

NO. 31

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION
REQUEST FOR PROPOSAL

STATE FEDERAL AID PROJECT NO. SOIB-NH-7-085(110)127 (PCN-22304)

0.558 Miles

GEOTECHNICAL REPAIRS UTILIZING DRILLED SHAFTS, GROUND ANCHORS AND SLOPE GRADING, PIPE
REPAIRS, JACKED OR BORED PIPE AND HMA MILL & OVERLAY

US 85, 1 MI N OF LONG X BRIDGE - HORSESHOE BEND

MCKENZIE COUNTY

DBE Race Neutral Goal - 0%

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 November 13, 2020.**

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)

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Project: SOIB-NH-7-085(110)127 (PCN-22304)

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

Project: SOIB-NH-7-085(110)127 (PCN-22304)

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- 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: SOIB-NH-7-085(110)127 (PCN-22304)

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: \$ _____

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: SOIB-NH-7-085(110)127 (PCN-22304)

RECEIPT OF ADDENDA ACKNOWLEDGEMENT

We hereby acknowledge receipt of the following addenda:

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

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: SOIB-NH-7-085(110)127 (PCN-22304)

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	201	0330	CLEARING & GRUBBING	L SUM	1.				
003	202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES	EA	2.				
004	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	164.				
005	202	0210	REMOVAL OF MANHOLES	EA	1.				
006	202	0312	REMOVE EXISTING FENCE	LF	1,341.				
007	203	0102	COMMON EXCAVATION-TYPE B	CY	25,325.				
008	203	0109	TOPSOIL	CY	3,558.				
009	203	0113	COMMON EXCAVATION-WASTE	CY	5,455.				
010	203	0140	BORROW-EXCAVATION	CY	7,914.				
011	216	0100	WATER	M GAL	380.				
012	251	0300	SEEDING CLASS III	ACRE	5.200				
013	251	2000	TEMPORARY COVER CROP	ACRE	7.900				
014	253	0301	BONDED FIBER MATRIX	ACRE	9.200				
015	255	0103	ECB TYPE 3	SY	18,399.				
016	255	0201	TRM TYPE 1	SY	120.				

BID ITEMS

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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	256	0200	RIPRAP GRADE II	CY	330.				
018	261	0112	FIBER ROLLS 12IN	LF	3,830.				
019	261	0113	REMOVE FIBER ROLLS 12IN	LF	3,830.				
020	302	0050	TRAFFIC SERVICE AGGREGATE	TON	5,080.				
021	302	0251	DRAINAGE AGGREGATE	CY	117.				
022	401	0050	TACK COAT	GAL	1,468.				
023	411	0105	MILLING PAVEMENT SURFACE	SY	16,061.				
024	430	0045	SUPERPAVE FAA 45	TON	3,007.				
025	430	1000	CORED SAMPLE	EA	21.				
026	430	5806	PG 58H-28 ASPHALT CEMENT	TON	180.400				
027	602	0130	CLASS AAE-3 CONCRETE	CY	1,291.100				
028	612	0115	REINFORCING STEEL-GRADE 60	LBS	67,414.				
029	702	0100	MOBILIZATION	L SUM	1.				
030	704	0100	FLAGGING	MHR	80.				
031	704	1000	TRAFFIC CONTROL SIGNS	UNIT	1,060.				
032	704	1048	PORTABLE RUMBLE STRIPS	EA	2.				

BID ITEMS

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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	704	1060	DELINEATOR DRUMS	EA	22.				
034	704	1067	TUBULAR MARKERS	EA	60.				
035	704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	1.				
036	704	1185	PILOT CAR	HR	40.				
037	706	0400	FIELD OFFICE	EA	1.				
038	706	0500	AGGREGATE LABORATORY	EA	1.				
039	706	0550	BITUMINOUS LABORATORY	EA	1.				
040	706	0600	CONTRACTOR'S LABORATORY	EA	1.				
041	709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	501.				
042	709	0161	GEOSYNTHETIC MATERIAL TYPE S1	SY	358.				
043	714	3151	HEADWALL-PRECAST CONCRETE 6IN	EA	4.				
044	714	4125	PIPE CONDUIT 48IN	LF	100.				
045	714	4128	PIPE CONDUIT 48IN-APPROACH	LF	44.				
046	714	4135	PIPE CONDUIT 60IN	LF	158.				
047	714	4140	PIPE CONDUIT 66IN	LF	58.				
048	714	4168	PIPE CONDUIT 60IN-JACKED OR BORED	LF	330.				

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
049	714	9659	REMOVE & RELAY PIPE-ALL TYPES & SIZES	LF	100.				
050	714	9680	PLUG PIPE-ALL TYPES & SIZES	EA	1.				
051	714	9730	UNDERDRAIN PIPE PVC PERFORATED 6IN	LF	760.				
052	714	9771	UNDERDRAIN PIPE PVC NON-PERFORATED 6IN	LF	89.				
053	722	0120	MANHOLE 72IN	EA	1.				
054	722	0130	MANHOLE 84IN	EA	2.				
055	722	0315	MANHOLE CASTING	EA	1.				
056	722	1120	MANHOLE RISER 72IN	LF	20.250				
057	722	1130	MANHOLE RISER 84IN	LF	20.				
058	722	6201	ADJUST MANHOLE SPECIAL	EA	2.				
059	752	0200	FENCE BARBED WIRE 4 STRAND	LF	150.				
060	752	0700	FENCE WOVEN WIRE	LF	1,219.				
061	752	0905	TEMPORARY FENCE	LF	150.				
062	752	2110	RESET VEHICLE GATE	EA	1.				
063	752	3120	CORNER ASSEMBLY WOVEN WIRE	EA	8.				
064	752	4120	DOUBLE BRACE ASSEMBLY WOVEN WIRE	EA	2.				

BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
065	754	0805	OBJECT MARKERS - CULVERTS	EA	3.				
066	760	0005	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	1.060				
067	760	0007	RUMBLE STRIPS - ASPHALT CENTERLINE	MILE	.530				
068	762	0113	EPOXY PVMT MK 4IN LINE	LF	23,800.				
069	762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	2,100.				
070	902	0400	MACHINE HYGIENE	L SUM	1.				
071	930	3995	5.0FT DIAMETER DRILLED SHAFT	LF	2,784.				
072	930	3996	5.0FT DIAMETER DRILLED SHAFT (MOD)	LF	3,728.				
073	930	3997	6.0FT DIAMETER DRILLED SHAFT	LF	1,961.				
074	930	4150	GROUND ANCHOR	LF	15,455.				
075	930	4155	SACRIFICIAL GROUND ANCHOR LOAD TEST	EA	2.				
076	930	4200	INSTRUMENTATION-INCLINOMETER	LF	450.				
077	930	4210	INSTRUMENTATION-STRAIN GAUGE	EA	16.				
078	930	4221	INSTRUMENTATION-DRILLED SHAFT MOVEMENT SENSOR	LF	432.				
079	930	4225	INSTRUMENTATION-DATA LOGGING EQUIPMENT	L SUM	1.				
080	930	4250	CROSS-HOLE SONIC LOG TEST	EA	13.				

BID ITEMS

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
081	930	4251	CROSS-HOLE SONIC LOG TEST - MOD 1	EA	2.				
082	930	4260	THERMAL INTEGRITY PROFILING TEST	EA	4.				
083	930	4261	THERMAL INTEGRITY PROFILING TEST - MOD 1	EA	1.				
084	930	8230	SHORING	EA	1.				
085	980	0100	CATTLE GUARD 8FT X 28FT	EA	2.				
086	980	0171	REMOVE CATTLE GUARD	EA	2.				
			TOTAL SUM BID						

Project: SOIB-NH-7-085(110)127 (PCN-22304)

Type of Work: GEOTECHNICAL REPAIRS UTILIZING DRILLED SHAFTS, GROUND ANCHORS AND SLOPE GRADING, PIPE REPAIRS, JACKED OR BORED PIPE AND HMA MILL & OVERLAY

County: MCKENZIE

Length: 0.5580 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 06/19/2022 *. 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.

***THIS DATE IS FOR ALL WORK. LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE ALL WORK BY JUNE 19, 2022 WILL BE CHARGED ACCORDING TO SECTION 108.07.**

REFER TO SP 51(20) WINTER SUSPENSION AND NOTE 251-P01 ORDER OF OPERATIONS FOR SEEDING FOR ADDITIONAL TIME AND LIQUIDATED DAMAGE REQUIREMENTS.

PROPOSAL FORM

North Dakota Department of Transportation

BID OPENING: November 13, 2020**Job 031**

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Project: SOIB-NH-7-085(110)127 (PCN-22304)**Type of Work:** GEOTECHNICAL REPAIRS UTILIZING DRILLED SHAFTS, GROUND ANCHORS AND SLOPE GRADING, PIPE REPAIRS, JACKED OR BORED PIPE AND HMA MILL & OVERLAY**County:** MCKENZIE**Length:** 0.5580 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.

_____,
BIDDER MUST SIGN ON THIS LINE

TITLE _____

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 # 31, SOIB-NH-7-085(110)127

Geotechnical Repairs, Ground Anchors, Slope Grading, Pipe Repairs Jacked or Bored Pipe, HMA Mill and Overlay

INDEX OF PROVISIONS

Road Restriction Permits

Hot Line Notice

Price Schedule for Miscellaneous Items dated October 1, 2014 (PS-1)

SP DBE Program - Race Neutral dated February 1, 2018

E.E.O. Affirmative Action Requirements dated March 15, 2014

Appendix A of the Title VI Assurances dated September 8, 2020

Appendix E of the Title VI Assurances dated September 8, 2020

SP Cargo Preference Act

Required Contract Provisions Federal Aid Construction Contracts
(Form FHWA 1273 Rev. May 1, 2012)

SP Certified Payrolls, dated 9-6-17

SP DBE Project Payment Reporting, dated 10-3-17

Labor Rates from U.S. Department of Labor dated August 28, 2020 (Mod. No. 5)

On-The-Job Training Program dated October 1, 2016

SSP 1 Temporary Erosion & Sediment Best Management Practices

SSP 4 Longitudinal Joint Density

SSP 5 Limitations of Operations

SSP 7 Bitumen Testing Price Adjustments

SSP 8 Federal Prohibition on Certain Technological Hardware

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SP 1(20) Ground Anchor

SP 2(20) Crosshole Sonic Log Tests

SP 3(20) Drilled Shaft

SP 4(20) Instrumentation

SP 5(20) Thermal Integrity Profiling

SP 6(20) Mass Concrete

SP 11(20) Erionite Containment

SP 13(20) Machine Hygiene & Noxious Weed Control

SP 51(20) Winter Suspension

PSP 1 Permits and Environmental Considerations

SP Fuel Cost Adjustment Clause dated September 8, 2006

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
<p>Highways Restricted by Legal Weight</p> <p>Single Axle -- 20,000 lbs. Tandem Axle -- 34,000 lbs. Triple Axle -- 48,000 lbs. 4 Axles or more -- 15,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 105,500 lbs.</p> <p>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.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>105,501 lbs. to 130,000 lbs. GVW -- \$1 per mile</p> <p>Over 130,000 lbs. GVW -- \$1 per mile plus \$5 per ton per mile for that weight exceeding 130,000 lbs. GVW</p> <p>Exceeding axle limits -- \$1 per ton per mile</p>
<p>8-Ton:</p> <p>Single Axle -- 16,000 lbs. Tandem Axle -- 32,000 lbs. 3 Axles or more -- 14,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 105,500 lbs.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>105,501 lbs. to 120,000 lbs. GVW -- \$1 per mile</p> <p>Over 120,000 lbs. GVW -- \$1 per mile plus \$5 per ton per mile for that weight exceeding 120,000 lbs. GVW</p> <p>Exceeding restricted axle limits -- \$1 per ton per mile</p>
<p>7-Ton:</p> <p>Single Axle -- 14,000 lbs. Tandem Axle -- 28,000 lbs. 3 Axles or more -- 12,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 105,500 lbs.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>105,500 lbs. to 110,000 lbs. GVW -- \$1 per mile</p> <p>Over 110,000 lbs. GVW -- \$1 per mile plus \$5 per ton per mile for that weight exceeding 110,000 lbs. GVW</p> <p>Exceeding restricted axle limits -- \$1 per ton per mile</p>
<p>6-Ton:</p> <p>Single Axle -- 12,000 lbs. Tandem Axle -- 24,000 lbs. 3 Axles or more -- 10,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 80,000 lbs.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>\$5 per ton per mile for all weight exceeding 80,000 lbs. GVW</p> <p>Exceeding restricted axle limits -- \$1 per ton per mile</p>
<p>5-Ton:</p> <p>Single Axle -- 10,000 lbs. Tandem Axle -- 20,000 lbs. 3 Axles or more -- 10,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 80,000 lbs.</p>	<p>No overweight movement allowed</p>

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

10/1/2014

**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. 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.

SECTION NO.	SECTION NAME	ITEM NAME	PRICE PER ITEM
107.08	Haul Roads	Water	\$27 per M Gal
107.08	Haul Roads	Bitumen for Mix	Invoice Price ¹ + 10%
107.08	Haul Roads	Bituminous Mix	\$42 per Ton ²
107.08	Haul Roads	Aggregate Base	\$17 per Ton ²
203.01 B	Rock Excavation	Rock Excavation	\$11 per CY
203.01 C	Shale Excavation	Shale Excavation	Common Excavation Price + \$1.00 per CY
203.01 D	Muck Excavation	Muck Excavation	\$9 per CY
203.05 H.3	Embankment	Overhaul	\$1.40 per CY - Mile
260	Silt Fence	Mucking Silt Fence	\$3.90 per LF
260	Silt Fence	Removal of Silt Fence ³	\$4.25 per LF
261	Fiber Rolls	Mucking of Fiber Rolls	\$3.90 per LF
261	Fiber Rolls	Removal of Fiber Rolls ³	\$4.25 per LF
420.04 E	Bituminous Seal Coat	Blotter Sand	\$27 per Ton ²
430.04 G	Hot Mix Asphalt (Exc. Material Hauled to Disposal Area)	Bituminous Mixture	Machine Placed: Bid or Invoice Price + \$31 per ton Hand Placed: Bid or Invoice Price + \$48 per Ton
704	Temporary Traffic Control	Flagging	\$32 per MHR

¹Price paid for bituminous material will be invoice price plus freight costs.

²Price 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 and bituminous mix 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.

³This is only for pre-existing items that were not installed under the Contract.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION: DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

PROJECT SOIB-NH-7-085(110)127 (PCN-22304)

RACE/GENDER NEUTRAL GOAL: 0%

NDDOT Contact Information	
Contractor Sign In & Submit Advertisements https://apps.nd.gov/dot/cr/csi/login.htm	Amy Conklin, DBE Program Administrator 701-328-3116 - or - aconklin@nd.gov
Submit quotes and post-bid documentation to: subquotes@nd.gov or Fax: 701-328-0343	Ramona Bernard, Civil Rights Division Director 701-328-2576 - or - rbernard@nd.gov
DBE Directory https://dotnd.diversitycompliance.com/	All times are stated in Central Time. The day of the bid opening is not counted as one of the business days.

