 mm) long.
   2) Installed Panel Exposure: 12-1/4 inches (311 mm) wide by 49-1/2 inches (1,257 mm) long.
   3) Side Panel Laps: 2-3/4 inches (70 mm).
   4) Panel Leading Edges Bent Down: 1/2 inch (13 mm); provides overlap for weather protection and adjoining to prior roof panels course.
e. Color: Weathered Timber or Charcoal.
f. Class 4 impact resistant and Class A fire rated.

g. Provide 50-year manufacturer's warranty.

2. Roof Edge

a. 20-gauge aluminum, prefinished, white in color.

3. Underlayment

a. Install 40 mil ice and water shield on entire roof.

C. Soffit and Fascia

1. Use System 3 by Rolex, MWI Components, or approved equal for soffit panels and fascia.
2. Install all necessary trim and accessories.
3. Match soffit, fascia, and trim for manufacturer, texture and color.
4. Use high-quality baked enamel finish with primers and coatings.
5. Color: White

6. Gutters and Down Spouts

a. Install heavy gauge aluminum.
b. Color: White

D. Caulking

1. Use products approved by Engineer, formulated for proposed use.
2. Match colors to adjacent exposed areas.

E. Insulation

1. Install fiberglass insulation where indicated.
2. Match thickness per Drawings.
3. Exhaust System Insulation

a. Use approved insulation: Calcium Silicate (ASTM C533, Type 1 indoors only, or outdoors above 250 °F pipe temperature), Perlite Insulation (ASTM C610).
b. Apply minimum 4 ½" thickness.
c. Cover per manufacturer's recommendations, using factory-applied Type II jacket or field-applied aluminum where required or seal welded PVC.
d. Install manufactured preformed insulation around all fittings and accessories.

F. Ventilation Systems

1. Exhaust Fan (EF-1)

a. Provide sidewall direct drive exhaust fan.
b. Use welded and painted heavy-duty blade.
c. Install 11-gauge galvanized steel frame.
d. Use permanently lubricated, totally enclosed, ball bearing, 1/3 HP, 120V motor.
e. Limit fan speed to 860 RPM and deliver 2000 CFM @ 0.3" W.G. static pressure.

f. Keep maximum sones to 16.0 at 5 feet per AMCA Standard 301.

2. Louvers

   a. Approved louvers:
      1) Model M-4 manufactured by Penn Ventilator Co.;
      2) Model ESK-402 by Greenheck;
      3) Model ELF375X by Ruskin; or,
      4) Approved equal.
   b. Provide 4-inch stationary louvers, fabricated of extruded aluminum or approved equal.
   c. Limit water penetration to 0.01 oz/sf at design air flow rate.
   d. Install aluminum expanded bond exclusion screen in removable frame inside.
   e. Finish with Kynar 500; Classic Bronze in color.

3. Motorized Operated Dampers (MOD-1, 2)

   a. Install low leakage parallel-blade dampers (maximum 1% full flow leakage).
   b. Use 16-gauge galvanized steel with interlocking blades, neoprene strips, and reinforced drive blades.
   c. Use extruded vinyl blade seals, field replaceable.
   d. Use stainless steel jamb seals.
   e. Provide 120-volt damper motors and operators with sufficient power to operate dampers under all operating conditions. Install the operator outside the airflow, where it shall not be subject to freezing.
   f. Ensure quiet, smooth operation and full stroke capability.
   g. Include external adjustable stops and limit switches.
   h. Control MOD-1 with thermostat and light switch.
   i. Control MOD-2 with “End Switch” to start ventilators.
   j. Acceptable Manufacturers:
      1) Honeywell #D640;
      2) Arrow;
      3) Greenheck;
      4) Louvers & Dampers, Inc.;
      5) Cesco Products;
      6) Ruskin Manufacturing; or,
      7) Approved equal.
   k. Mount dampers in accessible locations.
   l. Ensure electrical connections are accessible without removal of damper motor.

4. Motorized Operated Dampers (MOD-3, 4)

   a. Approved dampers:
      1) Model HCD-140 by Greenheck;
      2) Model CD/OD 102 by Ruskin Manufacturing; or,
      3) Approved equal.
   b. Install low-leakage opposed-blade dampers with extruded
   c. Provide low-leakage damper, extruded aluminum airfoil type opposed blades, 12-gauge Galvanized steel frame with 2-inch flanges, and ½-inch diameter axles turning in stainless steel sleeve bearings. Provide necessary mounting brackets and linkages.

d. Blade Seals: Silicone rubber.
e. Jamb Seals: Stainless steel.
f. Provide damper motors and operators with sufficient power to operate dampers under all conditions of operation. Install the operator outside of the air flow where it shall not be subject to freezing.
g. Damper operator for Mod-3 shall be a two-position, spring return, normally closed type, quiet in operation, and have ample power to overcome friction of damper linkage and air pressure acting on louvers to position dampers accurately and smoothly. Provide a strong linkage between operator and damper.
h. Damper operator for Mod-4 shall be a high torque modulating reverse actuator, opening as the space temperature rises. Damper shall be 100% open at 80 °F air temperature.
i. The operator linkage arrangement shall be such as to permit fully open or fully closed positions of the dampers as required.
j. Intake damper shall be controlled by generator. Exhaust damper shall be controlled by generator and thermostat.
k. Electrical connections to damper motors shall be readily accessible without the removal of the damper motor. Mount dampers in a readily accessible location.

5. Pressure Relief Damper (PRD-1)

a. Provide pressure relief damper for generator duct system.
b. Provide with a heavy duty double flanged, 12-gauge galvanized steel channel frame with streamlined airfoil blades, and ¾-inch axles, and standard galvanized ball bearings.
c. Provide with external heavy-duty linkage, with field adjustable blade counter balance.
d. Provide with no blade seals.
e. Approved dampers:
   1) Model HPR-230 by Greenheck; or,
   2) Approved equal

G. Metal Fabrications

1. Fabrication of Metal Products

a. Construct to sizes, shapes and thickness specified or shown on Drawings but not less than required for proper performance of the product.
b. Remove sharp or rough areas. Grind exposed sharp edges to smooth radius.
c. Complete welding by certified welder.
d. Assemble products to minimize splicing and assembly in field to greatest extent possible.
e. Clearly identify units for installation and assembly.
f. Provide anchorage provisions as specified and as shown on Drawings and as required for adequate support and proper installation. Reinforce as necessary.

2. Ladder

a. Fabricate ladders of 6061-T6 aluminum material.
b. Design, fabricate, and install OSHA compliant ladder and conform to details as shown on Drawings.

3. Retractable Safety Post

    a. Provide retractable safety post where shown on drawings.
    b. Retractable Safety Post shall be aluminum and designed with a telescoping tubular section that locks automatically when fully extended. Upward and downward movement shall be controlled by a stainless-steel spring balancing mechanism. Unit shall be completely assembled with stainless steel fasteners for securing to the ladder rungs in accordance with the manufacturer's instructions. Provide solid blocking in rungs.

4. Aluminum Access Cover

    a. Provide a double leaf aluminum access cover where indicated on Drawings.
    b. Approved manufacturers:
        1) Flygt Corporation;
        2) Halliday Products;
        3) EJ;
        4) Bilco Company;
        5) Red River Fabricating; or,
        6) Approved equal.
    c. Provide with Factory installed protective grating panels. Grate shall have a 300 pound per square foot load rating, be hinged and have a type 316 stainless steel automatic hold open latch and safety orange powder-coated finish. Grate shall be easily opened and/or removed. Operating mechanism shall be such that hatch latches cannot be accidentally operated while grate is loaded. Grate shall be opened and closed independently of cover.
    d. Provide ¼-inch aluminum frame, mill finish with bituminous coating to be applied to exterior of frame by manufacturer. Door leaf shall be ¼-inch aluminum diamond plate reinforced with aluminum stiffeners as required to withstand a live load of 300 psf.
    e. All hardware shall be Type 316 stainless steel. The door shall open to 90 degrees and lock automatically in that position.
    f. A vinyl grip handle shall be provided to release the cover for closing.
    g. Provide hasp to receive padlock.
    h. Provide with flush handle and hold open device on same side as handle.

5. Bar Screen

    a. Provide 6061-T6 aluminum bar screen as shown on Drawings.

6. Fastening Bolts

    a. Anchor Bolts: Provide stainless steel concrete anchors where required to fasten metal fabrications to concrete surfaces.
    b. Approved bolt manufacturers:
        1) Wej-It Corporation;
        2) Hilti; or,
        3) Approved equal.
    c. Assembly Bolts: For assembly of aluminum members shall be fabricated of aluminum and stainless steel and shall be adequate in strength for intended use

H. Wood and Carpentry Work

1. Wood Products

    a. Provide materials in the quantities needed for the work shown on the Drawings.
        1) Framing Members: Treated Construction Grade lumber.
        2) Plywood Sheeting: ¾-inch CD. Exterior
        3) Plywood Ceiling: ¾-inch AC Exterior
        4) Hardware: As required for complete and proper construction. Galvanized or stainless steel.

2. Wood Trusses

    a. Design for the following loading conditions:
        1) Top cord live load, 40 psf.
        2) Top cord dead load, 10 psf and weight of member,
        3) Bottom cord live load, 25 psf.
        4) Bottom cord dead load, 5 psf and weight of member.
    b. Provide lumber with a moisture content of lumber in the range of 7 to 19% at time of fabrication.
    c. Provide trusses manufactured to meet the quality requirement of ANSI/TPI 1.

I. Masonry Work

1. Facing Brick

    a. Provide brick, unless otherwise called for, in accordance with ASTM Specification C216 Grade SW and type FBS manufactured by Hebron Brick Company, Forterra or approved equal. Desert Common in color or approved equal.

2. Glass Block

    a. Provide 8-inch by 8-inch by 4-inch glass block from VUE by Pittsburgh Corning, Seves Glass Block or approved equal.

J. Structural Precast Concrete

1. Provide precast concrete as required by Drawings manufactured by Wells Concrete, Supercrete Industries, Taracon Precast or approved equal.
2. Meet the following requirements:
    a. Roof Members
        1) Uniform live load of 60 psf.
        2) Uniform dead load including member weight.
        3) Provide a minimum of 1-1/2” clear cover on all reinforcing.
    b. Wall members
        1) Lateral wind load of 20 psf.
        2) Vertical gravity load reaction of roof members bearing on the walls.
        3) Secondary moments induced by eccentric connections.

K. External Joint Seal

1. Provide external joint seals for all joints on manholes and structural precast concrete which meet ASTM C877, Type II.

2. Provide manufacturer's approved primer.

3. Minimum width: 8 inches

4. Approved products:
   a. MacWrap by MarMac Manufacturing Co. Inc.
   b. ConWrap CS-212 by ConSeal
   c. Infi-shield External Gator Wrap by Sealing Systems, Inc.
   d. Approved equal.

L. Storm Station Piping

1. Ductile Iron Pipe and Fittings

   a. Pipe:
      1) Conform to AWWA C150 and C151.
      2) Ensure pipe is clean, round, straight and of the required size.
      3) Install Class 52 pipe inside the wet well.
   b. Fittings:
      1) Working Pressure: 250 psi conforming to AWWA C110.
      2) Mechanical and Push-on: Conform to AWWA C110, C111, & C153.
      3) Flanged: American Standard Class 125, with ring gaskets.
      4) Use push-on fittings for buried installations unless otherwise shown on Drawings.
   c. Coatings:
      1) Apply epoxy coating to exterior of pipe and fittings.
      2) Apply double-thickness cement mortar lining and bituminous coating to pipe interior.
      3) Ensure mortar lining conforms to AWWA C104.
   d. Bolts:
      1) Use stainless steel bolts at each connection.
      2) Apply anti-seize material on stainless steel bolts and nuts.

M. Pump Discharge Piping

1. Controlled Density Fill (CDF)
   a. Use controlled density fill as backfill below force main at the station wall excavation.
   b. Blend, cement water, pozzolanic materials, and fillers to create the fill.
   c. Ensure the material flows around and fills voids upon placement.
   d. Ensure the material supports normal loads after 6 hours.
   e. Achieve compressive strength of 75 to 125 psi at 28 days.
   f. Use the following mix design to avoid further testing.

Mix Design

Cement	100 lbs/CY
Flyash	300 lbs/CY
Fine Aggregate	2600 lbs/CY
Water	70 gals/CY

2. Polyvinyl Chloride (PVC) Storm Sewer Forcemain

    a. Provide PVC pressure pipe conforming to AWWA C900-16.
    b. Use integral bell gasketed joints and couplings conforming to ASTM D-3139 for pipe up to 24-inch diameter.

3. Ductile Iron Fittings (Forcemain)

    a. Provide fittings with a working pressure of 250 psi, conforming with AWWA C110, C111, or C153.
    b. Use mechanical or push-on joints in accordance with AWWA C110 and C11.
    c. Use flanged fittings conforming to American Standard Class 125 with ring gaskets.
    d. Connect mechanical joints, flange joints, or similar bolted connections with stainless steel bolts and anti-seize material.
    e. Provide fitting types as shown on Drawings.
    f. Apply bituminous coating to the outside and double-thickness cement mortar and bituminous coating to the inside of all ductile iron fittings
    g. Encase fittings in polyethylene unless embedded in CDF or dry mix concrete bedding material.
    h. Restrain all push-on joints less than 24-inch diameter with fast grip gaskets.
    i. Use Mega-Bond coated EBAA Iron series 2000PV restraint, coated PVC Stargrip series 4000 by Star Pipe Products, coated SIGMA One-Lok by Sigma Corporation, or approved equal for mechanical joints with C905 PVC pipe.
    j. Provide and install all transition fittings and appurtenances required for transitions from varying pipe materials and joint types.

4. Duckbill Check Valve

    a. Use slip-on duckbill check valves.
        1) Use Tideflix TF-1 by Red Valve, Proco Series 700 or approved equal.

5. Couplings

    a. Provide style 413 or 411 by Rockwell International, style TC400 OR 400 by Romac Industries, Hymax Coupling by Krausz USA, Powerseal model 3538 straight coupling or approved equal.
    b. Apply fusion bonded epoxy coating inside and out.
    c. Minimum center ring length of 10 inches.
    d. Provide with all stainless-steel bolts and nuts with anti-seize material

6. Polyethylene Wrapping Material

    a. Provide polyethylene used for wrapping buried metal components that is 8 mil thick and meets the specifications of ANSI A21.5.

N. Instrumentation and Control

1. Supervisory Control Panel (SCP)

    a. Install the following components in the SCP:
        1) Transient Protection.
        2) Uninterruptible Power Supply.
        3) Direct Current (DC) Power supply(s) as required.
        4) Operator Interface Terminal (OIT).
        5) Programmable Logic Controller (PLC) with input and output modules as herein described.
        6) Power On light
        7) Common failure light
        8) Hand-Off-Auto switches for pumps.
        9) Run time meter.
        10) Pump Speed potentiometer
    b. Mount and label Items 4, 6, 7, 8, 9, and 10 on the door.
    c. Power the Supervisory Control and Telemetry system from the UPS. Install contact closure to indicate power loss to control and telemetry
    d. Ensure the SCP enclosure meets the following requirements:
        1) Use NEMA 3R construction with 14-gauge steel for both enclosure and door.
        2) Attach the door using a heavy-duty piano-type hinge.
        3) Submit all enclosures for approval before installation.
        4) Include a 12-gauge back panel with baked white enamel paint.
        5) Submit the door layout before fabrication.
        6) Install a 3-point heavy-duty latching mechanism with key-locking handle and latch rod rollers.
        7) Size the panel to a minimum of 48” x 36” x 20”.
        8) Install an appropriately sized ventilation kit.

2. Power Monitor

    a. Install a SymCom Model 460 power line monitor or approved equivalent on the new back panel inside the new enclosure. Ensure it senses power loss, phase reversal, low voltage, and voltage unbalance between phases. Confirm the monitor automatically resets upon power restoration

3. Indicator Lights

    a. Use Allen Bradley model 800FP or approved equivalent 22.5mm, with LED lamps, panel mounted lights for the following panel mounted indicator lights:
        1) Processor Running
        2) Common Fault
    b. Indicator lamps in or surface mounted on the supervisory control panel shall be cartridge mounted light emitting diodes with internal fresnel ring pattern in its lens. Color as indicated in drawings.

c. Dim glow lights are not a suitable alternate.

4. Speed Potentiometers

   a. Use Allen Bradley 800T-U29 speed potentiometers with 800T-X608 Speed Legend Plate.

5. R.F. Noise Attenuation

   a. Provide ferrite for control wire in each pump cable. Install ferrites in series on wires where the pump cables are terminated, i.e., junction boxes with terminal strips. Ferrite style and configuration shall be field-determined for suitable noise attenuation. Provide additional noise attention measures at the discretion of the Engineer at no additional cost.

6. Relays
   a. Use plug-in blade base auxiliary relays with dust protection, holding springs, and screw terminal bases. For high-frequency or time delay applications, install solid-state relays with plug-in or screw terminal configurations. Use AB Bulletin 700-HB or approved equivalent. Ensure all components are U.L. approved and heavy-duty grade. Do not use custom-designed components unavailable from standard sources.

7. Surge Protection

   a. Install PLUGTRAB PT Series surge suppression by Phoenix Contact or approved equivalent in the SCP. Rate for 120 VAC. Include a dry contact for remote plug status indication.

8. Power Supply

   a. Install DIN rail-mounted power supplies (IDEC PS5R Slim Line or approved equivalent) in the SCP as needed. Size and rate the power supplies according to application requirements. Verify and adjust indicated model numbers/sizing from control drawings as necessary. Provide larger power supplies at no extra cost if required.

9. IS Barrier

   a. Use rotary or push-button, heavy-duty, oil-tight switches rated for 600 VAC. Use Square D Series 9001K or approved equivalents with appropriate contact blocks and form factors.

10. Panel Switches

    a. Use rotary or push-button, heavy-duty, oil-tight switches rated for 600 VAC. Use Square D Series 9001K or approved equivalents with appropriate contact blocks and form factors
    .

11. Programmable Logic Controller

a. The programmable logic controller (PLC) shall consist of an integral central processing unit power supply and input/output devices required to perform all functions as required by the supervisory control sequence of operation.
b. The PLC shall also have adequate RAM memory for all functions plus 50% spare capacity with battery backup and EEPROM, utilize EEPROM in processor for program storage, security key switch, two ethernet ports, and other support features as required. Input/output modules to be supported shall include 240VAC/DC, 120VAC/DC, 48VAC/DC, 12-24VAC/DC and TTL digital signals and 1-5VDC, 0-10VDC, -10 to +10DC and 4-20mA analog signals. Other modules as may be required for control and alarm shall also be supported.
c. The PLC shall support timing and math functions including multiplication, division, exponents, addition, multiplexing, BCD input, logical operators, less than, equal to, greater than, real time clocking and counting. Additional PLC functions shall be Analog to BCD and BCD to Analog conversion.
d. Programmable logic controller shall be Allen Bradley Model CompactLogix 1769-L30ER with latest firmware available at time of installation or approved equivalent.
    1) Primary control decision shall be made by the PLC using standard ladder logic.

12. Intrusion Detectors

    a. Install Sentrol Guard Switch 151 surface-mounted magnetic contact switches or approved equivalents.

13. Elapsed Time Meter

    a. Elapsed time meter shall be a 7-digit LCD type. Meter shall be an Omron H7ET-NV-B, 24VDC or approved equivalent.

14. Uninterruptable Power Supply (UPS)

    a. Uninterruptible Power Supply (UPS) shall have the following minimum requirements:
        1) 120 volts AC input via rubber cord and 5-15P plug; 60Hz.
        2) 120 volts output via duplex (6)5-15R receptacle; 60 Hz.
        3) 700 volt amperes; 630 watts; 0.9 power factor.
        4) Modified sine wave output; less than 3% THD.
        5) +5% output voltage regulation from +10% to -15% input voltage.
        6) +0.1% frequency regulation.
        7) Short circuit protection.
        8) Instantaneous transfer (meet CBEMA requirements).
        9) 60dB noise rejection.
        10) IEEE 587 Class A voltage surge protection on output.
        11) Sealed maintenance free lead acid battery; 5 minute run time (minimum) at full load.
        12) 6 hour (max) battery recharge time.
        13) Indicators; Load protected status, low battery alarm, power overload status
        14) Audible signal; once each 10 seconds (power from inverter); once every 3 seconds (less then 2 minutes remain on battery); continuous (battery improperly charged).
        15) Contact to indicate supply power loss.
        16) UL listed; CSA certified; FCC part 15 subpart J Class A.
        17) Single enclosure required; black finish.

b. Provide Eaton, Model 9SX700 or approved equivalent.

15. Operator Interface Terminal (OIT)

    a. Operator interface terminal shall be Allen Bradley 2711P-T10C21D8S PanelView Plus 7 with Ethernet communication protocol or approved equivalent.
    b. Provide one spare Operator Interface Terminal.

16. Submersible Level Transmitter
    a. Install Ametek Model 575 submersible level transmitter or approved equivalent. Ensure suitability for wastewater, 4-20 mA output, 0-15 PSI range, and compatibility with IS barriers. Use unspliced cable long enough to reach SCP; verify length with Engineer.

17. Floats

    a. Install Roto-Float with NONC contacts, as manufactured by Anchor Scientific Inc or approved equivalent.
    b. Provide with cable length long enough to reach SCP or ventilated junction box as shown on plans un-spliced. Provide Type P-pipe mount.

18. Managed Ethernet Switch

    a. Install Allen Bradley 1783-BMS10CGA 8-port managed ethernet switch or approved equivalent. Obtain IP address from Engineer before installation.

19. Temperature Sensor/Transmitter

    a. Provide a 1000-ohm, continuous averaging, RTD type temperature sensor and transmitter by the same manufacturer. The transmitter must be capable of producing a 4-20mA signal. Temperature sensor/transmitter shall be Omega EWSE-PT100-TX or approved equivalent.
    b. Temperature transmitters shall be factory scaled for the -40 to 185 Deg F.
    c. Transmitters shall be mounted as shown on plans.

20. Time Delay Relays

    a. Time delay relays shall function as On Delay timers with a range of 50ms to 999 minutes. Input power shall be 120 VAC and have DPDT form C relay contacts rated for 10 amps at 240 VAC. Terminal style shall be 8-pin plug socket with screw terminals. Time delay relays shall be Ametek NCC Industrial – A1M series or prior approved equivalent.

21. Circuit Breakers – DIN Rail Mounted

    a. Install Square D QOU Series DIN rail-mounted circuit breakers rated per application or approved equivalent.

22. Fused Terminal Blocks

a. Phoenix Contact UK 6.3, Weidmuller W Series, or approved equivalent fused terminal blocks. Use standard ¼" x 1 ¼" fuses rated per application. Include lighted blown fuse indicators, except on 26-8 AWG wire. Rate each block for 10 amps. Provide all terminal blocks with Bussmann fast-acting fuses.

23. Terminal Blocks

a. DIN rail mounted, touch-safe, modular type.
b. 600V RMS, 30 amps minimum or higher amp rating as required for application.
c. Connector metal body material: Copper alloy, min 85% copper with nickel or tin plating.
d. Terminal screw material: Bronze with tin plating.
e. Terminal block shall have the following characteristics:
    1) It shall terminate wires without additional preparation: i.e. tinning of wire ends, application of ferrules, etc.
    2) The insulation housing shall have primary entry funnels to facilitate insertion of wires.
    3) The insulation housing shall prevent corrosion due to corrosive atmospheres.
    4) The termination shall be gastight to prevent corrosion due to corrosive atmospheres.
    5) Terminal screws shall be captive in the metal body or via the insulation housing.
    6) Once tightened the terminal screws shall be locked in place to prevent loosening due to shock and vibration.
    7) The terminal block shall be useable with accessories such as center or insertion bridges; test sockets; separating plates; and end covers, etc. The accessories used shall also be touch-safe.
    8) For wire identification, the terminal block shall provide space for marking with pre-marked or hand written labels.
f. Manufacturer/Model:
    1) Phoenix Contact Series UK 5N (minimum) through UK 35 or Weidmuller W Series as required for the application.

24. Variable Frequency Drives

a. Description
    1) Individually enclosed fusible combination type variable frequency controllers suitable for operating the indicated loads, in conformance with requirements of NEMA ICS 7.
    2) Select unspecified features and options in accordance with NEMA ICS 3.1.
    3) Allen Bradley PowerFlex 753.
b. Ratings
    1) Rated Input Voltage: As indicated, three phase, 60 Hertz.
    2) Motor Nameplate Voltage: As indicated, three phase, 60 Hertz.
    3) Displacement Power Factor: Between 1.0 and 0.95, lagging, over entire range of operating speed and load.
    4) Operating Ambient: 0 degrees C to 40 degrees C.
    5) Minimum Efficiency at Full load: 96 percent.
c. Design Features, Options
    1) Features:
        a) Programmable
            i) Dual Accel/Decel Profiles.

ii) Three Skip Frequencies.
iii) DC Injection Braking.
iv) Dynamic Braking.
v) Slip Compensation.
vi) Negative Slip Compensation (Droop).
vii) S Curve Accel/Decel Profile.
viii) Standard/Custom Volts-per-Hertz Curves.
ix) Proactive Current Limit.
x) Last Four Event Fault Memory.
xi) Flying Start.
xii) Automatic DC Boost.
xiii) Seven Preset Speeds.

b) I/O Interface
i) Drive Fault Contacts (Form C)
ii) Programmable Output (Form A)
iii) Run Contact (Form A)
iv) Drive Alarm Contacts (Form C)
v) Speed Pot Input.
vi) 0-10V DC Analog Input.
vii) 4-20mA Analog Input.
viii) 4-20mA Signal Loss Response.
ix) Analog Input Inversion
x) Selectable 0-10V DC/0-20 mA Analog Output with Offset.
xi) Pulse Train Input.
xii) Encoder Feedback Closed Loop Speed Control.

c) Special Function
i) Process PI Controller.
ii) Traverse function.
iii) Phase Lock Loop.
iv) Selectable Fault Reset & Run.
v) Auto Restart on Power Up.
vi) Electronic Thermal Overload.

2) Electrical:
a) IGBT's (Insulated Gate Bipolar Transistors).
b) Dynamic Current control.
c) DC Cooling Fan.
d) Isolated Power and Logic.
e) Internal Logic Supply from DC Bus.
f) Communications
i) Built-in serial bus for ease of integration to many protocols.
ii) Ethernet communication module for control and programming.
g) Input Data.
i) Voltage tolerance:h
1. -10% of Minimum, +10% of Maximum.
ii) Frequency Tolerance
1. 47-63 Hz.
iii) Number of Phases:
1. 3-Full Rating.
2. 1-1/2 Rating.
h) Displacement Power Factor:
i) 0.95.

i) Efficiency:
   i) 97.5% at rated amps, nominal line volts.
j) Maximum Short Circuit Current Rating:
   i) 200,000A rms symmetrical, 600 volts with RK5 fuses.

3) Protection:
   a) 480V Drive
      i) AC Input Overvoltage Trip 570V AC
      ii) AC Input Undervoltage Trip 280V AC
      iii) Bus Overvoltage Trip 810V DC
      iv) Bus Undervoltage Shutoff/Fault 400V DC
   b) Heat Sink Thermistor Monitored by microprocessor overtemp trip.
   c) Drive Over-current Trip:
      i) Software overcurrent limit: 200% of drive rated
      ii) Hardware overcurrent trip: 220 to 300% rated current.
   d) Line transients: Up to 6000 volts peak per IEEE C62. 41-1991.
   e) Control Logic Noise Immunity: Showering arc transients up to 1500 volts peak.
   f) Power Ride-Thru: 15 milliseconds at full load.
   g) Logic Control Ride-Thru: 0.5 seconds minimum, 2 seconds typical.
   h) Ground Fault Trip: Phase-to-ground on Drive Output.
   i) Short Circuit Trip: Phase-to-phase on Drive Output.
4) Environmental
   a) Altitude: 3300 ft. minimum without derating.
   b) Ambient Operating Temperature: 0° to 40°C (32° to 104°F).
   c) Storage Temperature: -40° to 70° C.
   d) Relative Humidity: 5 to 95% non-condensing.
   e) Shock: 15G peak for 11 ms duration (± 1.0 ms)/
   f) Vibration: 0.006 inches (0.152mm) displacement, 1G peak.
   g) Agency Certification: UL Listed, CSA Certified.
5) Control:
   a) Method: Sine coded PWM with 2-12 KHz programmable carrier frequency.
   b) Output Voltage Range: 0 to rated voltage.
   c) Output Frequency Range: 0 to 400 Hz.
   d) Frequency Accuracy: Digital Input; Analog Input.
   e) Volts per Hertz Ratio: Fully programmable.
   f) DC Boost: No boost, auto mode (8 settings with programmable run boost reduction), full custom, fan mode (2), or fixed mode (with independent accel and run boosts).
   g) Accel/Decel: Two independently programmable accel and decel times. Each time may be programmed from 0 to 600 seconds.
   h) Intermittent Overload: Constant Torque: 150% of rated output for 1 minute. Variable Torque: 115% of rated output for one minute.
   i) Current Limit Capability: Proactive current limit programmable from 20 to 160%. Independently programmable proportional and integral gain.
   j) Inverse Time Overload Capability: Class 20 protection with speed sensitive response to comply with NEC 430.
   k) Digital Input Resolution: 0.0018Hz.
   l) Analog Input:
      i) 4-20A resolution; 0.103%.
      ii) 0-10V DC resolution; 0.105%.
      iii) Remote Pot Resolution; 0.158%.

iv) Local Pot (HIM) Resolution; 0.100%.

m) Pulse Input:
i) Externally powered square wave pulse at 5V TTL.
ii) Low state voltage 0.0 and 0.4V DC.
iii) High state voltage 4.0 and 5.5V DC at 16mA.

6) Control Options:
a) Option; Contact closure interface board.
b) Option; +24V AC/DC interface board.
c) Option; 115V AC interface board.

7) Fan select/No Boost:
a) For applications, which do not require boost; "No Boost" setting provides a straight line Volts-per-Hertz pattern from minimum to maximum frequency. Two selections provide reduced voltage patterns for centrifugal fan and pump loads; Fan 1 provides 35% voltage at 50% frequency; Fan 2 provides 42% voltage at 50% frequency.

8) Display:
a) Local Programming and Display Panel: Backlit LCD display, 2 lines, 16 characters each, display of status, faults and programming. Process display provides 2 lines, any 2 parameters, scalable with user test. Selectable "Power Up" display.
b) Mount local programming and display panel on front door so adjustments can be done without opening enclosure.

9) Encoder Inputs:
a) Requirements
i) Line Drive Encoder 5V DC or 8-15V DC Output.
ii) Minimum Current – 10mA per channel.
iii) Quadrate or pulse.
iv) Single ended or differential.
v) Maximum input frequency – 125 kHz.

10) Control Outputs:
a) Contact Outputs
i) 115V AC, 30V EC – 5.0 Amp Resistive – 2.0 Amp Inductive.
ii) One form C fault contact.
iii) One form A run contact.
iv) One form C alarm contact.
v) One form A programmable contact for speed, current or torque.
b) Analog Outputs
i) One selectable, either 0-10V DC with selectable 2V offset or 0-20 mA with selectable 4Ma offset.
ii) Programmable proportional to output Hz, output power, output amps or Bus volts. Typical accuracy is $\pm$ 1.2%.

11) Power Input filter: Include DC bus reactors and/or other means to limit harmonic current flow back onto the input AC power line so as to negate the requirement for external reactors or isolating transformers.

d. Fabrication/Mounting
1) Wiring Terminations: match conductor materials and sizes indicated.
2) Drive shall be wall mounted as shown in electrical plans. Provide manufacture supplied NEMA rated conduit entry kit.

e. Source Quality control
1) Section 01400 – Quality Control: Manufacturer quality control.

2) Shop-inspect and perform standard productions tests for each controller.

f. Drive configuration and testing shall be done by control systems integrator. All functions of VFD must be programmed and demonstrated to Engineer by control system integrator.

O. Electrical

1. Hazard Labels

a. Manufacturers:
   1) Brady.
   2) Seton, or approved equal.

b. Description: Provide manufacturer's recommended arc flash and shock hazard label that includes the minimum Arc Thermal Performance Exposure Value (APTV) or Breakopen Threshold Energy Rating of PPE in cal/cm2 and the corresponding flash hazard boundary distance, nominal system voltage, and limited, restricted and prohibited approach distances. Labels shall include black "WARNING" lettering or symbols on a orange background.

c. Locations:
   1) Each electrical metering center, transformer, switchboard, motor control center, distribution panelboard, branch circuit panelboard, separate motor controller, and disconnect switch enclosure. Where gear is wider than 60 inches, provide labels at each end and in between at 80" O.C. maximum.
   2) Communication and control equipment enclosures unless rated at 50 volts or less.
   3) Other locations directed by Engineer.

d. Approach Boundaries:

Type	50 to 750 Volts	751 to 15 kV
Limited:	42 Inches	60 Inches
Restricted:	12 Inches	26 Inches
Prohibited:	1 Inch	7 Inches

2. Conduits and Raceway

a. Install Rigid Metallic Conduit (RMC), full-weight galvanized steel per UL6, minimum size 1/2". Double-locknut and seal cabinets with sealing locknuts and insulated throat bushings in dry locations.

b. Use Schedule 80 PVC (per NEMA TC3, TC6) for conduits in concrete, wet pits, or earth burial. Ensure temperature rating matches conductor requirements. Transition to galvanized rigid steel conduit at least 6" below grade. Apply asphaltum field coat or factory 40-mil PVC coat to steel conduit.

c. Allow above-ground PVC only where indicated on drawings.

d. Use galvanized steel EMT above grade. Use galvanized steel set screw fittings in dry areas; use waterproof fittings for wet or damp locations. Use steel flex for moving or vibrating equipment. Use steel seal tight in wet locations.

e. Do not use EMT, IMC, or aluminum raceways.

f. Use liquid-tight galvanized steel tubing with extruded PVC jacket. Use galvanized steel or malleable iron connectors (RACO 3511/3541 series) with insulated throats.
g. Install wireways, auxiliary gutters, and fittings compliant with UL870

3. Conductors and Terminal Lugs

   a. Use low voltage wire, single conductor, soft drawn copper, 600-volt insulation, with consistent color coding throughout project.
   b. Use solid wire for #10AWG and smaller. Use stranded wire for #8 AWG and larger. Use stranded wire for control and signal circuits.
   c. Use wire rated to at least 90°C. Refer to drawings for specific insulation types.
   d. Do not use aluminum wire.
   e. All terminal lugs shall be copper alloy unless expressly noted otherwise. Aluminum is not acceptable even when CU/AL rated. This requirement applies also to circuit breakers, starters, panelboards, and all other electrical equipment on this project.

4. Boxes

   a. Install FS and FD type copper-free cast galvanized iron boxes for exposed wiring. Ensure minimum 1-1/2” depth unless noted.
   b. Use 4” case iron fixture outlet boxes (ceiling type) with 20 in^3 capacity where required. Do not use aluminum boxes.
   c. Use galvanized steel rectangular, square and octagon boxes for EMT. Do not use sectional (gangable) boxes. Use Steel City or approved equal. Comply with NEC minimum size requirements.

5. Wiring Devices

   a. Use Hubbell or P&S specification-grade wall switches. Use Hubbell 1221-I for single pole.
   b. Install Crouse Hinds DS185 or Appleton FSK-IVS-A switch cover plates.
   c. Install special switches per drawings or specification sections.
   d. Use 5-20R duplex GFCI receptacles with integral feed-through GFCI protection.
   e. Use Red Dot CKMU in-use covers for exterior and noted locations.
   f. Use Leviton 4976-FS interior covers and Leviton WM1VF-GY for interior GFCI covers, except in hazardous areas.

6. Overcurrent Protective Devices

   a. Install overcurrent protective devices in accordance with the National Electric Code. Use circuit breakers as the primary protective devices. Select devices with appropriate ampere and voltage ratings for conductor and equipment protection.

7. Disconnects

   a. Install heavy-duty enclosed safety switches with quick-make, quick-break mechanisms. Match ampere rating and pole count to drawings. Equip switches with hardware for padlock locking in on/off positions. Provide padlocks (by Owner).

b. Include copper alloy lugs. Use Square D, Siemens, Eaton, or approved equal.

8. Panelboards

    a. Install deadfront panelboards with bolt-on thermal magnetic breakers (E frame or better). Use Square D "Mini Power-Zone Unit Substation" for 15 KVA 480-120/240 VAC single phase power centers.
    b. Use circuit breakers with trip indications distinguishable from "on" or "off." Use common trip multipole breakers; do not use handle ties. Install only full-size breakers. Ensure all 480V panelboards/breakers are rated for 42,000 AIC.
    c. Include typed directories, identification labels, and lock with keys. Locate and design per drawings.
    d. Provide copper busses. Use copper alloy lugs for 480V breakers and MLO panelboards.
    e. Use Siemens, Square D, Eaton, or approved equal.

9. Loadcenter

    a. Install deadfront, service entrance-rated loadcenters with thermal magnetic breakers. Use full-size breakers with trip indication different from "on" or "off." Use common trip multipole breakers; do not use handle ties. Rate loadcenters/breakers for 10,000 AIC.
    b. Include typed directories and identification labels. Locate and design per drawings. Use Siemens or Square D. Provide copper busses.

10. Contactors

    a. Install contactors as specified on drawings or other specification sections. Use aluminum alloy (AL/CU rated) lugs. Select from Siemens, Square D, or Allen-Bradley.

11. Cabinets

    a. Use welded stainless steel construction. Include keyed latch and engraved identification plate. Use NEMA 12 construction indoors and NEMA 4X outdoors.
    b. Select cabinets from Hoffman, Shallbetter, or approved equal.