PURPOSE

These provisions:

1. Provide an explanation of the federal law and outline the obligations to comply with the Federal DBE requirements applicable to this contract,
2. Explain the process NDDOT will follow to evaluate bidders' efforts to obtain DBE participation
3. Provide the standards NDDOT will use to measure compliance with the requirements
4. Identify sanctions for failing to comply with DBE program requirements.

QUOTES:

All bidders and all subcontractors over \$500,000 (regardless of whether they are apparent low bidder or their quote was used on a project in this bid opening) should submit a completed [SFN 52013-List of Businesses Submitting Quotes](#) by 4:00 pm CST, within 5 business days after the bid opening. **(Copies of quotes are no longer accepted).** This process is necessary in identifying "ready, willing, and able" contractors upon which to base the NDDOT Triennial DBE Goal. The number of contractors and the types of work they have bid/quoted will be used in the calculation of the DBE goal for each goal setting period.

All subcontractors, suppliers, manufacturers, regular dealers, vendors, and brokers should fax or email quotes to the Department no later than 9 PM the day before each bid opening.

All DBEs quoting on this project should submit all quotes and a list of contractors they quoted to NDDOT no later than 9 PM the day before each bid opening.

Prime contractors preparing to bid on NDDOT highway projects have requested that quotes be sent to them the day before the bid opening by:

- 2 PM Central - Suppliers (brokers/regular dealers), vendors, & manufacturers
- 5 PM Central - Subcontractors under \$500,000
- 8 PM Central - Subcontractors over \$500,000

REQUIREMENTS FOR ALL BIDDERS:

- ALL BIDDERS are strongly encouraged to submit all documentation at the time of bid opening.
- Must submit Form A with bid package at the time of bid opening.
- Must submit [Form C \(Notification of Intent to use\)](#) for DBE (if used) by 4:00 pm CST, within 2 business days after the bid opening. If no DBE's are used, Form C is not required.
- Completed [Form B](#), or a spreadsheet containing all the information on Form B, should be submitted by 4:00 pm, CST within 5 business days after the bid opening.
- Prime contractors are strongly encouraged to submit their bid documentation in one electronic file. Forms incorrectly submitted could result in a technicality, forcing the Department to award to the next responsive bidder.

To maximize subcontracting opportunities the following actions are encouraged.

ADVERTISE

All DBE and Non-DBE prime contractors and all subcontractors (over/under \$500,000), vendors, regular dealers/suppliers, and manufacturers, are encouraged to advertise using one of the two options:

OPTION 1: Place an advertisement soliciting DBE participation using the electronic [DBE Advertisement System](#).

- Submit the required information online at <https://apps.nd.gov/dot/cr/csi/login.htm> no later than noon, 15 calendar days before the bid opening.

OPTION 2: Directly contact by email or fax, all DBEs certified in the specific work type (NAICS) required for the job.

- Make contact with DBEs no later than 5 PM 7 calendar days before the bid opening.
- Use the DBE Directory to determine the DBE firms certified in the work to be subcontracted.

Either method of advertisement should:

- Provide the name, email address, telephone, and fax number of the company contact who will be available to discuss and/or receive quotes.
- Offer assistance to DBEs in interpreting plans; quantities; expected overtime; project scheduling; pit and batch plan locations, length of haul, type of road; method of measurement (seeding by the mile or acre, hauling by hour or by ton-mile) or other issues that may affect a price quote.

Indicate your intention to bid and/or receive quotes on specific jobs by using the Department's Bid Opening Sign in System

- The **[Bid Opening Sign-In](#)** web application located at <https://apps.nd.gov/dot/cr/csi/login.htm>.
Sign-In opens at 8 AM 7 calendar days prior to the bid opening and closes at 11 AM the day before the bid opening.
- Fill in the online form fields as required.
- Log in to download the "Bid Opening Contact Report" at <https://apps.nd.gov/dot/cr/csi/public/listBidOpenings.htm>

RECEIVE & EVALUATE ALL QUOTES GIVEN

All prime contractors and all subcontractors over \$500,000 should receive and evaluate all quotes offered.

All quotes given for each job should be faxed or emailed to prime contractors or subcontractors no later than the day before the bid opening. Subcontractors interested in work on the advertised jobs are encouraged to quote all contractors on the Sign-In report.

POST-AWARD REQUIREMENTS

FEDERAL AUTHORITY

The following paragraph must be included in all subcontracts of all tiers in accordance with 49 CFR § 26.13(b):

The contractor or all tiers of subcontractors 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 § 26.13 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 NDDOT 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

It is the prime contractors' responsibility to ensure all tiers of subcontractors, brokers, manufacturers, suppliers, vendors, and regular dealers comply with the requirements of this special provision. In addition, the prime contractor has the responsibility to monitor DBE performance on the project, and to ensure that the DBE performs a commercially useful function (CUF).

PRIME CONTRACTOR'S MONITORING, RESPONSIBILITIES, REPORTING

For the life of the project, the prime contractor is responsible for the DBEs listed on Form C and for the specific spec/code items or products that the prime committed to during the award process.

The prime contractor is responsible to:

- Report payments to DBEs used to meet the project goal. **Payments on the contract must be entered and stored in the CCS. Use of CCS on the project eliminates the requirement to submit SFN 60638 and SFN 14268.**
- Invite and encourage all subcontractors and all DBEs listed on [Form C](#) to the pre-construction conference.
- Provide minutes to any DBE not in attendance at the pre-construction conference.
- Ensure their firm as well as any subcontractors, manufacturers, and regular dealers/suppliers comply with the requirements of this special provision.
- Provide all subcontractors with Proposed Project Schedules and any necessary updates.
- Monitor DBE performance on the project.
 - Submit [SFN 60597, DBE Performance – Commercially Useful Function \(CUF\)](#) Certification to the project engineer with [SFN 5682, Prime Contractor's Request to Sublet](#). Project engineers will not approve Requests to Sublet without the CUF Certification.
- Maintain project records and documentation of payments to DBEs for three years following acceptance of the final payment from NDDOT (per FHWA-1273, Section II Nondiscrimination #11).
 - This reporting requirement also applies to any certified DBE.
 - NDDOT may perform interim audits of contract payments to DBEs to ensure that the actual amount paid to DBEs equals or exceeds the dollar amount stated on Form C.
 - Make these records available for inspection, upon request, by an authorized representative of the NDDOT or USDOT.

If SFN 60597, and reports of payment are not received in a timely manner, progress payments will be withheld from the prime until submitted.

NDDOT MONITORING AND ENFORCEMENT MECHANISMS

The Department will bring any false, fraudulent, or dishonest conduct in connection with the DBE program to the attention of USDOT. USDOT may pursue action as provided in 49 CFR § 26.107. Actions include referral to the Department of Justice for criminal prosecution or referral to the USDOT Inspector General for action under suspension and debarment, or Program Fraud and Civil Remedies rules. The Department will also consider similar action under its own legal authority, including responsibility determination in future contracts.

COMMERCIALLY USEFUL FUNCTION

DBEs are required to perform a commercially useful function (CUF). CUF refers to those services the DBE is certified to perform. Certified services for each DBE are listed in the online DBE Directory. It is a DBE's responsibility to immediately notify the prime contractor in writing if the DBE is unable to perform a CUF or the services indicated on [Form C](#).

The contractor must certify that DBEs working on the prime's contract are performing a commercially useful function. Submit [SFN 60597, DBE Performance – Commercially Useful Function Certification](#) to the project engineer with [SFN 5682 -Contractor's Request to Sublet](#). Project engineers will not approve the Requests to Sublet without the CUF Certification. A review of the certification must be performed by the project engineer to determine whether the contract dollar value of the DBE's work may be counted toward the project goal.

The Department counts participation to a DBE contractor toward DBE goals only if the DBE is performing a CUF on that contract.

- A. A DBE performs a CUF when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a CUF, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, installation and paying for the material itself. 49 CFR § 26.55(c)(1)
- B. A DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. 49 CFR § 26.55(c)(2)
- C. If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, the Department must presume that it is not performing a CUF. 49 CFR § 26.55(c)(3)
- D. When a DBE is presumed not to be performing a CUF as provided in paragraph C (above), the DBE may present evidence to rebut this presumption. 49 CFR § 26.55(c)(4)
- E. The Department's decisions on CUF matters are subject to review by Federal Highway Administration, but are not administratively appealable to USDOT. 49 CFR § 26.55(c)(5)

COUNTING RACE/GENDER NEUTRAL DBE PARTICIPATION - 49 CFR § 26.55

The Department does not count the participation of a DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE. 49 CFR § 26.55 (h)

The Department will count DBE participation toward our overall annual goal as provided in 49 CFR § 26.55 as noted below.

- 1. The Department will use the following factors in counting DBE trucking participation.
 - A. For purposes of this section, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE. 49 CFR § 26.55(d)(7)

- B. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract. 49 CFR § 26.55(d)(1)
- C. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract and receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs. 49 CFR § 26.55(d)(2-3)
- D. The DBE may lease trucks and drivers from another DBE firm and receives credit for the total value of the transportation services the lessee DBE provides. 49 CFR § 26.55(d)(4)
- E. The DBE may also lease trucks with drivers and is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the services under items 1C and 1D. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement. 49 CFR § 26.55(d)(5)

Example to 1D: DBE Firm X uses two of its own trucks on a contract. It leases two trucks with drivers from DBE Firm Y and six trucks with drivers from non-DBE Firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. DBE credit could be awarded only for the fees or commissions pertaining to the remaining trucks Firm X receives as a result of the lease with Firm Z.

- F. The DBE may lease trucks without drivers from a non-DBE truck leasing company and if the DBE uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

Example to paragraph 1F: DBE Firm X uses two of its own trucks and drivers on a contract. It leases two additional trucks and drivers from non-DBE Firm Z. Firm X uses its own employees to drive the trucks leased from Firm Z. DBE credit would be awarded for the total value of the transportation services provided by all four trucks. 49 § 26.55(d)(6)

- 2. Only the value of the work actually performed by the DBE counts toward the project goal when a DBE participates in a contract provided the DBE is certified in this work.
 - A. The Department counts the entire amount of that portion of a construction contract, or other contract not covered by item 2. B, that is performed by the DBE's own forces. Included are the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate). 49 CFR § 26.55 (a)(1)
 - B. The Department counts the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service for which they are certified, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a USDOT-assisted contract, toward DBE goals, if the Department determines the fee to be reasonable and not excessive. 49 CFR § 26.55 (a)(2)
 - C. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is also a DBE. 49 CFR § 26.55 (a)(3)
- 3. The Department counts expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:
 - A. If the materials or supplies are obtained from a DBE manufacturer, count 100% of the cost of the materials or supplies toward DBE goals. 49 CFR § 26.55 (e)(1)(i)
 - B. If the materials or supplies are purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies toward DBE goals. 49 CFR § 26.55 (e)(2)(i)
 - C. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of 3B (above) 49 CFR § 26.55 (e)(2)(ii)(C)
 - D. With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, if the Department determines the fees to be reasonable and not excessive. Do not count any portion of the cost of the materials and supplies themselves toward DBE goals, however.

49 CFR § 26.55 (e) (3)

- E. The Department determines the amount of credit awarded to a firm for the provisions of materials and supplies (e.g., whether a firm is acting as a regular dealer or a transaction expeditor) on a contract-by-contract basis. 49 CFR § 26.55 (e)(4)
- 4. If a firm is not currently certified in ND at the time of the execution of the contract, the Department does not count the firm's participation toward any DBE goal. 49 CFR § 26.55 (f)
- 5. The Department does not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward the Department's overall annual goal. 49 CFR § 26.55 (g)

DEFINITIONS

The definitions specified below apply only to this Special Provision and may contain differences from NDDOT Standard Specifications.

Achievement means any DBE certified service dollar amount committed to at the time of award. Any achievement must be supported by a request to sublet and Monthly DBE Payment Records for each DBE.

Aggregate providers are considered subcontractors rather than regular dealers/suppliers, regardless of the amount of their quote.

Apparent low bidder (ALB) means the bidder whose bid is read as low bid at the bid opening.

Bid Opening Sign-In System means the Department's online system to which all prime contractors and subcontractors must register to indicate their interest in quoting or bidding prior to each bid opening.

Bidder means a contractor intending to serve as the prime contractor for highway construction projects.

Blanket quote means when a business provides the same quote, for all projects, at a bid opening, using the same price at one rate, which is not project specific. Blanket quotes for the construction season are not allowed, i.e. trucking, striping, signing, construction supplies, etc.

Commercially Useful Function (CUF) describes a DBE's responsibilities and involvement in a project, see section Commercially Useful Function of this SP.

Commitment means the dollar amount of work the DBE will complete as stated in the bidder's proposal.

Contractor means all DBE and non-DBE firms, including prime contractors, brokers, vendors, regular dealers/suppliers, and manufacturers at any tier.

DBE Goal means a percentage of the total contract targeted for the hiring of DBE subcontractors to do specific bid items for which the DBE has been certified to perform. Project goals are set by assessing the project's bid items, location, whether DBEs are available to do the work.

DBE Participation means the percentage achieved when the dollar amount committed to the DBE is divided by the dollar amount of all contract items.

DBE Participation Review summarizes the prime's participation at the time of award. A replacement approval request must be submitted to substitute a firm for any DBEs reported as being used at the time of award.

Department means the project owner regardless of whether the owner is NDDOT, a city or a county project.

Disadvantaged business enterprise or DBE means a for-profit small business concern that is certified by the Department and listed in the DBE Directory available on the Department's web site. DBEs must first be certified in the work intended before any DBE achievement may be counted toward the project goal.

Equipment supplier is a firm which provides equipment for sale or lease, without operators, and whose primary business function is equipment sales or leasing.

Manufacturer means a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications. 49 CFR § 26.55 (e) (1) (ii)

Materials means aggregate, steel, petroleum products, concrete, asphalt, and other construction supplies.

NAICS Codes means industry codes assigned by North American Industry Classification System. When certified, DBE businesses are assigned NAICS codes which are identified in the DBE Directory.

NDDOT Certification & Compliance System (CCS) refers to the online compliance reporting system whereby contractors report/submit job related payments, commitments, and Utilization Plan documentation.

Positive Contact means active and documented solicitation of DBE and other subcontractors. Advertising the prime's intention to bid, using the Contractor sign in to notify DBEs and other subcontractors of the jobs the prime is interested in, and contacting individual DBEs is deemed positive contact.

Prime contractor means bidders who are submitting proposals on this project, regardless of the size of the project.

Project owner means any political subdivision such as a city or county which provides match to federal highway funds and uses NDDOT's electronic bidding system to let their projects to bid. The Department "owns" state projects.

Quoter means DBE or a non-DBE subcontractors, brokers, vendors, regular dealers/suppliers, and manufacturers at any tier who submits quotes to another contractor.

Race/Gender Neutral (RGN) means a zero (0) percent goal that is used to assist all small businesses. Please note, NDDOT intends to achieve its overall DBE goals via RGN means; 3.47 percent is the Department's RGN goal.

Responsible Bid Proposal means a bidder's proposal in which the project goal has been achieved, or the bidder demonstrates Good Faith Efforts (GFE) as outlined in this Special Provision timely.

Subcontractor means any firm intending to perform work, or intending to perform work and supply the materials, which were intended for their work on the project. All subcontractors must attach a list of DBE subcontractors intended for use to their quote when submitting it to the prime contractor.

Supplier means a party providing goods, services, and supplies on the project.

Broker means an agent who, without having custody of the property, a) negotiates contracts of purchase, work, lease, or sale; b) buys and sells goods; or c) negotiates between buyers and sellers. See Counting DBE Participation section.

Regular Dealer means a DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials supplies, articles, or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. See Counting DBE Participation section.

Tier means various levels of contractors on the job. For example a prime contractor's subcontractor (B) is referred to as the second tier. When B subcontracts with C, C becomes the third tier, etc.

Tied quote means the quote will be considered only if all of the bid items are included.

Untied quote means that any item or group of items quoted may be used for price noted on the quote whether one or all are used.

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
EEO AFFIRMATIVE ACTION REQUIREMENTS**

March 15, 2014

Bidders shall become familiar with the following requirements and be prepared to comply in good faith with all of them:

APPENDIX A

Notice or Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246).

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:
 - a. Goals for Female Participation in Each Trade – Statewide6.9%
 - b. Goals for Minority Participation in Each Trade by County:
Barnes, Cass, Dickey, Eddy, Foster, Griggs, LaMoure, Logan,
McIntosh, Ransom, Richland, Sargent, Steele, Stutsman, Traill0.7%

Grand Forks1.2%

Benson, Cavalier, Nelson, Pembina, Ramsey, Towner, Walsh2.0%

Burleigh, Morton0.4%

Adams, Billings, Bowman, Dunn, Emmons, Golden Valley, Grant,
Hettinger, Kidder, Mercer, Oliver, Sheridan, Sioux, Slope, Stark, Wells . . .1.3%

Bottineau, Burke, Divide, McHenry, McKenzie, McLean, Mountrail,
Pierce, Renville, Rolette, Ward, Williams4.4%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR 60-4 shall be based on its implementation of the Equal Opportunity Clause specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a),

and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall notify the Office of Federal Contract Compliance Programs, in writing, within ten working days of award of any subcontract in excess of \$10,000. The notification shall include the name, address, and telephone number of the subcontractor and their employer identification number; dollar amount of the contract, estimated starting and completion dates of the contract; the contract number; and geographical area in which the contract is to be performed.

Notification should be sent to:

U.S. Department of Labor/ESA
OFCCP
Denver District Office
1244 Speer Boulevard
Denver, Colorado 80202
Phone: 720-264-3200
Fax: 720-264-3211

4. As used in this "Notice" and in the contract for this project, the "covered area" is the State of North Dakota.

APPENDIX B

Standard Federal Equal Employment Opportunity Construction Contract Specifications
(Executive Order 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the proposal from which this contract resulted.
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:

- (1) Black (all persons having origins in any of the Black African racial groups, not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish Culture or origin, regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation of community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the proposal from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted

in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor. (Training programs approved by the North Dakota Department of Transportation are recognized by the U.S. Department of Labor.)

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all Foremen, Superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources; provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union, or if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to

the sources compiled under 7b above.

- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the Company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the Company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the Company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing it with the Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minorities and women, and where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring

- all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and Company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and Suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all Supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligation.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a Contractor association, joint Contractor- union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. Goals for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minorities, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termina-

tion, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the Company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form, however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPENDIX A OF THE TITLE VI ASSURANCES**

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees as follows:

1. Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- a. withholding payments to the Contractor under the contract until the Contractor complies; and/or
- b. cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPENDIX E OF THE TITLE VI ASSURANCES**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CARGO PREFERENCE ACT (CPA)

DESCRIPTION

The Federal Highway Administration (FHWA) in partnership with the Federal Maritime Administration (MARAD) has mandated the implementation of 46 CFR 381 making the cargo preference requirements applicable to the Federal Aid Highway Program.

The requirements of this Special Provision apply to items transported by ocean vessel.

CONTRACT REQUIREMENTS

A. General

Utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage 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. Gross tonnage is computed separately for dry bulk carriers, dry cargo liners, and tankers.

Furnish a legible, English language copy of a rated 'on-board' commercial ocean bill-of-lading for each shipment of cargo described in the previous paragraph. Furnish the bill-of-lading within 20 days following the date of loading for shipments originating in the United States and within 30 working days following the date of loading from shipments originating outside the United States.

Furnish bills-of-lading to the Engineer and to the following:

Division of National Cargo
Office of Market Development
Maritime Administration
Washington, DC 20590

B. Subcontracts

Include the language in Section "A, General" of this Special Provision in all subcontracts issued pursuant to this contract.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated 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. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

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 (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).

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.

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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 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 35 and 29 CFR 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.

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, 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 who 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.

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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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. 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, 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, 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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 contracting agency deems appropriate.

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 \$10,000 or more.

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, 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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

a. All laborers and mechanics employed or working upon the site of the work, 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 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.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. 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 shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). 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 classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall 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. (1) The contracting officer shall 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 shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore 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 utilized 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) 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 shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. 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.

(3) 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 shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall 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.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. 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, 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, 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 section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall 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. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed 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 Regulations, 29 CFR part 3;

(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 of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, 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 may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed 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 Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall 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 the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall 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, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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. 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 journeymen 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.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 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.

9. Disputes concerning labor standards. 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 he or she) 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 section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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 watchmen 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.

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. 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 watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 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.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or 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, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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" 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:

(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.

2. 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. 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.

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

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 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.

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 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).

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 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 1, 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

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

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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.

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.

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.

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.

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 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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. 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) 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;

(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; 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.

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

2. 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)

a. By signing and submitting this proposal, the prospective lower tier 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.

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 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 grantee or subgrantee 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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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.

* * * * *

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

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall 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 20).

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.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

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 on one of these lists before entry of the subcontractor into LCPtracker. These lists may be found at <https://www.dot.nd.gov/pacer/qualified.htm> and <https://www.dot.nd.gov/pacer/registered.htm>. 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/LCPtracker page at <https://www.dot.nd.gov/divisions/civilrights/laborcompliance.htm>. 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.

09/06/2017

CONTRACT SPECIAL PROVISION
MANDATORY USE OF ONLINE
DBE PROJECT PAYMENT REPORTING

Payments made to all tiers of subcontractors must be reported electronically using the B2GNow system. Paper forms (Monthly Record of DBE Project Payments – SFN 60638) will no longer be accepted.

After award, the Prime Contractor (Prime) must:

1. Create a new account if not already in the system. Create a user for each employee who will use the system. If there is no account already set up, you can email Customer Support directly from the Account Lookup page. Your email address will be your user ID. Customer Support will email you with the information you need to log in.
2. Once the project has been awarded and the Utilization Plan (UP) has been created in the system and assigned to the contractor it must be filled out and submitted. An automated email message will be sent to a designated individual within the company alerting them that a UP is pending. Log into the system using the link provided in the email. For each contract the Prime must add all DBE and non-DBE subs being used on the project. When all information has been provided submit the UP. Civil Rights will review the UP and if everything is in order it will be approved. If changes need to be made the UP will be returned to the contractor and they will have 7 days to make the necessary adjustments and resubmit. If DBE or non-DBE subcontractors are added after the initial UP is set up the Prime can submit a request for them to be added.
3. Once the UP is submitted the project is “locked in” after Financial Management has processed the project in their system. After a UP is locked in payments from NDDOT to the Prime are reported through the system. The Prime must start reporting DBE and non-DBE subcontractor payments through the system in accordance with prompt pay guidelines outlined in the contract.
4. A user manual for UP’s and recording project payments is available to the contractors within the system. After login they can go to View>>My Utilization Plans and they will find the guide on the top of the Utilization Plan screen. They do not have to have a current UP assigned to them to see this guide. The guide is also on the actual UP page when a UP is assigned to them.
5. For further information on the Certification and Compliance System, go to the NDDOT Civil Rights page at <https://www.dot.nd.gov/divisions/civilrights/civilrights.htm>. There is various training available on a regular basis, to sign up for training go to the main Certification and Compliance System page and click the “Training and Events” box. Contractors that need to obtain an account or need subcontractors set up within the system should call the NDDOT Civil Rights Division at (701) 328-3116 or email civilrights@nd.gov

10/3/2017

NDDOT's *Davis-Bacon Wage and Payroll Requirements Handbook* is available at:
www.dot.nd.gov/manuals/civilrights/davisbacon.pdf

U.S.DEPARTMENT OF LABOR

STATE	COUNTY	20200037	Page 1
NORTH DAKOTA	STATEWIDE	DATE OF DECISION 1-3-20	
		Revised 2-07-2020 (Mod. No. 1) Revised 2-28-2020 (Mod. No. 2) Revised 3-05-2020 (Mod. No. 3) Revised 3-20-2020 (Mod. No. 4) Revised 8-28-2020 (Mod. No. 5)	

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W/Pensions	Vacation	App. Tr.	Others
CARPENTERS	\$29.85	\$ 7.35			
CEMENT MASONS/FINISHERS	29.85	7.35			
LINE CONSTRUCTION:					
Lineman	43.50	5.75 + 29%			
Cable Splicer	43.50	5.75 + 29%			
Line Equipment Operator	36.93	5.75 + 29%			
Groundman	24.62	5.75 + 29%			
ELECTRICIANS:					
Electrician	34.92	11.40 + 11.5%			
Cable Splicer	36.67	11.40 + 11.5%			
(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	36.36	10.80 + 11.5%			
Cable Splicer	37.94	10.80 + 11.5%			
(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	34.70	11.40 + 11.5%			
Cable Splicer	34.64	11.40 + 11.5%			
(Burleigh, Morton and Stark Counties)					
Electrician					
(Cass County)	14.72	3.40			
WELDERS:					
Receive rate prescribed for craft performing operation to which welding is incidental					
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 and pilot car drivers	21.90	2.90			

01-03-2020

Revised 8-28-2020 (Mod. No. 5)

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Articulated/Off Road Hauler; Asphalt Dump
Person; Asphalt Paving Screen Operator;
Backhoe, up to and including 1/2 CY; Boring
Machine Locator; Console Board Operator;
Distributor Operator (Bituminous); Forklift
Operator; Front End Loader, 1-1/2 CY up to
and including 3 CY; Grade Person; Grave
Screening Plant Operator (not Crushing or
Washing); Greaser; Lazar Screed Operator;
longitudinal Float and Spray Operator; Micro
Surfacer Machine; Motor Grader Operator
(Haul Roads); Paving
Breaker Hydro Hammer Type; Pugmill
Operator; Push Tractor; Roller, Steel and
Rubber on Hot Mix Asphalt Paving; Rotomill
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

LABOR RATES

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Revised 2-07-2020 (Mod. No. 1)

Revised 2-28-2020 (Mod. No. 2)

Revised 3-05-2020 (Mod. No. 3)

Revised 3-20-2020 (Mod. No. 4)

Revised 8-28-2020 (Mod. No. 5)

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Page

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W/Pensions	Vacation	App. Tr.	Others
POWER EQUIP. OPERATORS: (CONT.)					
Group 4 (cont.)					
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; Fuel/Lube Operator	28.65	\$17.20			
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; Power Actuated Auger and Horizontal Boring Machine Operator, up to and including 5"; Roller (on other than hot mix asphalt paving); Oilers; Vibrating Packer Operator (Pad Type) (Self-Propelled); Water Spraying Equipment, Self-Propelled; Skidsteer Operator with attachments	27.80	17.20			
Group 6					
Brakeman or Switchman; Curb Machine Operator (Manual); 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 and Blower; Stump Chipper Operator; Tractor Pulling Compaction or Aerating Equipment; Trenching Machine Operator, up to and including 45 H.P.; Assistant/Apprentice Operator	26.50	17.20			
TRUCK DRIVERS:					
Single-Axle Truck	28.82	13.85			
Tandem- and Tri-Axle Truck	28.94	13.85			
Tandem- and Tri-Axle Semi	29.25	13.85			
Lowboy	29.25	13.85			
Off Road Heavy Duty End Dumps, 20 Yards and Under	29.25	13.85			
Euclid, Over 20 Yards	30.77	13.85			

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

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (NDDOT)

2017 ON-THE-JOB TRAINING PROGRAM 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. 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 contractors based only on federal highway dollars awarded from October 1 to September 30. Trainee assignments are not project specific; that means the contractor may train program participants on any project where training opportunities exist.

The number of trainee positions assigned will be determined by formula based on calculations involving particular project specification numbers on applicable projects. 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 through 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 October 1 to September 30:

6,000,000 to 15,000,000	1	trainee
15,000,001 to 23,000,000	2	trainees
22,000,001 to 31,000,000	3	trainees
31,000,001 and above	4	trainees

A maximum of four (4) 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 four trainee maximum, e.g., a contractor with one carryover and four assigned positions may have a total five trainees.

Failure to follow this OJT Special Provision and the accompanying 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

OJT Program Manual: Includes program requirements, wage rates, and curriculum:
<https://www.dot.nd.gov/divisions/civilrights/docs/ojtprogram.pdf>

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>

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

VI. APPROVALS REQUIRED

- A. Requests for Training Programs and Trainee Approvals 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 of any additional position assignments.
 - 2. Submit *SFN 7857 Application for Eligibility*, Job Service North Dakota (JSND) 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 and FHWA.

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 who are outside the targeted groups.

VII. NDDOT'S RESPONSIBILITIES

- A. The NDDOT OJT supportive services (OJTSS) consultant will monitor excerpts from the weekly certified payrolls submitted with the monthly vouchers for reimbursement. This includes weekly payrolls from

contractors working on state funded only projects. 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. 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.

- B. 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. Make trainees available to the OJTSS consultant for at least two on-site visits during the construction season.
- 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. 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.
- H. 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 certificate of completion and a wallet-sized card as proof of the graduate's successful training program completion.
- I. 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.
- J. 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 in order 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 CRD.

- L. May transfer trainees from one project to another in order to complete the OJT Program. If transfers are made, CRD must be notified and provided with the name of the trainer. The training hours will count toward overall OJT Program completion.
- M. May train trainees on municipal, private, out-of-state projects 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.
- N. 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.
- O. May use trainees on projects subject to TERO requirements as part of the core crew or as part of the skilled labor supplied by the contractor. 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.
- P. May not use one trainee to simultaneously fill multiple trainee positions
- Q. 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 pre-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.
- B. Contractors will be reimbursed for classroom training hours after the trainee has completed 80 hours of work on highway construction projects.
- C. Reimbursement for classroom training will be limited to 60 hours per trainee per construction season. Reimbursement for classroom training required under the NDDOT Transportation Technician Qualification Program will be at the NDDOT discretion.
- D. 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 state funded only 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.