12. Ventilated Junction Box

    a. Use NEMA 4X stainless steel junction boxes (16-gauge type 304) with continuously welded and ground seams. Include continuous hinge, oil-resistant gasket, padlock latch, and vented skirt. Provide painted inner panels and terminal blocks for all incoming wire terminations.

b. Use Allen Bradley 1492 power terminal blocks and Allen Bradley or Square D control terminal blocks (or approved equal).

13. Fuses

a. Install current-limiting fuses in fusible disconnects. Use Bussman Low-Peak or approved equal.

14. Automatic Transfer Switch

a. Install ASCO 7000 series or approved equal automatic transfer switches. Include delayed transition, solid neutral, and 3-phase, 1200 A capacity per drawings. Use NEMA Type 1 enclosure.
b. Provide 2 NO and 2 NC auxiliary contacts for switch position, Utility Power Available, and Generator Power Available indications.

15. Slip Couplings

a. Install XJ expansion couplings by Appleton or XJG expansion couplings by Crouse Hinds, or use an approved equal. Use galvanized rigid metal with 4" movement. Provide copper bonding jumpers as required.

16. Cable Seals

a. Seal each cable entering the upper position of a ventilated junction box or the SCP from the ventilated skirt area. Use OZ Gedney, Heyco, or approved equal cable seals.

17. Transformer

a. Install transformers suitable for indoor or outdoor installation. Ensure noise levels do not exceed NEMA STI standards. Use transformers rated for 115°C maximum temperature rise in 40°C ambient under full load.
b. Use 480-208/120V, 3-phase, 60 Hz delta-wye transformers with four 2-1/2% full capacity taps (2 above and 2 below 480V). Use copper windings and copper bus. Provide appropriate mounting brackets.

18. Power Meter

a. Install a Shark 100 digital meter from Electro Industries (Model ENCSHK100-277-60-10-VI-D2-INP10) to monitor station voltage. Provide a compatible CT kit to monitor station amp draw. Mount approximately 5’ off the floor adjacent to the new power panel.

19. Service Entrance

    a. Provide a new meter socket per utility requirements. Install a new C.T. cabinet to meet utility specifications. Construct a transformer pad as required by the utility.

20. Surge Protection

    a. Install secondary lightning protection after the main disconnect and ground to the neutral at the service entrance. Use Model 1456-85-pm (480V), Siemens TPS3E12250X02, Eaton SPD250480Y3N, or approved equal.
    b. Install another Shark 100 meter from Electro Industries (Model 100-60-10-VI-D2-INP10-X) to monitor station voltage. Include a CT kit and mount the meter in a 10”x10”x8” NEMA 1 hinged enclosure. Provide a dedicated 120 VAC circuit from the light panel for power. Mount the meter approximately 5’ off the floor adjacent to the new power panel.
    c. Install 208V surge protection using Model EP2500-3Y208 by Environmental Potentials or approved equal.

21. Heaters

    a. Install 5 kW unit heaters (Berko HUHAA, Ouellet OHV, QMARK MUH, or approved equal) of appropriate voltage. Include mounting brackets and summer fan switches. Provide remote wall-mounted thermostats to control all unit heaters.

22. LED Fixtures

    a. Install LED fixtures that deliver specified lumens at the designated color temperature. Ensure fixture efficacy meets specifications for the specified Correlated Color Temperature (CCT).
    b. Use LED fixtures with integral drivers. Use universal voltage drivers (120-277V).

P. Generator

1. Engine

    a. Manufacturers:
        1) Caterpillar.
        2) Cummins.
        3) MTU Detroit Diesel.
    b. Type: Water-cooled four-stroke Diesel internal combustion engine.
    c. Rating: Sufficient to operate at specified elevation and ambient limits.
    d. Fuel System: Appropriate for use of No. 1 and 2 fuel oil, or a blend of both.
    e. Engine Speed: 1800 rpm.

f. Governor: Isochronous type to maintain engine speed within 0.25 percent, no load to full load, with recovery to steady state within 2 seconds following sudden load changes. Equip governor with means for manual operation and adjustment.
g. Safety Devices: Engine shutdown on high water temperature, low oil pressure, over speed, and engine over crank. Limits as selected by manufacturer.
h. Engine Starting: 24-volt DC starting system with positive engagement starter motor.
i. Engine Coolant Heater: Thermal circulation type water heater with integral thermostatic control, sized to maintain engine coolant at 120 degrees F, and suitable for operation on 120 volts AC.
j. Radiator: Radiator with blower type fan and fan guard, sized to maintain safe engine temperature in ambient. Radiator Air Flow Restriction: 0.5 inches of water maximum. Provide -40 degree F permanent antifreeze solution recommended by manufacturer.
k. Required Engine Accessories: 35 AMP battery charging alternator, fuel filter, lube oil filter, intake air filter, lube oil cooler, fuel transfer pump, fuel priming pump, water pump, belts etc. as required.
l. Mounting: Provide spring or rubber vibration isolation between base rails and engine/generator unit.
m. Air Filter: Two-stage air cleaner or equal to prevent the introduction of ice or snow into engine in extreme winter weather.
n. EPA Requirements: Generator shall meet or exceed all applicable air quality standards.

2. Generator

a. Generator: ANSI/NEMA MG 1; reconnectible brushless synchronous generator with brushless permanent magnet exciter.
b. Insulation: ANSI/NEMA MG 1, Class H operating at Class F temperature rise.
c. Temperature Rise: Meet IEEE, NEMA and ANSI standards.
d. Enclosure: ANSI/NEMA MG 1; open drip proof.
e. Voltage Regulation: Include generator-mounted volts per Hertz exciter-regulator to match engine and generator characteristics, with voltage regulation +/- two percent from no load to full load. Include manual controls to adjust voltage drop +/- 5 percent voltage level, and voltage gain. Include ANSI/NFPA 110 100 percent one step load acceptance requirement.

3. Accessories

a. Base Mounted Fuel Tank: Provide with flexible fuel lines, connections, check valve, rupture containment chamber, mechanical fuel level gauge. Fuel tank shall be pressure tested at 3 psi to assure that no leakage exists. Include a tank overfilling device to prevent spillage. Include a fuel level sensor with 4-20 ma output for connection to SCP. Tanks shall be supported so that the basin wall does not set flat on the concrete pad. Tanks shall meet UL-142. The minimum capacity of the tank shall provide enough fuel for 12 hours of running at 100% load.
b. Exhaust Silencer: Critical type silencer, with companion flanges and flexible stainless steel exhaust fitting, suitable for horizontal orientation, sized in accordance with engine manufacturer's instructions. Include gravity-operated rain cap.
c. Battery: Heavy duty, diesel starting type lead-acid storage batteries, 180 ampere-hours minimum capacity with 900 cold cranking amps at 0°F. Match battery voltage to starting system. Include necessary cables and clamps.

d. Battery Tray: Plastic-coated metal treated for electrolyte resistance, construct to contain spillage of electrolyte and secure battery.
e. Battery Charger: Current limiting type designed to float at 2.17 volts per cell and equalize at 2.33 volts per cell. Include overload protection, full wave rectifier, DC voltmeter and ammeter, and 120 volts AC fused input. Provide unit mounted enclosure to meet environmental requirements and a 30 foot permanently attached cord and plug.
f. Circuit Breakers:
    1) Line Circuit Breaker: Three pole 400 AMP NEMA AB 1 molded case circuit breaker on generator output with integral thermal and instantaneous magnetic trip in each pole; include battery-voltage operated shunt trip, connection to open circuit breaker on engine failure. Mount unit in enclosure to meet environmental requirements.
g. Engine-Generator Control Panel: ANSI/NEMA 250, Type 12 generator mounted control panel enclosure with engine and generator controls and indicators:
    1) Frequency Meter: 45-65 Hz range, 3-1/2 inch dial.
    2) AC Output Voltmeter: 3-1/2 inch dial, 2 percent accuracy, with seven-position phase selector switch.
    3) AC Output Ammeter: 3-1/2 inch dial, 2 percent accuracy, with four-position phase selector switch.
    4) Output voltage adjustment.
    5) Push-to-test indicator lamps, one each for low oil pressure, high water temperature, over speed, and over crank.
    6) Engine auto-manual-off-remote selector switch.
    7) Engine running time meter.
    8) Fuel pressure gauge.
    9) Water temperature gauge.
    10) Auxiliary Relay: DPDT, operates when engine runs, with contact terminals prewired to terminal strip.
    11) Oil pressure gauge.
    12) Battery charge rate ammeter.
    13) Fuel level gauge.
h. Where the generator set manufacturer offers a digital display panel for sale, such a display shall be provided in lieu of the analog devices specified above. Analog may be Provideed only where the manufacturer does not offer digital for sale.
i. Vibration Isolation: Adjustable tension springs housed in forged iron flanges. Provide at least four (4) spring isolation units mounted to generator set base rails.
j. Electric Solenoid Fuel Valve: For use on fuel supply line near engine. Connect to open when engine starts and close when engine stops.
k. Remote Contacts: For connections to SCP provide dry contact closures for the following minimum conditions:
    1) Generator Common Alarm.
    2) Engine control switch not in auto or start position.
    3) Generator running.
    4) Pre-high coolant temperature alarm.
    5) High coolant temperature shutdown.
    6) Low coolant temperature alarm.
    7) Pre-low oil pressure alarm.
    8) Low oil pressure shutdown.
    9) Over-speed shutdown.
    10) Over-crank shutdown.

11) Generator fuel tank leak.
12) Utility power available.
13) ATS connected to Generator.
14) ATS connected to utility.

l. Provide a minimum of 30 watts of 24 VAC power to operate the generator intake, exhaust louvers, and control thermostat. Coordinate with louver motor supplier.

4. Ductwork

a. All ductwork shall be made from galvanized steel sheets. All ductwork shall comply with SMACNA HVAC Duct Construction Standards. All ductwork shall be substantially straight with no audible leaks, reinforced or crimped to prevent "panning" at system start-up and good rigid connections to louvers and dampers.
b. Connect the duct to the diesel engine radiator using a flexible connection. Material for the connection shall be wire-reinforced glass. The connection shall be rendered practically airtight.

5. Exhaust System Piping

a. Slope horizontal sections of exhaust piping downward away from the engine to a condensate trap and drain valve. Changes in direction shall be long-radius. Insulate and cover exhaust piping, mufflers and silencers installed inside any building to protect personnel. Provide vertical exhaust piping with a hinged, gravity-operated, self-closing, rain cover.

6. Fuel

a. Provide full tank of fuel for generator. Fuel shall include additives for long-term storage.

Q. Load Bank

1. The load bank shall be a completely self-contained unit which includes all resistive load elements, load control devices, load element branch circuit fuse protection, main load bus and terminals, control terminals, system protection devices and NEMA enclosure of required type. The load bank shall be the manufacturer's standard product that has been investigated, tested and listed by Underwriters Laboratories, as a system for the purpose intended. Simple assemblies of listed parts that are not system UL listed shall not be acceptable.

2. Enclosure shall be a NEMA Type 1, galvanized steel, unit construction, consisting of a power section, for installation and wiring of the load elements and a control section for installation and wiring of control components. The control section is to be physically and thermally isolated from both the hot load elements and the heated airflow. Load Bank shall be provided with adjustable height, floor-mounting adaptors, for independent support of unit. Ductwork shall be supported separately. Load bank shall also be provided with a flexible isolating transition from the generator radiator, along with sheet metal duct on both sides of the load bank as shown on drawings.

3. Load elements shall be in accordance with UL 1030, labeled or recognized, totally enclosed, sealed and weather-proof with an electrically grounded outer sheath such that

the element cannot be electrically short-circuited by external foreign objects and personnel are protected against accidental electrical shock. Elements shall be individually replaceable. Open wire type elements in which the electrically live conductors are exposed and which can be short circuited to each other or to ground by foreign objects or by the breakage of an element or and element support shall not be permitted.

4. Provide load element short circuit protection by using branch circuit fuses, per each 50 kW load branch circuit. Fuses shall be 200,000 A.I.C. current limiting type.

5. Provide one magnetic contactor per each fused branch circuit for load control.

6. Load bank power wiring shall be 302 degrees F insulated.

7. Main terminals shall be barrier type power terminal block with compression type terminal to accept stranded building wire. Provide chassis ground stud with compression type terminal.

8. Control wiring shall be 221 degrees F insulated.

9. Control power shall be derived internally from the main load bus. Control and protective circuits shall operate at 120 volts via control power transformer or line-neutral circuit and shall be fused.

10. The load bank shall include a comprehensive protection system to protect against overheating. The system shall function to disconnect the load elements from the power source and activate an alarm upon sensing an exhaust air temperature greater than 300 degrees F.

11. Load bank rating shall be 50 kW, 1.0 p.f. Load banks shall be rated for 50 percent of total generator rating. Load steps shall be in manufacturer's suggested increments, in order to obtain specific rating. Voltage shall be 480 volts ac, three-phase, 3-wire. Frequency shall be 60 Hertz. Air intake temperature shall be 155 degrees F max (radiator air outflow). Provide radiator air outflow. Load bank shall have continuous duty cycle, air temperature rise of 100 degrees F, nominal. And an air back pressure of 0.25-0.50 inch water column.

12. Provide with local control panel. Control panel shall be NEMA 1 for automatic and manual operation. The panel shall include:

    a. Control power on-off pushbuttons.
    b. Automatic and Manual operation switch.
    c. "Normal Operation" indicator lamp.
    d. Master load control switch.
    e. Load step control switches.
    f. "Cooling Failure" alarm indicator lamp.

13. The load bank is to be equipped with an automatic controller, which will be activated when the load bank mode control selector switch is placed in the "automatic" position. In automatic mode, the load bank is to be on-line and continuously operative whenever the power source runs. The load bank shall provide a component of the total power source

load and shall be automatically variable in response to dynamic total load demands upon the power source. The automatic controller shall include control logic, solid-state sensors and time delays, which shall act to apply or remove load bank component in multiple steps in response to dynamic output of the power source. The automatic controller shall function to maintain 50 percent total load upon the power source within a present bandwidth by adding load bank load component as external load component drops and removing load bank component as external load rises. The automatic controller shall sense load kilowatts. Full manual control of the load bank shall be restored when the mode selector switch is placed in the “manual” position. The automatic controller shall include a solid-state load sensor with level and time delay adjustment and output contacts for each load step. A current transformer for external installation shall be provided.

14. Acceptable manufacturer shall be Simplex LBD Series, or other approved equal.

R. Coatings

1. Coatings and Coating Products

    a. The coatings and coating products of PPG Industries, Inc. (Pittsburgh Paints), Tnemec Company, Inc., Sherwin Williams Company, Diamond Vogel Paints, Raven Lining Systems, or other specific coating manufacturer mentioned in this specification are set up as standards for quality. No requests for substitutions will be considered which decreases the film thickness designated and/or the number of coats to be applied, or decreases the quality of the coating specified.
    b. Materials used throughout shall be the product of one manufacturer unless otherwise specified. Complete surface preparation in strict compliance with manufacturer's instructions and specifications for the materials and surfaces involved.

2. Other Materials

    a. Provide other materials, not specifically described but required for a complete and proper installation, as selected by Contractor but subject to the approval of the Engineer.

CONSTRUCTION REQUIREMENTS

A. Door

1. Install door and frame plumb, true, and in accordance with manufacturer's instructions.

2. Seal frame completely to surface of structure with caulking.

B. Roofing

1. Install all products in accordance with manufacturers’ recommendations.

2. Apply roof edge to eaves and rake of entire roof.

3. Cover entire roof system with underlayment.

C. Soffit and Fascia

1. Install all products in accordance with manufacturers' recommendations.
2. Use no material that is scratched, dented or otherwise damaged.
3. Caulk where required to provide moisture barrier.
4. Install straight and level, adjust as necessary. Provide adequate space for expansion.
5. Provide wood backing, nailer boards and similar work.

D. Caulking

1. Install only on surfaces which are dry, sound, and well brushed, wiping free from dust.
2. Remove dust at open joints by mechanically blown compressed air, if so required.
3. Remove oil and grease by using an approved method.
4. Remove laitance and mortar from joint cavities.
5. Install the sealant in strict accordance with the manufacturer's recommendations, thoroughly filling joints to the recommended depth.
6. Tool joints to a profile required for the application.
7. Clean adjacent surfaces free from sealant as the installation progresses, using a solvent or cleaning agent recommended by the sealant manufacturer.

E. Insulation

1. Install insulation in accordance to manufacturer's instructions. Butt the edges and ends tight to other insulation and edges of material.
2. Installation of Fiberglass Insulation
    a. Completely fill the space between the ceiling joists with insulation. (OR between the parapet boards, as shown on the Drawings.)
    b. Overlap ceiling insulation on wall insulation. Use care when placing insulation near eaves, do not constrict ventilation airflow.
3. Exhaust System Insulation
    a. Do not apply insulation materials until tests specified in other sections of this specification are completed. Remove material such as rust, scale, dirt and moisture from surfaces to receive insulation. Keep insulation clean and dry. Reject and immediately remove from the job site any insulation that becomes wet or is unable to be cleaned to like new condition. Stagger joints on multi-layer insulation. Mix mineral fiber thermal insulating cement with demineralized water when used on stainless steel surfaces. Install insulation, jacketing and accessories in accordance

with MICA Insulation Standards standard plates except where modified herein or on the drawings.

b. Install pipe insulation on exhaust system as specified to form a continuous thermal retarder, including straight runs, fittings and appurtenances unless specified otherwise. Install with full-length units of insulation and use a single cut piece to complete a run. Do not use cut pieces or scraps abutting each other.

4. Pipes Passing Through Walls

   a. Install pipe insulation continuously through the sleeve.
   b. Provide an aluminum jacket with factory-applied moisture retarder over the insulation wherever penetrations require sealing.
   c. Where penetrating interior walls, extend the aluminum jacket 2 inches beyond either side of the wall and secure on each end with a band.
   d. Where penetrating floors, extend the aluminum jacket from a point below the backup material to a point 10 inches above the floor with one band at the floor and one not more than 1 inch from the end of the aluminum jacket.
   e. Where penetrating waterproofed floors, extend the aluminum jacket from below the backup material to a point 2 inches above the flashing with a band 1 inch from the end of the aluminum jacket.
   f. Where penetrating exterior walls, continue the aluminum jacket required for pipe exposed to weather through the sleeve to a point 2 inches beyond the interior surface of the wall.
   g. Where penetrating roofs, insulate pipe as required for interior service to a point flush with the top of the flashing and sealed with vapor retarder coating. Butt the insulation for exterior applications tightly to the top of flashing and interior insulation. Extend the exterior aluminum jacket 2 inches down beyond the end of the insulation to form a counter flashing. Seal the flashing and counter flashing underneath with caulking.

5. Pipes Passing through Hangers

   a. Ensure continuous insulation through hangers. Support all horizontal pipes 2 inches and smaller on hangers with the addition of a Type 40 protection shield to Protect the insulation in accordance with MSS SP-69. Whenever insulation shows signs of being compressed, or when the insulation or jacket shows visible signs of distortion at or near the support shield. Install insulation inserts as specified below for piping larger than 2 inches.
   b. Support horizontal pipes larger than 2 inches at 60 °F and above on hangers in accordance with MSS SP-69.
   c. Support vertical pipes with either Type 8 or Type 42 riser clamps with the addition of two Type 40 protection shields in accordance with MSS SP-69 covering the 360° arc of the insulation. Install an insulation insert of cellular glass or calcium silicate between each shield and the pipe. Cover 360° of the arc with insert. Ensure the same thickness as the insulation, and extend 2 inches on each end beyond the protection shield. When insulation inserts are required per the above, and the insulation thickness is less than 1 inch, wooden or cork dowels or blocks may be installed between the pipe and the shield to prevent the hanger from crushing the insulation. Support the vertical weight of the pipe with hangers located in a horizontal section of the pipe. When the pipe riser is longer than 30 feet, support the weight of the pipe with hangers in the vertical run of the pipe which are directly clamped to the

pipe, penetrating the pipe insulation. Insulate these hangers and seal the insulation jacket as indicated herein for anchors in a similar service.

d. Cover inserts with a jacket material of the same appearance and quality as the adjoining pipe insulation jacket, overlap the adjoining pipe jacket 1 ½ inches, and seal as required for the pipe jacket. Conform to ASTM C 1136, Type 1.

6. Insulation for Straight Runs

   a. Apply insulation to the pipe with joints tightly butted.
   b. Overlap longitudinal laps of the jacket material not less than 1 ½ inches, and Provide butt strips 3 inches wide for circumferential joints.
   c. Secure laps and butt strips with adhesive and stapled on 4-inch centers if not factory self-sealing. Adhesive may Be omitted where pipe is concealed.
   d. Factory self-sealing lap systems may Be used when the ambient temperature is between 40 and 120 °F and Install in accordance with manufacturer's instructions. Staple laps and butt strips whenever there is non-adhesion of the system. Where gaps occur, replace the section or repair the gap by applying the adhesive under the lap and then stapling.
   e. Patch breaks and punctures in the jacket material by either wrapping a strip of jacket material around the pipe and securing with adhesive and stapling on 4-inch centers (if not factory self-sealing, or patching with tape and sealing with a brush coat of vapor retarder coating. Adhesive may Be omitted where pipe is concealed. Extend patch not less than 1 ½ inches past the break.
   f. Install flexible cellular pipe insulation by slitting tubular sections and applying onto piping or tubing. Alternately, whenever possible, slide un-slit sections over the open ends of piping or tubing. Secure and seal all seams and butt joints with adhesive. When using self-seal products, secure only the butt joints with adhesive. Push insulation on the pipe, never pull. Stretching of insulation may result in open seams and joints. Clean cut all edges. Rough or jagged edges of the insulation not Be permitted. Use proper tools such as sharp knives. Do not stretch Type II sheet insulation around the pipe on pipe larger than 6 inches. On pipes larger than 12 inches, adhere sheet insulation directly to the pipe on the lower one-third of the pipe

7. Insulation for Fittings and Accessories

   a. Tightly butt pipe insulation to the insulation of the fittings and accessories.
   b. Place precut or preformed insulation around all fittings and accessories and conform to MICA plates, except as modified herein: 5 for anchors; 10, 11, 12, and 13 for fittings; 14, 15 and 16 for valves; 17 for flanges and unions; and 18 for couplings. Insulation Ensure the same as the pipe insulation, including same density, thickness, and thermal conductivity. Where precut/preformed is unavailable, rigid preformed pipe insulation sections may Be segmented into the shape required. Use insulation of the same thickness and conductivity as the adjoining pipe insulation. If nesting size insulation is used, overlap the insulation 2 inches or one pipe diameter. Elbows insulated using segments conform to MICA Tables 12.20 "Mitered Insulation Elbow."
   c. Protect terminations and insulation not protected by factory vapor retarder jackets or PVC fitting covers with two coats of adhesive applied with glass tape embedded between coats upon completion of installation of insulation on flanges, unions, valves, anchors, fittings and accessories. Overlap tape seams 1 inch. Extend adhesive onto the adjoining insulation not less than 2 inches. The total dry film thickness Ensure not less than 1/16 inch.

d. Tamper insulation terminations to unions at a 45° angle.
e. At the option of the Contractor, factory pre-molded one- or two-piece PVC fitting covers may Be used in lieu of the adhesive and embedded glass tape. Use factory pre-molded segments or factory or field cut blanket insert insulation segments under the cover and of the same thickness as adjoining pipe insulation. Secure the covers by PVC vapor retarder tape, adhesive, seal welding or with tacks made for securing PVC covers.

F. Ventilation Systems

1. Fan Installation

a. Mount fan securely. Flash and seal all ductwork penetrations through the roof as required.

2. Ducts

a. Follow the latest SMACNA Edition for "Low Velocity Duct Construction Standards" for ductwork fabrication.
b. Fabricate the inside straight and smooth with joints neatly finished unless otherwise directed.
c. Securely anchor ducts to building structure with specified aluminum duct hangers attached with stainless steel screws.
d. Brace and Install ducts so they Ensure free of vibration under all conditions of operation.
e. Properly flash where ducts protrude through roof.
f. Make joints air tight using mastic type duct sealer.
g. Install flexible inlet and outlet duct connections to each fan.
h. Caulk ducts or sleeves passing through ceiling or wall.

3. Balancing

a. Balancing air flow and secure manual dampers.

G. Metal Fabrications

1. Install in accordance with manufacturer recommendations where applicable.

2. Plumb and level as required.

3. Install supports and fastening mechanisms as needed to provide a secure and sturdy system.

4. Clean field welds and bolted connections. Remove all sharp or rough areas.

5. Field welding of galvanized materials: ensure recoated with approved galvanizing material.

H. Wood and Carpentry Work

1. General Framing

    a. General:
        1) In addition to framing operations normal to the fabrication and erection indicated on the Drawings, install wood blocking and backing required for the work of other trades.
        2) Set horizontal and sloped members with crown up.
        3) Do not notch, cut, or bore members for pipes, ducts, or conduits, or for other reasons except as shown on the Drawings or as specifically approved in advance by the Engineer.
    b. Selection of Lumber Pieces:
        1) Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing and will allow making of proper connections.
        2) Cut out and discard defects that render a piece unable to serve its intended function.
        3) Lumber may be rejected by the Engineer, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.
    c. Bearings:
        1) Make bearings full unless otherwise indicated on the Drawings.
        2) Finish bearing surfaces on which structural members are to rest so as to give sure and even support.
        3) Where framing members slope, cut or notch the ends as required to give uniform bearing surface unless otherwise indicated on Drawings.
        4) Do not shim any framing component.
    d. Nailing:
        1) Use only common wire nails or spikes of the dimension required for common practice, except where otherwise specifically noted on the Drawings.
        2) Provide penetration into the piece receiving the point of not less than ½ the length of the nail or spike, provided, however, that 16d nails may Be used to connect two pieces of 2" (nominal) thickness.
        3) Nail without splitting wood.
        4) Remove split members and replace with members complying with the specified requirements.
        5) Do not toenail; galvanized screws are acceptable.
    e. Bolting:
        1) Drill holes 1/16" larger in diameter than the bolts being used.
        2) Drill straight and true from one side only.
        3) Use washers under bolt head and nut where both bear on wood and use washers under all nuts.
    f. Screws:
        1) For lag screws and wood screws, prebore holes the same diameter as the root of threads, enlarging holes to shank diameter for the length of shank.

2. Finish Work

    a. Joints:
        1) Make joints to conceal shrinkage; miter exterior joints; cope interior joints; miter or scarf end-to-end joints.

2) Install trim in pieces as long as possible, jointing only where solid support is obtained.

b. Fastening:
   1) Install items straight, true, level, plumb, and firmly anchored in place.
   2) Where blocking or backing is required, coordinate as necessary with other trades to ensure placement of required backing and blocking in a timely manner.
   3) Nail interior trim with hot dipped galvanized nails of proper dimension to hold the member firmly in place without splitting the wood.
   4) On exposed work, set nails flush, nail carefully to prevent hammer marks.

3. Truss Installation

   a. Report apparent damage to trusses to the Engineer and truss manufacturer prior to erection.
   b. Set and secure trusses level and plumb, and in correct location. Hold each truss in correct alignment until specified permanent bracing is installed.
   c. Cutting and altering of trusses is not permitted. If any truss should become broken, damaged, or altered, written concurrence and approval by truss manufacturer.
   d. Do not place concentrated loads on top of trusses until all specified bracing has been installed and decking is permanently nailed in Place.
   e. Permanently brace trusses in a manner consistent with good building practices and in accordance with the requirements of the Building Structural System Design Documents. Anchor or restrain trusses to prevent out-of-plane movement so as to keep all truss members from simultaneously bucking together in the same direction. Accomplish such permanent lateral bracing by:
      1) Anchorage to solid end walls;
      2) Permanent diagonal bracing in the plane of the web members; or,
      3) Other suitable means.
   f. Provide materials used in temporary and permanent bracing.

I. External Joint Seal

1. Remove any dirt, debris, flashing or concrete high points from the concrete.

2. Apply manufacturer approved joint primer. Allow primer to dry prior to placing joint seal.

3. Provide overlap of 2” when joining two ends. Firmly press overlapping strip onto the end of underlying strip to seal the joint.

4. Follow any additional installation instructions provided by manufacturer.

J. Storm Station Piping

1. Piping System Installation

   a. Install piping systems including piping, fittings, and all other associated materials as shown in Drawings and as needed for a complete and proper installation. Perform work in a workmanlike manner. Conform to manufacturer instructions for installation, transportation, storage, etc.
   b. Protect pipe and joints from injury. Touch-up abraded pipe coatings prior to installation.

c. Check ductile iron pipe and fittings for defects and always handle with care to avoid damage. Keep the interior of all pipe and fittings free from dirt and foreign matter.
d. Ensure all pipes are clean, round, straight, of the required size, and installed by skilled workmen familiar with this class of work. Pipe sizes shown on Drawings are nominal pipe sizes. Ensure pipe run in a neat orderly manner and in group runs where applicable. Place pipe as indicated on Drawings.
e. Run pipe with the proper grade to provide for easy drainage and install with provisions for expansion and contraction to prevent damage to the building. Make field measurements to properly locate pipe sleeves, fixture connections, etc. Use proper fittings and reducers.
f. Install flanged piping systems in strict accordance with the Drawings and as specified herein. Thoroughly clean each fitting and piece of flanged pipe to remove dirt, rust, grease, and other foreign matter. Wire brush flanged faces to insure even bearing for gaskets and mating flanges. Bring individual runs of piping to true grade and alignment by means of erection bolts and drift pins without forcing. Install flange bolts with bolt heads in one direction. Align all connections to pumps perfectly prior to installation of flange bolts to prevent undue stresses being transmitted to the pumps. Tighten flange bolts by the cross-over method. Use ring gaskets with all flange connections.

K. Underground Piping

1. Pipe Installation

a. Before installation, verify all measurements at site. Make necessary field measurements to accurately determine makeup length or closures.
b. Check each length of pipe for defects and hairline cracks at ends prior to lowering into trench. Do not use defective pipe.
c. Place and vibrate bedding material in lifts not to exceed 6 inches.
d. Lower pipe carefully into trench. Set pipe true to line and grade.
e. Commence at lowest point in line. Lay spigot ends pointing in direction of flow.
f. Keep pipe clean of dirt and foreign matter. Clean surfaces of pipe ends to be connected and paint with approved lubricant prior to jointing pipe. Conform to manufacturer's recommendations when jointing.
g. Provide a smooth and uniform invert. The spigots bear against bell shoulders.
h. Check alignment of pipe. Correct misaligned, displaced or otherwise defective pipe at own expense.
i. Comply with all ductile iron pipe corrosion requirements as recommended by DI pipe manufacturers and the Ductile Iron Pipe Research Association.
j. Correct pipe installed with reverse grade at own expense.

2. Protection of Buried Metal Components

a. Double wrap all steel and iron components to be buried, including pipe, fittings, valves, and other steel and iron appurtenances used in the piping system with polyethylene to isolate the piping completely.
b. Encase ductile Iron piping with polyethylene for the entire length. Straight lengths of pipe bedded in CDF or dry mix concrete bedding material are not required to be encased.
c. Grease all nuts, bolts, and rods prior to wrapping.

L. Controls and Instrumentation

1. Supervisory Control Manufacturer Services

    a. Advise Engineer two weeks in advance of when the control system will be available for factory testing. The Owner will perform factory testing at the control system manufacturer's site. Provide for a minimum of two days (16 hours) at the manufacturer's facility to perform factory testing.
    b. Provide the services of a factory trained, qualified service representative of the supervisory control system equipment manufacturer to inspect the complete equipment installation and ensure that it is installed in accordance with the manufacturer's recommendations, make all adjustments necessary to place the system in trouble-free operation and instruct the operating personnel in the proper care and operating of the equipment Provided. Provide two (2) type written copies and an electronic PDF of these operating instructions to the Engineer prior to startup.

2. Wiring

    a. Tag and number each conductor in accordance with the manufacturer's wiring diagram. Connect all wires to an outgoing terminal strip. Fasten all wires to electrical components by solderless mechanical connectors to facilitate replacement. Neatly tie and fasten all wiring to chassis as required.
    b. Install flexible, stranded-type copper for all input and output wiring.
    c. Install noise filtering ferrites in junction boxes where pump cables terminate.
    d. Install Phoenix Contact series UK 5N or approved equal for all terminals inside control panels. Label terminals in accordance with the control system drawings.

3. Identification

    a. Provide nametags for all components which are door mounted or rear panel mounted. Provide engraved Bakelite nameplates for front of panel components with white letters on black background. Provide nameplates for rear of panel-mounted devices. Mark each end of wire and terminal block connection with the wire number, and mark likewise on the schematic drawing.

4. Programmable Logic Controller (PLC) Installation

    a. Install the PLC in the supervisory control panel on rails and Use screw type terminals for all terminations. The Owner will program the PLC. Demonstrate proper installation and communication to processor by "going online" with each PLC, testing each field device and witnessing correct action in the PLC through the programming software. Assign communication addresses to each component requiring such. Node addresses and details of configuration will be available from Engineer upon request.

b. Provide two copies of all operation and maintenance instructions prior to PLC startup and initial SCP operation. Provide these copies in addition to any required by other sections of these specifications.
c. Do not use discrete relays where the PLC can provide the same function in the supervisory control panel, unless specifically required by these specifications.

5. Startup Service
   a. Provide services of trained, experienced technician to assist during the startup period. Technician will be responsible for inspecting, testing and verifying correct operation of all field devices, control components, motor starters and VFDs. Provide Engineer with signed certificate for each control panel stating that control panel and each device wired to it has been checked out and has verified to be operating correctly.

M. Electrical

1. General Execution Requirements

   a. Thoroughly clean all electrical equipment, plates, panels, fixtures, and accessories.
   b. Ensure the general arrangement of the electrical is as indicated on the Contract drawings. Submit to the Engineer detailed drawings of proposed departures due to actual field condition or other causes. For exact locations of components of building construction, consult the dimension engineering and structural drawings. Field measurements take precedence over all drawings. Electrical drawings are diagrammatic and are intended only to indicate approximately the size, direction, location and general arrangement, but not exact details of arrangement or construction.

2. Tests

   a. Test service entrance, feeders and branch circuits feeding motors after installation, and before connection to equipment. Perform tests with a 500volt megger and verify conductors test free from short circuits and grounds. Test conductors phase to phase and phase to ground.
   b. Megger motors and transformers after installation. Record test readings and deliver to the Engineer. Disconnect sensitive equipment prior to Meg-ohm tests.

3. Conduits and Raceway

   a. Run conduit in straight lines, at right angles or parallel with walls, beams, or columns and substantially support by conduit straps or hangers to provide a rigid installation. Perforated hanger straps will not be allowed.
   b. Appropriately seal conduit inserted through foundation, wet well walls, or outside walls to prevent the ingress of moisture, vapors and rodents either around or through the conduit.
   c. Do not support or fasten conduit to other pipe or ducts.
   d. Swap out conduit thoroughly with a dry swab to remove moisture and debris before wire is drawn into place.
   e. Fit conduit ends with approved double lock nuts and insulated throat bushing forming a tight bond with box.
   f. Cap conduit ends during construction.

g. Use liquid tight flexible conduit with approved liquid tight connectors on both ends for connection to all motors and other devices subject to movement or vibration. Limit length of flexible conduit to 24” at each location.

4. Wiring Methods

a. Install all wiring in conduit or wireways, unless otherwise indicated.
b. Do not Use wire smaller than #12 AWG, except #14 AWG may be used for control and signal circuits unless otherwise noted on the drawings.

c. Color code secondary service, feeder, and branch circuit conductors throughout the project secondary electrical system as follows:

Color	Phase
Black (Brown, 480V)	A
Red (Yellow, 480V)	B
Blue (Orange, 480V)	C
White (Grey, 480V)	Neutral
Green	Ground

d. Utilize color-coded insulation the entire length of the conductor for branch circuit conductors, Size #10 or #12 AWG.
e. For conductors Size #8 AWG or larger, apply colored vinyl or PVC tape to each conductor at each terminal, pullbox, and junction box for a distance for six inches.
f. Be consistent with color coding of low voltage systems throughout the project.

5. Boxes and Wiring Devices

a. Mount boxes so that the long axis of devices will be vertical, and the covers readily accessible.
b. Install outlet boxes near the doors or windows close to the trim. Install boxes near the door on the lock sides as shown on drawings, even where the symbols appear on the hinge sides unless other locations are approved.
c. Install junction boxes as needed in accessible locations.

d. Install switches and receptacles in accordance with manufacturer's recommendations and the NEC.
e. Follow the following mounting heights, unless otherwise indicated on the drawings. All dimensions are in inches from the finished floor to the center of the device.

Switches	48"
Thermostats, General	54" (top of device)
Thermostats, Dampers	4" below ceiling level. (top of device)
Convenience Receptacles	48"

f. Where more than one wall switch or duplex receptacle (if at the same mounting height) is indicated in the same location, gang the devices in a common outlet box, unless they are light switches, then install in separate boxes.
g. Provide wall cover plates of appropriate type and size for all wiring devices.

6. Support Devices and Equipment Mounting

   a. Mounting methods include fender washer with anchors designed for the intended purpose. Use approved wall brackets, ceiling trapeze, or strap hangers secured with toggle bolts in CMU, expansion bolts in concrete, sheet metal screws in metal or wood. Plastic anchors are unacceptable in concrete.
   b. Provide vertical galvanized unistrut for all interior wall mounted enclosures including disconnects, surface mounted panelboards, starters, contactors, and cabinets.
   c. Mount enclosures so that at least ¼-inch air space is provided between the enclosure and the supporting surface.
   d. Review all drawings for possible space conflicts and adjust the location of the equipment to prevent such conflict with other items.

7. Labels

   a. Provide identifying engraved Bakelite nameplates for all panelboards, starters, transformers, cabinets, control enclosures, transfer switches and disconnects with white letters on a black background.
   b. Submit a list of engraving for approval prior to manufacturing.
   c. Engineer will provide available fault current and arc flash hazard report. Provide appropriate labels.