- 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.
- 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.
- 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.
4. Non-minority males who are economically disadvantaged must obtain written certification from Job Service North Dakota (JSND) to qualify for the OJT Program. Contractors wishing to hire and enroll economically disadvantaged candidates must provide JSND's certification along with SFN 60226 and the employment application when requesting trainee approval.
 - JSND is the only agency that may certify an individual as economically disadvantaged. If JSND refers the candidate to the contractor, written certification under this category will be provided to the contractor at the time of the interview.
 - Any person wishing to obtain this certification must apply to JSND and complete the Workforce Investment Act Program's Application for Eligibility (SFN 7857). A contractor recruiting a candidate who may qualify must contact the Workforce Investment Act Program Manager at JSND. JSND contacts are also online:
<http://www.dot.nd.gov/divisions/civilrights/docs/jobservice-workforce-invest-contacts.pdf>

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. Attach excerpts from the weekly certified payrolls showing the trainee's hours, rate of pay, and how applicable fringe benefits were paid. Excerpts from weekly payrolls are also required for state funded only projects. 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.
<http://www.dot.nd.gov/forms/sfn51023.pdf>
- 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 (15th) 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.

XV. DEFINITIONS

Carryover Position: Incomplete trainee position carried forward from a prior program year.

Carryover Trainee: Trainee scheduled to continue training hours under prior year's approved program.

CRD: NDDOT's Civil Rights Division administers the NDDOT On-the-Job Training Program.

Good Faith Efforts: Documentation supporting a contractor's efforts to fulfill the program requirements, e.g., new hires list, advertising examples/locations, current employees reviewed for upgrades, etc.

Journey-worker: A worker employed in a trade or craft who has attained a level of skill, abilities, and competencies recognized within the industry.

OJT Supportive Services (OJTSS): Department contractor providing in-person oversight, support, and guidance to contractors and trainees to increase the effectiveness of approved training programs.

Trainee: A person who receives training through an apprenticeship program or other FHWA approved program.

Trainer/Supervisor: Contractor's employee assigned to train, supervise, and support a trainee.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

1. 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.

2. CONSTRUCTION REQUIREMENTS

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.

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.

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

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

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.

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.

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

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.

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.

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

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.

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.

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 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 Erosion & Sediment Control Construction Certification Training at the preconstruction conference and will maintain that certification through the term of the contract.

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.

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

3. 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. The supervisor shall be:

1. An employee of the Prime Contractor;
2. 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; and
3. Competent to supervise personnel in erosion and sediment control operations.
4. Certified through the NDDOT Erosion & Sediment Control Construction Certification Training and maintain that training throughout the term of the contract.

C. Duties. The supervisor shall:

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.

4. 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.

5. BASIS OF PAYMENT

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

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.

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".

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

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

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LONGITUDINAL JOINT DENSITY FOR HOT MIX ASPHALT PAVEMENTS

DESCRIPTION

This provision describes the procedure for determining core locations, coring frequency and acceptance criteria for longitudinal joint construction. This Special Provision is in addition to the requirements of Section 430, "Hot Mix Asphalt (HMA)".

ATTACHMENTS

Appendix A – Notched Wedge

CONSTRUCTION REQUIREMENTS

A. General

Applicable longitudinal joints are defined as those between any two paved areas that require calculated density; excluding joints for mats constructed on aggregate base, reclaimed material, or cold in place recycled material.

Hot seams or seams created via echelon paving are not considered applicable joints.

B. Longitudinal Joint Placement.

When placing the top lift of pavement, locate longitudinal joints at lane lines or the proposed edge of pavement.

When placing asphalt pavement over existing concrete pavement, place longitudinal joints at the same location as the existing concrete pavement longitudinal joints.

C. Notched Wedge Construction Option.

If a notched wedge joint is used, construct the notched wedge according to Appendix A.

D. Coring.

Obtain joint density cores perpendicular to the mat density core locations for the pass completing the joint.

Obtain density cores for butt joints centered over the longitudinal joint.

If a notched wedge style joint is constructed, center the core over the tapered portion of the joint.

E. Longitudinal Joint Field Density.

Sublots and lots for longitudinal joint density correspond to the sublots and lots for the paving pass that completes the joint.

The Engineer will determine the density of each longitudinal joint core. The Engineer will then divide the joint core density by the daily Maximum Theoretical Density (MTD) from the second paving pass to determine the percent MTD of the joint.

The subplot percent MTD will then be averaged to obtain a lot percent MTD for the joint. The Engineer will use the lot percent MTD and Table 1 to determine a contract price adjustment. The Contract Price Adjustment per Linear Foot will be applied to the entire length of the lot.

F. Low Density Requirements.

If the percentage of compaction of a subplot is below 87.0%, a corrective action must be performed for that subplot. Collaborate with the Engineer on what corrective action to take.

If the percent compaction of a subplot is less than 90.0% and the joint is in a location where rumble strips will not be installed, seal the joint represented by that subplot with an undiluted emulsion that meets the requirements of Section 401.03 C, "Fog Coat" at no additional cost to the Department. Seal butt joints at a width of 8 inches centered on the joint and seal notched wedges at a width of 16 inches centered on the middle of the notched wedge. Use an application rate ranging from 0.10 to 0.15 Gal/SY.

METHOD OF MEASUREMENT

The Engineer will measure each lot in linear feet along the longitudinal joint.

BASIS OF PAYMENT

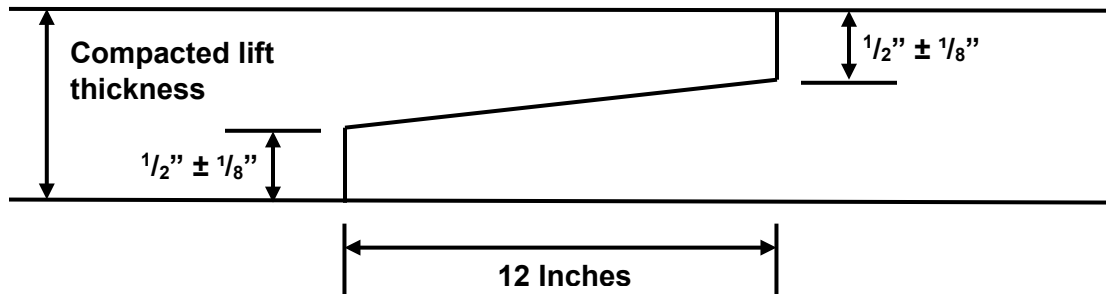
The pay adjustment for longitudinal joint density will not be used for areas constructed according to Section 430.04 I.3, "Ordinary Compaction".

The Engineer will apply the appropriate pay adjustment specified in Table 1 for each lot.

Table 1

Contract Price Adjustment Per Linear Foot	Joint Lot % MTD
\$0.40	≥ 91.1%
\$0.20	90.6% – 91.0%
\$0.00	90.0% - 90.5%
\$(0.20)	89.0% - 89.9%
\$(0.60)	88.5% - 88.9%
\$(1.10)	88.0% - 88.4%
\$(1.80)	87.5% - 87.9%
\$(3.60)	87.0% - 87.4%

Appendix A Notched Wedge



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. Night-time 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.

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 a minimum of 7 calendar days before anticipated nighttime operations. The Engineer may deny the request or delay approval if it would require additional staffing considerations. If nighttime operations requires 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

SPECIAL PROVISION

BITUMEN TESTING PRICE ADJUSTMENTS

DESCRIPTION

This Special Provision outlines the Contract Price Adjustment procedures for acceptance of PG Asphalt Binder Using the Multiple Stress Creep Recovery (MSCR) Test under AASHTO M 332.

MATERIAL ACCEPTANCE SPECIFICATION

A. Sampling.

Obtain one sample of asphalt binder for each 250 tons of binder material supplied to the project. Obtain the sample as prescribed in the NDDOT Field Sampling and Testing Manual, Procedure NDDOT 1. Each 250 tons of material will represent a subplot and 4 sublots will constitute a lot of material. Partial lots will consist of however many subplot samples were collected for that lot.

B. Original and Check Samples.

Each sample consists of two parts, an original and a check. The Engineer will perform tests using the original sample first.

If a test returns a value resulting in a pay factor of less than 1.00, the Engineer will perform that test on the check sample and the check sample results will be used to determine the pay factor for the material.

C. Testing Parameters.

The Engineer will randomly select one subplot for testing per lot.

If the check sample results in a pay factor of less than 1.00 the Engineer will perform the substandard tests on the remaining sublots within that lot.

D. Determination of Pay Factor.

The Engineer will apply the pay factors in the Basis of Payment section of this Special Provision to each individual subplot of material. If more than one test parameter in a subplot results in a pay factor of less than 1.00, the Engineer will apply the pay factor that results in the largest monetary deduction to that subplot.

BASIS OF PAYMENT

The pay factor determined by the Engineer will be applied to the "PG _____ Asphalt Cement" contract item. The pay factor will be multiplied by the unit cost of the item and the quantity of oil represented by the sample.

Table 1
Requirements on Original Binder

Specification	Test Result	Pay Factor (Percent)
Dynamic Shear AASHTO T 315 $G^*/\sin \delta$ Min. 1.00 kPa	≥ 1.00	1.00
	0.97 – 0.99	0.95
	0.94 – 0.96	0.90
	0.91 – 0.93	0.85
	< 0.91	0.70

Table 2
Requirements on Rolling Thin Film Oven (RTFO) Residue

Specification	Test Result	Pay Factor (Percent)	Specification	Test Result	Pay Factor (Percent)
Standard Traffic “S” AASHTO T 350 $J_{nr@3.2}$ Max. 4.5 kPa ⁻¹	≤ 4.5	1.00			
	4.6	0.95			
	4.7	0.90			
	4.8	0.85			
	> 4.8	0.70			
Heavy Traffic “H” AASHTO T 350 $J_{nr@3.2}$ Max. 2.0 kPa ⁻¹	≤ 2.0	1.00	Heavy Traffic “H” AASHTO R 92 Percent Recovery @ 3.2 kPa Min. 30%	> 30	1.00
	2.1	0.95		29	0.95
	2.2	0.90		28	0.90
	2.3	0.85		27	0.85
	> 2.3	0.70		< 27	0.70
Very Heavy Traffic “V” AASHTO T 350 $J_{nr@3.2}$ Max. 1.0 kPa ⁻¹	≤ 1.0	1.00	Very Heavy Traffic “V” AASHTO R 92 Percent Recovery @ 3.2 kPa Min. 55%	> 55	1.00
	1.1	0.95		54	0.95
	1.2	0.90		53	0.90
	1.3	0.85		52	0.85
	> 1.3	0.70		< 52	0.70
Extreme Traffic “E” AASHTO T 350 $J_{nr@3.2}$ Max. 0.5 kPa ⁻¹	≤ 0.5	1.00	Extreme Traffic “E” AASHTO R 92 Percent Recovery @ 3.2 kPa Min. 75%	> 75	1.00
	0.6	0.95		74	0.95
	0.7	0.90		73	0.90
	0.8	0.85		72	0.85
	> 0.8	0.70		< 72	0.70

Table 3
Requirements for Pressure Aging Vessel (PAV)
Residue

Specification	Test Result	Pay Factor (Percent)
Standard Traffic "S" AASHTO T 315 DSR, $G^*(\sin \delta)$ Max. 5000 kPa	≤ 5000	1.00
	5001 - 5200	0.95
	5201 - 5400	0.90
	5401 - 5600	0.85
	> 5600	0.70
Traffic "H", "V", "E" AASHTO T 315 DSR, $G^*(\sin \delta)$ Max. 6000 kPa	≤ 6000	1.00
	6001 - 6050	0.95
	6051 - 6100	0.90
	6101 - 6150	0.85
	> 6150	0.70
Creep Stiffness AASHTO T 313 Max. 300 mPa	≤ 300	1.00
	301 - 310	0.95
	311 - 320	0.90
	321 - 330	0.85
	> 330	0.70
m-value AASHTO T 313 Min. 0.300	≥ 0.300	1.00
	0.295 – 0.299	0.95
	0.290 – 0.294	0.90
	0.285 – 0.289	0.85
	< 0.285	0.70

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

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

A. Technological Equipment Prohibitions.

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.

B. Contractor Certification.

The Prime Contractor must complete the information below, sign this Special Provision, and submit the signed document to the Engineer at the preconstruction conference. This signature affirms that no prohibited products will be used in the project.

Project Number(s): _____

PCN(s): _____

Company Name: _____

Signatory Name (printed): _____

Signature: _____

Date: _____

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

HMA CORING, ACCEPTANCE, AND PAY FACTORS

DESCRIPTION

This special provision modifies portions of Section 430 of the 2020 Standard Specifications for Road and Bridge Construction. It changes the requirements of shoulder construction, depending on the method of construction; updates coring requirements for the changes in subplot size; and to clarify how contract price adjustments are calculated.

CONSTRUCTION REQUIREMENTS

Replace Section 430.04 I, "Compaction" and Section 430.04 M, "Acceptance" with the following text.

I. Compaction.

1. General.

Remove all surface irregularities before beginning compaction.

Sequence rolling operations and select the type and the number of rollers to match production and to attain the required density before the mat temperatures fall below 185°F.

In areas not accessible to rollers, compact the pavement mat with hand or mechanical tampers.

2. Calculated Density.

a. General.

Use calculated density on mainline pavement, interstate crossroads, ramps, turn lanes, monolithically placed shoulders, rest area approaches, and parking lots.

b. Coring.

(1) General.

Obtain pavement cores at locations designated by the Engineer under the observation of the Engineer.

Use a machine that cuts a cylindrical core sample without disturbing the density of the sample. Complete coring on or before the working day following the placement of the lift. Obtain a core with a smooth outer surface, no distortion of the cylindrical shape, and no displacement of the aggregate particles. Obtain a core that is 4 to 6 inches in diameter and the full depth of the in place asphalt.

Fill core holes before placing the subsequent lift of pavement. If there is no subsequent lift of pavement, fill the core hole within 24 hours of obtaining the core. Remove free standing water before filling core holes. Fill core holes in 2

inch lifts using material from the same mix design used on the roadway. Compact each lift using a hand tamper.

(2) Pavement Density Cores.

Use a masonry saw to cut the core so that only the layer to be tested is removed.

Label each core, using a system approved by the Engineer, to identify the location from which the core was obtained.

(3) Pavement Thickness Determination Cores.

Obtain pavement thickness determination cores after the final lift of pavement has been placed. Label the cores. The Engineer will take possession of these cores immediately upon extraction. Do not cut these cores.

3. Ordinary Compaction.

a. General.

Use ordinary compaction on non-monolithic shoulders, driveways, section line approaches, bike paths, leveling courses, and patches.

Ordinary compaction consists of breakdown rolling, intermediate rolling, and finish rolling. Compact the bituminous material until the surface is tightly bound and shows no displacement under operation of the roller.

For patching, immediately after spreading perform initial rolling with pneumatic-tired rollers or combination rollers.

b. Breakdown Rolling.

Breakdown rolling consists of one or more complete coverage with a roller meeting the requirements of one of the following Sections:

- 151.01 A.3, “Self-Propelled Pneumatic-Tired Rollers”;
- 151.01 B.2, “Smooth-Faced Steel-Wheel Roller: Tandem – Type A”;
- 151.01 C, “Vibratory Rollers”; or
- 151.01 D, “Combination Rollers”.

c. Intermediate Rolling.

Follow breakdown rolling with intermediate rolling with a roller conforming to Section 151.01 A.3, “Self-Propelled Pneumatic-Tired Rollers”, or 151.01 D, “Combination Rollers” until the surface is tightly bound and shows no displacement under the roller.

If roller tires pick up the bituminous material or there are excessive roller marks in the mat, the Engineer may allow the removal of the intermediate rolling operation if it appears to the Engineer that compaction is being achieved.

d. Finish Rolling.

Perform the finish rolling with a roller conforming to Section 151.01 B.3, “Smooth-Faced Steel-Wheel Roller: Tandem – Type B”, or 151.01 C, “Vibratory Rollers” in the static mode, and continue until roller marks are eliminated.

M. Acceptance.

1. General.

The Engineer will accept bituminous mix based on the criteria in this section.

The Engineer will include material used in shoulder placement when the shoulder is placed monolithically with the adjacent lane. Field density cores may be obtained in this area.

2. Aggregate.

The Engineer will accept aggregate used in the mix based on QC tests that are verified by QA testing, and the control limits specified in Section 430.04 E.5, "Control Limits".

If the results for two consecutive aggregate gradation tests in a single day fall outside the single test target value control limits, the Engineer will apply a contract price adjustment as specified in Section 430.06 C, "Contract Price Adjustments".

3. Asphalt Content.

The Engineer will base the acceptance of the asphalt content of bituminous mix on the totalizer readings obtained as specified in Section 430.04 E, "QC Testing" and SFN 9988, "Mix Bitumen Cut-Off Report" and will apply a contract price adjustment as specified in Section 430.06 C, "Contract Price Adjustments".

If the average asphalt content, as determined by the Engineer according to SFN 9988, "Mix Bitumen Cut-off Report" deviates from the target value by 0.40 percentage points or more, the Engineer may reject the material. If the material is accepted, the Engineer will apply a contract price adjustment as specified in Section 430.06 C, "Contract Price Adjustments".

4. Field Density.

This section will apply when the pavement is constructed as specified in Section 430.04 I.2, "Calculated Density".

The Engineer will base acceptance of the density of hot mix asphalt on the average density of the pavement compared to the daily average maximum theoretical density. The comparison will be made using SFN 59132, "Density Pay Factor".

The Engineer will determine the density of pavement based on lots. A lot is equal to the amount of material, in tons, placed each production day.

A subplot is defined as a single lift, one paver width wide, and 1,000 feet long. If a partial subplot is less than 500 feet, it will be included in the previous subplot. A partial subplot greater than 500 feet will be considered a separate lot.

The individual subplot densities will be averaged to determine the density of the pavement lot.

If the average density of the pavement compared to the daily average maximum theoretical density is above the values in Table 430-10, the Engineer will apply the adjustment factors specified in Section 430.06 C, "Contract Price Adjustments".

If the average density of the pavement compared to the daily average maximum theoretical density is at or below the values specified in Table 430-10, remove and replace the pavement.

Table 430-10

Superpave FAA 40, 41, 42, and 43	Superpave FAA 44 and 45
88.0%	89.0% ¹

¹ When the lift of pavement is placed on aggregate base, reclaimed material, or cold in place recycle material this number is reduced to 88.0%

BASIS OF PAYMENT

Replace Section 430.04 C.1, "General" with the following text.

C. Contract Price Adjustments.

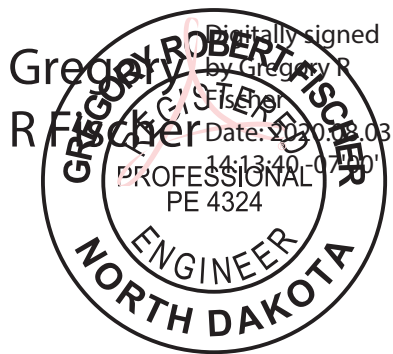
1. General

The Engineer will calculate the Combined Adjustment Factor by multiplying the individual adjustment factors for:

- Aggregate gradation;
- Asphalt content; and
- Compaction.

1.0 will be subtracted from the Combined Adjustment Factor to determine the Contract Price Adjustment.

The contract price adjustment will be determined by multiplying the Contract Price Adjustment Factor by the total tons of hot mix asphalt placed during a single day and the contract unit price for "Superpave, FAA ____" or "RAP Superpave FAA ____".



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

GROUND ANCHOR

Project SOIB-NH-7-085(110)127 – PCN 22304

DESCRIPTION

This work consists of furnishing equipment, materials, work drawings and experienced labor to install, test, stress, and complete the permanent ground anchors as specified.

Select the drilling method, grout mix, drill hole diameter, post-grouting injection pressures, and number of post-grouting cycles to achieve the specified acceptance criteria for every permanent ground anchor.

Conduct verification, extended creep, performance, and proof tests as specified.

DEFINITIONS

For the purpose of this special provision, the following terms are defined as follows:

- A. Alignment Load:** A nominal load applied to the ground anchor during testing to keep the testing equipment in the correct position.
- B. Anchorage:** The combined system of the anchor head, bearing plate, and trumpet that transfers the force in the tendon to the supported structure.
- C. Anchor Grout:** Grout that is injected into the drill hole just before or just after the Contractor installs the tendon. The anchor grout within the bond length transfers the applied tensile force from the tendon to the surrounding soil or rock.
- D. Anchor Strain Gauge:** Instruments installed on ground anchor strands within the bonded or unbonded zone to measure distribution of load along the anchor.
- E. Bearing Plate:** A steel plate that evenly distributes the ground anchor force to the supported structure.
- F. Bond length:** The length of the tendon that is bonded to the grout and transfers the applied tensile force to the surrounding soil or rock.
- G. Ground Anchor:** A system, referred to as a tieback or as an anchor, used to transfer tensile loads to soil or rock. A ground anchor includes all prestressing steel, anchorage devices, grout, coatings, sheathings, and couplers if used.
- H. Lock-off Load:** The tensile force or load in a ground anchor immediately after transferring the load from the jack to the anchorage after testing is complete.
- I. Maintaining Consistency of Load:** Maintaining the test load within 5 percent of the specified value.

- J. Maximum Test Load:** The maximum load applied to the ground anchor during testing.
- K. Minimum Ultimate Tensile Strength (MUTS):** The minimum specified breaking load of the prestressing steel as defined by the specified standard.
- L. Post-grouting:** The injection of grout along the anchor bond length after the primary grout has set. Post-grouting is performed to increase the pullout resistance of the anchor.
- M. Tendon and Tendon Steel:** The tendon includes the steel strands, corrosion protection, sheaths, centralizers, and spacers. The tendon steel consists of the high strength, steel strands.
- N. Unbonded Length:** The length of the tendon that is not bonded to the grout and surrounding ground.

MATERIALS

A. General.

Provide materials meeting the requirements in the following sections. Do not deliver the materials to the site until the Engineer has approved the Contractor experience and ground anchor work drawing submittals.

B. Tendons.

Furnish multi strand, Grade 270, 0.6 inch diameter, seven-wire steel strands conforming to ASTM A416 including S1.

C. Centralizers and Spacers.

Furnish centralizers and spacers made from plastic or steel.

D. Sheath, Bond Breaker, and Encapsulation.

Furnish plastic tubing or pipe with the following properties:

- Resistant to chemical attack from aggressive environments, grout, or corrosion inhibiting compounds.
- Resistant to aging by ultraviolet light.
- Fabricated from material that is not detrimental to the tendon.
- Capable of withstanding abrasion, impact, and bending during handling and installation.
- Allow the tendon to elongate during testing and stressing.

For the sheath, furnish plastic tubing or pipe, corrugated or smooth. A smooth sheath may also function as a bond breaker. Furnish a separate bond breaker if using a corrugated sheath.

For the bond breaker, furnish smooth plastic tubing or pipe that allows the tendon to elongate with minimal friction during testing and stressing.

Furnish high density polyethylene corrugated pipe and end caps conforming to AASHTO M 252, Type C, for tendon bond length encapsulation.

E. Corrosion Inhibiting Compound.

Furnish either grease, wax, or gel with corrosion inhibiting additives that conform with Section 4.6 of Recommendations for Prestressed Rock and Soil Anchors by the Post-Tensioning Institute (2014).

F. Heat-Shrink Sleeves and Tape.

Furnish heat-shrink sleeves and tape manufactured from polyolefin, cross-linked by radiation, and coated with an adhesive sealant.

G. Wax Tape.

Furnish petrolatum (wax) tape consisting of synthetic fabric saturated with a stable composition of petrolatum compound (wax) with inert fillers.

H. Cement Grout.

1. General.

Item	Reference
Cement	AASHTO M 85, Type V
Water	812

2. Fine Aggregate.

If using fine aggregate in the grout mix, provide natural sand that meets the following requirements.

Sieve Size	Percent Passing
No. 16	100
No. 200	5

3. Admixtures.

a. General.

Only use admixtures with the approval of the Engineer. Accelerating admixtures are not allowed.

Admixtures may be added to the grout to control bleed, improve flowability, and reduce water content if the admixtures meet the requirements of ASTM C 494 Type A or F.

Use only admixtures that are compatible with the prestressing steel and with the grout manufacturer's recommendation.

b. Expansive Admixtures.

Expansive admixtures may only be used for the following:

- Filling sealed encapsulations;
- Trumpet covers; or
- Anchorage covers.

I. Anchorages.

1. General.

Provide certificates of compliance in accordance with Special Provision 282(14) Certificate of Compliance, for the anchorages, anchorage components, and corrosion protection requirements described herein.

2. Anchor Heads and Wedges.

Furnish anchor heads conforming to one of the following:

- ASTM A36,
- ASTM A108 Grades 1040 or 1045,
- ASTM A536 Grade 80-55-06, or
- ASTM A576 Grade 1045.

Furnish three-part wedges that conform to ASTM A108 Grade 12L14, case hardened, 0.012 to 0.015 inches thick, and have a Rockwell C hardness from 59 to 65. Furnish the anchor heads and wedges from the same supplier.

3. Bearing Plate and Trumpet

Fabricate trumpets from steel pipe with a minimum wall thickness of 0.20 inch that meets the requirements of ASTM A 53 or steel tubing that meets the requirements of ASTM A 500. Weld the trumpet and bearing plate to create a watertight seal.

Provide bearing plates conforming to one of the following:

- ASTM A529,
- ASTM A536,
- ASTM A572, or
- ASTM A588.

Supply anchor covers (end caps) that completely cover the anchor head and provide a permanent watertight seal between the cover and the bearing plate. Supply anchor covers with a port that allows anchor covers to be completely filled with grout or grease after installation. Provide end caps with a minimum thickness of 0.20 inch fabricated from the following:

- Steel Pipe: ASTM A 53,
- Steel Tubing: ASTM A 500, or
- Steel Plate:
 - ASTM A 36
 - ASTM A 529,
 - ASTM A 572, or
 - ASTM A 588.

Hot-dip galvanize the bearing plates and anchorage end cap covers in accordance with ASTM A-153.

J. Ground Anchor Strain Gauges.

Furnish anchor strain gauges for measuring loads, such as d-Cable, from Yieldpoint, Inc., DYNA Force Sensors from Dywidag-Systems International, TensMeg sensors from RST Instruments, or approved equal. Select gauges that are compatible with the project data acquisition and instrumentation system. Provide all required information to convert instrument readings to engineering units.

Size gauges appropriately for the anticipated range of load in the strand anchors.

Provide sufficient length of signal cable from each gauge to extend from gauge, out through head, and to the readout.

CONSTRUCTION REQUIREMENTS

A. Contractor Experience Requirements.

Submit proof that the Contractor performing the work described in this special provision has successfully installed similar size and length ground anchors in comparable ground conditions. Provide a list describing at least five projects completed over the past five years. Provide a single-page summary for each project including the following:

- A brief description of the project,
- The project's location and project date,
- The project's owner, and
- An owner reference, including an individual's name, relationship to the project, and current phone number.

B. Ground Anchor Pre-Construction Conference.

Hold a Ground Anchor preconstruction conference at the site a minimum of 10 calendar days before beginning ground anchor construction work.

Have the following personnel attend the preconstruction conference:

- The Contractor's superintendent,
- On-site supervisors,

- Foremen in charge of:
 - Installation of ground anchors,
 - Construction of sacrificial anchor reaction blocks, and
 - Conducting ground anchor testing.
- The Engineer,
- The NDDOT Geotechnical Section.

Discuss the following at the preconstruction conference:

- Construction procedures,
- Personnel,
- Equipment, and
- Other elements of ground anchor installation.

The Contractor shall assign an engineer to supervise the work with at least three years of experience in the design and construction of permanently anchored structures. Submit a list of projects for the assigned engineer demonstrating the required experience. Limit the project list to two pages.

Submit a list of projects for each of the drill operators and on-site supervisors, demonstrating at least one year of experience installing permanent ground anchors. Limit the project list for each individual to two pages.

Submit the information, qualifications, and staff noted above within 10 business days after the award of the contract, to the NDDOT Construction Services Division.

C. Ground Anchor Work Drawing.

Furnish the ground anchor tendon size, unbonded free stressing lengths, and bond lengths as specified in the Plans. Select the drilling method, grout mix, grouting methods, and hole diameter appropriate for the soil and rock conditions at the site, so that every ground anchor meets the specified acceptance criteria.

Prepare the Ground Anchor Work Drawings in accordance with Section 105.08, "Work Drawings." Prepare the work drawings under the supervision and direction of a North Dakota Registered Engineer, and have the Registered Engineer sign and seal the work drawings. Submit the sealed Ground Anchor Work Drawings to the Engineer for acceptance prior to ordering the permanent ground anchors. Submit the Anchor Work Drawings at least 21 calendar days before the Ground Anchor Pre-Construction Conference. Include the following items:

1. Permanent Ground Anchor Tendon.

Furnish details of a 6-strand tendon as indicated in the Plans and in accordance with these specifications. Show locations of centralizers and spacers. Show locations and type of grout tubes for initial grouting.

2. Instrumented Permanent Ground Anchor Tendon.

Furnish details of an instrumented ground anchor showing locations of strand anchor strain gauges for ground anchors identified in the plans to receive instrumentation. Include four anchor strain gauges in each instrumented anchor at the following locations:

- One 5 feet from the back of the bearing plate, in the free length,
- One 5 feet from the front of the bond zone, in the bond zone,
- One 20 feet from the front of the bond zone, in the bond zone,
- One 35 feet from the front of the bond zone, in the bond zone.

Show adjustments to corrosion protection of strand at gauge locations. Show how signal cables will be routed along the tendon and through anchor heads and end caps, with descriptions, locations, and details of any weatherproof duct ports located in the end caps. Modify dimensions of end caps to accommodate load cells and platens.

Show locations of extra centralizers and spacers for gauge protection.

Show locations and type of grout tubes for grouting.

3. Sacrificial Instrumented Ground Anchor Tendon.

Furnish details of a 10-strand, high strength steel wire tendon in accordance with these specifications. Show locations of centralizers and spacers. Show locations and type of grout tubes for grouting.

Show details of strand anchor strain gauges installed at the following locations:

- One 5 feet from the back of the bearing plate, in the free length,
- One 5 feet from the front of the bond zone, in the free length
- One 5 feet from the front of the bond zone, in the bond zone,
- One 15 feet from the front of the bond zone, in the bond zone,
- One 25 feet from the front of the bond zone, in the bond zone,
- One 35 feet from the front of the bond zone, in the bond zone.