8. Cutting and Patching

   a. Coordinate the arrangement of all chases and openings in walls, floors, ceilings, partitions, etc., where shown on the drawings or otherwise necessary to receive electrical work.
   b. Ensure all cutting and patching is approved by Engineer. Do not endanger the stability of the structure by cutting or digging or otherwise and do not at any time cut or alter work of any other contractor without the Engineer's consent.
   c. Protect the interior components of electrical enclosures from cuttings, dust, etc. prior to starting any required cutting or drilling. Preferably, remove interior assemblies first.

9. Service Entrance

   a. Coordinate and pay all fees for work with the Utility.

10. Grounding

    a. Bond all metallic conduit and electrical equipment enclosures to form a continuous grounding system. Provide a bonding jumper for all flexible conduit to provide electrical continuity.

b. Ground the system neutral only at the service entrance grounding bus and isolate from ground throughout the balance of the system.

11. Brand Circuits and Feeders

a. Provide indicated and required feeders and branch circuits. Ensure system is essentially as shown on the Drawings.
b. Balance all branch circuits between phases in the field.
c. Where circuits are only identified by panel board schedule listings, provide as minimums, feeders or branch circuit sizes as follows:

20 Amp-#12 AWG	80 Amp-#4 AWG
30 Amp-#10 AWG	90 Amp-#2 AWG
40 Amp-#8 AWG	100 Amp-#2 AWG
50 Amp-#6 AWG	110 Amp-#2 AWG
60 Amp-#6 AWG	125 Amp-#1 AWG
70 Amp-#4 AWG	150 Amp-1/0 AWG
	175 Amp-2/0 AWG
	200 Amp-3/0 AWG
	225 Amp-4/0 AWG
	400 Amp-500 KCMIL

d. Install minimum conduit size per NEC unless larger sizes are shown on Drawings.

12. Fixtures

a. Luminaire locations indicate on the drawings are generalized and approximate. Carefully verify luminaire with above location list and approved shop drawings prepared under other divisions and other reference data prior to installation.
b. Check for adequacy of headroom and noninterference with other equipment, such as ducts, cabinets, pipes, access hatch or openings.
c. Rigidly install surface housings and adjust to neat flush fit with the ceiling or other finished mounting surface.
d. Suport suspended housings with conduit stems or steel rod with threaded ends. All-thread rod is not acceptable

N. Generator

1. Field Quality Control

a. Ensure representative of system manufacturer’s authorized local checks complete system for procedural and operational compliance. Provide engine lubrication oil and antifreeze as recommended by the manufacturer. Correct any deficiencies in the system.
b. Provide system manufacturer’s dealer representative to assist during installation, startup, system Check, adjusting and any site testing required after the installation is complete.
c. Test manual auto/start/stop, alarm and shutdown circuits by simulating conditions.
d. Provide a written report indicating that the installation has been tested by a manufacturer’s representative for a minimum of four (4) hours with building load and is installed and operating properly.

2. Adjusting

    a. Adjust generator output voltage and engine speed.

3. Demonstration

    a. Provide a complete orientation for all the owner's personnel. Orientation includes both classroom and hands-on instruction. Topics covered include control operation, schematics, wiring diagrams, meters, indicators, warning lights, shutdown system and routine maintenance and testing.

4. General Installation

    a. Provide clear space for operation and maintenance in accordance with AFPA 70 and IEEE C2. Install pipe, duct, conduit, and ancillary equipment to facilitate easy removal and replacement of major components and parts of the engine-generator set.

5. Piping Installation

    a. Weld piping. Provide flanged connections at equipment. Except as otherwise specified, utilize flanged fittings to allow for complete dismantling and removal of each piping system from the facility without disconnecting or removing any portion of any other system's equipment or piping. Ensure connections to all equipment are made with flexible connectors. Ensure pipes extending through the roof properly flashed. Ensure piping is installed clear of windows, doors, and openings to permit thermal expansion and contraction without damage to joints or hangers, and with a ½ inch drain valve at each low point.

6. Supports

    a. Ensure hangers, inserts, and supports of sufficient size to accommodate any insulation and conform to MSS SP-58 and MSS SP-69. Space supports not more than 7 feet on center for pipes 2 inches in diameter or less, not more than 12 feet on center for pipes larger than 2 inches but no larger than 4 inches, and not more than 17 feet on center for pipes larger than 4 inches in diameter. Provide supports at pipe bends or change of direction.
    b. Support ceiling and roof exhaust piping with appropriately sized type 41 single pipe roll and threaded rods; support all other piping with appropriately sized type 1 clevis and threaded rods.
    c. Make wall supports by suspending the pipe from appropriately sized type 33 brackets with the appropriate ceiling and roof pipe supports.

7. Flanged Joint

a. Use 125-pound, drilled flanges of the proper size and configuration to match equipment and diesel-engine connections. Factory cut gaskets in one piece 1/16 inch thick.

8. Pipe Cleaning

a. After fabrication and before assembly, manually wipe clean pipe interiors of all debris.

9. Pipe Sleeves

a. Fit pipes passing through construction such as ceilings, floors, or walls with sleeves. Extend each sleeve through securely fasten to its respective structure and cut flush with each surface. Build structure tightly to the sleeve. Ensure the inside diameter of each sleeve is ½ inch, and where pipes pass through combustible materials, 1 inch larger than the outside diameter of the passing pipe or pipe covering.

10. Onsite Inspection and Tests

a. Follow testing sequence as specified in the approved testing plan unless variance in authorized by the Engineer. Perform field testing in the presence of the Engineer. Tests may be scheduled and sequenced in order to optimize run-time periods; use the following general order of testing: construction tests; inspections; safety run tests; performance tests and final inspection.
b. Perform individual component and equipment functional tests for fuel piping, coolant piping, and lubricating-oil piping, electrical circuit continuity, insulation resistance, circuit protective devices, and equipment not provided by the engine-generator set manufacturer prior to connection to the engine-generator set.
    1) Piping Test
        a) Flush lube-oil and fuel-oil piping with the same type of fluid intended to flow through the piping, until the outflowing fluid has no obvious sediment or emulsion.
        b) Test fuel piping which is external to the engine-generator set in accordance with NFPA 30. Pressure test all remaining piping which is external to the engine generator set with air pressure at 150% of the maximum anticipated working pressure, but in no case less than 150 psi, for a period of 2 hours to prove the piping has no leaks. Test insulated pipe prior to installing insulation.
    2) Electrical Equipment Tests
        a) Test low-voltage cable insulation integrity for cables connecting the generator breaker to the automatic transfer switch panelboard main disconnect switch distribution bus. Test low-voltage cable, complete with splices, for insulation resistance after the cables are installed, in their final configuration, ready for connection to the equipment, and prior to energization. Apply the test voltage, 500 volts dc, for one minute between each conductor and ground and between all possible combinations conductors in the same trench, duct, or cable, with all other conductors in the same trench, duct or conduit. The minimum value of insulation:

R in megohms = (rated voltage in kV + 1) x 304,800/(length of cable in meters)

R in megohms = (rated voltage in kV + 1) x 1,000/(length of cable in feet)

Repair or replace each cable failing this test.

3) Ground-Resistance Tests

a) Measure the resistance of each grounding electrode each grounding electrode system the ground mat the ground ring using the fall-of-potential method defined in IEEE Std 81. Take ground resistance measurements before the electrical distribution system is energized in normally dry conditions not less than 48 hours after the last rainfall. Take resistance measurements of separate grounding electrode systems before the systems are bounded together below grade. The combined resistance of separate systems may Be used to meet the required resistance, but the specified number of electrodes still Be provided.
   i) Single rod electrodes – 25 ohms.
   ii) Multiple rod electrodes – 10 ohms.
   iii) Ground mat – 5 ohms

11. Acceptance

a. Final acceptance of the engine-generator set will not be given until the Contractor has successfully completed all tests after all defects in installation material or operation have been corrected.

O. Load Bank

1. Installation

a. Install the load bank within the air outflow of the engine unit-mounted radiator and cool by the radiator airflow. Install load bank within radiator exhaust air duct. Provide flexible transition from radiator to duct and solid duct transition to load bank and outlet control dampers.

2. Manufacturer’s Field Service

a. Provide manufacturer’s field representative for one-day start-up service, for each installation of the load bank, on site, after the load bank has been installed and connected.

P. Coatings

1. General Requirements

a. Install coatings at such times as the Contractor and Engineer may agree upon in order that neat and quality work Be obtained.
b. Remove coatings, except factory coatings, applied to areas not specifically observed by the Engineer. Provide access to equipment for use by Engineer personnel for observation.
c. Ensure all coating is done in accordance with coating manufacturer's instructions.
d. Follow individual requirements of each type of material used. Apply coatings under conditions which yield good results. Stop work immediately if problems arise that will prevent obtaining a good quality job. Contact coating manufacturer to determine what measures can be taken to correct the problem.
e. Maintain humidity and temperature within the proper limits as suggested by coating manufacturer. Maintain limits for a minimum of 24 hours prior to, and until coating is fully cured.
f. Check applied coating with a wet mil thickness gauge to verify compliance to the minimum dry film requirements. Keep records of these checks and records and provide copies to Engineer.

2. Surface Protection

a. Provide protection for all surfaces that may become damaged from sand blasting operations or coating over spray.
b. Protect or remove and replace all hardware, accessories, lighting and electrical fixtures, plumbing fixtures, and any other type of fixture, material or equipment that may become splattered or damaged.
c. Do not coat the following unless specifically noted otherwise:
    1) Factory-finished electrical motor control panels, main instrument panels, flow indicators, and related equipment.
    2) Moving parts of operating units electrical parts, linkages, sensing devices, and motor shafts.
    3) Stainless steel, chrome plate, copper, bronze, galvanized surfaces, and similar finished materials.
    4) Aluminum ductwork or aluminum-faced insulation.
    5) Aluminum louvers and trim.
    6) Plastic and PVC piping, equipment, and ductwork.
d. Do not coat over any code-required labels such as UL and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.
e. Do not damage any surface during blasting. Contractor is responsible to determine if blasting will cause damage to any surface and report this to Engineer. If damage is probable, an alternative method of surface preparation will be directed by Engineer.

3. Surface Preparation

a. GENERAL:
    1) Perform surface preparation so that dust and other contaminants from the cleaning process will not fall on wet, newly applied areas.
    2) Prepare concrete joint and install chemical resistant sealant following concrete restoration per Manufacturer recommendations where specified.
b. Ensure all surfaces clean, dry, and free from contaminants or other foreign material before applying coatings.
c. Report surface defects or imperfections to Engineer before applying coatings.
d. Do not apply coating to any surface that has not been properly prepared.

1) Before applying any coating to any surface, remove all rust, scale, oil, grease, dirt and all foreign material that will disrupt adhesion, quality and appearance of the finished coating.
2) Metal doors and frames, and other similar surfaces that have rough surfaces Ensure made smooth by sanding or filing before applying any coating.
3) Any surface condition that will interfere with the performance of the coating Ensure reported to Engineer.
4) Apply primer promptly to properly prepared surfaces to eliminate reformation of rust.
5) Clean up waste blast material prior to coating.

e. Commercial Blast Clean steel and iron piping, doors, door frames, materials, components and other metal surfaces to SSPC-SP 6 prior to applying coating.
f. Ensure all concrete and masonry surfaces is free from all dirt, oil, grease, chalking, previous coatings, excess mortar, and other contaminants. Point up all large cracks, voids and other surface imperfections. Remove all soluble salts and efflorescence and mildew. Abrasive blast clean all surfaces to a minimum surface profile as recommended by the Coating Manufacturer in order to prepare the surface for adherence of the coating system. Acid etching will be allowed for horizontal surfaces only where brush blasting is impractical.
g. Solvent clean and then abrasive sweep blast clean galvanized steel surfaces to create a tooth in the surface, prior to surface pretreatment.
h. Touch up or re-coat all scratches, chips and similar imperfections on pre-primed or finished materials in accordance to the specifications of this Section.
i. When surfaces are provided pre-primed or pre-coated, determine if existing coating is compatible with finish coat specified.
j. After cleaning, clean surfaces of all dust, sand, and loose particles by vacuuming. If the Contractor elects to blow off the surfaces with air, use oil-free air and the method conform to OSHA requirements.
k. Plug and grout all holes on concrete surfaces prior to coating. Provide a smooth and even finish.

4. Mixing and Tinting

a. Tint and thin in accordance to manufacturer's instructions and specifications.
b. Do not tint on site unless approved by Engineer.

5. Application

a. Do not apply coating if moisture content of surface exceeds the limit recommended by coating manufacturer.
b. Brush out each coat of material applied by brush uniformly to eliminate laps, skips and brush marks.
c. Apply each coat of material applied by roller using proper skills to avoid excessive lapping and paint lines from roller edge. Brush applied surfaces adjacent to roller applied surfaces shall be the same texture, color and appearance.
d. Apply each coat of material applied by spray only by skilled painters to assure a uniform finish. Protect all fixtures, hardware, flooring, and other finished surfaces from coating overspray.
e. Back-roll concrete walls, concrete block walls, and concrete ceilings in conjunction with the application of a spray-applied prime coat.

f. Back-roll/back-brush crevices, sharp corners, and other hard-to-apply areas in conjunction with the field-applied prime coat. This includes, but is not limited to, between pipe flanges, pipe flange/barrel joints, equipment fittings, and other narrow openings.
g. Thoroughly cure each coat according to manufacturer's instructions regarding temperature, humidity and time before applying further coats.
h. Uniformly apply each coat and not less than the minimum dry film rate specified. Correct deficiency in film thickness by application of additional coats of paint.
i. Correct any visible evidence of runs, sags, cloudiness, spotting, holidays, laps, brush marks, or other imperfections.
j. Apply final coat of material so it appears uniform. Ensure all coating edges adjacent to other colors or materials are clean and sharp, with no overlapping.
k. Spot coating to correct soiled or damaged coating surfaces will be allowed only when touch up spot is blended into surrounding finish and is invisible to normal viewing. Otherwise, recoat entire section to corners or visible stopping point.
l. Concrete and masonry surfaces must be aged a minimum of 30 days and pass a dryness test in accordance to ASTM D-4263 Test Method for Indicating Moisture by the Plastic Sheet Method, prior to surface preparation and application of any coating unless otherwise recommended by coating manufacturer.
m. Ensure that environmental conditions recommended by the Manufacturer are met before application of any materials or coatings. This may include, but is not limited to:
    1) Air Temperature
    2) Surface Temperature
    3) Relative Humidity
    4) Ventilation
n. Unless specified elsewhere herein, comply with the Manufacturer's most recent written instructions with respect to the following:
    1) Mixing of All Materials.
    2) Protection and Handling of All Materials.
    3) Recoat Limitation and Cure Times.
    4) Minimum Ambient and Substrate Temperatures, Substrate's Degree of Dryness, Relative Humidity, and Dew Point of Air.
    5) Application.
    6) Final Curing.
    7) Use of Proper Application Equipment.
o. Curing of Lining System: Protect the applied lining system from damage during curing and cure as recommended by the Manufacturer.
p. Apply the resurfacing and lining system in accordance with the Manufacturer’s instructions for severe wastewater lining system, where applicable.

6. Field Quality Control Inspection and Testing

    a. Inspection by the Engineer or others does not limit the Contractor's responsibilities for quality control inspection and testing as specified herein or as required by the Manufacturer's instructions.
    b. Contractor to perform the quality control procedures listed below in conjunction with the requirements of this Section.
        1) Inspect all materials upon receipt to verify that all are supplied by the approved Manufacturer.

2) Provide specified storage conditions for the restoration materials and applicable solvents.
3) Inspect and record findings for the degree of cleanliness of substrates used. The pH of the concrete substrate will be measured using pH-indicating papers. Perform pH testing once every 50 sq. ft. Acceptable pH values are between 9.0 and 11.0 as measured by a full-range (1-12) color indicating pH paper with readable color calibrations and a scale at whole numbers (minimum). Use Hydrion Insta-Check Jumbo 0-13 or 1-12 or equal. Touch the paper to the surface once using moderate gloved finger pressure. Do not allow the surface to be wiped or moved laterally to disturb the surface during pH testing. Following the one touch, lift the paper vertically to not "wipe" the surface. Compare the color indicated with the scale provided and record the pH. Spot check any areas that may be questionable with phenolphthalein.
4) Inspect and record substrate profile (anchor pattern). Abrade surfaces, at a minimum, equal to the roughness of CSP5 in accordance with ICRI Guideline 03732 and SSPC-SP13/NACE No. 6.
5) Measure and record ambient air temperature once every two hours of each shift using a thermometer and measure and record substrate temperature once every two hours using an infrared or other surface thermometer.
6) Measure and record relative humidity and dew point temperature every two hours of each shift using a sling psychrometer in accordance with ASTM E-337.
7) Provide correct mixing of restoration materials in accordance with the Manufacturer’s instructions.
8) Inspect and record that the "pot life" of restoration materials is not exceeded during installation.
9) Verify curing of the restoration materials in accordance with the Manufacturer's instructions.
10) For all wet well surfaces, upon full cure, check the installed coating by high voltage spark detection in accordance with NACE RP0188, and the Manufacturer’s printed application guide to verify a pinhole-free surface. Correct areas which do not pass the spark detection test at no cost to the Owner and recheck upon cure.
11) Upon completion of the coating installation, clean and prepare the restored area and permit close visual inspection by the Engineer. Any and all deficiencies or defective work (not in compliance with this section or related sections) will be marked for repair or removal/replacement by the Contractor at no additional cost to the Owner.

7. Coating Schedule

a. All ferrous piping, pumps, motors, lifting rails, and all exposed iron and steel components as specified below:
   1) Color:
      a) Dry Pit Piping: ANSI 70 (Grey)
      b) Pumps and Motors: ANSI 70 (Grey)
      c) Misc. steel: ANSI 70 (Grey)
   2) Coating System:
      a) First Coat: Polamide Epoxy Zinc Rich Primer, 4 mils dry film
      b) Second Coat: Polamide Epoxy, 6 mils dry film
      c) Third Coat: Polamide Epoxy, Semi-Gloss, 6 mils dry film
b. Steel doors and frames as specified below:

1) Color:
   a) Interior and Exterior of Doors: Selected by Owner.
2) Coating System:
   a) First Coat: Polamide Epoxy Zinc Rich Primer, 4 mils dry film
   b) Second Coat: Polamide Epoxy, 6 mils dry film
   c) Third Coat: Aliphatic Acrylic Polyurethane, Semi-Gloss, 6 mils dry film

c. The upper structure interior masonry walls and ceilings Ensure coated as specified below:
   1) Color:
      a) PPG 320-4 Weathered Sandstone, Semi-Gloss Finish.

   2) Coating System:
      a) First Coat: Polyamide Epoxy filler, 20 mils dry film
      b) Second Coat: Polyamide Epoxy, 6 mils dry film
      c) Third Coat: Polyamide Epoxy, 6 mils dry film
d. The exterior of masonry walls as specified below:
   1) Color:
      a) Clear.
   2) Coating System:
      a) First Coat: Silicone Acrylic Concrete Sealer, Solid Color by H & C
      b) Second Coat: Silicone Acrylic Concrete Sealer, Solid Color by H & C
      c) Third Coat: Silicone Acrylic Concrete Sealer, Solid Color by H & C

Q. Lift Station Testing

1. Coordinate with the water department to provide water in the station for testing. The water for testing will be provided at no cost to the contractor. The water will be dumped from adjacent hydrants into the storm sewer. Provide necessary hoses and coordinate with the water department for backflow preventers. The pumps will all be run through a short pumping cycle. Ensure the contractor's electrician, control integrator, pump supplier, and others are available for startup testing. The testing of pumps will be limited, and the pump supplier, and electrician will need to be available for adjustment of the systems during the first large rain event.

METHOD OF MEASUREMENT

The unit price for “Manhole 96” is for full compensation of the cost of construction of the 96” manhole base, lid, hatch, invert, and ladder, complete with all foundation preparation, excavation/shoring, backfilling and compacting as described herein and shown in the Plans, and the cost for all materials, equipment, labor, and incidentals required to provide a satisfactory complete installation.

The unit price for “Pipe PVC 12IN Sewer” is for full compensation of the cost of construction of the pipe, adapters, and couplings, complete with all bedding, excavation/shoring, backfilling, grading, compacting, and incidentals as described herein and shown in the Plans, and the cost for all materials, equipment, and labor required to provide a satisfactory complete installation.

The unit price for “Lift Station” is for full compensation of the cost of providing new lift station components, including construction of the 9’x20’ lift station structure, complete with all

foundation preparation, excavating/shoring, dewatering, concrete construction, bar screen and support, ladders, hatches, coating, site work, backfilling, CDF, compacting, and incidentals as described herein and shown in the Plans, and the cost for all materials, equipment, and labor required to provide a satisfactory complete installation. The pumps themselves are paid under the pay item “Pumping Equipment” as described in SP 404(24).

The unit price for “Pump House” is for full compensation of the cost of providing new pump house components, including construction of the generator building, complete with all foundation preparation, excavating, concrete construction, precast, insulation, trusses, metal shingles, soffit, fascia, gutter, door, louvers, dampers, exhaust fan, duct work, new lift station electrical service, incoming electric utility service, disconnect, supervisory control panel, pump VFDs, ATS, HVAC, lights, transformer, level transducer, float switches, generator, load bank, exhaust, louvers, dampers, all required electrical appurtenances for a complete operational system, coating, backfilling, compacting, grading, and incidentals as described herein and shown in the Plans, and the cost for all materials, equipment, and labor required to provide a satisfactory complete installation.

The unit price for “Outlet Structure” is for full compensation of the cost of construction of the outlet structure, and duckbill check valves, complete with all foundation preparation, excavation/shoring, backfilling, and compacting as described herein and shown in the Plans, and the cost for all materials, equipment, labor, and incidentals as required to provide a satisfactory complete installation.

BASIS OF PAYMENT

Item No.	Pay Item	Pay Unit
722-0140	MANHOLE 96IN	EA
722-1140	MANHOLE RISER 96IN	LF
724-5150	PIPE PVC 12IN SEWER	LF
920-0090	LIFT STATION	EA
920-0199	PUMP HOUSE	EA
920-0265	OUTLET STRUCTURE	EA

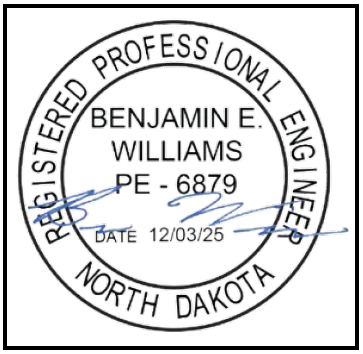
Such payment is full compensation for providing all materials, equipment, labor, and incidentals to complete the work as specified. For the Lift Station item, 75% of the unit price will be paid upon substantial completion of the feature; the remaining 25% will be paid upon final acceptance of the feature.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PUMPING EQUIPMENT

6-297(014)000 – PCN 24115



DESCRIPTION

A. This work consists of the construction of the storm water lift station Pumping Equipment as shown in the plan drawings and generally consists of the following items:

1. Installation of all pumps and pump motors.

2. Sections covered in these special provisions include:

   a. Pumping Equipment: Basic Requirements.
   b. Pumping Equipment: Products.
   c. Pumping Equipment: Startup

PUMPING EQUIPMENT: BASIC REQUIREMENTS

A. Description

1. Provide (3) vertical mixed flow pumps and motor units, oil lubricated, surface discharge strainer, pump bowl, column assembly, discharge head, and accessories as needed.

   a. Provide service representative for installation review and startup of the vertical mixed flow pumps.
   b. Provide operator training for operation and maintenance of the vertical mixed flow pumps for Owner's employees, utilizing operation and maintenance manual when so doing.

B. Submittals

1. Materials list of items proposed to be used under this Section.

2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.

3. Work Drawings showing arrangement, dimensions and materials.

4. Characteristic performances curves for pumps, showing total dynamic head, efficiency and brake horsepower plotted against capacity in gpm for conditions of head and capacity with required impeller.

5. Wiring and schematic control diagrams.

6. Manufacturer's catalog data for all equipment.

7. Testing certification for Pumps and Motors.

8. Design calculation of base plate.

C. Pump Manufactures.

1. The following pump and motor manufacturers are approved to provide equipment for this project.

   a. Pumps:
      1) Cascade Pump Company
         10107 South Norwalk Boulevard
         P.O. Box 2767
         Santa Fe Spring, CA 90670-0767
         213-464-1414
      2) Fairbanks Morse Pump Corporation
         3601 Fairbanks Avenue
         P.O. Box 6999
         Kansas City, Kansas 06106-0999
         913-371-2272
      3) American-Marsh Pump
         185 Progress Road
         Collierville, TN 38077
         800-888-7167
      4) Prime Pump Corporation
         P.O. Box 8526
         Berkeley, CA 94707
         510-620-0950

b. Motors:

1) U.S. Electrical Motors
Division of Emerson Electric
8100 West Florissant Avenue
P.O. Box 3946
St. Louis, MO 63136
888-367-7333
2) Wolong Electric America
3050 Post Oak Blvd #630
Houston, TX 770565
888-525-2915
3) Or approved equal

D. Manufacturer's General Warranty and Guarantee

1. Manufacturer warrants and guarantees to Owner and Engineer that all Equipment will be in accordance with the Contract Documents and will not be defective. Manufacturer's warranty and guarantee hereunder excludes defects or damage caused by:
   a. Abuse, modification or improper maintenance or operation by persons other than Manufacturer.
   b. Normal wear and tear under normal usage.

2. None of the following will constitute an acceptance of Equipment that is not in accordance with the Contract Documents or a release of Manufacturer's obligation to provide the Equipment in accordance with the Contract Documents:
   a. Observations by Engineer.
   b. Recommendation of any progress or final payment by Owner to Manufacturer under the Contract Documents.
   c. Any payment by Owner to Manufacturer under the Contract Documents.
   d. Use or occupancy of the Work or any part thereof by Owner.
   e. Any acceptance by Owner or any failure to do so.
   f. Any review and approval of a Work Drawing or Sample submittal.
   g. The issuance of a notice of acceptability by Engineer.
   h. Any inspection, test or approval by others.
   i. Any correction of defective work by Owner.

E. Correction Period

1. Within two years after final acceptance of project, replace any Equipment that is found to be defective without cost to Owner and in accordance with Owner's written instructions:
   a. Correct such defective equipment, or, if it have been rejected by Owner, remove it form the site and replace it with Equipment that is not defective, and

b. Satisfactorily correct or remove and replace any damage to other Equipment or the work of other resulting therefrom. If Manufacturer does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Equipment corrected or the rejected Equipment removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all cost of repair or replacement of Equipment of others) will be paid by Manufacturer.

2. Where defective Equipment (and damage to other Equipment resulting therefrom) has been corrected, removed or replaced under this paragraph, the correction period hereunder with respect to such Equipment will be extended for a minimum of an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

PUMPING EQUIPMENT: PRODUCTS

A. General Requirements

1. One or two stage.

2. Product of single manufacturer.

3. Pump manufacturer furnished electric motors.

4. Suited to pump storm water passing a 3" trash rack.

5. Oil lubricated, below surface discharge, enclosed line shaft mixed flow pumps including strainer, pump bowl, column assembly, discharge head, electric motor and accessories required.

6. Suitable for continuous operation at design requirements stated herein without excessive noise vibration, heating, cavitation or damage to pump units.

7. Provide any information required by control supplier to properly size and select motor starter.

8. Test performance of pump and motor prior to shipment. Separate tests are permitted.

B. Pump Design

1. Conform to the following performance requirements per pump:

a. Capacity	3,333 GPM
b. Head (TDH) as measured from pump bowls	40 feet
c. Minimum Efficiency	85 percent
d. Maximum Pump Speed	1,180 RPM

e.	Maximum Horsepower	40 HP
f.	Minimum Solids Passage	3 inches
g.	Pump Discharge Invert Elevation	830.00
h.	Operating Floor Elevation	837.50
i.	Bottom Slab Elevation in Wet Well	800.00
j.	Minimum Pump Size	12 inches
k.	End Flange	12 inches
l.	Minimum Sump Water Level	804.50
m.	Distance from pump centerline to discharge flange	16”

2. Limit of 40 HP operating between 10 and 47 feet TDH.

3. Operate between 10 and 47 feet TDH at specified minimum sump water Level without exceeding required NPSH.

C. Tests

1. Hydraulic performance shop test:
   a. Factory test pump Manufacturer's plant in accordance with Test Code of Hydraulic Institute Standards and provide certification of pump tests. Owner at his expense may send a representative to witness tests.
   b. Cover full range of operation from shutoff to maximum capacity, and have capacity plotted as abscissas, and operating head, brake horsepower, and efficiency plotted as ordinates (plot actual test points). Conduct tests at maximum and minimum operating speeds. Units: U.S. gallons per minute and feet of head.
   c. Test points:
      1) Shut off.
      2) Maximum run out.
      3) Design operating conditions.
      4) Two additional points, one on each side of design operating conditions.
   d. Test tolerances:
      1) Meet one of the following tolerance:
         a) At rated head: +10% of rated capacity.
         b) At rated capacity: +5% of rated head.
      2) No minus tolerance or margin allowed with respect to capacity or total head at rated or specified conditions.
      3) Provide shop space, tools, equipment, instruments, personnel, and all else required for satisfactory completion of tests. Payment for tests shall be included in Contract amount.
      4) Submit test curves for review prior to pumps being released for shipment.
      5) Provide NPSHR tests for each pump.

D. Pump Materials and Construction

1. Pump Bowls:
   a. Constructed of close-grained cast iron with a minimum tensile strength of 30,000 psi conforming to ASTM A48.

b. Stainless steel cap screws.
c. Bearings:
    1) Sleeve-type.
    2) Bronze B584 conforming to ASTM B505.
    3) Grease lubricated from grease chamber below the bearing with water-resistant grease. Provide grease extension line anchored securely to pump column.
    4) Sand collar/cap to prevent entrance of sand into the suction bell bearing.
d. Stainless steel-lined bowls.

2. Suction Bells:
    a. Constructed of close-grained cast iron with minimum tensile strength of 30,000 psi conforming to ASTM A48.
    b. Flared inlets designed to reduce entrance headloss.
    c. Sufficient number of vanes to support the bearing housing and be designed so as to minimize entrance losses and reduce vortexing.

3. Propellers:
    a. Constructed of ASTM B584 Alloy 836 bronze.
    b. Securely fastened to pump shaft with stainless steel lock collets, keys, lock nuts, or similar method to be readily removable and able to prevent damage from reverse rotation.
    c. Rounded vane leading edges to prevent accumulation of fibrous materials.
    d. Statically and dynamically balanced to limit vibration and supported on both sides by bearings for stability.

4. Pump and Line Shafts:
    a. Fabricate pump, line, and head shafts with stainless steel conforming to ASTM A 582 Grade 416.
    b. Diameter sufficient to transmit required horsepower with safety factor of 125% minimum.
    c. Head shaft - continuous through head shaft seal and coupled below motor.
    d. Straight within 0.1778 mm (0.007 inches) total indicator reading.
    e. Butting ends - machined, faced, and recessed square to the axis of the shaft.
    f. Provide left-hand tightening machine threaded connections.
    g. Shaft Couplings:
        1) Sleeve type couplings fabricated of stainless steel conforming to ASTM A 582, Type 41;6; bored and threaded from solid material.
        2) Machined at left-hand tightening thread connections.
        3) Safety factor: 1.5 times that of each shaft.

5. Column Pipes:
    a. Constructed of steel conforming to ASTM A53 Grade B.
    b. Extend from the top of the bowl assemblies to the bottom of the discharge heads.
    c. Flanged-type connections designed and constructed conforming to AWWA C207.
    d. Constructed in conformance with ASSA C200 and AWWA Manual M 11.

6. Discharge Heads:
   a. Fabricated of steel conforming to ASTM A52 Grade B with minimum thickness of 0.250 inches.
   b. Conform to AWWA C200 and AWWA Manual M 11.
   c. Designed to carry weight of motor and pump and designed for a working pressure of a minimum of 120% of pump shutoff head.
   d. Fabricated three (3) segment style, with a 45 degree insert to transfer flow from vertical to horizontal. Provide 3" segment style, with a 45 degree insert to transfer flow from vertical to horizontal. Provide 3" NPT air Valve tap on the top of Horizontal Segment.
   e. Flanged 12" discharge.
   f. Provide Integral lifting hook or similar arrangement on each side of head.
   g. Machined and of same diameter as motor base for uniform load distribution and appearance.
   h. Provide adequate space for shaft seal assembly and coupling of motor and heads shafts.
   i. Provide tie rod connections on each side of discharge head for tie bolts across flanged type couplings adapter to forcemain.
   j. Flange connect column pipes.
   k. Design and construct flange connections conforming to ASSA C207.
   l. Tension nut assembly to provide tensioning of enclosing tube, shaft bearing, seal of pumped liquid and oil pipe connection.
   m. Provide coupling guard and one (1) inch head drain tap.
   n. Provide fabricated steel base plate sized to support the pump.
   o. Provide base plate of sufficient strength for all static and dynamic loads and to prevent vibration.

7. Lubrication:
   a. Provide drip feed oil system for line shaft bearings.
   b. Provide 1 gallon (minimum) oil reservoir (oiler) bracketed to the motor base.
   c. Oiler shall be automatically controlled to provide lubrication when pumps start.
   d. Provide complete installation including solenoid valves, flow controls, check valves, fittings, etc.
   e. Provide 5 gallons oil in addition to the oil required for the initial filling.
   f. Construct all oil and grease lines and fittings of rigid stainless steel. Mount within 2” of the column and fit through the floor opening for the pump.

8. Strainers:
   a. Provide a stainless-steel strainer with 1.5” clear openings for each pump

E. Motors for Pumps

1. NEMA WP1 motors designed to operate at 460V, 3 Phase, 60 Hz and suitable for operation by variable frequency drives.

2. Vertical hollow shaft to operate the pumps.

3. 40 HP.

4. Rated for operation in ambient temperatures up to 40 degrees C. Balance in accordance with NEMA MGI Standards.

5. Provide oversized conduit box for conductors and conduit connectors. Provide terminal block for connections of conductors, also provide grounding terminal in conduit box.

6. Guaranteed motor efficiency of more than 92.7% for 1,180 RPM motors.

7. Motors shall have Thermistors in the windings to monitor the Stator Temperature. Each motor shall have a thermistor per phase. Connect thermistor in services to provide a single output to controls. The motors shall also have thermistor like devices to monitor bearing temperature and provide output to controls to allow shutting off motor prior to damage due to overheated bearings. Provide "Therma Sentry Motor Protection System."

8. Provide screens to prevent objects greater than ¼ inch from entering motor.

9. Motor service factor of 1.15 minimum.

10. Shaft key way coordinated with output shafting requirements.

11. Run short commercial tests on each motor that includes the following: no load current, locked rotor current winding resistance, high potential, bearing inspection.

12. Bearing Life: B-10 life of 44,000 hours per AFBMA.

F. Painting

1. Coat interior components below the base plate, including the bottom of the base plate, with coal tar epoxy with minimum 16 mil dry film thickness. Prior to coating, perform surface preparation conforming to SSPC-SP10 or NACE 2 Near White Metal Blast Cleaning.

2. Coat all exterior components, including sides and top of base plate and motor with 1 coat of zinc-rich primer and 2 coats of polyamide epoxy or approved equal. Color: PPG Conveyor Gray or approved equal. Minimum 3.0 mil dry film thickness per coat is required. Prior to coating, perform surface preparation conforming to SSPC-SP6 or NACE 3 Commercial blast cleaning.

3. Coat all other components with standard manufacturer finish coatings.

PUMPING EQUIPMENT: STARTUP

A. Startup Performance Testing

1. Provide assistance to performance test each pump at full speed.

2. Measure and record the following data:
   a. Water level
   b. Static discharge pressure
   c. Pumping discharge pressure
   d. RPM
   e. Non-running voltage
   f. Running voltage
   g. Running amps

3. Provide equipment and personnel to obtain readings.

B. Start-up Vibration Testing

1. At each performance test point measure vibration at six (6) locations 90 degrees apart on drive assembly and discharge head where directed by the Engineer. Record all readings.

2. Vibration of less than 2 mils at any point.

3. Modify or replace pump and drive equipment not meeting vibration standards at no cost to the Owner.

C. Manufacturer Field Services

1. Manufacturer's representative shall provide the following field services:
   a. Installation:
      1) Minimum of one-half (½) day to make sure that the Contractor has installed and set the pumps properly.
   b. Start-up Training:
      1) Two (2) days to instruct the Owner in operation and maintenance procedures and to certify to the Engineer that the equipment is installed and operates correctly. The two days for start-up shall be in addition to the installation requirements.
   c. Follow-up Training:
      1) One (1) day to be scheduled by Owner within 3 months of station start-up and before final completion to provide Owner additional training, conduct an inspection of all pump components, and make any necessary adjustments to pumps.
   d. General
      1) One (1) day is equivalent to 8 hours on project site.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item No.	Pay Item	Pay Unit
920-0100	PUMPING EQUIPMENT	L SUM

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified. 75% of the unit price will be paid upon substantial completion of the feature; the remaining 25% will be paid upon final acceptance of the feature.

RCE-FTF-NHU-SU-6-297(014)000, PCN 24115

BNSF CMA

BNSF Wireline (Fiber) License #25W-27913

BNSF Wireline (Electric) License #25W-27915

The attached is a placeholder for the time being. Final signatures are pending, and the final CMA and licenses will be added to the project via addendum and/or change order once received.

CMA

BNSF Wireline (Fiber) License 25W-27913

Tracking #_____

LICENSE FOR COMMUNICATION LINE, TELEVISION CABLE AND/OR FIBER OPTIC LINE ACROSS OR ALONG RAILWAY PROPERTY

THIS LICENSE FOR COMMUNICATION LINE, TELEVISION CABLE AND/OR FIBER OPTIC LINE ("**License**") is made to be effective _____, 2024 (the "**Effective Date**") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("**Licensor**") and **NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**, ("**Licensee**").