4. Bond length.

Use a bond length that is equal to or greater than the bond length shown in the plans for all of the ground anchors.

5. Grout Mix Design.

For each proposed mix design, develop a grout mix design that achieves a compressive strength of 3,000 psi per ASTM C 942. Provide a mix design that is a pumpable, stable fluid.

Provide compressive strength test results of two-inch cubes, molded, cured and tested in accordance with ASTM C942 for each proposed grout mix design prior to installing the first ground anchor. Provide three additional compressive strength test results on samples randomly selected by the Engineer. Demonstrate that the grout achieves a 3,000-psi compressive strength at the time of stressing.

6. Unbonded length.

Use an unbonded length for each ground anchor that is equal to the unbonded length shown on the Plans.

7. Tail length.

Show length of tail extensions at the front of ground anchor that is necessary to accommodate pre-stressing chairs, hydraulic jacks, stressing anchor heads, and load cell instrumentation where appropriate.

8. Centralizers.

Centralizers must support the tendon in the hole and position it to provide at least 0.5 inch of grout cover over the encapsulation. Centralizers must permit grout to flow freely around the tendon and along the drill hole.

Place centralizers in the following locations:

- Within 1 foot of the bottom of the tendon.
- Within 5 feet of the top of the bond length.
- With a maximum center-to-center spacing of 10 feet.

9. Spacers.

Place spacers for strand tendon at the following locations in the bond zone:

- Within 5 foot of the bottom of the tendon.
- Within 5 feet of the top of the bond length.
- With a maximum center-to-center spacing of 10 feet.

Spacers used along the bond zone, inside the encapsulation must separate the strands and position the tendon steel to provide at least 0.2 inch of grout cover between the tendon steel and the inside surface of the encapsulation.

10. Bearing Plate and Trumpet.

Show dimensions of a bearing plate and trumpet sized for safely supporting the 80 percent of the minimum ultimate tensile strength of the permanent ground anchor tendons on the concrete cap beam around the block-out pipe. Provide calculations in accordance with AASHTO LRFD Bridge Design Specifications, demonstrating sufficiency of the bearing plate dimensions.

Provide a trumpet long enough to overlap the corrosion protection in the unbonded length of the tendon by at least 4 inches with a seal between the trumpet and the corrosion protection, or by at least 12 inches without a seal.

11. Sacrificial Ground Anchor Reaction Block.

Design a Sacrificial Ground Anchor Reaction Block, including bearing plate, capable of safely supporting 80 percent of the MUTS of the sacrificial 10-strand ground anchor. Provide sufficient details, dimensions, and calculations that demonstrate the reaction block will not exert a maximum ground pressure exceeding 5,000 psf when the sacrificial ground anchor is tested to 80 percent of the MUTS.

Provide details of the anchor block's composition, size, fasteners, spacing, and orientations. Provide details of the material strength and individual component dimensions, including the bearing plate. Show the size and location of the opening on the ground anchor reaction block and the position of the sacrificial ground anchor and bearing plate.

12. Anchorage Head and End Cap.

Provide details and dimensions of anchorage head wedge plate and end cap. Show details of waterproof end cap seal at bearing plate.

13. Permanent Ground Anchor Corrosion Protection.

Provide Class I corrosion protection for permanent, encapsulated strand, ground anchors as shown in the Plans and in accordance with Recommendations for Prestressed Rock and Soil Anchors by the Post-Tensioning Institute.

Provide continuous corrosion protection at the transition from the bond length to the unbonded length of the anchor tendon.

14. Sacrificial Ground Anchor.

Corrosion protection is not required for the sacrificial ground anchors, bearing plates or the anchorage head wedge plates. Trumpets are required to protect the strain gage signal cables and anchor strands. End caps are not required for the sacrificial ground anchors.

15. Hole Diameter.

Size the hole diameter for the ground anchor to provide sufficient surface area to achieve the specified load testing acceptance criteria and to provide at least 0.5 inch grout cover over the encapsulation. Ensure that the area of the steel strands does not exceed 15 percent of the total area of the hole. Ensure that the hole diameter meets the minimum shown in the Plans.

D. Anchor Installation Plan and Anchor Testing Plan.

Submit the Anchor Installation and Testing Plans to the Engineer at least 21 working days before the Ground Anchor Preconstruction Conference. Obtain the Engineer's approval for the Anchor Installation Plan and Anchor Testing Plan before beginning ground installation of sacrificial and production anchors.

Use the approved drilling procedures and equipment from the sacrificial ground anchor testing program to install the production ground anchors.

1. Anchor Installation Plan.

Include the following in the Anchor Installation Plan:

- Drilling procedure and equipment.
- Hole diameter.
- Initial grout mix design.
- Grouting methods and equipment.
- Post-grouting procedure, including:
 - Number of post-grout tubes,
 - Location and spacing of grout ports on post-grout tubes,
 - Grout mix,
 - Post-grouting volumes,
 - Post-grouting pressures, and
 - Range of elapsed time between grouting stages.

2. Anchor Testing Plan.

Describe testing procedures and equipment for sacrificial, proof, extended creep, and performance testing. Include the following in the Anchor Testing Plan:

- Testing equipment, including hydraulic jack, pump, pressure gauge, load cell and displacement gauges,
- Calibration certificates for jack, gauges, and load cell,
- Sample testing forms,
- Test load Schedule (provide the factored design load at all test load increments in both force and pressure gauge units),
- Lengths of tendon extensions, jack, load cell, and jacking chair.

Follow the Sacrificial Ground Anchor Test Load Schedule in Table 1 for the sacrificial ground anchor testing and the Proof, Extended Creep, and Performance Test Load Schedule in Tables 2 through 4, respectively, for the permanent ground anchors.

E. Sacrificial Ground Anchor Testing.

Perform verification pullout tests on two sacrificial (non-production) ground anchors. Install the sacrificial ground anchors, perform the testing, and submit the test results to the Engineer for review and approval before beginning installation of the permanent ground anchors in the station range of the cap beam associated with each test. Allow the Engineer five calendar days to review and approve the test results.

Select the locations of the investigative test anchors within the following limits:

- Station 20+60 to 24+50: Install one sacrificial ground anchor at a location within 75 feet of the cap beam alignment within this range.
- Station 24+50 to 29+20: Install one sacrificial ground anchor at a location within 75 feet of the cap beam alignment within this range.
- Locate the two sacrificial anchors at least 300 feet apart from each other as measured along the cap beam alignment.
- Increase or decrease the free length as necessary so the elevation of the beginning of the bond zone of each sacrificial anchor is within 10 feet of the elevation of the beginning of the bond zone of the production anchor to be installed at the same station along the cap beam alignment.

Obtain the Engineer's approval of the site location before installing and testing the investigative test anchors. Excavate and grade the approved site location for the test and construct or place the ground anchor reaction block. Drill and install the sacrificial ground anchors at the same inclination, orientation, and bond length as the permanent ground anchors shown in the Plans. Do not apply a test load to the investigative test anchors that is greater than 80 percent of the ultimate tensile strength of the tendon steel.

If the Contractor makes any modifications to the work drawings, design calculations, or anchor installation plan after the results of sacrificial ground anchor testing, submit the revisions and obtain the Engineer's approval before beginning or resuming ground anchor installation.

F. Anchor Strain Gauge Installation.

At the strand anchor manufacturer's factory, install anchor strain gauges and signal cable per the gauge manufacturer's recommendation.

Protect instrument signal cables and gauges during transportation and installation of instrumented anchors.

G. Ground Anchor Installation.

Install the permanent ground anchors using the same drilling method, drill hole diameter, and post-grouting procedures used to install the sacrificial ground anchors, as accepted by the Engineer, to achieve the specified acceptance criteria. Do not vary the procedures used to install the permanent ground anchors from those used to install the sacrificial ground anchor, unless another sacrificial ground anchor is installed (at no cost to the NDDOT). Perform all work according to the work drawings and anchor installation plans approved by the Engineer.

Do not stress or test permanent ground anchors until the cap beam concrete has achieved a minimum compressive strength of 4,000 psi and the corresponding segment of cap beam has been backfilled.

1. Drilling.

a. General.

Provide casing when required to maintain an open hole in unstable soil or rock formations.

Do not drill within 15 feet of any open, un-grouted holes.

Allow initial and post-grout to cure at least 24 hours before drilling or post-grouting within 15 feet of an installed ground anchor.

b. Tolerances.

Drill the hole for the ground anchor through the block-out pipe in the cap beam the location shown in the Plans for primary ground anchor locations. Locate the collar of the hole so that the anchor tendon is aligned with the block-out pipe. Ensure that the collar of the drill hole is located within 3 inches in all directions of the location shown in the Plans and that the inclination of the drill hole is within 3 degrees of the inclination shown in the Plans.

2. Anchor Installation.

Inspect the permanent and sacrificial anchor tendon for signs of damage or corrosion before installation. Anchor tendons with a light coating of rust are acceptable, but do not use anchor tendons that show signs of heavy corrosion or pitting.

Clean open holes, block-out pipe, and cased holes before inserting the anchor tendon and grouting. Insert the anchor tendon in the drill hole without damaging the tendon, corrosion protection, or grout tubes. Do not drive or force the tendon into the drill hole. If the tendon cannot easily reach to the design length, then remove the tendon and clean or re-drill the hole to allow insertion.

3. Anchor Grouting.

Begin grouting no more than 18 hours after completing the drilling for the bond length. Inject grout at the lowest point of the drill hole by pumping through grout tubes, casing, hollow-stem augers, or drill rods. Either leave the grout tube in place or withdraw the grout tube during grouting, but ensure that the discharge end of the tube remains below the top of the grout during grout placement. If leaving the grout tube in place, ensure that it is filled with grout at the completion of grouting.

Do not allow differential pressure to develop between fluid grout inside and outside the corrugated encapsulation such that the encapsulation is damaged by the pressure differential. Do not cut holes in the encapsulation or remove the end cap to allow equalization of interior and exterior grout pressures.

Fill the hole with grout in one continuous operation, to a distance 1 to 2 feet behind the end of the trumpet. Remove any grout placed in this area before it hardens.

Do not pressure grout the unbonded length.

4. Post-Grouting.

Install the ground anchor with a post-grouting system. Inject grout under pressure in the bond zone through the post-grouting tube(s) after the initial grout has set in accordance with the Anchor Installation Plan. Repeat the post-grouting pressure injection procedure as needed to achieve the specified acceptance criteria.

5. Anchorage Installation.

Install the trumpeted bearing plate and the anchor head wedge plate perpendicular to the anchor tendon with a tolerance of ± 3 degrees. Do not bend or kink the anchor tendon. Ensure that the wedges and wedge holes are free of rust, grout, and dirt.

Ensure the trumpet overlaps the corrosion protection in the unbonded length of the permanent ground anchor tendon by at least 4 inches when a seal is provided between the trumpet and the corrosion protection. When a seal is not provided, ensure the trumpet overlaps the corrosion protection in the unbonded length by at least 12 inches. Ensure the corrosion protection in the unbonded length does not contact the anchor bearing plate or anchor head wedge plate. If necessary, trim the corrosion protection to prevent contact.

H. Ground Anchor Testing.

Test each permanent ground anchor to demonstrate that it meets the specified acceptance criteria. Conduct a minimum of two extended creep tests and two performance tests on the permanent ground anchors indicated in the Plans. Conduct proof tests on all ground anchors that are not subject to extended creep or performance testing. Submit all anchor test results to the Engineer for review and acceptance.

During the hold periods for all types of tests, maintain a constant load by adjusting the jack pressure as necessary. Do not allow the jack pressure to drop more than 50 psi during a hold period. Measure and record anchor movement to the nearest 0.001 inch. Avoid regripping strands or creating wedge bite marks on the strand below the anchor head.

1. Testing Equipment.

Provide testing equipment conforming to the following.

a. Hydraulic Jack and Pump.

Provide a hydraulic jack and pump with a rated capacity greater than the maximum test load. Provide a hydraulic jack with a stroke length at least 1 inch greater than the theoretical elastic elongation of the tendon steel at the maximum test load.

b. Pressure Gauges.

Provide two pressure gauges to measure the pressure in the hydraulic jack, a production gauge, and a reference gauge. Provide pressure gauges with graduations of 50 psi or smaller. Ensure the hydraulic jack and the pressure gauges have been calibrated as a unit within 12 months of the beginning of anchor testing. Ensure the calibration is traceable to the National Institute of Standards and Technology (NIST). Use the reference gauge to check the production gauge at least once per day when testing.

c. Load Cell and Readout.

Provide a load cell and readout with a rated capacity greater than the maximum test load for sacrificial ground anchor tests. Ensure the load cell and readout have been calibrated as a unit within 12 months of the beginning of anchor testing. Ensure the calibration is traceable to NIST.

d. Displacement Gauge.

Provide a displacement gauge that can measure movement in increments of 0.001 inch or less. Provide a displacement gauge with a 4.0-inch minimum range of travel. If the anticipated elongation of the tendon steel at the factored design test load will exceed 4.0 inches, provide displacement gauges with a sufficient range of travel, or provide multiple displacement gauges that can be arranged to allow the continuous measurement of the displacement of the anchor head.

e. Jack Chair.

Provide a jack chair that can transfer 100 percent of the ultimate tensile strength of the tendon steel.

2. Testing Equipment Setup.

Position the hydraulic jack, load cell, and other necessary items over the anchor tendon and parallel to its axis. Apply the alignment load to hold the jack in place.

Set the displacement gauge after applying the alignment load. Support the displacement gauge on a tripod or other support device that is independent of the ground anchor and the block. Position the displacement gauge so that its axis is parallel to the axis of the anchor tendon within 5 degrees. Check that the stem of the displacement gauge is free to move over its entire measurement range.

3. Sacrificial Ground Anchor Test.

Perform a sacrificial ground anchor load test by incrementally loading the sacrificial ground anchor according to the following schedule shown in Table 1. Use a load cell to monitor the load during hold periods.

TABLE 1 SACRIFICIAL GROUND ANCHOR LOAD TEST SCHEDULE			
Load Increment	Load Increment	Hold Period (minutes)	Time for Displacement Reading (minutes)
1	AL (0.05 MUTS)	---	Initial Reading
	0.10 MUTS	10	1, 2, 3, 4, 5, 6, 10
2	0.20 MUTS	60	*
3	0.30 MUTS	60	*
4	0.40 MUTS	60	*
5	0.50 MUTS	60	*
6	0.60 MUTS	60	*
7	0.70 MUTS	60	*
8	0.80 MUTS	60	*
9	AL (0.05 MUTS)	1	Final Reading
* - Record Displacement Readings and Strain Gauge Readings at 1, 2, 6, 10, 20, 30 and 60 minutes. AL = Alignment Load; MUTS = Minimum Ultimate Tensile Strength			

Conduct the sacrificial ground anchor load tests until completion or until reaching a pullout failure. Submit copies of all the test data to the Engineer.