In consideration of the mutual covenants contained herein, the parties agree to the following:

GENERAL

1. Grant of License. Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to construct and maintain, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), a communication line, television cable, and/or a fiber optic line containing a maximum of two (2) conduit, together with all conductors and their supporting or containing structures (collectively, the "**Communication Line**"), across or along Licensor's rail corridor at or near the station of Bismarck, County of Burleigh, State of North Dakota, Line Segment 0038, Mile Post 194.15 as shown on the attached Drawing No. 82753, dated September 16, 2021, attached hereto as **Exhibit "A"** and incorporated herein by reference (the "**Premises**"). Licensee warrants that it has exercised due care in establishing the Drawings and Specifications and carefully assessed the design process to conclude that the risks associated with using and operating the Communication Line as intended by Licensee will not pose any unreasonable risks to Licensor or to the Premises.

2. Term. This License shall commence on the Effective Date and shall continue for a period of twenty (20) years, subject to prior termination as hereinafter described.

3. Existing Improvements. Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use, repair, maintenance, or replacement of such improvements.

4. Use of the Premises. Licensee shall use the Premises solely for construction, maintenance, and use of the Communication Line in accordance with the Drawings and Specifications. Licensee shall not use the Premises for any other purpose.

5. Alterations. Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

COMPENSATION

6. License Fee. Licensee shall pay Licensor, prior to the Effective Date, the sum of Six Thousand Four Hundred and No/100 Dollars **($6,400.00)** as compensation for the use of the Premises.

7. Costs and Expenses.

   7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.

Sample

7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises or the presence, construction, and maintenance of the Communication Line, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred. Licensee shall bear the cost of flagger services and other safety measures provided by Licensor, when deemed necessary by Licensor's representative. Flagging costs shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7.**

7.3 Licensor, at its sole discretion, may elect to designate a third party (the "**Scheduling Agent**"), to perform and/or arrange for the performance of the Services.

8. Payment Terms. All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2-1/2%), or (ii) the maximum rate permitted by law.

LICENSOR'S RESERVED RIGHTS

9. Reserved Rights of Use. Licensor excepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:

9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances (other than the Communication Line) and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;

9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or

9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.

10. Right to Require Relocation. If at any time during the term of this License, Licensor desires the use of its rail corridor in such a manner as would, in Licensor's reasonable opinion, be interfered with by the Communication Line, Licensee shall, at its sole expense, within thirty (30) days after receiving written notice from Licensor to such effect, make such changes in the Communication Line as in the sole discretion of Licensor may be necessary to avoid interference with the proposed use of Licensor's rail corridor, including, without limitation, the relocation of the Communication Line, or the construction of a new line to replace the Communication Line. Notwithstanding the foregoing, Licensee agrees to make all emergency changes and minor adjustments, as determined by Licensor in its sole discretion, to the Communication Line promptly upon Licensor's request.

LICENSEE'S OPERATIONS

11. Construction and Maintenance of the Communication Line.

Sample

11.1 Licensee shall notify Licensor's Roadmaster, Bryan.Markee@bnsf.com or at telephone (701)837-6614, at least ten (10) business days prior to installation of the Communication Line and prior to entering the Premises for any subsequent maintenance thereon. In the event of emergency, Licensee shall notify Licensor of Licensee's entry onto the Premises at the telephone number above as soon as practicable and shall promptly thereafter follow up with written notice of such entry.

11.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.

11.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.

11.4 Any contractors or subcontractors performing work on the Communication Line or entering the Premises on behalf of Licensee shall be deemed agents of Licensee for purposes of this License.

11.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises in such a manner as not at any time to endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.

11.6 Licensee shall, at its sole cost and expense, construct and maintain the Communication Line in such a manner and of such material that the Communication Line will not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. The construction of the Communication Line shall be completed within one (1) year of the Effective Date, and any subsequent maintenance shall be completed within one (1) year of initiation. Within fifteen (15) days after completion of the construction of the Communication Line or the performance of any subsequent maintenance thereon, Licensee shall, at Licensee's own cost and expense, restore the Premises to substantially their state as of the Effective Date, unless otherwise approved in advance by Licensor in writing. On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense, surrender the Premises to Licensor pursuant to the terms and conditions set forth in **Section 24** hereof.

11.7 Licensor may direct one or more of its field engineers to observe or inspect the construction and/or maintenance of the Communication Line at any time for compliance with the Drawings and Specifications and Legal Requirements (defined below). Licensee shall reimburse Licensor for the cost of such observation or inspection related services pursuant to Section 8. If ordered at any time to halt construction or maintenance of the Communication Line by Licensor's personnel due to non-compliance with the Drawings and Specifications or any other hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to observe or inspect, or to halt work on, the Communication Line, it being solely Licensee's responsibility to ensure that the Communication Line is constructed and maintained in strict accordance with the Drawings

Sample

and Specifications and in a safe and workmanlike manner in compliance with all terms hereof. Neither the exercise of, nor the failure by Licensor to exercise, any right granted by this Section will alter in any way the liability allocation provided by this License. If at any time Licensee shall, in the sole judgment of Licensor, fail to properly perform its obligations under this **Section 11**, Licensor may, at its option and at Licensee's sole expense, arrange for the performance of such work as it deems necessary for the safety of its operations and activities. Licensee shall promptly reimburse Licensor for all costs and expenses of such work, pursuant to the terms of **Section 8**. Licensor's failure to perform any obligations of Licensee shall not alter the liability allocation hereunder.

11.8 Licensee shall, at its sole cost and expense, remove all combustible material from around wooden poles on the Premises, if any, and will at all times keep the space around such poles free of such material, and if removal of such combustible material shall not be attended to with fifteen (15) days after having been requested by Licensor to do so, Licensor shall have the right itself to perform the work and Licensee hereby agrees to reimburse Licensor for the expense so incurred.

11.9 Licensee shall, at its sole cost and expense, construct and at all times maintain the Communication Line in accordance with the National Electric Code. The use of a rail mounted cable plow to install the Communication Line is strictly prohibited unless advance written approval is granted by Licensor, which approval Licensor may grant or withhold in its sole and absolute discretion. Unless otherwise specified, all underground line shall be installed at least forty-eight (48) inches below grade level.

12. Boring and Excavation.

12.1 Prior to Licensee conducting any boring, excavation, or similar work on or about any portion of the Premises, Licensee shall contact the applicable State's call-before-you-dig utility location service to have 3rd parties mark the location of utilities. Licensee shall explore the proposed location for such work with hand tools to a depth of at least three (3) feet below the surface of the ground to determine whether pipelines or other structures exist below the surface, provided, however, that in lieu of the foregoing hand-tool exploration, Licensee shall have the right to use suitable detection equipment or other generally accepted industry practice (*e.g.*, consulting with the State Infrastructure Corporation) to determine the existence or location of pipelines and other subsurface structures prior to drilling or excavating with mechanized equipment. Licensee may request information from Licensor concerning the existence and approximate location of Licensor's underground lines, utilities, and pipelines at or near the vicinity of the proposed Communication Line by contacting Licensor's Telecommunications Helpdesk, currently at 1-800-533-2891 (option 1, then option 7), at least ten (10) business days prior to installation of the Communication Line. Upon receiving Licensee's timely request, Licensor will provide Licensee with the information Licensor has in its possession regarding any existing underground lines, utilities, and pipelines at or near the vicinity of the proposed Communication Line and, if applicable, identify the location of such lines on the Premises pursuant to Licensor's standard procedures. Licensor does not warrant the accuracy or completeness of information relating to subsurface conditions of the Premises and Licensee's operations will be subject at all times to the liability provisions herein.

12.2 For all bores greater than 26-inch diameter and at a depth less than 10.0 feet below bottom of rail, a soil investigation must be performed by Licensee and reviewed by Licensor prior to construction. This study is to determine if granular material is present, and to prevent subsidence during the installation process. If the investigation determines in Licensor's reasonable opinion that granular material is present, Licensor may select a new location for Licensee's use, or may require Licensee to furnish for Licensor's review and approval, in Licensor's sole discretion, a remedial plan to deal with the granular material. Once Licensor has approved any such remedial plan in writing, Licensee shall, at Licensee's sole cost and expense, carry out the approved plan in accordance with all terms thereof and hereof.

Sample

12.3 Any open hole, boring, or well, constructed on the Premises by Licensee shall be safely covered and secured at all times when Licensee is not working in the actual vicinity thereof. Following completion of that portion of the work, all holes or borings constructed on the Premises by Licensee shall be:

12.3.1 filled in to surrounding ground level with compacted bentonite grout; or

12.3.2 otherwise secured or retired in accordance with any applicable Legal Requirement. No excavated materials may remain on Licensor's property for more than ten (10) days, but must be properly disposed of by Licensee in accordance with applicable Legal Requirements.

LIABILITY AND INSURANCE

13. Liability and Indemnification.

13.1 For purposes of this License: (a) "**Indemnitees**" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "**Liabilities**" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "**Licensee Parties**" means Licensee or Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.

13.2 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE, KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):**

13.2.1 **LICENSEE'S OCCUPATION AND USE OF THE PREMISES,**

13.2.2 **THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR**

13.2.3 **ANY ACT OR OMISSION OF ANY LICENSEE PARTY.**

13.3 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE SHALL CAUSE ITS CONTRACTOR TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.**

13.4 **IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL CAUSE ITS**

Sample

CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.

13.5 **THE FOREGOING OBLIGATIONS OF LICENSEE AND LICENSEE'S CONTRACTOR SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL, TO THE FULLEST EXTENT PERMITTED BY LAW, APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.**

13.6 Upon written notice from Licensor, Licensee agrees to tender to its Contractor the defense of any lawsuit or other proceeding brought against any Indemnitee by any entity, relating to any matter covered by this License for which Licensee's Contractor has an obligation to assume liability for and/or save and hold harmless any Indemnitee. Licensee's Contractor shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.

13.7 Licensee shall cause Licensee's contactor to perform all such construction, installation, maintenance, repairs and removal of the Communication Line in accordance with the terms and conditions of this License. Licensee shall require that prior to entry upon the Premises, each of Licensee's contractors performing work on the Communication Line or entering the Premises on behalf of Licensee for any purpose to enter into the Right of Entry Agreement in the form attached hereto as Exhibit "B" and incorporated herein

14. Personal Property Risk of Loss. **ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY, AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.**

15. Insurance. Licensee is a governmental agency of the State of North Dakota and has liability coverage through the Risk Management Fund, pursuant to N.D.C.C. Chapter 32-12.2. Coverage meets or exceeds the minimum limits of insurance specified below. Licensee shall provide Licensor a certificate of financial responsibility upon request. Licensee's contractors will be required to sign the Right of Entry Agreement attached hereto as Exhibit "B" and provide the required insurance certificate prior to performing any work or entering the Premises.

15.1 Commercial General Liability Insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of $5,000,000 each occurrence and an aggregate limit of at least $10,000,000 but in no event less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence or equivalent and include coverage for, but not limited to, the following:

- Bodily Injury and Property Damage
- Fire legal liability
- Products and completed operations

15.2 Business Automobile Insurance. This insurance shall contain a combined single limit of at least $1,000,000 per occurrence, and include coverage for, but not limited to the following:

Sample

- Bodily injury and property damage.
- Any and all vehicles owned, used or hired.

15.3 Workers' Compensation and Employers' Liability Insurance. This insurance shall include coverage for, but not limited to:

- Licensee's statutory liability under the workers' compensation laws of the state(s) in which the services are to be performed. If optional under state laws, the insurance must cover all employees anyway.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 by disease policy limit, $500,000 by disease each employee.

15.4 Railroad Protective Liability Insurance. This insurance shall only Licensor as the Insured with coverage of at least $5,000,000 per occurrence and $10,000,000 in the aggregate. The coverage obtained under this policy shall only be effective during the initial installation and/or construction of the Communication Line. **THE CONSTRUCTION OF THE COMMUNICATION LINE SHALL BE COMPLETED WITHIN ONE (1) YEAR OF THE EFFECTIVE DATE**. If further maintenance of the Communication Line is needed at a later date, an additional Railroad Protective Liability Insurance Policy shall be required. The policy shall be issued on a standard ISO form CG 00 35 12 03 and include the following:

- Endorsed to include the Pollution Exclusion Amendment.
- Endorsed to include the Limited Seepage and Pollution Endorsement.
- Endorsed to include Evacuation Expense Coverage Endorsement.
- No other endorsements restricting coverage may be added.
- The original policy must be provided to Licensor and prior to performing any work or services under this License.
- Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control arising out of the acts or omissions of the contractor named on the Declarations."

In lieu of providing a Railroad Protective Liability Policy, for a period of one (1) year from the Effective Date, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to Licensee or its contractor. The limits of coverage are the same as above. The cost is $506.00.

- □ I elect to participate in Licensor's Blanket Policy;
- □ I elect not to participate in Licensor's Blanket Policy.

15.5 Intentionally deleted.

15.6 Other Requirements:

15.6.1 Licensee shall furnish to Licensor an acceptable certificate(s) of financial responsibility including a signature of the authorized representative. Licensee shall notify Licensor in writing at least 30 days prior to any change in its liability program. In the event of a claim or lawsuit involving Licensor arising out of this License, Licensee will make available any required policy covering such claim or lawsuit.

15.6.2 Failure to provide evidence as required by this Section 15 shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this Section shall not operate as a waiver of Licensee's obligations hereunder.

Sample

15.6.3 The fact that insurance (including, without limitation, self-insurance) is obtained by Licensee shall not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.

15.6.4 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable.

15.6.5 For purposes of this Section 15, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS

16. Compliance with Laws, Rules, and Regulations.

16.1 Licensee shall observe and comply with any and all laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("**Legal Requirements**") relating to the construction, maintenance, and use of the Communication Line and the use of the Premises.

16.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the Website "*www.BNSFcontractor.com*" (the "**Safety Orientation**") within one year prior to entering upon the Premises. Additionally, Licensee must ensure that each and every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew the Safety Orientation annually.

16.3 Licensee shall obtain on or before the date it or its contractor enters the Premises, any and all additional rights-of way, easements, licenses and other agreements relating to the grant of rights and interests in and/or access to the Premises (collectively, the "**Rights**") and such other rights, licenses, permits, authorizations, and approvals (including without limitation, any necessary local, state, federal or tribal authorizations and environmental permits) that are necessary in order to permit Licensee to construct, maintain, own and operate the Communication Line and otherwise to perform its obligations hereunder in accordance with the terms and conditions hereof.

16.4 Licensee shall either require that the initial stated term of each such Rights be for a period that does not expire, in accordance with its ordinary terms, prior to the last day of the term of this License or, if the initial stated term of any such Right expires in accordance with its ordinary terms on a date earlier than the last day of the term of this License, Licensee shall, at its cost, exercise any renewal rights thereunder, or otherwise acquire such extensions, additions and/or replacements as may be necessary, in order to cause the stated term thereof to be continued until a date that is not earlier than the last day of the term of this License.

16.5 Upon the expiration or termination of any Right that is necessary in order for Licensee to own, operate or use the Communication Line in accordance with the terms and conditions of this License, this License thereby shall automatically expire upon such expiration or termination of the Right.

17. Environmental.

Sample

17.1 Licensee shall strictly comply with all federal, state and local environmental Legal Requirements and regulations in its use of the Premises, including, but not limited to, the Resource Conservation and Recovery Act, as amended (RCRA), the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, and CERCLA (collectively referred to as the "**Environmental Laws**"). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or hazardous substances, as defined by Environmental Laws on or about the Premises.

17.2 Licensee covenants that it will not handle or transport "hazardous waste" or "hazardous substances", as "hazardous waste" and "hazardous substances" may now or in the future be defined by any federal, state, or local governmental agency or body on the Premises. Licensee agrees periodically to furnish Licensor with proof, satisfactory to Licensor that Licensee is in compliance with the provisions of this **Section 17.2**.

17.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of hazardous substances on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use the best efforts to promptly respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor immediate notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.

17.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the Communication Line which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.

17.5 Licensee shall promptly report to Licensor in writing any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take whatever action is necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.

DISCLAIMER OF WARRANTIES

18. No Warranties.

18.1 **LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

18.2 **LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE COMMUNICATION**

Sample

LINE WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.

19. Disclaimer of Warranty for Quiet Enjoyment. **LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.**

20. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damage Licensee sustains in connection with the eviction.

LIENS AND TAXES

21. Liens and Charges. Licensee shall promptly pay and discharge any and all liens arising out of any construction, alterations or repairs done, suffered or permitted to be done by Licensee on Premises. Licensor is hereby authorized to post any notices or take any other action upon or with respect to Premises that is or may be permitted by law to prevent the attachment of any such liens to Premises; provided, however, that failure of Licensor to take any such action shall not relieve Licensee of any obligation or liability under this **Section 21** or any other Section of this License.

22. Taxes. Licensee shall pay when due any taxes, assessments or other charges (collectively, "**Taxes**") levied or assessed by any governmental or quasi-governmental body upon the Communication Line, or any other improvements constructed or installed on the Premises by or for Licensee (collectively, the "**Improvements**") or any Taxes levied or assessed against Licensor or the Premises that are attributable to the Improvements.

DEFAULT, TERMINATION, AND SURRENDER

23. Default and Termination. In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 15**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:

23.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of **Section 26** below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in **Section 15**.

23.2 Should Licensee not comply fully with the obligations of **Section 17** regarding the handling or transporting of hazardous waste or hazardous material, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice of termination upon Licensee.

23.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedy set forth in this **Section 23** shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.

23.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence

Sample

of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.

23.5 Licensee agrees not to assert that termination of this License is a discontinuance in service that requires prior approval by the FCC and represents and warrants that it has redundant facilities that would allow it to continue the provision of service after termination of this License.

24. Surrender of the Premises.

24.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:

24.1.1 if so directed by Licensor in writing, remove the Improvements, the Communication Line and all appurtenances thereto, or, at the sole discretion of Licensor, appropriately decommission the Communication Line with a method satisfactory to Licensor;

24.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;

24.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and

24.1.4 leave the Premises in substantially the condition which existed as of the Effective Date.

24.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 24.1** above (the "**Restoration Obligations**"), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.

24.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) remove the Communication Line and the other Improvements or otherwise restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold the Communication Line and the other Improvements and personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore. Further, if Licensor has consented to the Communication Line and the other Improvements remaining on the Premises following termination, Licensee shall, upon request by Licensor, provide a bill of sale in a form acceptable to Licensor conveying the Communication Line and the other Improvements to Licensor.

Sample

MISCELLANEOUS

25. Successors and Assigns. All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.

26. Assignment.

26.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any attempted assignment by Licensee in violation of this **Section 26** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.

26.2 For purposes of this **Section 26**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation own, directly or indirectly, at least 50% of the combined voting power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.

26.3 Notwithstanding the provisions of **Section 26.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 15** above concerning insurance requirements. In addition to and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment.

26.4 The provisions of this **Section 26** shall survive the expiration or earlier termination of this License.

27. Notices. Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.

Sample

If to Licensor: Jones Lang LaSalle Brokerage, Inc.
4200 Buckingham Rd, Ste 110
Fort Worth, TX 76155
Attn: Permits/Licenses

with a copy to: BNSF Railway Company
2301 Lou Menk Drive, GOB-3W
Fort Worth TX 76131
Attn: Senior Manager Real Estate

If to Licensee: North Dakota Department of Transportation
608 East Boulevard Ave
Bismarck, ND 58505
Attn: Director of Office of Project Development

28. Survival. Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Communication Line and the other Improvements are removed and the Premises are restored to its condition as of the Effective Date.

29. Recordation. It is understood and agreed that this License shall not be placed of public record recorded in the public real property records of Pierce County, North Dakota. The parties further understand that North Dakota law limits the ability of the Licensee to shield from public disclosure any information given to the Licensee. The Licensee shall give the Licensor reasonable notice of public records requests for this License or other Licensor documents.

30. Intentionally deleted.

31. Severability. To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.

32. Integration. This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However, nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.

33. Joint and Several Liability. If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.

34. Waiver. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.

35. Interpretation.

35.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein

Sample

shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.

35.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.

36. Counterparts. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged via email or electronic facsimile machines and any email or electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.

37. Licensor's Representative. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

END OF PAGE – SIGNATURE PAGE FOLLOWS

Sample

This License has been duly executed by the parties hereto as of the date below each party's signature; to be effective, however, as of the Effective Date.

LICENSOR:

BNSF RAILWAY COMPANY a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc.
4200 Buckingham Rd, Ste. 110
Fort Worth, TX 76155

By: _____
Shane Krueger
Title: Vice President – Permits & Special Projects

Date: _____

LICENSEE:

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

608 East Boulevard Ave
Bismarck, ND 58505

By: _____

Title: _____

Date: _____

Sample

BNSF Wireline (Electrical) License 25W-27915

Tracking #_____

LICENSE FOR ELECTRIC SUPPLY LINE
ACROSS OR ALONG RAILWAY PROPERTY
(Electric Light, Power Supply, Irrespective of Voltage, Overhead or Underground)

THIS LICENSE FOR ELECTRIC SUPPLY LINE ("**License**") is made to be effective _____, 2024 (the "**Effective Date**") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("**Licensor**") and **NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**, ("**Licensee**").

In consideration of the mutual covenants contained herein, the parties agree to the following:

GENERAL

1. Grant of License. Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to construct and maintain, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), electric supply line containing a maximum of one(1) conductors, together with its supporting or containing structures (collectively, the "**Electric Supply Line**"), across or along Licensor's rail corridor at or near the station of Rugby, County of Pierce, State of North Dakota, Line Segment 0033, Mile Post 142.50 as shown on the attached Drawing No. 82543, dated September 7, 2021, attached hereto as **Exhibit "A"** and incorporated herein by reference (the "**Premises**").

2. Term. This License shall commence on the Effective Date and shall continue for a period of twenty-five (25) years, subject to prior termination as hereinafter described.

3. Existing Improvements. Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use, repair, maintenance, or replacement of such improvements.

4. Use of the Premises. Licensee shall use the Premises solely for construction, maintenance, and use of the Electric Supply Line in accordance with the Drawings and Specifications. Licensee shall not use the Premises for any other purpose and Licensee is expressly prohibited from using or allowing any telecommunication facilities or equipment within the Premises or using or allowing the use of the Premises for any other purpose.

5. Alterations. Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

COMPENSATION

6. License Fee. Licensee shall pay Licensor, prior to the Effective Date, the sum of Six Thousand Four Hundred and No/100 Dollars **($6,400.00)** as compensation for the use of the Premises.

7. Costs and Expenses.

7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.

SAMPLE

7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises or the presence, construction, and maintenance of the Electric Supply Line, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred. Licensee shall bear the cost of flagger services and other safety measures provided by Licensor, when deemed necessary by Licensor's representative. Flagging costs shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7.**

7.3 Licensor, at its sole discretion, may elect to designate a third party (the "**Scheduling Agent**"), to perform and/or arrange for the performance of the Services.

8. Payment Terms. All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2-1/2%), or (ii) the maximum rate permitted by law.

LICENSOR'S RESERVED RIGHTS

9. Reserved Rights of Use. Licensor excepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:

9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances (other than the Electric Supply Line) and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;

9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or

9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.

10. Right to Require Relocation. If at any time during the term of this License, Licensor desires the use of its rail corridor in such a manner as would, in Licensor's reasonable opinion, be interfered with by the Electric Supply Line, Licensee shall, at its sole expense, within thirty (30) days after receiving written notice from Licensor to such effect, make such changes in the Electric Supply Line as in the sole discretion of Licensor may be necessary to avoid interference with the proposed use of Licensor's rail corridor, including, without limitation, the relocation of the Electric Supply Line, or the construction of a new electric line to replace the Electric Supply Line. Notwithstanding the foregoing, Licensee agrees to make all emergency changes and minor adjustments, as determined by Licensor in its sole discretion, to the Electric Supply Line promptly upon Licensor's request.

LICENSEE'S OPERATIONS

11. Construction and Maintenance of the Electric Supply Line.

SAMPLE

11.1 Licensee shall notify Licensor's Roadmaster, Bryan.Markee@bnsf.com or at telephone (701)837-6614, at least ten (10) business days prior to installation of the Electric Supply Line and prior to entering the Premises for any subsequent maintenance thereon. In the event of emergency, Licensee shall notify Licensor of Licensee's entry onto the Premises at the telephone number above as soon as practicable and shall promptly thereafter follow up with written notice of such entry.

11.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.

11.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.

11.4 Intentionally deleted.

11.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises in such a manner as not at any time to endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.

11.6 Licensee shall, at its sole cost and expense, construct and maintain the Electric Supply Line in such a manner and of such material that the Electric Supply Line will not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. The construction of the Electric Supply Line shall be completed within one (1) year of the Effective Date, and any subsequent maintenance shall be completed within one (1) year of initiation. Within fifteen (15) days after completion of the construction of the Electric Supply Line or the performance of any subsequent maintenance thereon, Licensee shall, at Licensee's own cost and expense, restore the Premises to substantially their state as of the Effective Date, unless otherwise approved in advance by Licensor in writing. On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense, surrender the Premises to Licensor pursuant to the terms and conditions set forth in **Section 24** hereof.

11.7 Licensor may direct one or more of its field engineers to observe or inspect the construction and/or maintenance of the Electric Supply Line at any time for compliance with the Drawings and Specifications and Legal Requirements (defined below). Licensee shall reimburse Licensor for the cost of such observation or inspection related services pursuant to Section 8. If ordered at any time to halt construction or maintenance of the Electric Supply Line by Licensor's personnel due to non-compliance with the Drawings and Specifications or any other hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to observe or inspect, or to halt work on, the Electric Supply Line, it being solely Licensee's responsibility to ensure that the Electric Supply Line is constructed and maintained in strict accordance with the Drawings and Specifications and in a safe and workmanlike manner in compliance with all terms hereof. Neither the

SAMPLE

exercise of, nor the failure by Licensor to exercise, any right granted by this Section will alter in any way the liability allocation provided by this License. If at any time Licensee shall, in the sole judgment of Licensor, fail to properly perform its obligations under this **Section 11**, Licensor may, at its option and at Licensee's sole expense, arrange for the performance of such work as it deems necessary for the safety of its operations and activities. Licensee shall promptly reimburse Licensor for all costs and expenses of such work, pursuant to the terms of **Section 8**. Licensor's failure to perform any obligations of Licensee shall not alter the liability allocation hereunder.

11.8 Licensee shall, at its sole cost and expense, construct and at all times maintain the Electric Supply Line in accordance with the National Electric Safety Code.

11.9 If the operation or maintenance of the Electric Supply Line at any time causes interference, including but not limited to physical interference from electromagnetic induction, electrostatic induction, or from stray or other currents, with the facilities of Licensor or of any lessee or licensee of Licensor, or in any manner interfere with the operation, maintenance, or use by Licensor of its right-of-way, tracks, structures, pole lines, signal and communication lines, radio, or other equipment, devices, other property or appurtenances thereto, Licensee agrees immediately to make such changes in the Electric Supply Line and furnish such protective devices and/or replacement equipment to Licensor and its lessees or licensees as shall be necessary, in the judgment of Licensor's representative, to eliminate such interference. The cost of such protective devices and their installations shall be borne solely by Licensee. If any of the interference covered by this **Section 11.9** shall be, in the judgment of Licensor, of such importance to the safety of Licensor's operations as to require immediate corrective action, Licensee, upon notice from Licensor, shall either, at Licensor's election, cease using the Electric Supply Line for any purpose whatsoever and remove same, or reduce the voltage or load on the Electric Supply Line, or take such other interim protective measures as Licensor may deem advisable, until the protective devices and/or replacement equipment required by this **Section 11.9** have been installed, put in operation, tested, and found to be satisfactory to correct the interference.

11.10 Licensee shall, at its sole cost and expense, remove all combustible material from around wooden poles on the Premises, if any, and will at all times keep the space around such poles free of such material, and if removal of such combustible material shall not be attended to with fifteen (15) days after having been requested by Licensor to do so, Licensor shall have the right itself to perform the work and Licensee hereby agrees to reimburse Licensor for the expense so incurred.

11.11 Cutting head must travel at 0.0% grade (or downward) beginning 25' (minimum) from centerline of track until it reaches a point 25' (minimum) from the centerline of track. Minimum pressure must be applied to pumping the slurry to the cutting head during drilling. This will deter the bentonite slurry used for lubrication from seeping up and fouling the track roadbed. A BNSF Flagman must be present during installation and will monitor the ballast and roadbed.

12. Boring and Excavation.

12.1 Prior to Licensee conducting any boring, excavation, or similar work on or about any portion of the Premises, Licensee shall contact the applicable State's call-before-you-dig utility location service to have 3rd parties mark the location of utilities. Licensee shall explore the proposed location for such work with hand tools to a depth of at least three (3) feet below the surface of the ground to determine whether pipelines or other structures exist below the surface, provided, however, that in lieu of the foregoing hand-tool exploration, Licensee shall have the right to use suitable detection equipment or other generally accepted industry practice (*e.g.*, consulting with the State Infrastructure Corporation) to determine the existence or location of pipelines and other subsurface structures prior to drilling or excavating with mechanized equipment. Licensee may request information from Licensor concerning the existence and approximate

SAMPLE

location of Licensor's underground lines, utilities, and pipelines at or near the vicinity of the proposed Electric Supply Line by contacting Licensor's Telecommunications Helpdesk, currently at 1-800-533-2891 (option 1, then option 7), at least ten (10) business days prior to installation of the Electric Supply Line. Upon receiving Licensee's timely request, Licensor will provide Licensee with the information Licensor has in its possession regarding any existing underground lines, utilities, and pipelines at or near the vicinity of the proposed Electric Supply Line and, if applicable, identify the location of such lines on the Premises pursuant to Licensor's standard procedures. Licensor does not warrant the accuracy or completeness of information relating to subsurface conditions of the Premises and Licensee's operations will be subject at all times to the liability provisions herein.

12.2 For all bores greater than 26-inch diameter and at a depth less than 10.0 feet below bottom of rail, a soil investigation must be performed by Licensee and reviewed by Licensor prior to construction. This study is to determine if granular material is present, and to prevent subsidence during the installation process. If the investigation determines in Licensor's reasonable opinion that granular material is present, Licensor may select a new location for Licensee's use, or may require Licensee to furnish for Licensor's review and approval, in Licensor's sole discretion, a remedial plan to deal with the granular material. Once Licensor has approved any such remedial plan in writing, Licensee shall, at Licensee's sole cost and expense, carry out the approved plan in accordance with all terms thereof and hereof.

12.3 Any open hole, boring, or well, constructed on the Premises by Licensee shall be safely covered and secured at all times when Licensee is not working in the actual vicinity thereof. Following completion of that portion of the work, all holes or borings constructed on the Premises by Licensee shall be:

12.3.1 filled in to surrounding ground level with compacted bentonite grout; or

12.3.2 otherwise secured or retired in accordance with any applicable Legal Requirement. No excavated materials may remain on Licensor's property for more than ten (10) days, but must be properly disposed of by Licensee in accordance with applicable Legal Requirements.

LIABILITY AND INSURANCE

13. Liability and Indemnification.

13.1 For purposes of this License: (a) "**Indemnitees**" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "**Liabilities**" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "**Licensee Parties**" means Licensee or Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.

13.2 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE, KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):**

13.2.1 **LICENSEE'S OCCUPATION AND USE OF THE PREMISES,**

SAMPLE

13.2.2 **THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR**

13.2.3 **ANY ACT OR OMISSION OF ANY LICENSEE PARTY.**

13.3 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE SHALL CAUSE ITS CONTRACTOR TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.**

13.4 **IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.**

13.5 **THE FOREGOING OBLIGATIONS OF LICENSEE AND LICENSEE'S CONTRACTOR SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL, TO THE FULLEST EXTENT PERMITTED BY LAW, APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.**

13.6 Upon written notice from Licensor, Licensee agrees to tender to its Contractor the defense of any lawsuit or other proceeding brought against any Indemnitee by any entity, relating to any matter covered by this License for which Licensee's Contractor has an obligation to assume liability for and/or save and hold harmless any Indemnitee. Licensee's Contractor shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.

13.7 Licensee shall cause Licensee's contactor to perform all such construction, installation, maintenance, repairs and removal of the Electric Supply Line in accordance with the terms and conditions of this License. Licensee shall require that prior to entry upon the Premises, each of Licensee's contractors performing work on the Electric Supply Line or entering the Premises on behalf of Licensee for any purpose to enter into the Right of Entry Agreement in the form attached hereto as Exhibit "B" and incorporated herein

14. Personal Property Risk of Loss. **ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY,**

SAMPLE

AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.

15. Insurance. Licensee is a governmental agency of the State of North Dakota and has liability coverage through the Risk Management Fund, pursuant to N.D.C.C. Chapter 32-12.2. Coverage meets or exceeds the minimum limits of insurance specified below. Licensee's contractors will be required to sign the Right of Entry Agreement attached hereto as Exhibit "B" and provide the required insurance certificate prior to performing any work or entering the Premises.

15.1 Commercial General Liability Insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of $5,000,000 each occurrence and an aggregate limit of at least $10,000,000 but in no event less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence or equivalent and include coverage for, but not limited to, the following:

- Bodily Injury and Property Damage
- Fire legal liability
- Products and completed operations

15.2 Business Automobile Insurance. This insurance shall contain a combined single limit of at least $1,000,000 per occurrence, and include coverage for, but not limited to the following:

- Bodily injury and property damage.
- Any and all vehicles owned, used or hired.

15.3 Workers' Compensation and Employers' Liability Insurance. This insurance shall include coverage for, but not limited to:

- Licensee's statutory liability under the workers' compensation laws of the state(s) in which the services are to be performed. If optional under state laws, the insurance must cover all employees anyway.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 by disease policy limit, $500,000 by disease each employee.

15.4 Intentionally deleted.

15.5 Intentionally deleted.

15.6 Other Requirements:

15.6.1 Licensee shall furnish to Licensor an acceptable certificate(s) of financial responsibility including a signature of the authorized representative. Licensee shall notify Licensor in writing at least 30 days prior to any change in its liability program. In the event of a claim or lawsuit involving Licensor arising out of this License, Licensee will make available any required policy covering such claim or lawsuit.

15.6.2 Failure to provide evidence as required by this Section 15 shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this Section shall not operate as a waiver of Licensee's obligations hereunder.

15.6.3 The fact that insurance (including, without limitation, self-insurance) is obtained by Licensee shall not be deemed to release or diminish the liability of Licensee, including, without limitation, liability

SAMPLE

under the indemnity provisions of this License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.

15.6.4 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable.

15.6.5 For purposes of this Section 15, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS

16. Compliance with Laws, Rules, and Regulations.

16.1 Licensee shall observe and comply with any and all laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("**Legal Requirements**") relating to the construction, maintenance, and use of the Electric Supply Line and the use of the Premises.

16.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the Website "*www.BNSFcontractor.com*" (the "**Safety Orientation**") within one year prior to entering upon the Premises. Additionally, Licensee must ensure that each and every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew the Safety Orientation annually.

16.3 Licensee shall obtain on or before the date it or its contractor enters the Premises, any and all additional rights-of way, easements, licenses and other agreements relating to the grant of rights and interests in and/or access to the Premises (collectively, the "**Rights**") and such other rights, licenses, permits, authorizations, and approvals (including without limitation, any necessary local, state, federal or tribal authorizations and environmental permits) that are necessary in order to permit Licensee to construct, maintain, own and operate the Electric Supply Line and otherwise to perform its obligations hereunder in accordance with the terms and conditions hereof.

16.4 Licensee shall either require that the initial stated term of each such Rights be for a period that does not expire, in accordance with its ordinary terms, prior to the last day of the term of this License or, if the initial stated term of any such Right expires in accordance with its ordinary terms on a date earlier than the last day of the term of this License, Licensee shall, at its cost, exercise any renewal rights thereunder, or otherwise acquire such extensions, additions and/or replacements as may be necessary, in order to cause the stated term thereof to be continued until a date that is not earlier than the last day of the term of this License.

16.5 Upon the expiration or termination of any Right that is necessary in order for Licensee to own, operate or use the Electric Supply Line in accordance with the terms and conditions of this License, this License thereby shall automatically expire upon such expiration or termination of the Right.

17. Environmental.

17.1 Licensee shall strictly comply with all federal, state and local environmental Legal Requirements and regulations in its use of the Premises, including, but not limited to, the Resource Conservation and Recovery Act, as amended (RCRA), the Clean Water Act, the Oil Pollution Act, the Hazardous Materials

SAMPLE

Transportation Act, and CERCLA (collectively referred to as the "**Environmental Laws**"). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or hazardous substances, as defined by Environmental Laws on or about the Premises.

17.2 Licensee covenants that it will not handle or transport "hazardous waste" or "hazardous substances", as "hazardous waste" and "hazardous substances" may now or in the future be defined by any federal, state, or local governmental agency or body on the Premises. Licensee agrees periodically to furnish Licensor with proof, satisfactory to Licensor that Licensee is in compliance with the provisions of this **Section 17.2**.

17.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of hazardous substances on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use the best efforts to promptly respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor immediate notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.

17.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the Electric Supply Line which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.

17.5 Licensee shall promptly report to Licensor in writing any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take whatever action is necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.

DISCLAIMER OF WARRANTIES

18. No Warranties.

18.1 **LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

18.2 **LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE ELECTRIC SUPPLY LINE WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.**

SAMPLE

19. Disclaimer of Warranty for Quiet Enjoyment. **LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.**

20. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damage Licensee sustains in connection with the eviction.

LIENS AND TAXES

21. Liens and Charges. Licensee shall promptly pay and discharge any and all liens arising out of any construction, alterations or repairs done, suffered or permitted to be done by Licensee on Premises. Licensor is hereby authorized to post any notices or take any other action upon or with respect to Premises that is or may be permitted by law to prevent the attachment of any such liens to Premises; provided, however, that failure of Licensor to take any such action shall not relieve Licensee of any obligation or liability under this **Section 21** or any other Section of this License.

22. Taxes. Licensee shall pay when due any taxes, assessments or other charges (collectively, "**Taxes**") levied or assessed by any governmental or quasi-governmental body upon the Electric Supply Line, or any other improvements constructed or installed on the Premises by or for Licensee (collectively, the "**Improvements**") or any Taxes levied or assessed against Licensor or the Premises that are attributable to the Improvements.

DEFAULT, TERMINATION, AND SURRENDER

23. Default and Termination. In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 15**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:

23.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of **Section 26** below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in **Section 15**.

23.2 Should Licensee not comply fully with the obligations of **Section 17** regarding the handling or transporting of hazardous waste or hazardous material, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice of termination upon Licensee.

23.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedy set forth in this **Section 23** shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.

23.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or

SAMPLE

thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.

24. Surrender of the Premises.

24.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:

24.1.1 if so directed by Licensor in writing, remove the Improvements, the Electric Supply Line and all appurtenances thereto, or, at the sole discretion of Licensor, appropriately decommission the Electric Supply Line with a method satisfactory to Licensor;

24.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;

24.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and

24.1.4 leave the Premises in substantially the condition which existed as of the Effective Date.

24.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 24.1** above (the "**Restoration Obligations**"), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.

24.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) remove the Electric Supply Line and the other Improvements or otherwise restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold the Electric Supply Line and the other Improvements and personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore. Further, if Licensor has consented to the Electric Supply Line and the other Improvements remaining on the Premises following termination, Licensee shall, upon request by Licensor, provide a bill of sale in a form acceptable to Licensor conveying the Electric Supply Line and the other Improvements to Licensor.

MISCELLANEOUS

25. Successors and Assigns. All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.

26. Assignment.

26.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any

SAMPLE

attempted assignment by Licensee in violation of this **Section 26** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.

26.2 For purposes of this **Section 26**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation own, directly or indirectly, at least 50% of the combined voting power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.

26.3 Notwithstanding the provisions of **Section 26.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 15** above concerning insurance requirements. In addition to and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment.

26.4 The provisions of this **Section 26** shall survive the expiration or earlier termination of this License.

27. Notices. Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.

If to Licensor: Jones Lang LaSalle Brokerage, Inc.
4200 Buckingham Rd, Ste 110
Fort Worth, TX 76155
Attn: Permits/Licenses

with a copy to: BNSF Railway Company
2301 Lou Menk Drive, GOB-3W
Fort Worth TX 76131
Attn: Senior Manager Real Estate

If to Licensee: North Dakota Department of Transportation
608 East Boulevard Ave
Bismarck, ND 58505
Attn: Director of Office of Project Development

SAMPLE

28. Survival. Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Electric Supply Line and the other Improvements are removed and the Premises are restored to its condition as of the Effective Date.

29. Recordation. It is understood and agreed that this License shall not be placed of public record recorded in the public real property records of Pierce County, North Dakota. The parties further understand that North Dakota law limits the ability of the Licensee to shield from public disclosure any information given to the Licensee. The Licensee shall give the Licensor reasonable notice of public records requests for this License or other Licensor documents.

30. Intentionally deleted.

31. Severability. To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.

32. Integration. This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However, nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.

33. Joint and Several Liability. If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.

34. Waiver. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.

35. Interpretation.

35.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.

35.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.

36. Counterparts. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged via email or electronic facsimile machines and any email or electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.

SAMPLE

37. Licensor's Representative. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

END OF PAGE – SIGNATURE PAGE FOLLOWS

SAMPLE

This License has been duly executed by the parties hereto as of the date below each party's signature; to be effective, however, as of the Effective Date.

LICENSOR:

BNSF RAILWAY COMPANY a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc.
4200 Buckingham Rd, Ste. 110
Fort Worth, TX 76155

By: _____
Shane Krueger
Title: Vice President – Permits & Special Projects

Date: _____

LICENSEE:

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

608 East Boulevard Ave
Bismarck, ND 58505

By: _____

Title: _____

Date: _____

SAMPLE

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

VIDEO VEHICLE DETECTION SYSTEM

PROJECT RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

DESCRIPTION

This provision sets forth requirements for work, furnishing, installing, and placing into operation select vehicle detection system components at each intersection, which detects vehicles by processing video images and providing detection outputs to a traffic signal controller. This equipment shall meet the NEMA environmental, power, and surge ratings.

ITEMS COVERED & SYSTEM COMPONENTS

The video detection and monitoring system includes the following components:

1. Provide video detection cameras that are Autoscope Vision Processor devices manufactured by Econolite Control Products Inc.

2. With each camera installation, include an Econolite Autoscope Vision compatible cable branch cable (Econolite part #1175-011) (cable, round, 3-conductor, 18 AWG w/polyethylene jacket) connection to the traffic signal controller cabinet, 4 Vision cameras, COM manager, 1400 feet of cable, mounting brackets and turn assistance. Install the latest software and firmware on all devices.

3. Attach manufacturer recommended mounting risers to the mast arms. Extend risers 5 feet above the mast arms.

4. Provide two (2) spare video detection cameras per intersection to the City as additional equipment. Install all cameras and associated cabling, connect all necessary hardware, and aim and secure each camera in accordance with the manufacturer's specifications. Program detection and counting zones and verify reliable system operation in coordination with a manufacturer's representative. Use the camera locations shown in the plans as general guidance only. Install Autoscope cameras on mast arms at the indicated locations, following the manufacturer's installation guidelines. Label each camera and its corresponding cable to match the identifiers shown in the plans. Aim all cameras as directed by the City to ensure the appropriate field of view. Employ a Field Service Representative approved by the Autoscope supplier to oversee and verify installation and configuration. Ensure that all personnel performing the installation are properly trained and certified by the Autoscope equipment manufacturer. Include the cost of the Field Service Representative's services in the unit price for this item.

WARRANTY, MAINTENANCE, AND SUPPORT

Warranty the video detection system components by its supplier for six (6) years after final inspection and acceptance. Provide ongoing software support by the supplier including updates of the MVP sensor, modular cabinet interface unit, and supervisor computer applications. Provide these updates free of charge during the warranty period. Coordinate the delivery of spare cameras to the City of Grand Forks.

METHOD OF MEASUREMENT

Provide all labor and equipment necessary for the video detection system to be fully operational. Do not measure video vehicle detection system components separately. Include the cost for labor, materials, and equipment necessary for furnishing and installing the video vehicle detection system in the contract unit price for “TRAFFIC SIGNAL SYSTEM – SITE X”.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

BUFFER TUBE FAN-OUT KIT

PROJECT RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

DESCRIPTION
Furnish and install buffer tube fan-out kits on the single mode fiber optic ends in the traffic signal controller cabinets.

MATERIALS
Provide buffer tube fan-out kits that match the number of fiber strands in the lateral fiber optic cable. Provide buffer tube fan-out kits that are compatible with the fiber optic cable being terminated and color-coded to match the lateral fiber strand color. Provide buffer tube fan-out kits that are 900 um. Provide buffer tube fan-out kits that have a fiber strand length for routing and placement in the fiber optic termination panel. Provide components of the buffer tube fan-out kits that are rated for outdoor use.

CONSTRUCTION REQUIREMENTS
Install fiber optic buffer tube fan-out kits on lateral fiber cable ends within each traffic signal cabinet or building fiber optic termination panel. Coil and secure the fan-out buffer tubes with the fiber management materials provided with the fiber optic termination panels. Taping of buffer tubes or leaving buffer tubes unmanaged is not allowed.

METHOD OF MEASUREMENT
Include buffer tube fan-out kits and all associated materials in the price bid for “IT SYSTEM” and include all labor, materials, and equipment required to complete the work.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FIBER OPTIC SPLICE ENCLOSURE

PROJECT – RCE-FTF-NHU-SU-6-297(014)000, PCN 24115

DESCRIPTION

This work consists of furnishing and installing fiber optic splice closures for fiber optic cables at locations shown on the plans.

MATERIALS

Use dome-type splice closures that meet the following minimum requirements:

1. Seal, anchor, and protect all fiber optic cable splices.
2. Provide at least six (6) total cable entries.
3. Ensure suitability for underground applications; closures must be corrosion-resistant, watertight, and airtight.
4. Equip splice trays with a hinged design and an upright locking mechanism for each tray.
5. Use a sealing design that allows re-entry without glue, sealant, or new cable seals.
6. Bond the splice closure internally and externally and include an external ground lug.
7. Include all necessary accessories to complete splicing.
8. Provide all required mounting hardware, unless already supplied with the pull box or manhole.
9. Ensure compliance with Telcordia GR-771 Generic Requirements.

Size each splice closure to accommodate the total number of fiber strands from all entering cables.

CONSTRUCTION REQUIREMENTS

1. Notification Requirements

1.1 Splicing Location Notification
Notify the Engineer of proposed daily splicing locations:

- Two business days prior to splicing.
- The morning of proposed splicing.
- At least four hours prior to sealing the splice closure to allow inspection.

2. Inspection and Documentation

2.1 Engineer Absence Protocol
If the Engineer is not present to inspect the open splice closure:

- Take a minimum of eight (8) high-resolution digital photographs from multiple angles.
- Document the interior of the splice closure and all completed work per specifications and plans.

2.2 Required Photo Content

Include the following in the photographs:

1. Splice Trays showing:
    - Spliced fiber strands
    - Uncut fiber strands
    - Proper fiber coiling
2. Clearly labeled fiber trays
3. Remaining buffer tubes with appropriate coiling
4. Fully reassembled interior components prior to final sealing
5. Final installation in the pull box or manhole:
    - Coiled fiber cable secured to fiber management hardware (at least two photos)

2.3 Submission

- Organize all photographs by location.
- Submit them to the Engineer along with final testing result documentation.
- Ensure all images are clear, complete, and compliant with project requirements.

3. Technician Certification

Installation technician must hold a valid certification in:

- IMSA Fiber Optics for ITS, Traffic, Fire Alarm, and Communications Systems, or
- An equivalent or higher-level fiber optics certification.

4. Splicing Preparation Procedures

After preparing the fiber cable and designated buffer tube for splicing:

- Clean all fiber strands of homogeneous gel (unless using gel-free buffer tubes).
- Coil all uncut fiber strands neatly in the tray.
- Neatly coil, secure, and store remaining buffer tubes in the storage area within the closure, beneath the splice trays, per manufacturer's recommendations.
- Wrap and secure buffer tubes designated for splicing to the splice tray using ties, as specified by the manufacturer.
- Label each individual splice and buffer tube in all splice trays.

5. Splice Closure Sealing

- Secure and seal all fiber optic cables at splice closure entrances.
- Plug all unused cable entries.
- Do not tape bare fiber strands to the splice tray under any circumstances.

6. Re-entry Procedures

If re-entry into the splice closure is required:

- Follow the manufacturer's re-entry and resealing procedures precisely.
- Use extreme caution to avoid damaging existing fiber strands, splices, and buffer tubes.
- Seal the splice closure according to all manufacturer re-entry requirements.

7. Final Installation

- Verify that splice closures and associated fiber cable coils fit properly within the pull box or manhole.
- Securely mount the splice enclosure to the side of the pull box or manhole.

METHOD OF MEASUREMENT

Do not measure Fiber Optic Splice Enclosures for separate payment. Include all splice trays, mounting hardware, labeling, all materials, hardware, labor, and equipment necessary to complete the work in the unit price for the related bid item.

BASIS OF PAYMENT

Pay Item	**Pay Unit**
IT SYSTEM	LS

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FIBER OPTIC TERMINATION PANEL

PROJECT RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

DESCRIPTION

This work consists of furnishing and installing fiber optic termination panels in traffic signal cabinets or buildings for interconnect cables.

MATERIALS

Provide a Leviton OPT-X 1000i 2RU, Hubbell FCR2U or an approved similar rack mount enclosure. Provide termination panels to accommodate all fiber optic cables as shown on the plans. Equip all termination panels with required 12 port (LC) type bulkheads and be compliant with the Telcordia Technologies Generic Requirement (GR) GR-326 *Generic Requirements for Single-Mode Optical Connectors and Jumper Assemblies, Latest Issue*. Perform acceptance testing for insertion loss and return loss with the test certification provided with each patch panel.

Provide a wall-mounted rack enclosure for housing fiber optic termination panels, network switches, and related equipment for the lift station fiber termination. The enclosure shall be a 6U, 19-inch rack-mountable cabinet with a minimum depth of 16.5 inches and a load capacity of at least 200 pounds. Constructed of steel and includes a lockable, reversible front door with ventilation, as well as removable side panels for ease of access. The enclosure includes top and bottom cable access ports and is suitable for indoor installation in utility buildings such as lift stations. An acceptable product is the Tripp Lite SRW6U or an approved equal that meets or exceeds these specifications.

Provide termination panels that are compatible with the fiber optic cable being terminated.

Provide 12 port panels as indicated in the plans, that have hinged doors that provide access to both the fiber fan out and the termination bulkheads. Size the panel to accommodate the entry of the lateral fiber optic cable, buffer tube fan-out kids, and bulkheads with the access door closed. Provide patch panels that are suitable to be installed in a traffic signal controller cabinet. Provide fiber optic patch panels that include a fiber adapter panel, adapters, fiber pigtails, strain relief, grommet tape, zip ties, cable management hardware for fiber strands and fan out kit buffer tubes, and wall mounting bracket. Provide terminations within the patch panel that are polished with a physical contact (PC) finish.

CONSTRUCTION REQUIREMENTS

Provide all port termination panels as indicated in the plans for all fiber optic cables at each traffic signal controller cabinet. Label the termination panels with a labeling scheme that complies with fiber directions shown on the plans.

Fiber terminations are as shown on the plans. Field terminate LC type bulkhead connectors on the ends of the lateral fiber cable strands and install them on the back side of the termination

panel. Provide terminated connectors that are nickel-plated with a ceramic ferrule and polished with a physical contact finish.

Use a single mode fiber pigtail buffer tube that is factory terminated on the 12 port LC type bulkhead and fusion splice the pigtail to the lateral fiber optic cable. Size and configure the termination panel to accommodate splicing of the pigtail and shall include a splicing chip attached to the back of the patch panel to hold all individual splices.

Use proper strain relief and cable management inside the termination panel for the fiber cable and fiber fan out strands per the manufacturer's recommendations. The use of tape to secure the individual fanned out strands to the bottom of the termination panel is not allowed.

Install all hardware in accordance with manufacturer's recommendations.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT
Include the Fiber Optic Termination Panels and all associated materials in the price bid for "IT SYSTEM" include all labor, materials and equipment required to complete the work.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

INTERIM COMPLETION

PROJECT – RCE-FTF-NHU-SU-6-297(014)000, PCN 24115

DESCRIPTION

This project has a 2-year construction schedule. This special provision outlines the requirements and conditions necessary to be in place prior to the interim completion date.

CONSTRUCTION REQUIREMENTS

A. General.

Structure work performed prior to the interim completion date on 11/30/2026 and continuing after that date will not be factored into the enforcement of liquidated damages, so long as there are no impacts to the items listed under Section B.3.

Obtain the Engineer's written permission to perform non-bridge work not listed during a particular season. Obtain the Engineer's written permission to perform non-bridge work after the interim completion date.

B. 2026 Season Construction.

1. **General.**
   Complete the work as described in "Section B" of the Construction Requirements of this SP prior to the interim completion date of 11/30/2026.

   The Engineer will enforce liquidated damages as specified in Section 108.07 B, "Failure to Complete within the Contract Time" if the suspension of work requirements are incomplete by the required interim completion date. The Engineer will cease the enforcement of liquidated damages once the requirements are met.

2. **First Year Construction Phases.**
   Complete the work in Phase 1 as described in Plan Note 704-P02.

3. **Interim Completion Requirements.**
   Prior to the 11/30/2026 interim completion date, complete the work in Phase 1 and meet the work site requirements listed here:

   - The temporary vehicular bypass road surface is paved and is open to two-way traffic (one lane in each direction);
   - The temporary pedestrian shared use path surface is paved and is open to pedestrians;

- Temporary lighting and signals are operational;

- Reset existing signs where replacement signs have not been installed. The cost of labor, materials, and equipment necessary to reset and remove the existing signs before and after the winter suspension is included in the contract unit price for “Traffic Control Signing.” Reset all signs according to Standard Drawing D-754-23.

- Place topsoil, seed, and stabilize disturbed areas;

- Maintain access to DeMers Avenue and South 42nd Street via the temporary vehicular bypass road and temporary pedestrian shared use path.

- Remove debris from areas used by the public and within 60 feet of those areas, and comply with Section 107.07 C, “Parking of Equipment, Vehicles, and Stored Materials”;

- Remove all portable traffic control devices. Post mount or anchor any signs or devices required by the plans over the winter.

Schedule an inspection with the Engineer 5 days before the anticipated completion of listed work. The Engineer may require the completion of additional items of work relating to the listed work before determining the enforcement of liquidated damages.

C. 2027 Season Construction

1. General.

If the Contractor desires to begin non-bridge work in the second year prior to 5/1/2027 receive the Engineer's written permission before beginning work. Any delays occurring due to non-bridge work performed before 5/1/2027 will be considered non-excusable as specified in Section 108.06 B.6, "Non-Excusable Delays".

2. Second Year Construction Phases.

Complete Phases 2 through 5 in the 2027 construction season. Complete all work by the completion date. Liquidated damages will be charged as specified in Section 108.07 B, “Failure to Complete within the Contract Time” if all work is not completed by the completion date.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

ARCHITECTURAL FORMLINER

RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

DESCRIPTION

This work consists of applying concrete coating to all exposed concrete surfaces that receive the architectural formliner.

MATERIALS

A. General.

Obtain all concrete coating and anti-graffiti products from a single source.

B. Concrete Formliner.

Provide extended use elastomeric formliners meeting the following requirements:

1. Compliance
   a. Shore A Hardness: ASTM D 2240, 60-70.
   b. Cast Density: PCF 62-67
   c. Tear Strength: ASTM D 624: PL 140-160
   d. Tensile Strength: ASTM D 638 (ASTM D 412): 1300-1600 psi
   e. Ultimate Elongation: ASTM D 638 (ASTM D 412): 280-330 percent
2. Manufacturing Tolerances
   a. Mold Bonded to 0.75 inch (19mm) plywood: +/- 0.125 inches (3.2mm), length and width.
   b. Unbonded: shrinkage rate of +/- 1 inch (25mm), length and width.
3. Acceptable Manufacturers
   a. Architectural Polymers
   b. Fitzgerald Formliners
   c. Rekli
   d. or approved equivalent by Engineer and Landscape Architect of Record

Basis of Design: “Tallgrass Prairie” custom formliner pattern as shown in plans and details

C. Concrete Coating.

Provide latex/acrylic copolymer coating with a sand-textured finish formulated for use on masonry/concrete surfaces. Tex-Cote XL 70 Bridge Cote with Silane, or Approved Equal

Concrete coating shall be considered incidental to contract unit price of concrete areas receiving formliner.

Location	**Color**	
	AMS-STD-595A	Basis-of-Design
External DeMers Ave bridge beams	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal
External BNSF bridge beams	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal
Bridge Barriers: all areas not in relief	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal
Bridge Pilasters: all areas not in relief	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal
Abutment Walls: all areas not in relief, within all formliner areas with 1” relief	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal
Wing Walls: all areas not in relief, within all formliner areas with 1” relief	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal
Bridge Piers: all areas not in relief, within all formliner areas with 1” relief	37769 Misc	Tex-Cote Chamois T-125, or Approved Equal

Location	**Color**	
	AMS-STD-595A	Basis-of-Design
Bridge Barriers: within all areas with 2” relief	33510 Dark Sandstone Camouflage	Tex-Cote Sandalwood T-114, or Approved Equal
Bridge Pilasters: within all areas with 2” relief	33510 Dark Sandstone Camouflage	Tex-Cote Sandalwood T-114, or Approved Equal
Abutment Walls: within all formliner areas with 2” relief	33510 Dark Sandstone Camouflage	Tex-Cote Sandalwood T-114, or Approved Equal
Wing Walls: within all formliner areas with 2” relief	33510 Dark Sandstone Camouflage	Tex-Cote Sandalwood T-114, or Approved Equal
Bridge Piers: within all formliner areas with 2” relief	33510 Dark Sandstone Camouflage	Tex-Cote Sandalwood T-114, or Approved Equal

CONSTRUCTION REQUIREMENTS

A. **General.**
Furnish, store, prepare, apply and cure all materials according to product manufacturer's directions.

B. Submittals.
Submit the following to the Engineer a minimum of 60 working days before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Product data including manufacturer's technical information and application instructions for each material proposed for use.
2. A list of cleaning products compatible with the anti-graffiti coating.
3. Laboratory test reports showing that materials proposed for use meet physical or performance property requirements.
4. Certificates of Compliance of the anti-graffiti coatings.
5. Supply 1 foot X 1 foot color sample of each concrete coating to be used on the architectural surface.
6. Supply 2 foot X 2 foot color sample of formliner patterns to be used

C. Test Panel.
Once the 1 foot by 1 foot color sample has been approved by the Engineer, produce a test panel that measures 48 x 24 x 3 inches. Construct the panel on the project site at a location acceptable to the Engineer and demonstrate the final colors simulating the desired appearance.

Construct a new panel if the initial panel does not match the color samples of the concrete coating. The Engineer will use the test panel to evaluate the final colors. Do not remove the test panel from the jobsite until the Engineer releases it.

D. Surface Preparation.
Following removal of forms, give all exposed textured concrete surfaces an ordinary surface finish as specified in Section 602.04 I.1 "Surface Finish A" before the surface preparation. Finish defects greater than 1/2" in diameter to blend with the balance of the textured surface.

Prepare surface according to concrete coating manufacturer's specifications.

Thoroughly flush all surfaces that are to receive an architectural surface finish with clean water not more than 24 hours before applying the finish.

E. Application.
Allow concrete to cure a minimum of 28 days before applying the surface finish. The Engineer will allow earlier placement if the manufacturer, in writing, approves an earlier placement and warranties the concrete coating on the surface for a minimum of one year.

Apply the base color according the manufacturer's recommendations for thickness and coverage.

Apply anti-graffiti coating according to the manufacturer's recommendations for timing after concrete coating curing, thickness, and coverage.

METHOD OF MEASUREMENT

The Engineer will measure, completed and in-place architectural form liner, as specified in Section 109.01, "Measurement of Quantities".

BASIS OF PAYMENT

Include the cost of work described in this Special Provision in the bid price for the appropriate concrete items.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

E-Ticketing (Mandatory)

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This work consists of providing electronic material tickets (E-Ticket) for all loads of aggregate, Hot Mix Asphalt, and concrete delivered to the project. For materials under 2,000 tons, a paper ticket will be accepted according to Section 109.01 J, “Weighted Materials”.

CONSTRUCTION REQUIREMENTS

A. General.

30 days before project start confirm that the material suppliers E-Tickets are compatible with the Department’s Electronic Ticketing portal (Haulhub).

If necessary, create a programming interface to integrate with the Department’s E-Ticketing Portal. Utilize the interface to provide electronic data from the load read-out weighing system at the material source in a manner that is readable by the Department’s E-ticketing Portal. Haulhub will be available to coordinate the interface with the Contractor and Subcontractors.

As E-Tickets are generated, submit them to the Department using the Department’s Electronic Ticketing Portal.

Payment for material weight delivered to the project will be based upon the eTickets marked “Delivered.”

Do not reissue or reprint tickets that have been marked “Delivered,” “Pending,” or “Rejected” without first notifying the Engineer. The Engineer may reject a reissued or reprinted ticket at their discretion. When a reissued or reprinted ticket is rejected, payment will be based upon the original ticket. When a load is rejected, the Engineer will notify the Contractor that all or a portion of the load was rejected.

The Department will reject any load that does not have a corresponding E-Ticket unless the cause is beyond the Contractor’s control. In such circumstances paper tickets may be permitted at the discretion of the Engineer.

B. Calibration and Testing.

Before beginning the project conduct a test of each supplier’s integration with the Department’s Electronic Ticketing Portal before shipping material. Complete the test at least 15 days before shipping material.

Provide at least 5 calibration E-Tickets from each supplier to be used for the project. The calibration E-Tickets must accurately record the ticket information found in the ticket information below. Mark all categories “TEST”. After the Engineer confirms the calibration E-

Tickets are entered correctly into the Department's E-Ticketing Portal, void the E-Ticket with the reason being "Department Calibration Test".

C. Ticket Information.

1. General Information.

Provide the following information on each E-Ticket:

1. Ticket Number
2. DOT Project Number or DOT Project Control Number (PCN);
3. Date;
4. Name of Contractor or Sub Contractor;
5. Time of loading;
6. Unique Truck ID;
7. Maximum Gross Vehicle Weight;
8. Material type identified by pay item name;
9. Unit of Measurement
10. Time of Delivery
11. A place for comment
12. A running total of the material placed that day.

2. Weighted Materials.

Provide the following information for each E-Ticket for weighted materials:

1. Gross weight (if not automatic weighed).
2. Tare weight (if not automatic weighed).
3. Net weight.
4. Mix design number.

Measurements of weighted material is to the 0.1 ton of the material.

3. Portland Cement Concrete.

Provide the following information for Portland Cement Concrete for E-Ticket

1. Loaded time (water/cement time).
2. Wet and dry batch weights (if computer generated) or SSD.
3. Water:
   a) In aggregate.
   b) Total water.
   c) Water/cement ratio.
   d) Max water/cement ratio.
   e) Allowable water to add.
4. Admixtures (including brand names if available):
   a) Retarder and weights.
   b) Water reducer and weights.
   c) Air entrainment and weights.
   d) Special performance admixtures and weights.
   e) Concrete fibers.
5. Cementitious material(s) and weights.
6. CPI Name and certificate number.
7. Quantity of each material in the mix.

Measure the delivered concrete mixture to the nearest 0.25 CY.

D. Summary Sheet.

For material paid for by weigh, provided an electronic daily haul summary.

(1) NDDOT project number or NDDOT PCN (whichever is used on the weigh tickets)
(2) Delivery date
(3) Contractor and Subcontractor if applicable
(4) Pit location and owner
(5) Identification number of truck
(6) Each load's net weight and ticket number, with justification for out of sequence numbers
(7) Material type identified by pay item name
(8) Total weight of material delivered to the project
(9) Weight of material voided or "rejected" for the day
(10) Weight of the day's production
(11) A signed statement from the Contractor attesting to the accuracy and completeness of the facts represented. A signed statement from a subcontractor or supplier attesting to the accuracy and completeness of the facts represented is required if they operate the scales. The statement shall consist of the following language: "I certify the Daily Haul Summary is true, accurate, and complete."
(12) Blank for the Engineer's signature. Include the following language: "I certify the Daily Haul Summary has been reviewed, corrected as necessary, and approved."
(13) Place for comments

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Pay Item	Pay Unit
E-Ticketing	LSUM

Payment for E-Ticketing will be based on the following table:

Activity	Amount Earned
Completion of the Calibration and Testing	50%
Final Material Delivery	50%

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

WATERPROOFING

RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

DESCRIPTION

This work consists of supplying and installing a waterproofing system for the BNSF Underpass bridge on the concrete deck and surface. In addition to the requirements contained herein, perform the work in accordance with the manufacturer's instructions and recommendations.

MATERIALS

Use waterproofing materials, hardware and protective mat membrane complying with the specifications described below.

CONSTRUCTION REQUIREMENTS

A. General.

Adjacent areas not to be waterproofed shall be protected. Apply or erect masking, spray curtains, and partitions as necessary to prevent overspray.

Concrete Structures and Substrates:

A. Provide a sound substrate as described in SSPC-SP 13/NACE No. 6. Repair spalls and other defects with cementitious material as recommended by the manufacturer and approved by the Engineer.

B. Install the system when air and substrate temperatures are above 32°F and the substrate temperature is at least 5°F above the dew point and rising. If installation is proposed when ambient or substrate temperatures are below 32°F, the installer shall perform additional testing and follow all manufacturer instructions. Installation may proceed at temperatures down to -20°F only if approved by the Engineer and supported by manufacturer-recommended procedures and field conditions.

C. Substrate moisture content shall be 5.0% or less. Test concrete moisture content with a non-destructive concrete moisture meter approved by the Engineer. After precipitation, remove all standing water and allow the substrate to dry naturally.

B. Materials.

1. Waterproofing Systems

A. General: Provide a spray applied, 100% solids, fast cure, high build polymer system that prevents the passage of water and complies with the physical property requirements specified herein. Use materials specified below.

B. Primer: Single or multi-component polymer primer with the material properties shown below.

Table 1

Physical Property	Test Method	Requirement
Mixing Ratio		Per manufacturer
Adhesion to Concrete	ASTM D7234	150 psi, minimum, or failure in concrete substrate
Adhesion to Steel	ASTM D4541	300 psi, minimum

C. Spray Applied Base Coat Membrane: 100% solids, rapid curing elastomer with the material properties shown below.

Table 2

Physical Property	Test Method	Requirement
Solids Content		100%
Gel Time		10 seconds, maximum
Tack Free Time		30 seconds, maximum
Shore Hardness	ASTM D2240	40D, minimum
Adhesion to Concrete	ASTM D7234	150 psi, minimum, or failure in concrete substrate
Tensile Strength	ASTM D638	2,000 psi, minimum
Tear Strength (Die C)	ASTM D638	300 pli, minimum
Elongation at Break	ASTM D638	150%, minimum
Low Temperature Crack Bridging (1/8” opening @ -15°F)	ASTM C1305	Pass @ 40 cycles
North American Ballast Impact Test	9.2 – 28.1 kips 2,000,000 Cycles	Pass
Resistance to Penetration	ASTM D1883 *(Modified per AREMA Ch. 8, Part 29.10.3.3)*	Pass

D. Spray Applied Ballast Protection Mat: 100% solids, rapid curing elastomer with the material properties shown below.

Table 3

Physical Property	Test Method	Requirement
Solids Content		100%
Gel Time		30 seconds, minimum
Tack Free Time		1 minute, minimum

Shore Hardness	ASTM D2240	40D, minimum
Tensile Strength	ASTM D638	2,000 psi, minimum
Tear Strength (Die C)	ASTM D638	300 pli, minimum
Elongation at Break	ASTM D638	150%, minimum
North American Ballast Impact Test	9.2 - 28.1 kips, 2,000,000 Cycles 9.2-48 kips, 2,000,000 Cycles **4,000,000 Cycles Total**	Pass
Resistance to Penetration	ASTM D1883 *(Modified per AREMA Ch. 8, Part 29.10.3.3)*	Pass

C. Installation.

1. Preparation:

   A. Provide clean, sound concrete substrate.

   B. Repair spalls and other defects with cementitious material as recommended by the manufacturer and approved by the Engineer.

   C. Prepare concrete surfaces to SSPC-SP13/NACE No. 6 Surface Preparation of Concrete and achieve a Concrete Surface Profile (“CSP”) of at least 3 measured using ICRI CSP chips.

   D. Treat cracks, joints, etc. in accordance with waterproofing manufacturer’s recommendations.

2. Pre-inspection:

   A. Prior to application of primer or joint treatment, the applicator shall inspect and approve substrate preparation. Application shall not commence until all defects identified have been remedied.

3. Joint Treatment

   A. Treat and fill all joints and cracks in the substrate in accordance with waterproofing manufacturer’s written instructions.

4. Installation:

   A. Do not begin membrane installation until all materials and equipment necessary to perform the installation are at the job site and all required repairs have been completed.

   B. Installer shall maintain spray and other installation equipment in proper operating condition throughout installation. Installer shall provide reserve equipment as required.

   C. Installer shall perform and record relevant field quality control tests and readings throughout the installation process.

D. Primer shall be mixed in accordance with the waterproofing product's data sheet.

   1. For concrete or masonry structures and substrates, spray, squeegee, or roll primer at 130-200 ft^2 per gallon over surfaces to receive spray applied waterproofing membrane. Allow primer to cure before spraying waterproofing membrane.

   2. Coverage rates and number of coats may vary based on surface profile, substrate condition, and primer selected.

E. Spray base coat membrane as a "stripe coat" over all cracks, joints, seams, corners, penetrations, etc. at a minimum thickness of 60 mils (26 ft^2 per gallon).

F. As required by the waterproofing manufacturer's instructions, place reinforcing strip over cracks, joints, or other detail areas.

G. Spray base coat membrane over primed surfaces at a minimum thickness of 80 mils (20 ft^2 per gallon) or the minimum thickness required to meet the physical properties outlined above. Spray additional base coats as required to achieve the specified thickness.

H. Spray ballast protection mat membrane over base membrane to achieve a minimum coverage rate of 25 ft^2 per gallon. Broadcast rubber aggregate into ballast protection mat spray to achieve a minimum coverage rate of 0.75 pounds per ft^2. The final thickness shall be 250 mils (minimum).

I. Ballast may be placed directly on ballast mat membrane one (1) hour after the installation has been completed.

5. Field Quality Control

A. All work in this section to be completed by third-party, on-site representative. On-site representative shall record all readings and test results into a daily quality control log ("QC Log"). A copy of each QC Log shall be submitted to the Engineer at the end of each day.

B. Record environmental condition readings at least once every four (4) hours, when ambient conditions significantly change, or immediately prior to Installer performing new task (prior to installing primer, primer to installing base membrane, etc.), whichever is more frequent.

C. Record material batch numbers, processing information, and quantity of each material used.

D. Perform adhesion strength testing in accordance with ASTM D7234 for concrete surfaces. Perform a minimum of 3 adhesion tests for each layer tested and one additional test for each 3,000 sq. ft.

   1. For concrete surface, perform adhesion strength testing after surface preparation, or on a representative sample of prepared substrate, of the primer bond to the substrate, and the base membrane bond to the primer. Evaluate the results based on duration of cure, mode of failure, and force at failure.

Minimum value is 150 psi, but acceptance is based on evaluations of the results.

E. Perform dry film thickness testing of base membrane in accordance with SSPC-PA2, SSPC-PA9, or ASTM D1005.

1. If On-site representative uses non-destructive magnetic test equipment, testing shall be performed in accordance with SSPC-PA2 Measurement of Dry Coating Thickness with Magnetic Gages.

2. If on-site representative uses non-destructive ultrasonic test equipment, testing shall be performed in accordance with SSPC-PA9 Measurement of Dry Coating Thickness of Cementitious Substrates Using Ultrasonic Gages.

3. If on-site representative uses destructive test equipment, testing shall be performed in accordance with this section:

i. Remove a sample of membrane from the substrate by cutting or use of a hollow punch.

ii. Remove any excess substrate residue from the backside of the sample.

iii. Measure thickness of the sample at the thinnest point using a handheld micrometer or dial caliper.

4. Spray equipment is calibrated and tested to a stroke count per gallon of material sprayed.

5. Other components of system may be tested for thickness using wet film or stroke per gallon methods.

F. On-site representative shall perform visual inspections throughout installation process. Holidays or other defects in the waterproofing system shall be marked and repaired.

6. Curing, Protecting, and Cleaning

A. Curing: Allow waterproofing system to cure a minimum of one (1) hour, or the minimum amount of time required by Manufacturer, prior to allowing vehicular traffic or placement of ballast.

B. Protecting: Six inches of ballast shall be placed over the waterproofing immediately upon acceptance by the Engineer and the Railroad. Construction traffic is not allowed on the waterproofing until the ballast covering is in place.

C. Cleaning: Clean spills and oversprays as they occur. Consult waterproofing manufacturer’s product literature and SDS for proper cleaning products and methods. Clean site to Owner’s satisfaction prior to final acceptance.

D. Acceptance.

1. Submittals

A. Product Data: For each component comprising waterproofing system, submit waterproofing manufacturer’s technical data sheets, safety data sheets (“SDS”), results

of physical property testing conducted by an AASHTO-accredited third-party laboratory (for materials listed above), instructions for evaluating, preparing, and treating substrates, and installation and testing procedures. All third-party testing shall have been conducted within the past five (5) years.

B. Project References: Submit separate reference lists from both waterproofing manufacturer and waterproofing installer that include specific projects previously completed which have utilized the principal materials submitted for this project. The list must include rail references. Manufacturer must illustrate a minimum of ten (10) years of prior experience providing the principal materials submitted for this project on similar projects.

C. Samples: Submit two (2) samples (4”x4”) that are representative of the finished membrane surface, texture, and color.

D. Installer Approval from Manufacturer: Submit certificate signed by the waterproofing manufacturer certifying that Installer is an approved installer of waterproofing manufacturer’s products.

2. Quality Assurance

A. Installer Qualifications: Engage an experienced Installer who is authorized in writing by waterproofing manufacturer for installation of the specified waterproofing system. The installer shall be an established firm regularly engaged in satisfactory installations of similar materials on projects similar in nature and complexity.

B. Manufacturer Qualifications: Waterproofing manufacturer shall have ISO 9001 certification. Waterproofing manufacturer shall be a primary blender with proprietary formulations, an Approved Applicator program, and have the capacity to provide field technical services as required. All primers and membranes shall be provided from the same manufacturer.

C. Manufacturer’s On-Site Representative: Waterproofing manufacturer shall provide a third-party authorized representative to be on the job site at all times to observe the installation of each portion of the membrane system. The on-site representative, upon consultation with the Engineer, may suspend any item of work that is suspect and/or does not meet the requirements of this Special Provision or Manufacturer. Resumption of work shall only occur after the on-site representative and Engineer are satisfied that appropriate remedial action has been taken by Installer.

D. Schedule pre-installation meeting to review installation schedule, shut down, and restricted access procedures. Indicate project owner’s representative and installer’s superintendent.

3. Delivery, storage, and handling

A. Deliver products in waterproofing manufacturer’s original containers labeled with Manufacturer’s name, product brand name, date of manufacture, and batch/lot numbers.