After completing the test on the sacrificial ground anchors and after receiving approval from the Engineer, remove and dispose of the anchor reaction apparatus (block or frame). Remove and dispose of the ground anchor end hardware, cut the ground anchors and restore the grading to the final condition shown in the Plans to the satisfaction of the Engineer.

4. Proof Test.

Complete a proof test by incrementally loading and unloading the ground anchor according to the following schedule shown in Table 2.

TABLE 2 PROOF TEST LOAD SCHEDULE

Load Increment	Hold Period (minutes)	Time for Displacement Reading (minutes)
AL (≤ 0.10 FDL)	---	Initial Reading
0.20 FDL	*	*
0.40 FDL	*	*
0.60 FDL	*	*
0.75 FDL	*	*
0.90 FDL	*	*
1.0 FDL	10 (60) ^[1]	1, 2, 3, 4, 5, 6, 10 (20, 30, 40, 50, 60) ^[1]
0.40 FDL	*	*
AL (≤ 0.10 FDL)	---	1

* Hold load just long enough to read displacement, but not longer than one minute

^[1] If the amount of movement between the 1 minute and 10 minute displacement readings exceeds 0.04 inch, then hold the load for 60 minutes and take additional displacement readings at the times shown in parentheses.

AL = Alignment Load FDL = Factored Design Load

5. Extended Creep Test.

Perform an extended creep test by incrementally loading and unloading the ground anchor according to the following schedule shown in Table 3. Use a load cell to monitor the load during hold periods. Record displacement, load cell, and strain gauge readings (for instrumented ground anchors).

TABLE 3 EXTENDED CREEP LOAD TEST SCHEDULE

Load Cycle	Load Increment	Hold Period (minutes)	Time for Displacement, Load Cell and Strain Gauge Readings (minutes)
1	AL (≤ 0.10 FDL) 0.20 FDL	---	Initial Reading 1, 2, 3, 4, 5, 6, 10
2	AL (≤ 0.10 FDL) 0.20 FDL 0.40 FDL	--- * 30	1 * 1, 2, 3, 4, 5, 6, 10, 15, 20, 25, 30
3	AL (≤ 0.10 FDL) 0.20 FDL 0.40 FDL 0.60 FDL	--- * * 30	1 * * 1, 2, 3, 4, 5, 6, 10, 15, 20, 25, 30
4	AL (≤ 0.10 FDL) 0.20 FDL 0.40 FDL 0.60 FDL 0.75 FDL	--- * * * 45	1 * * * 1, 2, 3, 4, 5, 6, 10, 15, 20, 25, 30, 45
5	AL (≤ 0.10 FDL) 0.20 FDL 0.40 FDL 0.60 FDL 0.75 FDL 0.90 FDL	--- * * * * 60	1 * * * * 1, 2, 3, 4, 5, 6, 10, 15, 20, 25, 30, 45, 60
6	AL (≤ 0.10 FDL) 0.25 FDL 0.40 FDL 0.60 FDL 0.75 FDL 0.90 FDL 1.0 FDL	--- * * * * * 300	1 * * * * * 1, 2, 3, 4, 5, 6, 10, 15, 20, 25, 30, 45, 60 75, 90, 100, 120, 150, 180, 210, 240, 270, 300
	AL (≤ 0.10 FDL)	---	1

* Hold load just long enough to read displacement, but not longer than one minute.

AL = Alignment Load FDL = Factored Design Load

6. Performance Test.

Perform an extended creep test on one permanent ground anchor identified by the Engineer, by incrementally loading and unloading the ground anchor according to the following schedule shown in Table 4. Use a load cell to monitor the load during hold periods. Record displacement, load cell, and strain gauge readings (for instrumented ground anchors).

TABLE 4 PERFORMANCE LOAD TEST SCHEDULE

Load Cycle	Load Increment	Hold Period (minutes)	Time for Displacement, Load Cell and Strain Gauge Readings (minutes)
	AL (0.10 FDL)	---	Initial Reading
1	0.20 FDL	*	*
	AL (0.10 FDL)	---	1
2	0.20 FDL	*	*
	0.40 FDL	*	*
	AL (0.10 FDL)	---	1
3	0.20 FDL	*	*
	0.40 FDL	*	*
	0.60 FDL	*	*
	AL (0.10 FDL)	---	1
4	0.20 FDL	*	*
	0.40 FDL	*	*
	0.60 FDL	*	*
	0.75 FDL	*	*
	AL (0.10 FDL)	---	1
5	0.20 FDL	*	*
	0.40 FDL	*	*
	0.60 FDL	*	*
	0.75 FDL	*	*
	0.90 FDL	*	*
	AL (0.10 FDL)	---	1
6	0.20 FDL	*	*
	0.40 FDL	*	*
	0.60 FDL	*	*
	0.75 FDL	*	*
	0.90 FDL	*	*
	1.0 FDL	10	1, 2, 3, 4, 5, 6, 10
		(60) [1]	(20, 30, 40, 50, 60) [1]
	AL (0.10 FDL)	---	1

* Hold load just long enough to read displacement, but not longer than one minute

[1] If the amount of movement between the 1 minute and 10 minute displacement readings exceeds 0.04 inch, then hold the load for 60 minutes and take additional displacement readings at the times shown in parentheses.

AL = Alignment Load FDL = Factored Design Load

7. Acceptance Criteria for Ground Anchors.

A sacrificial ground anchor is acceptable when:

- It holds the 0.70 MUTS load increment for the specified hold period (60 minutes).
- It meets the acceptance criteria for creep movement at a load equal to 1.0 times the factored design load.
- It meets the acceptance criteria for the apparent free length during testing.

A permanent ground anchor is acceptable when:

- It holds the maximum test load for the specified hold period.
- It meets the acceptance criteria for creep movement.
- It meets the acceptance criteria for the apparent free length during testing.

a. Creep Movement.

The acceptance criteria for both sacrificial and permanent ground anchors is 0.04 inches of creep movement or less between the 1 and 10 minute displacement readings, or 0.08 inches of creep movement or less between the 6 and 60 minute displacement readings.

The acceptance criteria for ground anchors subject to extended creep testing is 0.08 inches or less of creep movement in the last log cycle of time for each hold period. A log cycle of time is the time between two displacement readings where the second reading is at a time 10 times longer than the time of the first reading (for example, 1 minute to 10 minutes, 6 to 60 minutes, and 30 to 300 minutes are each one log cycle of time).

Tendons which have not been proof stretched may require adjustments to the creep displacement readings to account for the creep of the wire strand tendons. Determine necessary adjustments from test results furnished by the tendon supplier.

b. Apparent Free Length.

The apparent free length of a ground anchor is the equivalent length of the tendon steel that has the same elongation as the measured elastic movement under the same net load (the test load minus the alignment load). Calculate the apparent free length at the maximum test load in a proof test and at the maximum test load in each load cycle in a performance test or extended creep test. Use the following equation to calculate the apparent free length.

$$\text{Apparent Free Length} = (A \times E \times d) \div (TL - AL)$$

Where:

A = cross-section area of the tendon steel
E = modulus of elasticity of the tendon steel

d = elastic movement (displacement reading at the test load minus the subsequent displacement reading at the alignment load)

TL = test load

AL = alignment load

An acceptable apparent free length is equal to or greater than the theoretical elastic elongation of 80 percent of the unbonded free stressing length of the ground anchor plus the jack length and equal to or less than the theoretical elastic elongation of 100 percent of the unbonded free stressing length plus 50 percent of the tendon bond length plus the jack length.

If movement measured during a ground anchor test does not meet this acceptance criterion, but the anchor can hold the required test load and it meets the acceptance criteria for creep movement, then repeat the test load cycle by reducing the test load to the alignment load and then incrementally increasing the test load to the design test load per the proof test schedule.

If the ground anchor fails to meet the apparent free length acceptance criteria on the second attempt, repeat the test load cycle a third time.

If after three attempts the ground anchor still fails to meet the apparent free length acceptance criteria, correct the ground anchor in accordance with the following section.

8. Permanent Ground Anchors Not Meeting Acceptance Criteria.

When a ground anchor does not meet the acceptance criteria, correct the problem at no additional expense to the Department. The corrections may include, but are not limited to:

- Completing additional post-grouting cycles on the ground anchor, if the post-grout tubes are functional,
- Replacing the unacceptable ground anchor, or
- Reducing the ground anchor design load and installing additional ground anchors through the secondary block-outs.

Ground anchors that do not meet one of the acceptance criteria may still be incorporated into the Work under the following conditions:

- a. If the ground anchor cannot hold the design test load and the post-grouting system is still intact (if included), then conduct additional post-grouting cycle(s) on the ground anchor and repeat the testing using the original acceptance criteria.
- b. If the ground anchor holds the design test load but does not meet the acceptance criteria for creep movement at the design test load and the post-grouting system is still intact, then conduct additional post-grouting cycle(s) on the ground anchor and repeat the testing using an enhanced acceptance criterion for creep movement. The enhanced acceptance criterion consists of no more than 0.04 inches of creep movement between the 1 and 60 minute displacement readings at the design load.
- c. If the ground anchor does not meet the acceptance criteria for creep movement or if it cannot hold the design load, the ground anchor may be incorporated into the Work at a reduced load. Lock off the ground anchor at no more than 50 percent of the stabilization load (the load that the anchor holds without detectable movement at the end of testing). To determine the stabilization load, stop adjusting the jack pressure, wait until the displacement reading has not changed for 10 minutes, and then measure the load in the anchor. When incorporating a ground anchor into

the Work in this manner, install additional ground anchors or use some other corrective procedure approved by the Engineer to compensate for the reduced anchor load.

Except for items “a” and “b” above, submit the proposed corrective work to the Engineer in writing before beginning corrective work.

9. Permanent Ground Anchor Lock-off.

a. General.

After successful testing of a ground anchor is complete, adjust the load on the ground anchor to the lock-off load shown in the Plans. Increase the load as necessary to compensate for seating losses. Transfer the load from the jack to the anchorage device.

b. Lift-Off Testing.

Before removing the jack, perform a lift-off test to confirm the load in the anchor tendon. Perform the lift-off test by re-applying load to the anchor tendon until the wedge plate lifts off the bearing plate or the wedges lift. The lift-off reading must be within 5 percent of the specified lock-off load.

If the lift-off reading is more than 5 percent below the specified lock-off load, increase the lock-off load by lifting the anchor head and placing shims under the anchor head. If the lift-off reading is more than 5 percent above the specified lock-off load, notify the Engineer and adjust the procedures to ensure this does not occur on subsequent ground anchors.

c. Completion.

Cut off excess tendon steel, leaving at least 0.5 inch extending above the wedges, and completely fill the trumpet with grout. Prevent the grout from freezing. Ensure that the permanent anchorage cover fits over the anchor head and seals against the bearing plate. For non-instrumented ground anchors, completely fill the cover with grout. For instrumented anchors, completely fill the cover with corrosion inhibiting grease.

METHOD OF MEASUREMENT

Permanent ground anchors that are installed, tested, and accepted will be measured from the base of the bearing plate (in contact with the abutment bearing area) to the end of the installed anchor as shown in the Plans. Additional permanent ground anchors installed by the Contractor to achieve the acceptance criteria are considered corrective measures and will not be measured for payment.

Sacrificial ground anchor testing will be measured by each test completed and submitted to the Engineer.

BASIS OF PAYMENT

The unit price of a permanent ground anchor is for full compensation of the work, including but not limited to, completing the drill hole for the permanent ground anchor; hauling and disposal of drill cuttings; furnishing the multi-strand ground anchor tendon with Class I corrosion protection; furnishing end hardware, including the bearing plate with trumpet, anchorage heads with wedge grips and end caps; furnishing and placing initial grout through grout tubes;

completing pressurized post-grouting cycles through grout tubes; placement and removal of temporary drill casing; permanent casing, if used by the Contractor; all costs associated with proof, extended creep, and performance testing; costs of submittals and test reports; and for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the work.

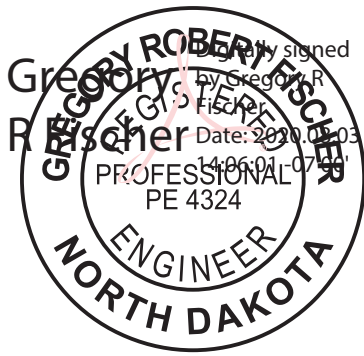
Costs associated with instrumenting the permanent ground anchors will be measured and paid for under the Instrumentation Pay Items in accordance with the Special Provision for Instrumentation.

The unit price of sacrificial ground anchor testing is for full compensation of the work, including but not limited to, design, construction and disposal of the ground anchor reaction block; furnishing the 10-strand sacrificial ground anchor; completing the drill hole for the sacrificial anchor, hauling and disposal of drill cuttings; furnishing end hardware, including the bearing plate and anchorage heads with wedge grips; furnishing and placing initial grout through grout tubes; completing pressurized post-grouting cycles through grout tubes; placement and removal of temporary drill casing; all costs associated with sacrificial ground anchor load testing; costs of submittals and test reports; and for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the work.

The Department will pay for accepted quantities at the contract unit price as follows:

<u>Spec - Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
930-4150	Ground Anchor	Linear Feet
930-4155	Sacrificial Ground Anchor Load Test	Each

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



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

CROSSHOLE SONIC LOG TESTS

Project SOIB-NH-7-085(110)127 – PCN 22304

DESCRIPTION

This work consists of furnishing equipment, materials, and experienced labor to complete crosshole sonic log (CSL) testing of completed drilled shafts.

MATERIALS

A. Access Tubes and Caps.

Access tubes for CSL testing consist of non-galvanized, standard weight, Schedule 40 steel tubes with an inside diameter of 1½ inches to 2 inches, as appropriate for compatibility with the CSL probe.

Provide access tubes that are round with a uniform regular inside diameter free of defects and obstructions, including all tube joints, to permit the free, unobstructed passage of source and receiver probes used for the CSL tests. Furnish access tubes that are watertight and free from corrosion, with clean internal and external faces to ensure a good bond with the drilled shaft concrete and CSL grout. Provide watertight, threaded caps on the bottom and removable watertight caps on the top of the access tubes.

B. Neat Cement Grout.

Furnish neat cement grout for filling the access tubes at the completion of the CSL tests and acceptance of the drilled shaft by the Engineer. Use grout that is a homogeneous mixture of water and Portland cement Type I/II or Type 1L (MS). Do not exceed a water-cement ratio of 0.45. Provide grout with an unconfined compressive strength of 4,000 psi at 28 days when tested in accordance with ASTM C 1107.

Item	Reference
Cement	804.01
Water	812

CONSTRUCTION REQUIREMENTS

A. CSL Testing Consultant.

Submit a resume of the CSL Consultant, retained by the Contractor, for approval by the Engineer. List 5 projects over the past 3 years consisting of similar sized drilled shafts (diameter and length) constructed in similar conditions. Limit the resume length to 5 pages. Use a ND licensed Professional Engineer to supervise the testing and interpretation of the results.