B. Copies of Safety Data Sheets (SDS) and directions for storage and handling for all components shall be kept on site for review.

C. Store materials as required by waterproofing manufacturer in a clean, dry, protected location and within temperature range required by waterproofing manufacturer. Protect stored materials from direct sunlight.

D. Remove and replace product damaged by shipment, weather, or job conditions or which cannot be applied within their stated shelf life.

REFERENCES

1. References

A. ICRI No. 310.2R-2013, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair

B. SSPC-SP10/NACE No. 2 Near-White Blast Cleaning

C. SSPC-SP13/NACE No. 6 Surface Preparation of Concrete

D. SSPC-PA2 Measurement of Dry Coating Thickness with Magnetic Gages

E. SSPC-PA9 Measurement of Dry Coating Thickness on Cementitious Substrates Using Ultrasonic Gages

F. ASTM C1305 – Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane

G. ASTM D638 – Standard Test Method for Tensile Properties of Plastics

H. ASTM D2240 – Standard Test Method for Rubber Property-Durometer Hardness

I. ASTM D4541 – Standard Test Method for Pull-Off Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers

J. ASTM D7234 – Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

K. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials

BASIS OF PAYMENT

Include costs for supplying and installing all waterproofing materials in the unit price bid for “SUPERSTRUCTURE CONCRETE”.

ATTACHMENTS

Plan 711200, Sheet 5 of the BNSF Railway – Union Pacific Railroad “Guidelines for Railroad Grade Separation Projects”.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CONCRETE EROSION CONTROL BLANKET

PROJECT 6-297(014)000 - PCN 24115

DESCRIPTION

This work consists of supplying and installing concrete erosion control blanket.

MATERIALS

A. Geosynthetic Material.

Material	Section
Geosynthetic Type RR	858.01

B. Concrete Erosion Control Blanket.

Provide concrete erosion control blanket that consists of individual closed-cell precast concrete blocks bound together in panels by cable with a minimum weight of 50 lbs per square foot.

Use concrete that has a minimum compressive strength of 4,000 psi. for wet cast block.

Provide work drawings that contain the following information:

- Manufacturer's installation instructions;
- Size of blocks;
- Size of blanket;
- Method of tying blanket together;
- Overlaps;
- Anchoring product information; and
- Trenching detail.

C. Anchors.

Provide driven anchors that are the following:

- Corrosion resistant;
- Lock off; and
- Can be tied to the cable loops;

D. Grout.

Proportion grout using one part Portland Cement and two parts sand by volume.

CONSTRUCTION REQUIREMENTS.

A. Submittals.
Submit the testing results that the block design was tested according to ASTM D7277 and the manufacturer's installation instructions to the Engineer.

B. Foundation and Preparation.
Prepare the foundation slope to a smooth plane and uniformly compact the slopes.

Remove the following materials before placing the filter fabric:

- Rocks or clods larger than 1 inch in diameter;
- All sticks; and
- Deleterious materials.

Regrade and compact areas that have slopes deformities including:

- Roots;
- Grade stakes;
- Stones;
- Holes;
- "Pockmarks';
- Slope board teeth marks;
- Footprints; or
- Other voids larger than 1 inch in Depth on the local slope face.

No grooves or depressions greater than 1/2 inch in depth with a dimension exceeding 1 foot in any direction are permitted on the local slope face.

Do not place filter fabric or blocks until the Engineer has reviewed the surface.

C. Trenches.
Excavate and prepare the anchor trenches, side trenches, and toe trenches a minimum of 2 blocks deep.

Uniformly grade the trench hinge-point at the top of the slope. Regrade areas where dips or bumps larger than 1 inch above or below local grade occur.

Grade the width of the anchor trench hinge-point to maintain contact between all concrete blocks and the underlying grade at the hinge-point.

D. Placement of Filter Fabric.
Place the filter fabric on the prepared area. Remove the folds and wrinkles in the filter fabric.

Maintain contact between the filter fabric and the subgrade.

Place the filter fabric so that the upstream strip of fabric overlaps the downstream strip. Overlap the longitudinal and transverse joints by a minimum of 2 feet. Extend the filter fabric beyond the top and bottom termination points by a minimum of 2 feet.

Stagger the joints between the filter fabric and concrete erosion control blanket.

E. Placement of the Concrete Erosion Control Blanket.
Use a spreader bar to lift the concrete erosion control blanket.

Place the concrete erosion control blanket on the filter fabric. Set adjacent erosion control blanket side by side, so that they abut each other.

Grout any seams larger than 2 inches and at grade changes that result in a discontinuous surface in the direction of flow.

Backfill and compact the anchor and side trenches even with the top surface of the concrete erosion control blanket.

METHOD OF MEASUREMENT

The Engineer will not measure Concrete Erosion Control Blanket or Geosynthetic Material overlaps, placed in trenches, or cutoffs.

BASIS OF PAYMENT

Pay Item	Pay Unit
Concrete Erosion Control Blanket	SY
Geosynthetic Material Type RR	SY

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

CIVIL RIGHTS LAWS

Because of the extraordinary reach of the civil rights laws, all assistance recipients must comply with these “super crosscutters.” Pursuant to EPA’s regulations on “Nondiscrimination in Programs receiving Federal Assistance from the Environmental Protection Agency,” the SRF agency must agree, and require all assistance recipients to agree, not to discriminate on the basis of race, color, national origin or sex. 40 C.F.R. Part 7.

Recipients of federal assistance are required to collect and maintain information to show compliance with the laws. This information includes a list of discrimination complaints, reports of any compliance reviews conducted by other agencies, descriptions of any pending discrimination-based lawsuits, and data on the racial, ethnic, national origin, sex, and handicap characteristics of populations served. If there is "reason to believe" that discrimination may be occurring based on this review, the matter will be referred to the EPA Regional Director of Civil Rights for appropriate action.

The following four laws prohibit discrimination in the provision of services or benefits, on the basis of race, color, national origin, sex, handicap or age, in programs or activities receiving federal financial assistance. If, for example, a municipality receives SRF assistance to build a wastewater treatment plant, it may not decline to provide service from that plant to a particular neighborhood because of its racial composition. As the preface to this section noted, Title VI, the Rehabilitation Act, and the Age Discrimination Act were amended in 1988 to clarify that their anti-discrimination provisions apply to the entire operations of an assistance recipient, not just to the specific program, project, or activity that is the objective of the assistance. The reach of these statutes and Section 13, which contains language instructing EPA to treat its sex discrimination provisions in a manner similar to the Civil Rights Act, extends beyond that of other cross-cutting authorities.

The following excerpts from the four laws demonstrate their prohibition of various forms of discrimination that are prohibited in federally assisted programs and activities:

Title VI of the Civil Rights Act of 1964
No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Section 13 of the Federal Water Pollution Control Act Amendments of 1972 (CWSRF only)
No person in the United States shall, on the ground of sex be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal assistance under… the federal Water Pollution Control Act…

Section 504 of the Rehabilitation Act of 1973
(n)o otherwise qualified individual with a disability in the United States . . . shall, solely by reason of his or her disability, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance…

Age Discrimination Act of 1975
(n)o person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving financial assistance.

DISCOVERY OF ARCHAEOLOGICAL AND OTHER HISTORICAL ITEMS

In the event of an archaeological find during any phase of construction, the following procedure will be followed:

(1) Construction shall be halted, with as little disruption to the archaeological site as possible.

(2) The Contractor shall notify the Owner who shall contact local law enforcement. Local law enforcement shall provide notification to the State Historical Preservation Officer in accordance with North Dakota Administrative Code (NDAC) 40-02-03-03.

(3) The State Historical Preservation Officer may decide to have an archaeologist inspect the site and make recommendations about the steps needed to protect the site, before construction is resumed.

(4) The entire event should be handled as expediently as possible in order to hold the loss in construction time to a minimum while still protecting archaeological finds.

A similar procedure should be followed with regard to more recent historical resources. Should any artifacts, housing sites, etc., be uncovered, the same procedure should be followed as for an archaeological find.

In the event archaeological/historical data are evaluated to meet National Register criteria, the Advisory Council on Historic Preservation may be notified and asked to comment.

BONDING REQUIREMENTS

Bonding requirements must meet the minimums established in 2 CFR 200:

(1) A bid guarantee from each bidder equivalent to five percent of the bid price. The “bid guarantee” must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(2) A performance bond on the part of the contractor for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor’s requirements under such contract.

(3) A payment bond on the part of the contractor for 100 percent of the contract price. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and materials in the execution of the work provided for in the contract.

WILLIAMS-STEIGER OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

A. AUTHORITY

(1) The contractor is subject to the provisions of the Williams-Steiger Occupational Safety and Health Act of 1970.

(2) These construction documents and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the Federal law(s) , including but not limited to the latest amendment of the following:

a. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 94-596;

b. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;

c. Part 1926 - Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

B. SAFETY AND HEALTH PROGRAM REQUIREMENTS

(1) This project, its prime contractor and its subcontractors, shall at all times be governed by Chapter XVII of Title 29, Code of Federal Regulations, Part 1926 - Safety and Health Regulations for Construction (29 CFR 22801), as amended to date.

(2) To implement the program and to provide safe and healthful working conditions for all persons, general project safety meetings will be conducted at the site at least once each month during the course of construction, by the construction superintendent or his/her designated safety officer. Notice of such meeting shall be issued not less than three (3) days prior, stating the exact time, location, and agenda to be included. Attendance by the owner, architect, general foreman, shop steward(s), and trades, or their designated representatives, witnessed in writing as such, shall be mandatory.

(3) To further implement the program, each trade shall conduct a short gang meeting, not less than once a week, to review project safety requirements mandatory for all persons during the coming week. The gang foreman shall report the agenda and specific items covered to the project superintendent, who shall incorporate these items in his/her daily log or report.

(4) The prime contractor and all subcontractors shall immediately report all accidents, injuries, or health hazards to the owner and architect, or their designated representatives, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970.

(5) This program shall become a part of the contract documents and the contract between the owner and prime contractor, prime contractor and all subcontractors, as though fully written therein.

AMERICAN IRON AND STEEL (AIS) REQUIREMENTS

The Contractor acknowledges that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

One of the following certification forms should be used as documentation of compliance with the AIS requirements.

Sample Certification for AIS

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

_____

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

Sample Step Certification for AIS

The following information is provided as a sample letter of step certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

_____

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

LEAD SERVICE LINE REPLACEMENT (DWSRF)

The memo *Implementing Lead Service Line Replacement Projects Funded by the Drinking Water State Revolving Fund* dated May 1, 2024 and issued by the Environmental Project Agency outlines the following requirements that apply to lead service line replacements (LSLR) depending on the project type:

Stand-alone LSLR
Stand-alone LSLR projects refers to projects that are solely replacing lead service lines and are not conducting additional construction or activities that would disturb the service line, such as main replacement or meter replacement. All LSLRs conducted through a stand-alone LSLR project must replace the full lead service line (i.e., the customer-owned and system-owned portions) unless a portion has already been replaced or is concurrently being replaced with another funding source. The entire length of each property's lead service line must be replaced at the same time except where it is impractical due to access constraints or local requirements that prevent the same organization from completing the full LSLR at the same time. The time between starting and completing full LSLR should be as short as possible and should not exceed three months.

LSLR in Conjunction with Planned Infrastructure Projects
All DWSRF-funded projects involving LSLR implemented in conjunction with other planned infrastructure projects that affect the service line must plan to replace the full service line. Planned infrastructure work includes water infrastructure or capital improvement projects that do not solely replace lead service lines. Examples include, but are not limited to, water main replacement, meter replacement, and transportation-related construction projects. A partial LSLR may only be funded by the SRF where the water system shows all of the following: that the partial LSLR is done in conjunction with planned infrastructure work, that disturbance to the service line is unavoidable because of the planned infrastructure work, and that the water system has documented customer refusal showing it cannot gain access to that property to conduct a full LSLR following multiple attempts. Refusals may consist of any of the following: a refusal signed by the customer, documentation of a verbal statement refusing replacement, or documentation of no response after multiple attempts to reach the customer regarding full LSLR.

LSLR in Conjunction with Emergency Infrastructure Repair or Replacement

Emergency repair and replacement of drinking water transmission and distribution infrastructure can necessitate unexpected replacement of lead service lines. Under such circumstances, DWSRF-funded borrowers must offer to replace the full lead service line. However, the borrower may use DWSRF funding to pay for emergency partial LSLR if full replacement is not possible due to a documented customer refusal. Refusals may consist of any of the following: a refusal signed by the customer, documentation of a verbal statement refusing replacement, or documentation of no response after multiple attempts to reach the customer regarding full LSLR.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CO-FUNDING REQUIREMENTS – NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Project 6-297(014)000 - PCN 24115

DESCRIPTION

The work included in this contract contains funding from the North Dakota Department of Environmental Quality (NDDEQ). This funding requires additional contract provisions. How those provisions affect the work is described below and the provisions are included in this Special Provision.

CIVIL RIGHTS LAWS

Compliance with the NDDOT Civil Rights program satisfies the requirements of this provision.

DISCOVERY OF ARCHAEOLOGICAL AND OTHER HISTORIC ITEMS

Compliance with NDDOT Standard Specification 107.06 “Discoveries” will meet the requirements of this provision. The NDDOT will notify the appropriate entities, including NDDEQ.

BONDING REQUIREMENTS

Submitting a bid bond as specified in NDDOT Standard Specification 102.09, “Proposal Guaranty” and a contract bond as specified in NDDOT Standard Specification 103.05, “Contract Bond” will fulfill the requirements of this provision.

WILLIAMS-STEIGER OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

This provision is included as required by the Environmental Protection Agency. The owner(s) of the project will have no enforcement liability for this provision, and it is entirely the contractor’s responsibility for compliance.

AMERICAN IRON AND STEEL (AIS) REQUIREMENTS

All items within the project are subject to the requirements of NDDOT Standard Special Provision SSP 11, however in addition to those requirements the AIS Requirements and accompanying example forms are applicable to materials supplied under the “Subproject 7 – Co Funded Work” header in Section 8 of the project plans.

These requirements are functionally identical to the iron and steel requirements of NDDOT Standard Special Provision SSP 11. In addition to the applicable NDDOT Certificate of Compliance required for iron and steel materials, submit the appropriate completed form contained within this provision for items that fall under the named estimate of quantities header.

FULL LEAD SERVICE LINE REPLACEMENT

If lead services lines are encountered during construction of the project, notify the Engineer. Compliance with the lead service line replacement provision may result in contract revisions, as appropriate.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

MATURITY CURVE

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This work consists of creating a maturity curve for concrete pavement.

CONSTRUCTION REQUIREMENTS

A. General.

The Department requires a maximum of 14 calendar days to verify concrete mix designs before the Engineer will allow paving operations to begin. Develop the maturity curve using AASHTO T413.

Provide thermometers and data loggers that automatically measure, record and display the maturity (TTF) value and meet the standards in AASHTO T-413. Provide access to the monitoring software to the engineer.

Use the same type of thermometers or sensors used to develop the maturity curve.

B. Contractor's Mix Design

The water/cement (w/c) ratio used to develop the maturity curve is the target w/c ratio for the mix. Provide mix at the maximum w/c ratio expected during production, or within 0.02 of the maximum w/c ratio of the mix design

C. First Day of Paving.

Secure sensors to reinforcement or dowel bars or place sensors directly into the concrete pavement and at least 1.5 feet from the edge of the pavement. Use sensors that begin recording immediately after completion of the pour and continue to monitor the concrete until the strength shown by the maturity curve exceeds the mix design strength. Place a minimum of two probes in each day's placement with one at the end of the days run.

D. Opening to Traffic.

Pavement placed during development of the maturity curve may be opened to traffic when one of the following criteria has been met:

- the maturity factor of the placed concrete meets or exceeds the initial maturity factor as determined by the strength-maturity curve being developed; or
- the average strength of the three beams used for development of the strength-maturity curve meets 450 psi, at a particular test age.

Before opening a section to traffic which has sensors placed into the concrete, provide the Engineer a copy of the report for the area represented by that maturity curve according to AASHTO T413.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Include the cost of developing the maturity curve in the contract unit price of the Concrete Pavement bid items.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CONCRETE PAVING GRADE CONTROL

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

Replace Section 550.04 C.2.a “String Line” with the following.

CONSTRUCTION REQUIREMENTS

Use one of the following methods for grade control when slip form paving.

A. String Line.
Use and maintain a taut string line for operating the automatic equipment controls.

B. Stringless Grade Control.

1. **General.**
   Use electronic survey equipment for operating the automatic equipment controls.

   The Supplemental Information will include the electronic data. The data may need to be converted into the required format for the survey equipment.

   Submit a plan to the Engineer 14 days before beginning paving with the number of survey points to be used and the coordinates with elevation of any addition survey points.

2. **Engineer Responsibilities.**
   The Engineer will set the primary control points.

3. **Contractor Responsibilities.**
   Set additional Survey points necessary for the operation.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

MANUFACTURED CONSTRUCTION TRACKOUT PAD

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This work consists of installing, maintaining, and removing manufactured construction trackout pad device(s) for all stabilized construction accesses.

MATERIALS

Provide a multi-use manufactured trackout pad device designed to minimize sediment leaving the stabilized construction work area.

Provide a trackout pad device system with a minimum width of 12 feet and a minimum length of 35 feet, or 3 times the circumference of the largest tire crossing the pad, whichever is greatest.

CONSTRUCTION REQUIREMENTS

A. General.

Remove topsoil before placing of stabilized construction access. If the access restricts water flow, provide temporary drainage through the stabilized construction access.

B. Installation.

Install the device according to the manufacturer's recommendations on a surface that can support the construction loads. Provide additional devices when needed for turning radii to prevent trucks from running off the pad during turns.

C. Maintenance.

Remove dirt and debris from device as required to maintain the function of the device. Monitor and maintain devices to minimize shifting, rutting of adjacent surfaces, and structural failure. Reset device if shifting occurs. Maintain a stable surface between the device and adjacent roadway. Replace missing or damaged device elements to maintain the function of the device.

D. Removal.

Remove the manufactured trackout pad system after the site is stabilized or when the trackout pad is no longer required. Properly dispose dirt and debris from the manufactured trackout pad and restore the stabilized construction entrance area.

After removal, restore the disturbed area to its original condition.

Perform topsoil work as specified in Section 203.04 B, "Topsoil".

Place the type of seed specified in the plans. If no seed is specified use Class II seed mixture. Place seed mixture as specified in Section 251.02, "Equipment"; 251.03, "Materials"; and 251.04, "Construction Requirements".

Place mulch as specified in Section 253.02, “Equipment”; 253.03, “Materials”; and 253.04, “Construction Requirements”.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Pay Item	Pay Unit
Stabilized Construction Access	Each
Remove Stabilized Construction Access	Each

Include the cost for any required pipe, topsoil, and seed in the price bid for “Stabilized Construction Access”.

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

BRIDGE DECORATIVE LIGHTING

RCE-FTF-NHU-SU-6-297(014)000 - PCN 24115

DESCRIPTION

Provide and install materials and equipment for construction of lighting system (aesthetic) in accordance with the National Electrical Code (NEC), as specified in the Contract and the following.

EQUIPMENT

Intentionally left blank.

MATERIALS

A. General.
To be in accordance with Chapter 11: Lighting of the NDDOT Design Manual.

B. Luminaires.
1. LED RGB Downlight grazing faces of DeMers Bridge Piers and BNSF Median Bridge Piers
2. Basis of Design
    a. Lumenpulse - LUMENFACADE MAX LFM-SA, 36" LENGTH
    b. Griven - PARADE L3 MC RGBW
    c. Targetti - JEDI PROJECTOR RGBW Q, 36" LENGTH
    d. or approved equivalent by Engineer and Landscape Architect of Record
3. Mounting Brackets as specified by manufacturer

C. RGB Color Changing Lighting Controller
Capable of changing lighting at the controller manually and via online application

D. Cloud-based Remote Management System
Provide a cloud-based remote management system with the following features:
1. Access for remote firmware upgrades
2. Capability for
    a. File upload
    b. Scheduling
    c. Scene triggering
    d. System monitoring
3. Support for multi-user access with granular permissions
4. Compatibility with mobile and desktop devices
5. Secure outbound HTTPS communication
6. Five-year service agreement – starting upon full commission of the project.

E. Control Cables

Install control cabling for the lighting system with the following performance, safety, and environmental standards to ensure reliable operation in outdoor and damp conditions:

1. Minimum voltage rating of 600V.
2. Operational range from -40°C to +90°C.
3. Stranded copper.
4. Overall tinned copper braid shield with minimum 85% coverage to protect against electromagnetic interference.
5. Outer Jacket: Oil-, UV-, and moisture-resistant PVC or PE, suitable for outdoor and damp environments.
6. Certifications:
    - UL TC-ER listed
    - RoHS compliant
7. Maintain shield continuity at all terminations to ensure signal integrity.

F. Splice Boxes

Install a NEMA 4X or NEMA 6P splice box under the bridge to protect lighting connections from moisture, corrosion, and dust. Mount the box securely using vibration-resistant hardware and position it for easy maintenance access while minimizing exposure to vandalism or accidental damage.

Comply with NEC Articles 314 enclosing all splices with listed connectors and ensuring proper grounding and bonding. Label the box clearly with its purpose and manufacturer details.

G. Anti-Seize Lubricants.

Use an anti-seize lubricant on all metal screw and bolt connections.

CONSTRUCTION REQUIREMENTS

A. General.

Plan shows approximate locations of lighting units, splice boxes, service equipment, service cabinets, handholes, and conduit runs. Coordinate with Engineer to establish exact locations.

Do not perform Work until underground facilities have been located in accordance with local and state requirements.

B. Submittals.

Submit the following to the Engineer a minimum of 12 weeks before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.

1. Provide a separate line that includes the following for each material type listed from the materials list.
   a. Name of the manufacturer
   b. Name of the product
   c. Catalogue number
   d. Quantity ordered for the project

   The submittal and the Engineer's review of the submitted list do not relieve the responsibility for providing Materials that comply with the Approved/Qualified Products Materials List.

2. Cut Sheets, Catalogue Sheets, or Specification Sheets
   a. Provide cut sheets, catalogue sheets or specification sheets for the Approved/Qualified Products Materials List to the Engineer upon request if further review of the APL materials and products is needed.

3. Work Drawings
   a. Submit work drawings a minimum of 20 working days before materials are anticipated to be incorporated into the work. Approval by the Engineer is required prior to using material in the project.
   b. Provide dimensions, types of materials, and the functional characteristics of equipment to be installed.
   c. Submit work drawings for the following items:
      i. Feed Point Equipment including;
         1. Circuit breakers (enclosed in a load center-type panel board);
         2. Enclosed relay (normally open);
         3. Cabinet; and
         4. Photoelectric cell
      ii. Conductors;
      iii. Pull Box;
      iv. RGB Lighting Controller
         1. Accessory equipment
      v. Mounting brackets for LED RGB Downlights;
         1. Relation to Luminaire;
         2. Fuseholder; and
         3. All necessary calculations and drawings used in the design of mounting brackets.

C. Installation, Programming, Testing, and Training.

Perform complete installation, programming, functional testing, and training on the decorative lighting system. This includes

1. Installation of all luminaires, control systems, and associated components in accordance with manufacturer specifications and project requirements.

2. Programming of lighting controls to achieve the desired aesthetic effects, including color-changing sequences and timing schedules as directed by the Engineer and Landscape Architect of Record.
    a. Capacity to house a full year of lighting programming

3. Testing of the entire system to verify proper operation, including individual fixture functionality, control system responsiveness, and overall system integration.

4. Training provided to City personnel upon completion of system installation. Include training for system operation, routine maintenance procedures, troubleshooting guidance, and included access to all necessary documentation and program software.
    a. Cost for any subscriptions required for online access, along with the subscription cost of the first year after project acceptance, to be included as part of the cost of this bid item.

METHOD OF MEASUREMENT
The Engineer will measure, completed and in-place bridge decorative lighting, as specified in Section 109.01, “Measurement of Quantities”.

BASIS OF PAYMENT
Payment for installing bridge decorative lighting will be made at the contract unit price for the following.

Bid Item	**Unit**
770.9402 Bid Item Lighting System (Aesthetic)	Lump Sum (L SUM)

When the ‘Lighting System’ item is included in the Contract, the Contractor may submit a schedule of values for each lighting system detailing the individual component costs. The Engineer will review the schedule of values and if acceptable, will make progressive payments based on the schedule and as work is completed. The Engineer will not make payment beyond 95 percent of the contract unit price until the lighting system is accepted.

If no schedule of values is submitted, the Engineer will make a determination of overall lighting system construction progress and make progressive payments up to 95 percent of the contract unit price until the lighting system is accepted.

Such payment shall be compensation for furnishing materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PILE DYNAMIC ANALYZER (PDA) TESTING AND ANALYSIS

PROJECT – RCE-FTF-NHU-SU-CPU-6-297(014)000, PCN 24115

DESCRIPTION

This work consists of providing and using a Pile Dynamic Analyzer (PDA) to perform high strain dynamic monitoring of driven piles meeting the requirements of ASTM D4945, Standard Test Method for High-Strain Dynamic Testing of Deep Foundations.

EQUIPMENT & MATERIALS

A. General.

Furnish all equipment and materials necessary for the dynamic monitoring such as sensors, cables, or wireless transmitters, etc. The equipment used needs to conform to the requirements of ASTM D4945.

CONSTRUCTION REQUIREMENTS

A. Experience Requirements and Submittal

The personnel performing the work described in this special provision is required to have successfully completed at least 3 PDA testing projects within the last 5 years, and these identified projects need to be of a scope and complexity similar to that anticipated for this project. Also, documentation showing experience with PDA equipment and the Case Pile Wave analysis Program (CAPWAP) is required. All dynamic monitoring is to be performed using a PDA (Model PAK, PAX, or PAL).

The refined wave equation analysis and deliverables outlined in this special provision are required to be completed by a Professional Engineer registered in the state of North Dakota that has completed a minimum of 5 refined wave equation analyses.

The Professional Engineer completing the analysis and deliverables outlined in this special provision are required to have a minimum test score of 75% on the pile driving Contractors association (PDCA) sponsored “Dynamic Measurement and Analysis Proficiency Test”.

Submit the above documentation to the Engineer and the NDDOT Geotechnical section according to Section 105.08 “Work Drawings” a minimum of 45 days before beginning PDA testing.

Notify the Engineer and NDDOT Geotechnical section 7 days before beginning PDA testing.

B. PDA Test Locations and Driving Sequence

Perform one PDA test at each substructure (excluding the approach slab grade beams). Perform the PDA test on the first pile driven in each substructure. Once the PDA test pile is driven, the other piles in the substructure unit may be driven. Piles driven as PDA Test piles are a functional load-carrying part of the completed foundation unit and not solely used for PDA testing.

C. Pile Preparation

Prepare each pile to be tested by marking and attaching instrumentation to the piles. During initial driving of the piles, attach instrumentation after the pile has been placed in the leads.

In all circumstances, extra care should be exercised to protect the instrumentation from distress throughout the pile installation. Wireless pile instrumentation may be attached to the pile, if approved by the Engineer, prior to placing the pile in the leads provided that the instrumentation is adequately protected against damage by contact with the leads, abrasion, or shear from the rope, chain, or fabric, used to pick up the pile.

During the test, provide assistance as necessary, e.g. access, tightening gages, resetting or replacing gages, or replacing cables as necessary for the successful conduct of the dynamic monitoring program. Alert the Engineer to any unanticipated or unusual conditions including such items as severed cables, loose gages, or unusual pile, or pile hammer performance.

D. Pile Driving

Drive the PDA test piles per the pile driving formula shown in the plans. Drive the PDA test piles using the same methods and equipment that will be used for driving the other piles.

E. Scheduling

Provide a written schedule to the engineer showing all required PDA test pile activities for the following week. Submit this schedule a minimum of 2 working days prior to the first day included in the schedule.

Multiple concurrent PDA testing and/or analyses will be allowed. Any delays to the contractor’s schedule due to coordination or untimeliness of PDA testing or evaluation/analyses will not be grounds for extension of contract time.

F. Installation Testing

Perform dynamic measurements following procedures set forth in ASTM D4954 during the driving of piles designated as PDA Test piles.

Continuous PDA monitoring may require multiple installations of PDA testing equipment depending on the supplied pile length. If multiple piles lengths are used to produce the final installed pile, multiple PDA equipment installations will be required. With the PDA testing equipment attached, drive the pile and monitor using the PDA equipment.

G. Restrike Tests

Perform restrike tests on all PDA test piles. Wait a minimum of 72 hours after initial pile installation is complete; then, restrike each PDA test pile with the required dynamic testing instruments attached. The other piles in the substructure may be driven while waiting to restrike each PDA test pile.

Warm the hammer before the restrike using timber mats or another acceptable method.

The maximum amount of penetration required during the restrike test shall be 3 inches, or the maximum number of hammer blows required will be 20, whichever occurs first.

The pile-driving hammer used for restrike testing shall be capable of supplying enough energy to develop a minimum of twice the required driving resistance shown on the plans.

H. Refined Wave Equation Analysis

Following dynamic testing of the driven piling, perform a refined wave equation analysis based on driving data obtained from the high-strain dynamic monitoring program using the Case Pile Wave Analysis Program (CAPWAP) or other approved signal matching software.

Complete the analysis on all piles dynamically tested. Furnish PDA and CAPWAP electronic data and hardcopy outputs to the Engineer.

After the wave matching analysis is performed, use the GRLWEAP or similar data program and the signal matching program (e.g. CAPWAP) data to produce a refined Wave Equation Analysis bearing graph and Inspector's chart. Prepare similar charts for set-up and pile restrikes. Submit the refined WEAP bearing graph and Inspector's Chart for each Substructure where a PDA test is being completed. Use the bearing graph to determine the foundation pile's nominal bearing resistance per foot of pile.

Prepare and submit a summary plot of the performance of each PDA test pile in the pile group where each pile is plotted on the Inspector's chart by its observed set and the corresponding stroke of the pile hammer.

I. Deliverables

Provide the results from each dynamic test performed with the PDA and analyzed with the CAPWAP program meeting the following requirements to the Engineer within the time specified:

- Results from each high-strain dynamic test performed with the PDA and analyzed with the CAPWAP program. The results are to be transmitted in the form of the electronic raw data files and a hard copy of columnar data produced with the PDIPLOT program or similar. The data shall consist of blow counts, stresses in the pile, pile nominal geotechnical capacities, hammer energies and hammer strokes for each one-foot depth increment. Supply this data within 5 Working days after dynamic pile tests have been completed at any given substructure unit.
- Bearing graphs showing blow count-versus-pile nominal geotechnical resistance and Inspector's charts depicting stroke-versus blow count to be used for confirming the Nominal Pile Bearing Resistance of the foundation piles. The graphs/charts are to be developed based on the results of the PDA and CAPWAP. These graphs/charts are also to be documented in the report listed below. These graphs and charts are

required for each foundation group where PDA testing is completed. Submit this information electronically (Adobe PDF or similar). Supply this data within 5 Working days after dynamic pile tests have been completed at any given substructure unit.

- Provide pile driving criteria charts that would be used for informational purposes. Pile acceptance will be based on the field verification formula shown in the plans.
- Supply one or more flash drives (or other electronic storage media) containing data for the piles tested for each Substructure. The data shall be in the form of W01 (PDA file), PIL (PDIPLOT file), and CWW (CAPWAP file) and be properly labeled.
- A final Project report which summarizes the findings from the PDA and the associated CAPWAP computer program and the developed bearing graphs. Include reports and electronic copies of bearing graphs and Inspector's charts. Include any preconstruction WEAP analysis data sheets and WEAP submittal information and electronic files modeling the Contractor's hammer system. Include subsequent refined wave equation analysis, and summary plots showing foundation pile performance. Include electronic copies of field notes and other information pertinent to the high-strain dynamic monitoring (including gage locations, test dates, performance notes, etc.) Transmit this electronic archive to the Engineer within 5 Working Days after completion of the Project dynamic pile test program.
- Provide expert advice to the NDDOT as requested regarding the analysis and interpretation of the PDA and CAPWAP data.

METHOD OF MEASUREMENT

BASIS OF PAYMENT

The department will measure Pile Dynamic Analyzer (PDA) Testing as each individual PDA test once analyses and deliverables are acceptably completed.

Item No.	Pay Item	Pay Unit
622-7001	Dynamic Pile Test	EA

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CONCRETE THICKNESS DETERMINATION

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This provision details the thickness measurement of Portland Cement Concrete (PCC) pavement. It replaces the contents of Section 550.04 I, “Acceptance”, in its entirety.

The Engineer will utilize a MIT-SCAN-T3 and the appropriate reflector plates to determine concrete thickness to the nearest 0.10 inch. The procedure for the Engineer’s nondestructive test method is described in Appendix A.

The Contractor will provide the reflector plates.

I. Pavement Thickness Determination.

1. General.

Provide the Engineer with galvanized steel MIT SCAN Plates that measure 30 cm ±0.1 mm that are supplied by Kessler Soils Engineering Products, Inc. or approved equal.

The Engineer will determine the location of the reflector plates at the intervals designated in Appendix A. The Contractor will secure the plates to aggregate using one of the following methods:

- A maximum of 3 either galvanized or masonry nails up to 3.5 inches in length; or
- Using a small amount of concrete from the paving operation as close as possible to the paving operation.

A lot is defined as:

- 4,000 square yards of main line concrete pavement of constant thickness and placement width;
- Fractional areas of main line between 1,000 and 4,000 square yards; and
- Individual ramps, leave outs, cross-overs, intersection, shoulders, or other irregular areas of pavement not included in the main line.

Fractional areas of main line with less than 1,000 square yards are part of the adjacent lot.

2. Contractor Thickness Determination.

Probe the concrete depth behind the paver at every station with a reflector plate. Probe either left or right of centerline. Record the station number and the lane in which the plate is located. Submit the probe results to the Engineer at the completion of the days paving. The Engineer will not use these results to determine which locations to utilize the MIT-SCAN.

When probing, use a stiff metal probe that will not flex under normal use. Measure depth to the nearest 0.10 inch.

3. Department Thickness Determination.

a. General.
The Engineer will randomly select one reflector plate from each lot of mainline pavement for measurement using the MIT-SCAN. For shoulders, the Engineer will measure both plates using the MIT-SCAN and average the values.

The Engineer will record the pavement thickness to the nearest 0.10 inch.

The requirements of Section I.3, “Department Thickness Determination” of this provision apply to all measurements obtained under this provision.

The following applies if cores are obtained for any reason:

Fill the core hole with fresh concrete mix and use a vibrator to consolidate the concrete in the holes. Screed the new concrete off and apply curing compound to the new concrete. If fresh concrete mix is not available, submit a proposed patching mix to the Engineer.

b. Thickness Deficient by less than 0.2 inch.
If the results of the Engineer’s thickness determination for a lot show a deficiency of less than 0.2 inches below the designed pavement thickness, no additional measurement, the Engineer will not obtain additional measurements.

c. Thickness Deficient by 0.2 inch and less than 1.0 inch.
If the results of the Engineer’s thickness determination for a lot show a deficiency of 0.2 inches or greater and less than 1.0 inch, the Engineer will require the Contractor to core the pavement above the reflector plate and will measure the core as specified in AASHTO T 148.

If the core length is shown a deficiency of 0.2 inches or more and less than 1.0 inch, the Engineer will request two additional cores from the lot at intervals separated from each other and from the first core by at least 1/4 the length of the lot.

If neither of the two additional cores is deficient in length 1.0 inch or more, the Engineer will compute the average thickness of that lot of pavements as the average length of the three cores and will process a contract price adjustment as specified in Section 550.06 B, “Thickness Tolerance Contract Price Adjustments”.

If either of the additional cores is deficient in length by 1.0 inch or more, Section I.3.d of this Special Provision will apply.

d. Thickness Deficient by 1.0 inch or Greater.
If the results of the Engineer’s thickness determination for a lot show a deficiency of 1.0 inch or more, the Engineer will require the Contractor to core the pavement above the reflector plate and will measure the core as specified in AASHTO T 148.

If the core length is shown to be deficient by less than 1.0 inch, the requirements of Section I.3.c of this Special Provision will apply.

If the core length is shown to be deficient by 1.0 inch or more, the following will apply:

- The Engineer will measure the thickness of the pavement represented by that lot at the remaining reflector plates within the lot to determine the extent of the deficient pavement;

- The Engineer will require the Contractor to core the pavement above the remaining reflector plates that show a deficiency of 1.0 inch or greater and will measure the cores as specified in AASHTO T 148. The requirements of Section I.3.d of this special provision will apply;

- The Engineer will require the Contractor to core each panels in both longitudinal directions from reflector plate locations until the core length is less than 1.0 inch deficient, when measured as specified in AASHTO T 148;

- Remove and replace all concrete panels with a core hole created under Section I.3.d of this special provision. Use the same mix design approved for the project.

- The Department will pay for replacement material, provided it meets the specifications.

- The Engineer will calculate the average thickness of the remainder of the lot from at least two additional cores obtained outside the area that is deficient by more than one inch at intervals separated from each other and from the core deficient by more than 1.0 inch by at least 1/4 the length of the lot.

- The Engineer will not use exploratory cores in computing average thickness for determining adjusted unit price.

BASIS OF PAYMENT

Include the price of the plates and securing the plates in the contract unit price of the Concrete Pavement bid item.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PIPE STEEL SMOOTH WALL 0.469IN 36 INCH BORED

PROJECT RCE-FTF-NHU-SU-6-297(014)000 – PCN 24115

DESCRIPTION

The Work of this section includes all labor, machinery, construction equipment, and appliances required to perform all jack and bore placement of pipeline casings and installation of pipe therein.

The overall work scope will include, but not limited to, jacking pits and equipment, sheeting, steel casing pipe, skid, spacers, steel straps, coatings, location signs as required, installation of the carrier pipe withing the casings, miscellaneous appurtenances to complete the entire work, and surface settlement monitoring and restoration as shown on the Construction Drawings.

Jack and bore operations will be performed within the right-of-way and/or easements shown on the Construction Drawings.

1. **Reference Documents.**
   ASTM International (ASTM)

   American Water Works Association (AWWA)

   American Welding Society (AWS)

   North Dakota Department of Transportation (NDDOT)

   City of Grand Forks, North Dakota (City)

EQUIPMENT

A. Tunneling Equipment.
The equipment used in jack and bore casings will be of adequate commercial size and in satisfactory working condition for safe operation. Only crew experienced in tunneling operations shall be used in performing the work.

Provide all structures, safety equipment, and professional services required to provide for the health and safety of the general public and of personnel involved in pipe tunneling work in accordance with the authorities having jurisdiction.

B. Geotechnical Conditions.
Closely review the boring information and carefully evaluate soil conditions at the work site prior to submitting the bid. Select equipment to handle the baseline tunnel conditions including the presence of cobbles, boulders, and groundwater.

Examine soil profiles during construction of tunneling launch and receiving pits prior to starting tunneling operations or undertake an independent sampling and testing program. Cost for the independent sampling and testing program will be the Contractor's expense.

Based on the available Project soil borings, the unconsolidated materials in the Project area consist of lean to fat clay.

Tunnel Conditions:

Soil Types: Based on soil borings in the area, the tunnel will encounter deposit soils consisting of lean to fat clay, very stiff, light brown, very moist, with traces of fine gravel.

Water: Based on soil borings, groundwater was not encountered at the proposed tunneling elevation. Any dewatering required to perform the tunnel is incidental.

Cobbles and Boulders: Cobbles and boulders were not encountered in boring SB-14; however, for baseline purposes, assume that 2 boulders up to 1 foot in diameter and 1 nest of cobbles up to 5 cubic feet in size will be encountered. Assume that the cobbles and boulders will slow the tunnel progress but will not stop the tunnel progress.

MATERIALS

A. Steel Casing.

Leakproof conforming to the requirements of ASTM A139 Grade B, equipped with grout holes as specified in the Drawings, and designed to withstand Coopers E80 Railroad loading when under railways.

Clear inside diameter at least 8 inches greater than largest outside diameter of the carrier pipe, joints, or couplings.

For steel casings with a nominal diameter of 36 inches, the minimum pipe wall thickness will be 0.469 inches unless noted otherwise or required by the Contractor's design.

B. Casing Joints.

Leakproof conforming to the requirements of ASTM A139 Grade B with either field welded or manufactured interlocking pipe joints.

All steel casing will be square cut with beveled ends for welding. Grind smooth any sharp protrusions in joint prior to welding that could point load the joint.

C. Casing Tolerances.

Provide steel casing pipe with a roundness such that the difference between the major and minor outside diameters shall not exceed 1% of the specified nominal outside diameter or 0.25 inches, whichever is less.

Provide steel casing such that the outside circumference is within 1% of the nominal circumference but not exceeding 0.50 inches, whichever is less.

Steel casing pipe will have a maximum allowable straightness deviation in a 10-foot length of 1/8" inch.

D. Casing Pipe Spacers.
Use manufactured spacers within the casing as shown on the Drawings.

Wood skids are prohibited.

Spacing per manufacturer's recommendations.

1. Acceptable Manufacturers.
Pipeline Seal and Insulator, Inc.

Cascade Water Works Manufacturing Co.

CCI Pipeline Systems, LLC.

Raci North America.

Approved Equal.

E. Bentonite.
API Specification 13A, high swelling montmorillonite, capable of mixing with water to form a stable homogeneous suspension.

F. Portland Cement.
ASTM C 150, Type I/II per NDDOT Section 804.

G. Flyash.
ASTM C618 per NDDOT Section 820.

H. Water.
Potable and complying with ASTM C94.

I. Surface Settlement Monitoring Points.

1. Green Areas.
3/4"-inch diameter x 18-inch long, schedule 40 steel pipe.

2. Pavement & Structures.
PK nail.

J. Backfill Grout Mix Design.

1. Backfill Grout.
Consist of a cellular concrete.

Portland cement, flyash, water and a high stability foaming agent.

2. Slump.
10 inches and pumpable through a 2" line.

3. Wet Density.
35 pounds per cubic foot.

4. **Compressive Strength.**
   100 psi minimum at 28 days.

5. **Water in Casing.**
   Increase backfill grout density to 70 pounds per cubic foot if water is present in casing and cannot be removed prior to grouting.

CONSTRUCTION REQUIREMENTS

A. General.

Notify the Engineer, roadway, and utility owners at least seven days in advance of the planned start of work within the roadway, utility, or surface right-of-way, or as required by the applicable permit, whichever is more stringent.

Complete installation of surface settlement monitoring points, as shown on the Drawings a minimum of ten days prior to the start of tunneling. Coordinate installation of surface settlement monitor points when working within the railroad property limits.

Conduct all operations such that trucks and other vehicles do not interfere with traffic or create a mud, dust, or noise nuisance on roadways and to adjacent properties. Promptly clean up, remove, and dispose of mud and spoils.

Provide traffic control for surveying when directed by the Engineer.

B. Submittals.

The owner of a right-of-way over the work requires approval of tunneling design and shop drawings. Furnish submittals to that owner and obtain the necessary approvals prior to furnishing the submittals required in this Section.

Tunnel operation plan.

Tunnel Contractor qualifications.

For the items listed below, submit design drawings and related supplemental information:

- Manufacturer’s literature and detailed description of tunneling equipment, shield or boring machines, steering and guidance system.
- Face control methods during tunneling, shelving systems, steering, pipe jacking systems, and face control methods during shutdown
- Procedures and sequence for installing tunnels.
- Method and system to be used for removal and disposal of soil material.
- Details of pipe lubrication system.
- Water control and disposal.
- Lighting and ventilation methods.
- Casing pipe including joint cushion material and capacity.
- Settlement monitoring layout and plan.
- Description of two projects (with details of diameter and distance) on which the tunneling system has been successfully used.

Submit for record, shift reports showing at least the following information:

- Tunnel advance with beginning and ending stations.
- Departure from specified line and grade.
- Soil types encountered by station and face position.
- Stations and quantities of boulders, cobbles, construction debris, water, and bedrock.
- Casing pipe lubrication quantities.
- Description of unusual conditions or incidents.
- Soil removal volume for every casing pipe segment.
- Copies of jacking force logs (minimum of 1 reading per 8 foot of casing).
- Description of poor air quality and explosive gases detected.

Submit a survey certifying that the tunnel meets the Contract requirements for line and grade.

Product description and installation methods for surface settlement monitoring points.

If settlements or heave greater than the limits specified in this Section are exceeded, submit descriptions of remedial actions to minimize settlement and methods to repair or replace undermined or damaged surface features and structures.

C. Quality Assurance.

Perform all work in conformance with the authorities having jurisdiction.

Tunnel construction will be conducted by a Contractor with the following qualifications:

- Two projects demonstrating successful tunneling of 36-inch minimum diameter casing, including consolidation and contact grouting, utilizing pipe jacking with a minimum length of 180 feet through moist to saturated fill soils containing cobbles and boulders.

D. Site Conditions.

Inspect the locations where tunneling operations will be conducted and the pipe is to be installed, verify the conditions under which the work will be performed, and provide all necessary details, whether shown or not, for the orderly prosecution of the work.

Furnish special insurance, traffic control, flaggers and any other requirements imposed by the owner of the right(s)-of-way in which the work occurs.

Consolidation grouting of soil beyond the specified limits of the tunnel may be required to facilitate removal of cobbles and boulders and prevent settlement of the ground surface and railroad track above.

Should tunneling or related construction activity cause damage to any property or structure within and adjacent to the Construction Limits, immediately undertake such emergency repairs as will make the property or structure safe and usable. Undertake all permanent repairs, reconstruction and other work as may be necessary to restore the property or structure to at least as good a condition as that preceding the event causing the damage. The Contractor’s responsibility in this regard is absolute. This work will be completed by the Contractor at no additional cost to Owner.

Flag or otherwise mark and protect all settlement monitoring points and monitoring instruments. Replace settlement monitoring points and instruments damaged by the Contractor immediately, at the Contractor’s expense.

E. Sequence and Scheduling.
Coordinate sequence and schedule with the Engineer, owners of roadway, railroad, or easement, or other public access and overlying right-of-way or real estate. Notify all parties at least seven days in advance, or as required by the applicable permit, whichever is more stringent.

Install surface settlement points along the tunnel alignment. Do not begin tunneling operations until the Engineer has completed the settlement baseline survey.

Contact grouting of the tunnel casing shall be completed with 48 hours of tunnel completion.

F. Operation Plan.
Prepare and follow an operation plan for protection of the public, structures, utilities, facilities, personnel and the work. The Contractor is responsible for providing a safe workplace and to avoid hazard to life and property.

Ensure operation plan complies with all applicable sections of OSHA 1926.800 Subpart S – Under-ground Construction and include a plan for providing the Engineer and other personnel requested by the Engineer access to all areas of the project for observation of the Work. Access shall be provided at all times during work hours.

G. Face Control and Ground Support.
The tunneling method selected by Contractor will provide full support and control of the ground during all phases of the work and shall allow access to and removal of cobbles and boulders at the tunnel face.

For tunnels where running soils are present at the face, provide tunnel shield(s) with mechanically operated doors or sand shelves, with a provision for installing and supporting breast boards to prevent soils from running and causing unacceptable settlements.

Tunnel in a manner to prevent voids from developing outside the casing. Use and operate tunnel equipment features to minimize the number of voids and ground loosening around the tunnel.

Do not mine ahead of the front of the shield. Keep the leading edge of the shield in contact with the soil face at all times, except when required to remove boulders.

Utilize consolidation grouting or equivalent techniques, as required, to prevent ground loss during boulder removal operations.

H. Alignment Tolerances.
Take extreme care to maintain line and grade during jacking operation. The Contractor will be required to modify jacking operations to correct any deviation when deemed necessary by City, NDDOT, or the Engineer.

I. Consolidation Grouting.
Where shown on the Drawings, specified in the Special Provisions, ordered by the Engineer, or as necessary, design and place consolidation grouting to prevent voids from occurring at the excavated face that may result in surface settlement.

Use consolidation grout stabilization as specified and as necessary for groundwater control along the casing pipe and at the tunnel face if required.

Consolidation grout ahead and around boulders if required for excavation ahead of the leading edge of the tunneling equipment.

J. Ground Water Control.

Keep tunnel and pit subgrades continuously free from standing water and surface runoff during tunnel operations. Do not dewater through the casing.

Conduct dewatering as required prior to lower the groundwater level below the tunnel invert or use a tunneling method that prevents groundwater flow into the tunnel.

K. Settlement and Damage Control.

Operate tunneling equipment to minimize lost ground and to comply with specified limits for preventing settlement, movement, cracking, or damage of roadways, railways, tunnels, surface structures, utilities, or adjacent structures. If any movement or settlement occurs or which causes or might cause damage over, along, or adjacent to the work, stop tunneling operations immediately, except for those activities which will assist in making the work secure and prevent further movement, settlement, or damage.

Keep settlements within limits specified in this Section. Conduct remedial activities, as ordered by the Engineer, if settlements are greater than specified.

If roadways, railways, tunnel, utilities, or structures are damaged by tunneling operations, immediately replace or repair to original or better condition and to the satisfaction of the Engineer at no additional cost to the Owner.

1. Settlement Threshold and Limiting Values.

Surface heave or settlement at railways, underground utilities, structures and signs:

Class of Track	Alert/Warning Threshold	Critical/Review Threshold
1	0.433 in	0.866 in
2	0.433 in	0.866 in
3	0.394 in	0.748 in
4	0.315 in	0.630 in
5	0.236 in	0.512 in
6	0.197 in	0.394 in

If an Alert/Warning Threshold Value is reached:

a. Owner, Engineer, and Contractor will meet to discuss cause and remedial measures proposed by the Contractor.
b. Notify BNSF Roadmaster that an Alert/Warning Threshold has been reached.
c. Owner will increase the settlement monitoring frequency as directed by the Engineer.

The Contractor will then implement the remedial measures in the event that additional settlement monitoring points exceed the Threshold Value, so that the Limiting Value is not reached.

Take all necessary steps so that the Critical/Review Threshold Value is not exceeded. Contractor may be directed to suspend activities in the affected area, with the exception of those actions necessary to avoid exceeding the Critical/Review Threshold Value.

If a Critical/Review Threshold Value is reached, all work will stop and the site secured until remedial measures have been submitted and approved by the Engineer and BNSF.

2. **Monitoring Frequencies.**
   a. **Pre-Construction.**
      Take initial baseline readings at least twice per day for no less than two days prior to the start of excavation support construction or tunneling.

   b. **Construction.**
      During excavation support system construction and tunneling, monitoring should proceed through the construction period and should be completed at least twice daily.

   c. **Post-Construction.**
      After completion of the tunneling and pit backfilling, monitoring points will be surveyed for a minimum of three days, then once per week until movement stabilizes, for a minimum of two weeks.

L. Mud Jacking.
Mud jacking to level the roadway or rail line is required to correct any settlement over allowable limits to the satisfaction of the North Dakota Department of Transportation (NDDOT), other road-way owner, or Railroad.

Furnish submittals of all materials, methods, equipment and schedule for review by the Engineer, the roadway owner, or Railroad.

M. Carrier Pipe Installation.
Inspect each joint prior to insertion into the casing. Support the carrier pipe within the casing so that the pipe is generally centered within the casing. Distribute the load of the carrier pipe along the casing in accordance with the carrier pipe or spacer manufacturer’s recommendations.

N. Backfill Grouting.
Clean and remove all debris and water from the interior of casing pipe prior to placement of bulkheads and backfill grout.

Construct a solid concrete block and mortar bulkhead in the annular space between the carrier and casing pipe. Wrap the portion of the carrier pipe passing through the block bulkhead with flexible foam expansion joint material. Secure expansion joint materials with stainless bands.

After the carrier pipe has been inspected and tested, fill the annular space between casing and carrier pipe with backfill grout in two lifts. Place backfill grout to prevent any voids between the casing and the carrier pipe. Place grout from the downstream end and vent as necessary. Pump at a pressure below that which may endanger rupture of the casing or carrier pipe. After complete filling, maintain a pressure of at least 4 psi for 10 minutes to ensure annular space remains filled.

P. Testing and Inspection.

Provide adequate facilities for safe storage and proper curing of grout test cylinders collected by the Contractor's ITL onsite for first 24 hours, and for additional time as may be required before transporting to test lab.

Provide grout for testing of slump, and for making cylinders. When grout is pumped, samples used shall be taken from discharge end of pump hose.

Specimens will be made, cured, and tested by the Contractor's ITL in accordance with ASTM C31 and ASTM C39.

Frequency of testing may be changed at discretion of Engineer. Cylinders will be taken once for each 50 cubic yards, of grout placed.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Pay Item	Pay Unit
PIPE STEEL SMOOTH WALL .469IN 36IN BORED	LF

Include all costs for the materials, equipment, and labor associated with tunneling operations, removing boulders, nests of cobbles and debris during tunneling operations, as well as all materials, equipment, and labor associated with surface settlement monitoring. Payment shall be made on a Time and Materials Allowance for obstructions that prevent tunnel installation which were unforeseen at the time of bidding

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

ELECTRONIC DOCUMENT SUBMITTAL PROCEDURE

PROJECT 6-297(014)000 – PCN 24115

DESCRIPTION

This provision covers the exchange of project related documents and correspondence between the Engineer and Contractor.

CONSTRUCTION REQUIREMENTS

A. General.

Upload all documents to be submitted to the Engineer via the Oracle Aconex website. The Engineer may, in writing, waive the use of Oracle Aconex for specific documents and allow submission of those documents via traditional means.

Submit physical items such as product or material samples or color charts using traditional means.

Training on the use of Oracle Aconex is optional but encouraged.

At the preconstruction conference, the Engineer will provide a noncomprehensive list of documents and work drawings expected to be submitted through the Oracle Aconex portal.

B. Obtaining Access to Oracle Aconex

Submit the following information to the Engineer for each person requiring access to the Oracle Aconex website a minimum of 10 days before access is necessary:

- Person's name;
- Email address;
- Preferred login name;
- Company name; and
- Person's role on the project.

The above information will be sent to Oracle Aconex for account creation and access to the online project area. Users will be sent login information to the submitted email address and must complete their own account creation using the instructions included in the email.

Additional users may be added at any time by submitting the above information to the Engineer.

C. Submittal Procedure.

Use one of the following methods for submission of documents via Oracle Aconex

- Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via the Oracle Aconex website; or

- Subcontractors and Suppliers provide paper submittals to General Contractor who electronically scans and converts to PDF format.

Review and apply an electronic stamp verifying that the documents have been reviewed for completeness and accuracy by the Contractor before submission.

The Engineer will provide comments, feedback, and approval or rejection of items, as applicable, via Oracle Aconex.

D. Interaction with Other Contract Requirements.
The use of Oracle Aconex does not alter the content of other contract clauses for submission deadlines, review periods, or additional requirements other than the method of submission.

BASIS OF PAYMENT

The Department has paid for access to the Oracle Aconex website for this project. Include costs associated with the use of the Oracle Aconex in contract items that will require the use of the website.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

PERMITS AND ENVIRONMENTAL CONSIDERATIONS

PROJECT NUMBER: RCE-NHU-SU-CPU-6-297(014)000 – PCN 24115

This Special Provision incorporates the US Army Corps of Engineers (USACE) Section 404 Permit obtained by the North Dakota Department of Transportation (NDDOT) into the bidder's proposal.

The Contractor shall be responsible for complying with all the terms and conditions as contained in the permit(s) attached hereto. Bidders shall become familiar with all standard conditions and special conditions of the permit(s) and submit their bid for the construction of this project based on the following:

- **Section 404 Permit**
  The 404 Permit, NWO-2014-01256-BIS, authorizes permanent and temporary impacts to jurisdictional waters as shown in Section 75 of the plans. The Section 404 Permit is attached.

The Contractor is responsible for preparing and submitting Permit(s) for any additional impacts not authorized by the attached Permit(s) obtained by the NDDOT. The Contractor is responsible for any delays associated with obtaining any additional Permit(s).

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504-7565

November 6, 2025

NWO-2014-01256-BIS

North Dakota Department of Transportation
Attn: Mr. Steve Kessler
608 East Boulevard Avenue
Bismarck, North Dakota 58505

Dear Mr. Kessler:

We are responding to your October 22, 2025 request for a Department of the Army permit for the ND 297 (DeMers Avenue) and 42nd Street Grade Separation, PCN 24115 project. The project is located in Sections 5, 6, 7, 8, and 9, Township 151 North, Range 50 West, Latitude 47.916639° North, Longitude -97.088306° West, Grand Forks, Grand Forks County, North Dakota.

Based on the submitted application and NDDOT preliminary plans for RCE-NHU-SU-CPU-6-297(104)000 Grand Forks ND Highway 297 (DeMers Avenue) and 42nd Street Grade Separation dated October 8 and 19, 2025, the project involves a grade separation/underpass construction to include multiple culvert installations/replacements, roadway bridge construction at DeMers Avenue, and overpass railroad bridge at the BNSF tracks; 42nd Street will be shifted 21' to the east; and new roads on new alignments will be constructed for 7th Avenue (jug handle) and 43rd Street (backage road and cul-de-sac). Two dry stormwater basins will be constructed, and incidentals will occur, such as lighting, signing, storm sewer, and water mains. Temporary bypasses will be installed to allow for traffic flow during the construction period, and the English Coulee tributary system will be routed through two 44" by 27" by 79' reinforced concrete arch pipes under the proposed 43rd Street and two 51" by 31" by 274' RCPs under 42nd Street. These activities will result in permanent discharges in approximately 0.174 acre of wetlands and 0.069 acre of stream; temporary discharges in 0.365 acre of wetlands and 0.051 acre of stream will be removed upon project completion.

We have determined activities in waters of the U.S. associated with the project are authorized by Nationwide Permit Number (NWP) 23 Approved Categorical Exclusions, found in the December 27, 2021 Federal Register (86 FR 73522) and January 13, 2021 Federal Register (86 FR 2744), Reissuance and Modification of Nationwide Permits. Enclosed is a fact sheet that fully describes this Nationwide Permit and lists the General and Regional Conditions that must be adhered to for this authorization to remain valid. **Please note that deviations from the original plans and specifications of your project could require additional authorization from this office.**

This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other Federal, state, tribal and local approvals before beginning work.

You are responsible for all work accomplished in accordance with the terms and conditions of the Nationwide Permit, **including the Regional Conditions specific to projects undertaken in North Dakota.** Information about the NWP and regional conditions are available on our website at http://www.nwo.usace.army.mil/Missions/Regulatory-Program/North-Dakota/. If a contractor or other authorized representative will be accomplishing the work authorized by the Nationwide Permit on your behalf, it is strongly recommended that they be provided a copy of this letter and the attached conditions so that they are aware of the limitations of the applicable Nationwide Permit. Any activity that fails to comply with all of the terms and conditions of the Nationwide Permit will be considered unauthorized and subject to appropriate enforcement action.

In addition, your work must comply with the following special conditions:

1. In addition to the 0.174-acre of English Coulee tributary widening shown in Section 75, pages 5 and 6 of the plan sheets for Project No. RCE-FTF-NHU-SU-CPU-6-297(014)000, to offset the loss of 0.069 acre of stream, you shall deduct 0.138 credits from NDDOT Kirkeby/Schuster Mitigation Bank. Evidence of this deduction shall be provided to this office prior to initiation of construction activities in waters of the U.S. authorized by this verification. Evidence of wetland reestablishment via the drainage widening shall be provided through photo documentation. If wetlands fail to establish at the locations specified in the plan sheets within three years, NDDOT shall be held responsible for providing alternative mitigation.

Within 30 days after completion of the authorized work, you must sign the enclosed Compliance Certification and return it to this office.

This verification will be valid until **March 14, 2026.** If the nationwide permit is modified, suspended, or revoked prior to this date, but is reissued without modification or the activity complies with any subsequent modification, this authorization remains valid until the expiration date. If the nationwide permit is modified, suspended, or revoked, and construction has commenced or is under contract to commence before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation to complete the activity under the present terms and conditions.

The Omaha District, North Dakota Regulatory Office is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at https://regulatory.ops.usace.army.mil/customer-service-survey. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax.

Please refer to identification number NWO-2014-01256-BIS in any correspondence concerning this project. If you have any questions, please contact Amber Inman by email at Amber.L.Inman@usace.army.mil or telephone at (701) 989-6428.

Sincerely,

Benjamin N. Soiseth
Chief, North Dakota Section

Enclosures

COMPLIANCE CERTIFICATION

Permit File Name: ND 297 (DeMers Avenue) and 42nd Street Grade Separation, PCN 24115

Action ID: NWO-2014-01256-BIS

Nationwide Permit Number: 23

Permittee: NDDOT
Attn: Mr. Steve Kessler
608 East Boulevard Avenue
Bismarck, North Dakota 58505

County: Grand Forks

Date of Verification: November 6, 2025

Within 30 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers, Omaha District
North Dakota Regulatory Office
3319 University Drive
Bismarck, North Dakota 58504
CENWO-OD-RND@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of the permit your authorization may be suspended, modified, or revoked. If you have any questions about this certification, please contact the U.S. Army Corps of Engineers.

* * * * * * * * *

I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit verification.

Permittee Signature _____ Date _____

US Army Corps of Engineers
Omaha District

Nationwide Permit 23: Approved Categorical Exclusions

Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

(a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 *et seq.*), that the activity is categorically excluded from the requirement to prepare an environmental impact statement or environmental assessment analysis, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and

(b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

Notification: Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letter(s).

(Authorities: Sections 10 and 404).

Note: The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO). Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are: the Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07. Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same website.

Contents adapted from the Federal Register (86 FR 73522) published on Dec. 27, 21 and Federal Register (86 FR 2744) published on Jan. 13, 2021.

US Army Corps of Engineers
Omaha District

General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements.

No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably

culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas.

Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (*e.g.,* through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas.

Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds.

No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material.

No activity may use unsuitable material (*e.g.,* trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes.

No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments.

If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows.

To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (*e.g.,* stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains.

The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls.

Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills.

Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance.

Contents adapted from the Federal Register (86 FR 73522) published on Dec. 27, 21 and Federal Register (86 FR 2744) published on Jan. 13, 2021.

Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project.

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (*e.g.,* National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: *http://www.rivers.gov/*.

17. Tribal Rights.

No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine

whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (*e.g.,* an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination

results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at *http://www.fws.gov/* or *http://www.fws.gov/ipac* and *http://www.nmfs.noaa.gov/pr/species/esa/* respectively.

19. Migratory Birds and Bald and Golden Eagles.

The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section

106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: No historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or

that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts.

Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters.

Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation.

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (*i.e.,* on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation

would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (*e.g.,* conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the

project site, the district engineer will determine the appropriate compensatory mitigation (*e.g.,* riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed

option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (*e.g.,* resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged

or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures.

To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

(a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management.

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions.

The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits.

The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

Contents adapted from the Federal Register (86 FR 73522) published on Dec. 27, 21 and Federal Register (86 FR 2744) published on Jan. 13, 2021.

29. Transfer of Nationwide Permit Verifications.

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification.

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States.

If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

(a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant

crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (*e.g.,* a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why

compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

Contents adapted from the Federal Register (86 FR 73522) published on Dec. 27, 21 and Federal Register (86 FR 2744) published on Jan. 13, 2021.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:* (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (*e.g.,* via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were

considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

Contents adapted from the Federal Register (86 FR 73522) published on Dec. 27, 21 and Federal Register (86 FR 2744) published on Jan. 13, 2021.

US Army Corps of Engineers ®
Omaha District

2021 Nationwide Permits
Regional Conditions for North Dakota
and
Omaha District - Required Best Management Practices

The following Nationwide Permit (NWP) regional conditions will be used in the State of North Dakota. The issuance of the NWPs was announced in the January 13, 2021, issue of the Federal Register (86 FR 2744) and December 27, 2021, issue of the Federal Register (86 FR 73522). Regional conditions are placed on NWPs to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resources concerns.

A. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO ALL NWPs OR LIMITED REVOCATION OF NWPs

For all NWPs, permittees must notify the Corps in accordance with General Condition 32 Preconstruction Notification (PCN) requirements for regulated activities located within or comprised of the following:

1. **Wetlands Classified as Peatlands:**

   For purposes of this condition, peatlands are permanently or seasonally waterlogged areas with a surface accumulation of peat (organic matter) 30 centimeters (12 inches) or more thick. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay. Any peat-covered areas, including fens, bogs, and muskegs, are all peatlands.

   a. PCN required for NWP 3, 5, 20, 32, 38 and 45.

   b. All NWPs not listed above are revoked for use in peatlands.

2. **Waters Adjacent to Natural Springs:**

   PCN required for any regulated activity located within 100 feet of the water source in natural spring areas. For purposes of this condition, a spring source is defined as any location where there is flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

   Springs do not include drain tile outlets.

3. **Bank Stabilization Activities:**

   PCN required for any regulated activity that involves bank stabilization impacting an area greater than 1/10 of an acre below the Ordinary High Water Mark or includes features that extend out from the existing bank line greater than 25% of the bankfull channel width.

4. **Specific Waterways:**

   PCN required for any regulated activity occurring in or under the Missouri River, including Lake Sakakawea and Lake Oahe. In addition, a PCN is required for any activity occurring in an off channel area (e.g. marinas and bays) of any of these waterways.

US Army Corps of Engineers ®
Omaha District

2021 Nationwide Permits
Regional Conditions for North Dakota
and
Omaha District - Required Best Management Practices

B. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO SPECIFIC NWP

1. NWP 23 – Approved Categorical Exclusions:

In addition to PCN requirements identified in Regulatory Guidance Letter (RGL) 05-07 or the applicable Corps RGL, PCN is required prior to initiating any regulated activity under NWP 23 that would permanently impact an area greater than 1/2 an acre of waters of the United States. In addition to information required for PCN, the applicant must identify the approved categorical exclusion that applies in RGL 05-07 or the applicable Corps RGL and provide documentation that the project fits the categorical exclusion.

C. BEST MANAGEMENT PRACTICES

Required Best Management Practices:

In addition to the Regional Conditions above, additional required best management practices apply to NWPs within the Omaha District follow. These are also available at: https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Nation-Wide-Permit-Information/

The following Nationwide Permit regional condition best management practices are required for Montana, Nebraska, North Dakota, South Dakota, and Wyoming in the Omaha District. The issuance of the NWPs was announced in the January 13, 2021, issue of the Federal Register (86 FR 2744) and December 27, 2021, issue of the Federal Register (86 FR 73522). Regional conditions are placed on NWPs to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resources concerns.

A. REQUIRED BEST MANAGEMENT PRACTICES APPLICABLE TO MONTANA, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA, AND WYOMING

1. Suitable Material:

Permittees are reminded of General Condition No. 6 which prohibits use of unsuitable material. A list of materials prohibited or restricted as fill material in waters of the United States can be found at: http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/12320/prohibited-restricted-materials.aspx

PARAGRAPHS PERTAINING TO ALL STATES EXCEPT NORTH DAKOTA HAVE BEEN REMOVED FROM THIS VERSION FOR CLARITY.

B. NORTH DAKOTA REQUIRED BEST MANAGEMENT PRACTICES

2. Minimum Culvert Width:

For all NWPs in jurisdictional streams, the culvert opening width of a stream crossing shall not be less than the mean bank to bank width as measured from the Ordinary High Water Mark in the affected stream reach. In stable stream channels, the Ordinary High Water Mark is often found at the point where over-bank flow begins during a flood event. In incised stream channels that do not frequently access a floodplain or upper terrace, the Ordinary High Water Mark is generally located within the entrenched channel. The Ordinary High Water Mark may be identified by observing indicators such as a distinct change in slope, a change in vegetation characteristics, or a change in sediment characteristics, see 33 CFR 328.3(e).

3. **Culvert Countersink Depth:**

For all NWPs in jurisdictional streams and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural stream channel flow line according to the table below. This regional condition does not apply in instances where the lowering of the culvert invert would allow a headcut to migrate upstream of the project into an unaffected stream reach or result in lowering the elevation of the stream reach.

Culvert Type	Drainage Area	Minimum Distance Culvert Invert Shall Be Lowered Below Stream Flow Line
All culvert types	< 100 acres	Not required
Pipe diameter <8.0 ft	100 to 640 acres	1/2 ft
Pipe diameter <8.0 ft	>640 acres	1.0 ft
Pipe diameter > 8.0 ft	All drainage sizes	20% of pipe diameter
Box culvert	All drainage sizes	1.0 ft

a. The stream flow line shall be defined as the longitudinal average of the low flow stream channel.

b. The slope of the culvert should be parallel to the slope of the stream flow line.

c. The culvert invert depression depth shall be measured at the culvert inlet for culverts installed at a slope less than the slope of the stream flow line.

d. Riprap inlet and outlet protection shall be placed to match the height of the culvert invert.

4. **Spawning Areas:**

Spawning areas and seasons can be accessed on the North Dakota Game & Fish Department's website at: http://gf.nd.gov/gnf/conservation/docs/spawning-restriction-exclusions.pdf

5. **Intake Structures:**

a. Intake screens with a maximum mesh opening of 1/4-inch must be provided, inspected annually, and maintained. Wire, Johnson-like, screens must have a maximum distance between wires of 1/8-inch. Water velocity at the intake screen shall not exceed 1/2-foot per second.

b. Pumping plant sound levels will not exceed 75 dB at 50 feet.

c. Intakes located in Lake Sakakawea, above river mile 1519, and on the Yellowstone River, are subject to the following conditions:

i. The intakes shall be floating.

ii. At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.

iii. If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.

iv. If the water depth falls below six feet, the intake shall be moved to deeper water or the maximum intake velocity shall be limited to 1/4-foot per second.

d. Intakes located in Lake Sakakawea, below river mile 1519, and the Missouri River below

Garrison Dam are subject to the following conditions:

i. The intakes shall be submerged.

ii. At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.

iii. The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.

iv. If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼-foot per second with intake placed at the maximum practicable attainable depth.

e. Intakes and associated utility lines that are proposed to cross sandbars in areas designated as piping plover critical habitat are prohibited.

f. Any temporary open trench associated with utility lines are to be closed within 30 days of excavation. This time limit may be extended by notifying the North Dakota Regulatory Office and receiving a written response that the extension is acceptable

6. <u>Boat Docks:</u>

To ensure that the work or structure shall not cause unreasonable obstruction to the free navigation of the navigable waters, the following conditions are required:

a. No boat dock shall be located on a sandbar or barren sand feature. The farthest point riverward of a dock shall not exceed a total length of 30 feet from the Ordinary High Water Mark. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer's Office.

b. Any boat dock shall be anchored to the top of the high bank.

c. Any boat dock located within an excavated bay or marina that is off the main river channel may be anchored to the bay or marina bottom with spuds.

d. Section 10 Waters located in the State of North Dakota are:

i. Bois de Sioux River

ii. James River Missouri River

iii. Red River of the North

iv. Upper Des Lacs Lake

v. Yellowstone River

US Army Corps of Engineers
Omaha District

2022 Nationwide Permits
Regional Conditions
State of North Dakota
Section 401 Water Quality Certification

The following Nationwide permit (NWP) regional conditions pertaining to Section 401 Water Quality Certification (WQC) will be used in the State of North Dakota for NWP 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 41, 45, 46, 49, 53, 54 and 59.

The Environmental Protection Agency is responsible for providing WQC for activities that occur on Indian Lands in the State of North Dakota.

The North Dakota Department of Environmental Quality is responsible for providing WQC for Section 404 activities that occur in the State of North Dakota, excluding Indian Lands.

WQC by NWP follows:

- **NWP 1 – Aids to Navigation**
  -Certification not required (Section 10 Only)

- **NWP 2 – Structures in Artificial Canals**
  -Certification not required (Section 10 Only)

- **NWP 3 – Maintenance**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 4 – Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities**
  -EPA waived certification for all activities.
  -NDDEQ certified for all activities.

- **NWP 5 – Scientific Measurement Devices**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 6 – Survey Activities**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 7 – Outfall Structures and Associated Intake Structures**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified with a condition requiring a copy of the preconstruction notification (PCN) be provided for any projects affecting classified rivers, streams or lakes. Classified waters are listed in Appendixes I and II of the State Water Quality Standards.

- **NWP 8 – Oil and Gas Structures on the Outer Continental Shelf**
  -Not applicable in North Dakota

- **NWP 9 – Structures in Fleeting and Anchorage Areas**
  -Certification not required (Section 10 Only)

- **NWP 10 – Mooring Buoys**
  -Certification not required (Section 10 Only)

- **NWP 11 – Temporary Recreational Structures**
  -Certification not required (Section 10 Only)

- **NWP 13 – Bank Stabilization**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified with a condition requiring that a copy of the PCN be provided for any projects affecting classified waters.

- **NWP 14 – Linear Transportation Projects**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 15 – U.S. Coast Guard Approved Bridges**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities, except those affecting classified waters. Individual certification is required for projects affecting classified waters.

- **NWP 16 – Return Water From Upland Contained Disposal Areas**
  -EPA denied certification and individual certification is required for all activities.
  -NDDEQ certified with a condition requiring that a copy of the PCN be provided for any projects affecting classified waters.

- **NWP 17 – Hydropower Projects**
  -EPA denied certification and individual certification is required for all activities.
  -NDDEQ certified for all activities, except those affecting classified waters. Individual certification is required for projects affecting classified waters.

- **NWP 18 – Minor Discharges**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 19 – Minor Dredging**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities, provided spoils are disposed of at an upland site and are not allowed to drain back to waters of the state.

- **NWP 20 – Response Operations for Oil or Hazardous Substances**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 22 – Removal of Vessels**
  -EPA waived certification for all activities.
  -NDDEQ certified for all activities.

- **NWP 23 – Approved Categorical Exclusions**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities, except those impacting classified waters and bank loss exceeds 300 linear feet. Individual certification is required for the excepted projects.

- **NWP 24 – Indian Tribe or State Administered Section 404 Programs**
  -Not applicable in North Dakota.

- **NWP 25 – Structural Discharges**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified with conditions: 1) PCN must be provided for projects affecting classified waters; 2) Projects must not result in a net loss of wetland or wetland type; and 3) no in-stream berms, dams, or similar structures in classified waters, unless constructed in such a way that the stream assimilative capacity and aquatic life passage are maintained or the structures are part of a restoration project.

- **NWP 28 – Modifications of Existing Marinas**
  -Certification not required (Section 10 Only)

- **NWP 30 – Moist Soil Management for Wildlife**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 31 – Maintenance of Existing Flood Control Facilities**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 32– Completed Enforcement Actions**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified with a condition requiring that a copy of the PCN be provided for any projects affecting classified waters.

- **NWP 33 – Temporary Construction, Access, and Dewatering**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 34 – Cranberry Production Activities**
  -EPA denied certification and individual certification is required for all activities.
  -NDDEQ N/A

- **NWP 35 – Maintenance Dredging of Existing Basins**
  -Certification not required (Section 10 Only)

- **NWP 36 – Boat Ramps**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 37 – Emergency Watershed Protection and Rehabilitation**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 38 – Cleanup of Hazardous and Toxic Waste**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 41 – Reshaping Existing Drainage Ditches**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 45 – Repair of Uplands Damaged by Discrete Events**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 46 – Discharges in Ditches**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ certified for all activities.

- **NWP 49 – Coal Remining Areas**
  -EPA denied certification and individual certification is required for all activities.
  -NDDEQ certified for all activities.

- **NWP 53 – Removal of Low-Head Dams**
  -EPA denied certification and individual certification is required for all activities.
  -NDDEQ certified for all activities.

- **NWP 54 – Living Shorelines**
  -EPA waived certification for all activities.
  -NDDEQ N/A

- **NWP 59 – Water Reclamation and Reuse Facilities**
  -EPA certified with conditions (see EPA certification following this listing).
  -NDDEQ N/A

EPA certification follows.

October 13, 2021

U.S. Environmental Protection Agency Region 8 Clean Water Act Section 401 Water Quality Certification for the U.S. Corps of Engineers CWA Section 404 2021 Nationwide Permits Reissuance

This Certification applies to any potential point source discharges from potential projects authorized under the proposed re-issuance of the following U.S. Army Corps of Engineers CWA 404 Nationwide Permit (NWPs) into waters of the United States that occur within Indian country[1] lands within the state of North Dakota: NWP 3, 4, 5, 6, 7, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25, 27, 30, 31, 32, 33, 34, 36, 37, 38, 41, 45, 46, 49, 53, 54, and 59/E.[2]

Section 401(a)(1) of the Clean Water Act requires applicants for Federal permits and licenses that may result in discharges into waters of the United States to obtain certification that potential discharges will comply with applicable provisions of the CWA, including Sections 301, 302, 303, 306 and 307. Where no state agency or tribe has authority to give such certification, the U.S. Environmental Protection Agency (EPA) is the certifying authority. In this case, the Sisseton-Wahpeton Oyate, Spirit Lake Tribe, Standing Rock Sioux Tribe, Three Affiliated Tribes (the Mandan, Hidatsa and Arikara Nation), and Turtle Mountain Band of Chippewa Indians currently are not authorized to provide CWA Section 401 certifications for discharges occurring on reservations, or any other Indian country lands, within the State of North Dakota, therefore, the EPA is making the certification decisions for discharges that may result from potential projects authorized under the proposed Corps CWA 404 NWPs listed above. Although the above Tribes currently are not authorized to provide CWA Section 401 certifications, EPA will condition certifications using Tribal water quality requirements where applicable and appropriate.

General Information

The general information provided in this section is intended to provide context for EPA's certification decision and does not itself constitute a certification condition(s). The information in this section is being provided to help project proponents comply with the terms and conditions of the CWA Section 401 certification on the NWPs on applicable Indian country lands.

- Prior to work commencing, project proponents should notify the appropriate Tribal Environmental Office.
- The project proponents for projects authorized under the NWPs should obtain all other permits, licenses, and certifications that may be required by federal, state, or tribal authority.

[1] Indian country is defined in 18 U.S.C. Section 1151. Indian country in North Dakota generally includes (1) lands within the exterior boundaries of the following Indian reservations located within North Dakota: the Fort Berthold Indian Reservation, the Spirit Lake Reservation, the Lake Traverse Reservation, the Standing Rock Sioux Reservation, and the Turtle Mountain Reservation; (2) any land held in trust by the United States for an Indian tribe; and (3) any other areas that are "Indian country" within the meaning of 18 U.S.C. Section 1151.

[2] This Certification does not apply to the following NWPs: 1, 2, 8, 9, 10, 11, 24, 28, and 35. The Corps has not requested certification for these NWPs. If any activity authorized by these listed NWPs may result in a discharge into a water of the United States, the project proponent should contact the Corps or EPA to determine if a CWA Section 401 certification is required. Furthermore, NWPs 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, A/55, B/56, C/57, and D/58 were reissued in January 2021. 86 FR 2744. EPA denied certification for all these NWPs, except NWP 48. Project proponents must apply for an individual CWA Section 401 certification from EPA for all NWPs reissued in January 2021, except NWP 48, for which EPA expressly waived certification authority.

- If a project is unable to meet the enclosed conditions, or if certification is denied for an applicable NWP, the project proponent should request an individual CWA Section 401 certification from EPA. An individual certification request is subject to the requirements outlined in 40 CFR 121.
- Copies of this certification should be kept on the job site and readily available for reference.
- Pursuant to CWA section 308(a), EPA representatives may inspect the authorized activity and any mitigation areas to determine compliance with the terms and conditions of the NWP.
- If you have questions regarding this certification, or need assistance contacting the appropriate tribe, please contact EPA Region 8 at: R8CWA401@epa.gov and Aaron Blair at (303) 312-6883 or via email at blair.aaron@epa.gov or Toney Ott at (303) 312-6906 or via email at ott.toney@epa.gov. Additional information on tribes in EPA Region 8 also can be found at: https://www.epa.gov/tribal/region-8-tribal-program.

NWPs Granted with Conditions (121.7(d)(2))

On behalf of the tribes listed above, CWA Section 401 certification is granted with the following conditions for NWPs 3, 5, 6, 7, 13, 14, 15, 18, 19, 20, 23, 25, 27, 30, 31, 32, 33, 36, 37, 38, 41, 45, 46, and 59/E. EPA Region 8 has determined that any discharge authorized under these proposed NWPs will comply with water quality requirements, as defined in 40 C.F.R. 121.1(n), subject to the following conditions pursuant to Section 401(d). Note that all correlating justification statements and citations as required by 40 CFR 121.7(d)(2) are included in Appendix A.

General Condition 1: Point source discharges shall not occur in jurisdictional waters of these special aquatic resources: (1) fens, bogs, or other peatlands; (2) within 100 feet of the point of discharge of a known natural spring source; (3) riffle-pool complexes of streams; or (4) water sources above hanging gardens. Projects or activities expected to have potential discharges into these areas are not covered by this certification and require a project-specific CWA Section 401 certification from EPA Region 8.

A peatland is defined by the U.S. Forest Service as any type of peat covered terrain with an accumulation of at least 20 to 40 centimeters of peat within the upper 80 centimeters of the soil profile. More resources on peatlands and hanging gardens can be found here:
https://www.fws.gov/mountain-prairie/es/fen/FWSRegion6FenPolicy1999.pdf
https://www.fs.fed.us/wildflowers/beauty/California_Fens/what.shtml
https://cnhp.colostate.edu/cnhpblog/2009/08/11/hanging-gardens/
https://springstewardshipinstitute.org/hanging-garden

General Condition 2: Except as specified in the project plan, no debris, silt, sand, cement, concrete, oil or petroleum, organic material, or other construction related materials or wastes shall be allowed to enter or be stored within 100 feet of waters of the U.S. If materials are stored within 100 feet of waters of the U.S., the project plan shall identify the measures and controls that will be used to ensure the materials will not enter waters of the U.S. No activities shall result in an unconfined discharge of liquid cement into waters of the U.S.

Any materials not specified in the project plan that do enter waters of the U.S. shall be reported to EPA (R8CWA401@epa.gov) with a remediation plan within 15 days.

For emergency spills, including any spills of petroleum products, contact EPA's National Response Center at 1-800-424-8802, the appropriate Tribal Environmental Office, and local spill response hotlines within 24 hours.

General Condition 3: Activities that may result in a point source discharge shall occur during seasonal low flow or no flow periods. Activities that cannot meet this condition require a project-specific CWA Section 401 certification from EPA Region 8.

General Condition 4: When operating equipment or otherwise undertaking construction activities (including grouting riprap) in aquatic resources:

- Work shall be completed in the dry, unless justification for working in the wet can be documented by the project proponent prior to construction.[3]
- Concrete grouting shall be allowed to dry thoroughly before exposure to waters of the U.S.
- All equipment shall be cleaned prior to arriving on the project site. All equipment shall be inspected daily and prior to entering any streams or wetlands for oil, gas, diesel, anti-freeze, hydraulic fluid, and other petroleum leaks.
- All contaminated areas shall be cleaned immediately, and contaminated soil removed from the site or contained in enclosed containers. Containers shall not be stored within 100 feet of waters of the U.S. If site conditions do not allow for storage at least 100 feet away from waters of the U.S., or if the topography is such that storage can occur within 100 feet without risk to waters of the U.S., the project proponent shall document this along with the measures and controls that will be used to ensure contaminants will not enter waters of the U.S. All equipment detected with leaks shall be repaired promptly or moved offsite within 24 hours.
- Containment booms and/or absorbent material shall be available onsite. In the case of spills, containment booms and/or absorbent materials shall be employed immediately to prevent discharges from reaching waters of the U.S.

General Condition 5: For projects that require coverage under EPA's Construction General Permit, the project proponent shall submit the Stormwater Pollution Prevention Plan (SWPPP) to EPA Region 8 (R8CWA401@epa.gov).

For projects that do not require the development of a SWPPP, the project proponent shall document how the project will utilize construction techniques, including soil erosion and sediment controls, to prevent or minimize water quality degradation because of the project. Projects shall not permanently impact the overall health of the aquatic resource; beneficial uses shall not be lost or impaired.

General Condition 6: Vegetation in jurisdictional wetlands and waterbodies shall be protected except where its removal is necessary for completion of the work. Locations disturbed by construction activities shall be revegetated with appropriate native vegetation in a manner that optimizes plant establishment for the specific site (e.g., stockpiling of existing topsoil that is weed-seed free). Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching. All revegetation materials, including plants and plant seed shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities. Exceptions to native revegetation include agricultural lands that are being returned to crop or pasture vegetation, with Corps permission.

Where removal of vegetation occurs, the project proponent shall develop a restoration plan prior to initiating construction on the project. The restoration plan shall include measures, including but not limited to:

- The project proponent shall describe and photo document where the disturbance or removal of riparian/wetland vegetation will occur during the completion of the work.

[3] See "Working in the dry: Cofferdams, in-river construction, and the United States Army Corps of Engineers" https://usace.contentdm.oclc.org/digital/collection/p16021coll4/id/156/

- The project proponent shall revegetate disturbed jurisdictional areas within three months of completion of construction, based on pre-disturbance or reference site conditions, including percent cover and native species diversity.
- The project proponent shall revegetate any disturbed wetland soil with native plant species. Non-native and invasive species shall not be used for restoration activities.

General Condition 7: The placement of material (discharge) for the construction of new dams is not certified, except for stream restoration projects. Activities that cannot meet this condition require a project-specific CWA Section 401 certification from EPA Region 8.

General Condition 8 – Applicable only to the following NWPs: 3, 7, 13, 14, 15, 19, 23, 27, 37, and 59/E. Project proponents shall provide notice to EPA Region 8 at least 30 days prior to commencing work in water of the U.S. to provide EPA Region 8 with the opportunity to review and inspect the activity for the purposes of determining whether any discharge from the proposed project will violate this water quality certification. In cases where the Corps requires a PCN for the applicable NWP, in accordance with Corps' National General Condition 32(b), Pre-Construction Notification (86 FR 2873), the applicant shall also provide the PCN to Region 8.

Additionally, the applicant shall include a summary of communications with the affected Tribe's water quality staff regarding the project, including any concerns or issues, in its submission to EPA.

NWP-Specific Conditions:

NWP 3, Specific Condition 1: No more than 25 cubic yards of new or additional riprap shall be placed to protect the structure or fill. If a project proponent seeking NWP authorization plans to use more than 25 cubic yards of new or additional riprap to protect the structure or fill, the project proponent shall request a project-specific CWA Section 401 certification from EPA Region 8.

NWP 3, Specific Condition 2: Bridge replacements shall span the bankfull width and/or the ordinary highwater mark of the affected waters of the U.S. Projects or activities that cannot meet this condition require a project-specific CWA Section 401 certification from EPA Region 8.

NWP 3, Specific Condition 3: Fill or dredged material shall not result in an increase in land contour height beyond the original dimensions for the repair of low water crossings, or loss of stream cross section dimensions. Original land contour dimensions shall be documented prior to construction to confirm contours are returned to these dimensions post-maintenance activities.

NWP 3, Specific Condition 4: Silt and sediment removal shall not exceed:

1) 50 linear feet for low water crossings; and
2) 100 linear feet for bridge crossings.

Projects or activities that cannot meet this condition require a project-specific CWA Section 401 certification from EPA Region 8.

NWP 7, Specific Condition 1: Construction of the outfall structure shall be placed at the streambed elevation and, at a minimum, the pipe should be sized to prevent high pressure discharge of stormwater. Pipe sizing selection methods and justification that high pressure discharge will be minimized shall be documented by the

project proponent.

NWP 7, Specific Condition 2: Outfall structures shall not be constructed in jurisdictional wetlands. If a project proponent plans to construct an outfall structure in a jurisdictional wetland, the project proponent shall request a project-specific CWA Section 401 certification from EPA Region 8.

NWP 7, Specific Condition 3: For activities that do not require a SWPPP, the project proponent shall submit to EPA, an erosion and sediment control plan prior to construction that includes outfall stabilization controls. (Projects or activities requiring a SWPPP must submit the SWPPP to EPA per General Condition 5.)

The plan shall describe type, location, and maintenance schedules for all controls to be put in place prior to, during, and after construction to stabilize all areas of the bed and bank around and adjacent to the outfall structure and associated intake structures that may be affected by outfall or stream flows, respectively. The plan shall provide for maintenance of measures, and adaptive management processes if any measures are determined to be ineffective. During monitoring and maintenance, if water quality requirements are exceeded or if measures are identified as ineffective, then descriptions of additional measures taken to ensure compliance shall be sent to EPA within 48 hours of the exceedance or measure failure.

Rip rap aprons and/or energy dissipation structures shall be constructed to provide protection from the erosive potential of high-velocity flows, as documented in the erosion and sediment control plan, with adaptive management in place for potential structure failures.

NWP 7, Specific Condition 4: The project proponent shall submit a monitoring plan to EPA Region 8 prior to initiating construction on the project.

- The project proponent shall monitor the project site through the next growing season or until the site is restored to pre-disturbance or reference site conditions. The monitoring plan shall contain the restoration plan (as outlined in General Condition 6) and any additional adaptive management methods if the site is not achieving pre-disturbance or reference site conditions.
- The project proponent shall use referenced photographs to document the status of all relevant locations at the project site prior to construction, during project construction, after project completion, and upon completion of all restoration activities, consistent with the monitoring plan.
- The project proponent shall submit electronic photos (prior to, during and post-construction, and post-restoration) in an annual monitoring report to EPA Region 8 (R8CWA401@epa.gov). The report shall be labeled with the project name and Corps District number.

NWP 13, Specific Condition 1: The project proponent shall submit a project plan with design techniques and stabilization methods to EPA Region 8 prior to construction. Activities shall use native vegetation or other bioengineered design techniques (e.g., willow plantings, root wads, large woody debris, etc.) or a combination of hard-armoring (e.g., rock) and predominately native vegetation or bioengineered design techniques. Artificial soil stabilizing material (e.g., mulch, matting, netting, etc.) shall be used to reduce soil erosion. These materials, to include all plants and plant seed, shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities. Sediment control measures shall be maintained in good working order at all times.

Any project proposing bank stabilization solely using hard armoring methods, or where the scope of the entire project is greater than 500 linear feet, is not authorized under this certification and the project proponent shall seek a project-specific CWA Section 401 certification from EPA Region 8.

NWP 13, Specific Condition 2: The slopes of disturbed banks shall be configured to mimic a stable reference reach and not reduce the bottom width of the stream. Pre-construction cross sections shall be included in the project plan submitted to EPA Region 8.

NWP 13, Specific Condition 3: The project proponent shall submit a monitoring plan to EPA Region 8 prior to initiating construction on the project.

- The project proponent shall monitor the project site through the next growing season or until the site is restored to pre-disturbance or reference site conditions. The monitoring plan shall contain the restoration plan (as outlined in General Condition 6) and any additional adaptive management methods if the site is not achieving pre-disturbance or reference site conditions.
- The project proponent shall use referenced photographs to document the status of all relevant locations at the project site prior to construction, during project construction, after project completion, and upon completion of all restoration activities, consistent with the monitoring plan.
- The project proponent shall submit electronic photos (prior to, during and post-construction, and post-restoration) in an annual monitoring report to EPA Region 8 (R8CWA401@epa.gov). The report shall be labeled with the project name and Corps District number (if available).

NWP 14, Specific Condition 1: NWP 14 is conditionally certified, except that a project-specific CWA section 401 certification is required for projects authorized under one or more NWP by the Corps that result(s) in:

1. Greater than 1/10 acre of impacts to waters of the U.S.; or
2. Greater than 300 linear feet of impacts to waters of the U.S.

NWP 14, Specific Condition 2: The project proponent shall submit a project design plan to EPA Region prior to construction. Affected streambanks shall be sloped such that the stream bottom width is not reduced, and bottom elevations are restored to original elevations. Stream bank slopes should not be steeper than 3:1. Justification for banks steeper than 3:1 shall be included in the project design plan. The project design plan also shall document how all temporary fills and structures will be removed, and the area restored to pre-project conditions.

NWP 14, Specific Condition 3: Permanent culverts shall be installed using an established culvert analysis and design tool (ex. HY-8, HEC-RAS, USGS CAP, etc.). Culverts shall span the bankfull width and/or ordinary high-water mark of the affected waterbody. The culvert bottom shall be installed below the existing streambed elevation to allow aquatic organism passage and the natural substrate to reestablish.

NWP 14, Specific Condition 4: The project proponent shall submit a monitoring plan to EPA Region 8 prior to initiating construction on the project.

- The project proponent shall monitor the project site through the next growing season or until the site is restored to pre-disturbance or reference site conditions. The monitoring plan shall contain the restoration plan (as outlined in General Condition 6) and any additional adaptive management methods if the site is not achieving pre-disturbance or reference site conditions.
- Impacts to aquatic resource buffers shall be avoided. If avoidance is not possible, methods for buffer restoration and monitoring shall be in the monitoring plan.
- The project proponent shall use referenced photographs to document the status of all relevant locations at the project site prior to construction, during project construction, after project completion, and upon completion of all restoration activities, consistent with the monitoring plan.

- The project proponent shall submit electronic photos (prior to, during and post-construction, and post-restoration) in an annual monitoring report to EPA Region 8 (R8CWA401@epa.gov). The report shall be labeled with the project name and Corps District number (if available).

NWP 15, Specific Condition 1: Fill or dredged material shall not result in an increase in land contour height beyond the original dimensions of the waterbody. Original land contour dimensions shall be documented prior to construction to confirm contours are restored to pre-disturbance conditions. Affected streambanks shall be sloped such that the stream bottom width is not reduced, and bottom elevations are restored to original elevations. Stream bank slopes should not be steeper than 3:1. Justification for banks steeper than 3:1 shall be included in the project design plan. The project design plan also shall document how all temporary fills and structures will be removed, and the area restored to pre-project conditions.

NWP 15, Specific Condition 2: Crossings shall be placed perpendicular to the water course, unless the project proponent can document that this would result in increased impacts to aquatic resources or compromise the safety of the structure.

NWP 15, Specific Condition 3: Bridge decks shall be designed such that they do not drain directly into the waterbody.

NWP 15, Specific Condition 4: Bridges shall span the bankfull width, adjacent wetlands, and/or ordinary high-water mark of the affected waterbody. Projects that cannot meet this condition require a project-specific CWA Section 401 certification from EPA Region 8.

NWP 19, Specific Condition 1: Dredged or fill materials shall be placed in non-jurisdictional areas and controlled such that it cannot return to waters of the U.S. Dredged or fill material shall not be placed on islet, islands, sandbars, landmass or other area of sediment accumulation within the banks of a stream, shore of lake, edge of wetland or other type of waterbody, unless the project proponent can document that the vegetation and geomorphology signify a long-term stable configuration (e.g., areas of sediment accumulation are not formed from temporary situations such as drought conditions or upstream reservoir release conditions).

NWP 27, Specific Condition 1: NWP 27 is conditionally certified, subject to the general conditions listed above, except for the following activities, where an individual project-specific CWA Section 401 certification is required: (1) the project involves dam removal; and/or (2) the project or activities involve greater than 1-acre of impacts to waters of the U.S.; and/or (3) the project impacts greater than 500 linear feet of waters of the U.S.

NWP 37, Specific Condition 1: Original and planned stream contours shall be documented by the project proponent. Construction activities shall not result in the channelization of streams or sloughs. Channelization is defined, for this purpose, as the placement of excess material in a manner that modifies the bank alignment, and subsequently the channel alignment, from its present condition.

NWP 37, Specific Condition 2: Construction activities shall not remove silt beyond what was deposited by the emergency event. Based on the original site conditions and planned project design, the project proponent shall justify the amount of silt identified for removal, such that the construction activities do not result in the removal of silt beyond what was deposited by the emergency event (e.g., excavating a wetland area to the point it's a stormwater retention pond, or deepening/widening a stream channel to accommodate higher flow capacity).

NWP 37, Specific Condition 3: Construction of temporary structures or drains for the purpose of reducing or preventing flood damage shall be removed within 60 days following the emergency event, unless justification for retaining the structures for a longer period is documented by the project proponent.

NWPs Denied (121.7(e)(2))

On behalf of the Sisseton-Wahpeton Oyate, Spirit Lake Tribe, Standing Rock Sioux Tribe, Three Affiliated Tribes (the Mandan, Hidatsa and Arikara Nation), and Turtle Mountain Band of Chippewa Indians, EPA Region 8 cannot certify that the range of discharges from potential projects authorized under the following proposed NWPs will comply with water quality requirements, as defined in 40 CFR 121.1(n). Therefore, CWA Section 401 water quality certification is denied for NWPs 16, 17, 34, 49, and 53 and applicants must request an individual water quality certification, consistent with 40 CFR 121.5.

Certification denial is due to insufficient information. 40 CFR 121.7(e)(2)(iii). In EPA's unique role certifying on behalf of a tribe, EPA lacks important information about tribal water resources. In the case of the Sisseton-Wahpeton Oyate, Spirit Lake Tribe, Standing Rock Sioux Tribe, Three Affiliated Tribes (the Mandan, Hidatsa and Arikara Nation), and Turtle Mountain Band of Chippewa Indians, EPA Region 8 lacks sufficient information on sensitive resources that may exist on these tribal lands, potential impaired waters on these tribal lands, and potential cultural importance of the water resources on these tribal lands. Additional information on these specific subjects would be needed for EPA Region 8 to assure that the range of discharges from potential projects authorized under NWPs 16, 17, 34, 49, and 53 will comply with water quality requirements, as defined in 40 CFR 121.1(n).

This information would also be necessary for EPA Region 8 to identify specific water quality requirements and evaluate whether the range of discharges from potential projects will comply with such requirements, in accordance with CWA section 401(a)(1) and 40 CFR 121.7(b). Lacking this information, EPA Region 8 is therefore denying certification.

NWPs Waived (121.9(a)(1))

On behalf of the Sisseton-Wahpeton Oyate, Spirit Lake Tribe, Standing Rock Sioux Tribe, Three Affiliated Tribes (the Mandan, Hidatsa and Arikara Nation), and Turtle Mountain Band of Chippewa Indians, EPA Region 8 is expressly waiving its authority to act on the CWA § 401 certification request for the following proposed NWPs: 4, 22, and 54.

NORTH Dakota | Environmental Quality

Be Legendary.™

December 8, 2020

Patricia L. McQueary
Regulatory Program Manager, North Dakota
US Army Corps of Engineers
1513 South 12th Street
Bismarck, ND 58504-6640

Dear Ms. McQueary:

The department has completed reviewing the proposed 2020 Nationwide Permits (NWPs) for compliance with Standards of Quality for Water of the State (WQ-standards) and for Certification under Section 401 of the Clean Water Act.

The department has Clean Water Act Section 401 authority for North Dakota. Under that authority the department certifies, certifies with conditions, or denies select 2020 NWPs. Certification, certification with condition, and denials are issued to ensure that the water quality requirements as defined in the Standards of Quality of Water Quality of the State, North Dakota Administrative Code Chapter 33.1-16-02.1 (WQ-Standards) are supported as intended by the Clean Water Act (CWA) Sections 301, 301, 303, 306, and 307, the 40 Code of Federal Registry Part 121 and the ND Century Code 28-61-04.

If a project is unable to meet the enclosed conditions, or if certification is denied for an applicable NWP, the applicant may request an individual certification from the department. An individual certification request must follow the requirements outlined in §121.5 of EPA's CWA § 401 Certification Rule, effective September 11, 2020.

The department may inspect any authorized activity to determine compliance with the terms and conditions (Section 121.11).

Under Section 401 of the Clean Water Act this department grants certification to the following Nationwide Permits as the discharge(s) will comply with water quality requirements:

1) **Nationwide Permits Not Applicable:** No. 8, 24, 34, 54, A, B, and E.

2) **Nationwide Permits Clean Water Certified:** No. 1, 2, 3, 4, 5, 6, 9, 10, 11, 14, 18, 20, 21, 22, 25, 28, 30, 31, 33, 36, 37, 38, 41, 43, 44, 45, 46, 48, 49, 50, 51, 53, and C.

Under Section 401 of the Clean Water Act the department grants certification with conditions (Section 121.7(d)(2)) to the following Nationwide Permits, as with the conditions discharge(s) will comply with water quality requirements:

3) **Nationwide Permits 7, 13, 16, 32, 35, and 52:** Nationwide Permits 7, 13, 16, 35 and 52 are granted Section 401 Clean Water Certification with the condition that all projects, (Including Federal and Non-Federal Permittees), provide preconstruction notification (PCN) for projects in, over or under Class I, IA, II and class III rivers and streams, and classified lakes listed in Appendixes I and II of the WQ-Standards

   Section 121.7(d)(2)
   (i) A preconstruction notification (PCN) requirements for Federal and Federal Permittees provides the department the means to ascertain if the Water Quality Standards are being supported and to confirm if the action was implemented as permitted. Both of these are required under 40 CFR § 121.2 [Clean Water Certification is required for any license or permit that authorizes an activity that may result in a discharge] and 40 CFR 121.11(b) [The certifying authority, prior to the initial operation of a certified project, shall be afforded the opportunity to inspect the facility or activity of the purpose of determining whether the discharge from the certified project will violate the certification].

   (ii) Without a PCN the department and USACE regulator will be blind to any violations, preventing the requirements of 40 CFR 121.11(c) [The Federal agency shall be responsible for enforcing certification condition that are incorporated into a license or permit]. Without a PCN Sections 301,302,303,306 and 307 of the Clean water act (CWA) cannot be supported.

4) **Nationwide Permits 15, and 17:** Nationwide Permits 15 and 17 are granted Section 401 Clean Water Certification except those in, on or over Class I, IA, II Rivers and Streams.

   Section 121.7(d)(2)
   (i) Bridges and hydropower dams sequester sediments and other pollutants from runoff, as well as reduce or increase flow velocities in waters of the state. Maintaining natural stream morphology reduces the destabilization of the stream/river.

   Drainage directly from hydropower surfaces and bridge decks may cause erosion, and introduce additional pollutants, such as oil, gas, sediment, and toxics. Directing bridge deck drainage into constructed runoff water quality control systems will help prevent erosion and keep pollutants from directly entering the waterway.

   The placement of a structure within the ordinary highwater alters the hydrologic characteristics of the waterbody leading to increased erosional forces, scour around the structures, increased sediment loads to the waterbody, abandonment of the primary channel, and undermining of the structure itself.

   (ii) All streams are waters of the state under North Dakota Century Code 28-61-04 and protected by North Dakota Administrative Code Chapter 33.1-16-02.1 for the

beneficial uses, municipal, domestic, aquatic life, recreation, agriculture, and industry. In order to ensure that state law is supported bridges and hydropower projects need project and specific conditions and allow inspections during and after construction (Section 121.11).

Authority for NWP 15 and 17 are 40 CFR § 121.2 [Clean Water Certification is required for any license or permit that authorizes an activity that may result in a discharge] and 40 CFR 121.11(b) [The certifying authority, prior to the initial operation of a certified project, shall be afforded the opportunity to inspect the facility or activity of the purpose of determining whether the discharge from the certified project will violate the certification]. Conditioning of NWP 17 and 19 insure support of Sections 301,302,303,306 and 307 of the CWA.

5) **Nationwide Permit 19:** Nationwide Permit 19 is granted Section 401 Clean Water Certification with the condition spoils are disposed at an upland site where they will not drain back to waters of the state.

Section 121.7(d)(2)
(i) Discharge of dredge material has the capacity to bury the biological community, impact stream function, and release trace elements in concentration exceeding the numeric criteria in the WQ-standards.

(ii) All streams, rivers, lakes, ponds and wetlands are waters of the state under North Dakota Century Code 28-61-04 are protected by North Dakota Administrative Code Chapter 33.1-16-02.1 for the beneficial uses, municipal, domestic, aquatic life, recreation, agriculture, and industry. Conditioning of NWP 19 insure support of Sections 301,302,303,306 and 307 of the CWA.

6) **Nationwide Permits 23, and 29:** Nationwide Permits 23 and 29 are granted Section 401 Clean Water Certification with the condition that the project will not result in a stream bank loss exceeding 300 Linear feet in Class I, IA, II and III streams. Projects that cannot meet the condition under nationwide Permits 23 and 29 will require an individual certification.

Section 121.7(d)(2)
(i) Projects exceeding 300 linear feet of stream bank have the capacity to remove the biological, hydraulic and geomorphic stream function, disconnect and fragment the watershed and potentially result in the total loss of a stream.

(iii) All streams are waters of the state under North Dakota Century Code 28-61-04 and protected by North Dakota Administrative Code Chapter 33.1-16-02.1 for the beneficial uses of municipal, domestic, aquatic life, recreation, agriculture, and industry. Conditioning of NWP 19 insure support of Sections 301,302,303,306 and 307 of the CWA.

7) **Nationwide Permit 27:** Nationwide Permit 27 is granted Section 401 Clean Water Certification with the following conditions: (1) Projects in Class I, IA, II, III rivers and streams, and classified lakes listed in Appendixes I and II of the WQ-Standards must provide a preconstruction notification, (2) projects will not result in a net loss of wetland or wetland type, and (3) no in-stream berms, dams, or similar structures on Class I, IA, and II, III river or stream listed in the Appendix I of the standards unless constructed in such a way that the stream assimilative capacity and aquatic life passage are maintained or the structures are part of a stream, river, wetland, or lake restoration project.

Section 121.7(d)(2)
(i) NWP 27 is sometimes used for damning, ephemeral and intermittent drainages. A PCN is required to ensure appropriate conditions are applied during and after construction to protect aquatic life passage, existing beneficial uses and prevent construction in ecological settings likely to become contaminant sinks (WQ-Standards). Projects need to demonstrate that at maturity there will be no net loss of wetland and wetland types. Wetland/wetland type and associated vegetation ensure no loss of assimilative capacity of contaminates, nutrients, and sediment to protect aquatic life (WQ-Standards).

(iv) Under 40 CFR § 121.2 [Clean Water Certification is required for any license or permit that authorizes an activity that may result in a discharge], 40 CFR 121.11(b) [The certifying authority, prior to the initial operation of a certified project, shall be afforded the opportunity to inspect the facility or activity of the purpose of determining whether the discharge from the certified project will violate the certification], and 40 CFR 121.11(c) [The Federal agency shall be responsible for enforcing certification condition that are incorporated into a license or permit]. Without a PCN, 40 CFR § 121.2, 40 CFR 121.11(b), or 40 CFR 121.11(c) cannot be satisfied. Conditioning of NWP 27 insure support of Sections 301,302,303,306 and 307 of the CWA.

8) **Nationwide Permits 39, 40, and 42:** Nationwide Permits 39, 40 and 42 are granted Section 401 Clean Water Certification with the condition that the resulting will not cause a loss or relocation of 150 feet or more of any river or stream. Projects that cannot meet the condition under nationwide Permits 39, 40 and 42 will require an individual certification.

Section 121.7(d)(2)
(i) North Dakota has many intermittent and perennial streams with bed widths of less than four (4) feet. Projects with large footprints (i. g., Commercial, Industrial, Agricultural, and Recreational) that remove ≥150 linear feet of stream bank have the capacity to remove the capability, singularly or cumulatively, of the biological, assimilative, hydraulic and geomorphic stream function, disconnect and fragment the watershed and potentially result in the total loss of a stream.

(v) All streams are waters of the state under North Dakota Century Code 28-61-04 and protected by North Dakota Administrative Code Chapter 33.1-16-02.1 for the beneficial uses, municipal, domestic, aquatic life, recreation, agriculture, and industry.

Conditioning of NWP 39, 40, and 42 insure support of Sections 301,302,303,306 and 307 of the CWA.

9) **Nationwide Permit D (Utility Line Activities for Water and Other Substances):** Utility line activities under Nationwide Permit D for water and other substances are granted Section 401 Clean Water Certification with the condition they do not carry oil and gas production water, produce water, or brine water. Pipelines that carry oil or gas production water, produced water, or brine water, collectively called saltwater pipelines, in, over or under Class I, IA, II and class III rivers and streams, and classified lakes listed in Appendixes I and II of the WQ-standards will require an individual certification with conditions based on the specific waterbody, location on the water, type of construction, and safety controls applied prior, during, and after construction.

Section 121.7(d)(2)
(i) Documentation of the "may discharge" by saltwater pipelines in violation of North Dakota's Administrative Code Chapter 33.1-16-02.1, the Clean Water Act 301, 302 (40 CFR part 121) are the 284 reported pipeline releases/failures reported in North Dakota between January 1, 2016 and October 1, 2020.

Saltwater pipelines in, over or under Class I, IA, II and class III rivers and streams, and classified lakes listed in Appendixes I and II of the WQ-standards need to be conditioned based on the waterbody, location on the water, type of construction, and safety controls applied prior during and after construction.

Pipelines carrying oil or gas production water, produced water, or brine water can be constructed to minimize discharge and failure potential through appropriate permit conditions. Under the proposed 2020 NWP D information is required to develop project specific conditions. General information needed to certify or certify with conditions is, but not limited to is: 1) construction type, 2) design, 3) crossing type, 4) monitoring, 5) safety systems installed, and 6) what toxin or pollutant is being transported by the pipeline.

Specific information required: (1) The geologic and geomorphic conditions at the constructions site to determine the likelihood of point source releases from construction activities such as the common frac-out of directional drilling fluids and the toxicity of the fluids, and (2) the location of the project in order to inspect during and after construction to ensure compliance with conditions (§121.11). Finally, there is a physical requirement to know that that all saltwater pipelines are installed at depths below any potential scour to protect them from the hydraulic energies of water.

(ii) Class I, IA, II and III streams under 40 CFR 131.10 and state law ND Century Code 28-61-04 have federally and state defined beneficial uses. These include the Clean Water Act (CWA) 101(a)(2) beneficial uses of "*wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983*". Class I, IA, II and III streams under 40 CFR 131.10 and state law ND Century Code 28-

61-04 also have state defined beneficial uses. These include municipal, domestic, agriculture, and industrial uses. Pollutant releases into state waters may occur during and after construction of production, produced and brine water (saltwater) pipelines. Releases will violate sections 301, 302, 303, and 306 of the Clean Water Act, and WQ-Standards.

The department has the legal obligation to ensure the protection of the beneficial uses: municipal and industrial, fish and aquatic biota, recreation, agriculture, and industrial by insuring the ND Century Code 28-61-04 is supported by the WQ-Standards as determined by the Clean Water Act 301, 302, 303, and 306 and information to do so (§121.11).

Under Section 401 of the Clean Water Act the department denies (CFR 40 Section 121.7(e)(2)) certification of the following Nationwide Permits as the discharge(s) will not comply with water quality requirements:

10) **Nationwide Permit 12:** Oil and gas natural related projects in Class I, IA, II and class III rivers and streams, and classified lakes listed in Appendixes I and II of the standards are denied Section 401 Water Quality Certification.

Denied Section 121.7(e)(2)
(i) Documented "May discharge" by oil and natural gas pipelines in violation of North Dakota's Administrative Code Chapter 33.1-16-02.1, the Clean Water Act 301, 302 and 40 CFR Part 121 is documented by the 183 crude oil pipeline releases/failures reported in North Dakota between January 1, 2016 and October 1, 2020.

Pipeline permitted under NWP 12 can be built/constructed to minimize discharge and failure potential through appropriate conditioning. Under the proposed 2020 NWP there is not enough information to do so. General information needed to certify or certify with conditions is, but not limited to is: 1) construction type, 2) design, 3) crossing type, 4) monitoring, 5) safety systems installed, and 6) what toxin or pollutant is being transported by the pipeline.

Specific information required: (1) The geologic and geomorphic conditions at the constructions site to determine the likelihood of point source releases from construction activities such as the common frac-out of directional drilling fluids and the toxicity of the fluids, and (2) the location of the project in order to inspect during and after construction to ensure compliance with conditions (§121.11). Finally, there is a requirement to know that all oil and natural gas pipelines are installed at depths below any potential scour to protect them from the hydraulic energies of water.

(ii) Class I, IA, II and III streams under 40 CFR 131.10 and state law ND Century Code 28-61-04 have federally and state defined beneficial uses. These include the Clean Water Act (CWA) 101(a)(2) beneficial uses of "*wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983*".

Class I, IA, II and III streams under 40 CFR 131.10 and state law ND Century Code 28-61-04 also have state defined beneficial uses. These include municipal, domestic, agriculture, and industrial uses. Pollutant releases into state waters may occur during and after construction of crude oil, natural gas and oil related pipelines. Releases will violate sections 301, 302, 303, 306 and 307 of the Clean Water Act, and WQ-Standards.

The department has the legal obligation to ensure the protection of the beneficial uses: municipal and industrial, fish and aquatic biota, recreation, agriculture, and industrial by ensuring the ND Century Code 28-61-04 is supported by the WQ-Standards as determined by the Clean Water Act 301, 302, 303, 306, and 307 and information to do so (§121.11).

The WQ-Standards may be found at https://www.legis.nd.gov/information/acdata/pdf/33.1-16-02.1.pdf. Within the WQ-Standards are the Authority 33.1-16-02.1-01, Beneficial uses 33.1-16-02.1-04, Narrative standards 33.1-16-02.1-08, Numeric standards 33.1-16-02.1-09, Stream and stream class (Appendix I), Lake and lake classifications (Appendix II), Antidegradation policy (Appendix IV).

Sincerely,

Karl H. Rockeman, P.E.
Director, Division of Water Quality

PNW:saj