B. Access Tubes for CSL Testing.

1. Drilled Shafts Requiring CSL Access Tubes.

Equip drilled shafts with CSL access tubes prior to CSL testing. Shafts to receive CSL access tubes will be indicated by the Engineer during construction. Thermal integrity profiling (TIP) testing may be completed on selected drilled shafts that are also tested using CSL in accordance with Special Provision 5(20)

2. Orientation and Assembly of the CSL Access Tubes.

Securely attach the access tubes to the interior of the reinforcement cage of the shaft, as shown on the Plans. Where circumferential components of the rebar cage bracing system prevent bundling the access tubes directly to the vertical reinforcement, place the access tubes inside the circumferential components of the rebar cage bracing system as close as possible to the nearest vertical steel reinforcement bar. Ensure that the access tubes are secured and do not slip during installation of the rebar cage in the drilled shaft excavation or during concrete placement

Install the access tubes in straight alignment and parallel to the vertical axis of the reinforcement cage. Extend the access tubes within 0.5 feet of the bottom of the drilled shaft and to at least 2 feet above the top of the shaft.

Splice watertight joints in the access tubes to achieve full-length access tubes, as required. Clear the access tubes of all debris and extraneous materials before installing the access tubes. Debur the tops of access tubes. Prevent damage, bending, slippage, or leakage to access tubes by carefully installing and placing the reinforcement cage and concrete in the shaft excavation.

3. Filling CSL Access Tubes with Water.

Fill the access tubes with water and confirm the tubes and joints are watertight before concrete placement, and securely install a watertight cap at the top of each tube. Do not allow any other material to enter the access tubes during construction of the drilled shaft. Keep access tubes full of water through the completion of CSL testing of that shaft. When temperatures below freezing are possible, protect the access tubes against freezing by wrapping the exposed tubes with insulating material, adding antifreeze to the water in the tubes, or other methods as approved by the Engineer.

C. CSL Testing.

1. Inspection of CSL Access Tubes.

Inspect the access tubes after placing the shaft concrete and before beginning the CSL testing to verify that the CSL test probes can travel easily to the bottom of the access tubes without encountering obstructions or snags. Replace each access tube that a test probe cannot pass through, at no additional cost to the Department, with a 2-inch diameter hole cored through the concrete for the entire length of the shaft in accordance with the Remedial Action Plan section of the Drilled Shaft Special Provision.

Unless directed otherwise by the Engineer, locate cored holes approximately 6 inches inside the reinforcement and without damaging the drilled shaft reinforcement. Log descriptions of inclusions and voids encountered in the cored holes and submit a copy of the log to the Engineer. Preserve the core from the holes in wooden core boxes, identified as to location and depth, and make the core available for inspection by the Engineer.

2. CSL Testing Procedure.

Conduct CSL testing in accordance with ASTM D 6760. Notify the Engineer of the date and time of each CSL test at least 48 hours prior to the scheduled test. Perform CSL testing after the drilled shaft concrete has cured at least 72 hours but no more than 15 days after the placement of concrete.

Pull the CSL probes simultaneously, starting from the bottoms of the access tubes, utilizing an electronic depth measuring device. Perform the CSL tests with the source and received probes in the same horizontal plane. Continuously record CSL signals at depth intervals of 2.5 inches or less from the bottom of the tubes to the top of each shaft. Perform CSL testing on every possible tube combination.

D. Reporting.

Submit a report stamped by a ND Professional Engineer to the Engineer for review and acceptance in accordance with ASTM D 6760 that includes, but is not limited to the following:

- A description of the testing equipment.
- Date and location of test.
- Identification and location of tested drilled shaft.
- Arrangement and identification of access tubes, relative separation of tubes to the nearest 0.5 inch.
- The number of days between concrete placement and CSL testing.
- Scaled CSL ultrasonic profiles with analyses of the following for each tube pair tested, including:
 - First pulse arrival time (FAT) versus depth (can be indicated in waterfall diagram).
 - Wave speed versus depth.
 - Relative pulse energy / amplitude in decibels versus depth.
 - A presentation of the nested signal peak as a function of time plotted versus depth (waterfall diagram).
- Identify any flaw and defect zones on the above plots.
- A discussion and assessment of the data quality, and integrity of the tested drilled shaft, including a comparison the thermal integrity profiling (TIP) results to CSL results for shafts tested using both methods.

Evaluate the concrete in the shaft using the following classification on each CSL profile:

Satisfactory	FAT increase $\leq 20\%$ and Energy Reduction ≤ 9 decibels
Flaw	FAT increase $> 20\%$ and $\leq 30\%$ or Energy Reduction > 9 decibels and ≤ 12 decibels
Defect	FAT increase $> 30\%$ or Energy Reduction > 12 decibels

Within the report, indicate the flaw and defect zones, if any, observed in the CSL profiles for each tube pair tested and list them in a table sorted by depth, with their magnitude (horizontal and vertical extent) and location on the shaft. If TIP testing occurs in the same CSL tested shaft, compare results of the TIP and CSL testing, discussing and explaining similarities and differences of anomalies observed in the two tests.

E. Flaws and Defects.

1. Flaws.

Investigate flaws, as described below, that are observed in more than 50 percent of the profiles (tube pairs) at a given depth or zone.

2. Defects.

Investigate defects, as described below, that are observed in more than one profile (tube pair) at a given depth or zone.

3. Investigation.

Provide additional CSL tests for all tube combinations after a longer waiting time to verify or update the original CSL test results and the observed concrete condition. Provide 3D tomographic imaging defining the zones of flaws and defects relative to an equivalent wave speed that is 85 percent of the average wave speed from the original or updated CSL test results. If available, provide TIP test results, in accordance with Special Provision 5(20). Discuss and explain similarities and differences observed in the results of the two test methods.

F. Engineer's Final Acceptance of CSL Tested Drilled Shafts.

The Engineer will determine final acceptance of each drilled shaft tested, based on the CSL and, if completed, TIP test results received for the tested shafts, and will provide a response to the Contractor within 5 working days after receiving the test report.

G. Contractor's Remedial Action Plan.

For drilled shafts determined by the Engineer to have potentially inadequate concrete, submit a remedial action plan for accessing and repairing the zone(s) of potentially inadequate concrete to the Engineer for approval in accordance with the Drilled Shaft Special Provision. Do not begin access or repair operations until receiving the Engineer's approval of the remedial action plan. Include post-remediation CSL testing in the remedial action plan to verify the effectiveness of the proposed remediation.

H. Requirements for CSL Access Tubes and Cored Holes after CSL Testing.

After CSL tests are completed and final acceptance of the drilled shaft is obtained, fill CSL access tubes and any cored holes with grout conforming to this Special Provision. Fill the access tubes and cored holes with grout using a tremie tube that extend to the bottom of the tube or cored hole.

Do not grout CSL tubes that will be used to install Drilled Shaft Movement Sensors until the instrumentation has been installed in accordance with the Instrumentation Special Provision.

METHOD OF MEASUREMENT

Drilled shafts will be measured in accordance with the Special Provision for Drilled Shafts.

CSL Testing will be measured by each drilled shaft tested and accepted by the Engineer.

All CSL tests conducted to verify defects found in the initial testing and conducted to verify the effectiveness of remediation, as well as related 3D tomographic evaluations, will not be measured for payment and are provided at no additional cost to the Department.

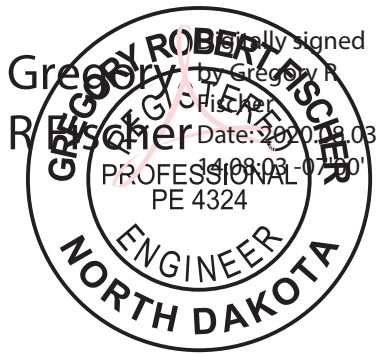
BASIS OF PAYMENT

The unit price of CSL testing shall be full compensation for each drilled shaft tested including, but not limited to: furnishing the steel access tubes and end caps and installing the access tubes to the steel reinforcement cage; filling tubes with water; providing experienced personnel to conduct the CSL testing; furnishing adequate equipment to complete the tests; preparing the CSL report that includes presentation of the CSL data, interpretation of the CSL data, and assessment of drilled shaft's integrity; submitting the CSL testing report; removing the water and filling the access tubes with the specified grout; and for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the CSL testing work.

The accepted quantities for CSL testing will be paid for at the Contract unit price per each tested drilled shaft tested and reported to be free of addressable flaws and defects. The Mod 1 pay item shall be used for 6-foot diameter drilled shafts.

<u>Spec - Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
930-4250	Crosshole Sonic Log Test	Each
930-4251	Crosshole Sonic Log Test – Mod 1	Each

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



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

DRILLED SHAFT

Project SOIB-NH-7-085(110)127 – PCN 22304

DESCRIPTION

This work consists of furnishing equipment, materials, and experienced labor to complete drilled excavations filled with steel reinforcement bars and concrete.

MATERIALS

A. General.

Provide materials meeting the requirements in the following sections. Do not deliver the materials to the site until the Engineer has approved the Contractor Experience and Shaft Installation Narrative submittals.

B. Concrete for Drilled Shafts.

Provide Concrete conforming to Section 802 "Portland Cement Concrete" with the following revisions:

- Attain a minimum compressive strength of 5,000 psi at 28 days.
- Minimum slump of 9 inches, as measured at the chute of the concrete truck.
- Provide aggregate with a nominal maximum particle size of 1/2 inch.
- Use Class F fly ash to replace 25 to 35 percent of the cement by weight.
- Provide water reducing and/or retarding concrete admixtures Types A, B or D, as classified under ASTM C 494 that meet the requirements of AASHTO M 194, to achieve the required concrete workability and slump throughout concrete placement.

C. Reinforcing Steel.

Provide steel reinforcement bars in conformance with Section 836 of the Standard Specifications.

D. Temporary Steel Casing.

If using temporary steel casing, provide temporary casing consisting of a clean, watertight, smooth wall steel of sufficient strength to resist damage and deformation from transportation and handling, installation and extraction stresses, and all pressures and forces acting on the casing

E. Mineral Slurry.

If using mineral slurry, furnish mineral slurry prepared and maintained in conformance with the manufacturer's recommendations, Table 1, and the quality control plan specified in the Shaft Installation Narrative Submittal.

TABLE 1		
Property	Requirement	Test Method/Reference
Density	63 to 75 pcf	Mud Weight (Density), API 13B-1, Section 1
Viscosity 1) Bentonite 2) Attapulgite	1) 28 to 50 sec/qt 2) 28 to 40 sec/qt	Marsh Funnel and Cup, API 13b-1, Section 2.2
pH	8 to 11	Glass Electrode, pH Meter, or pH Paper
Sand Content 1) Prior to final cleaning 2) Immediately prior to placing concrete	1) 4.0% max 2) 4.0% max	Sand Content, API 13B-1, Section 5

Maintain slurry temperature at 40 degrees Fahrenheit or greater when tested.

F. Synthetic Slurry.

If using synthetic slurry, furnish synthetic slurries from one of the manufacturers listed in Table 2. Prepare and maintain synthetic slurry in accordance with the manufacturer's recommendations, Tables 3 through 6 (as applicable), and the quality control plan specified in the Shaft Installation Narrative Submittal.

The synthetic slurry must be one of the materials shown in Table 2.

TABLE 2	
Product Name	Manufacturer
SlurryPro CDP	KB International LLC 735 Board St Ste 209 Chattanooga TN 37402 (423) 266-6964
Super Mud	PDS Co Inc 105 W Sharp St El Dorado AR 71731 (870) 863-5707
Shore Pac GCV	CETCO Construction Drilling Products 2870 Forbs Ave Hoffman Estates IL 60192 (800) 527-9948
Terragel or Novagel Polymer	Geo-Tech Services LLC 220 N. Zapata Hwy Ste 11A-449A Laredo TX 78043 (210) 259-6386

Use synthetic slurries in compliance with the manufacturer's instructions. Provide certification of compliance from slurry manufacturer in accordance with Section 106.01 C. that indicates their product meets the requirements of this Special Provision and is suitable for subsurface site conditions indicated in the plans.

Meet the requirements shown in Tables 3 through 6 for the applicable product. Maintain slurry temperature at 40 degrees Fahrenheit or greater when tested.

TABLE 3 -- SLURRYPRO CDP		
Property	Requirement	Test Method/Reference
Density During drilling Before final cleaning and immediately before placing concrete	≤ 67.0 pcf ≤ 64.0 pcf	Mud Weight (Density), API 13B-1, Section 1
Viscosity During drilling Before final cleaning and immediately before placing concrete	50 – 120 sec/qt ≤ 75 sec/qt	Marsh Funnel and Cup, API 13b-1, Section 2.2
Sand Content Before final cleaning and immediately before placing concrete	$< 0.5\%$	Sand Content, API 13B-1, Section 5

TABLE 4 -- SUPER MUD		
Property	Requirement	Test Method/Reference
Density During drilling Before final cleaning and immediately before placing concrete	≤ 64.0 pcf ≤ 64.0 pcf	Mud Weight (Density), API 13B-1, Section 1
Viscosity During drilling Before final cleaning and immediately before placing concrete	32 – 60 sec/qt ≤ 60 sec/qt	Marsh Funnel and Cup, API 13b-1, Section 2.2
pH	8.0 – 10.0	Glass Electrode, pH Meter, or pH Paper
Sand Content Before final cleaning and immediately before placing concrete	< 0.5%	Sand Content, API 13B-1, Section 5

TABLE 5 -- SHORE PAC GCV		
Property	Requirement	Test Method/Reference
Density During drilling Before final cleaning and immediately before placing concrete	≤ 64.0 pcf ≤ 64.0 pcf	Mud Weight (Density), API 13B-1, Section 1
Viscosity During drilling Before final cleaning and immediately before placing concrete	33 – 74 sec/qt ≤ 57 sec/qt	Marsh Funnel and Cup, API 13b-1, Section 2.2
pH	8.0 – 11.0	Glass Electrode, pH Meter, or pH Paper
Sand Content Before final cleaning and immediately before placing concrete	< 0.5%	Sand Content, API 13B-1, Section 5

TABLE 6 -- TERRAGEL OR NOVAGEL POLYMER		
Property	Requirement	Test Method/Reference
Density During drilling Before final cleaning and immediately before placing concrete	≤ 67.0 pcf ≤ 64.0 pcf	Mud Weight (Density), API 13B-1, Section 1
Viscosity During drilling Before final cleaning and immediately before placing concrete	45 - 104 sec/qt ≤ 104 sec/qt	Marsh Funnel and Cup, API 13b-1, Section 2.2
pH	9.0 – 11.5	Glass Electrode, pH Meter, or pH Paper
Sand Content Before final cleaning and immediately before placing concrete	$< 0.5\%$	Sand Content, API 13B-1, Section 5

G. Water Slurry.

Water slurry may be used if the full length of the drilled hole is cased. Do not mix soil into water slurry. Prepare and maintain water slurry in conformance to the following requirements:

TABLE 7		
Property	Requirement	Test Method/Reference
Density	≤ 65 pcf	Mud Weight (Density), API 13B-1, Section 1
Sand Content	$\leq 1.0\%$	Sand Content, API 13B-1, Section 5

Maintain slurry temperature at 40 degrees Fahrenheit or greater when tested.

H. Steel Reinforcing Bar Cage Centralizers, Boots, and Base Plates.

Provide commercially manufactured devices for properly aligning, centering and supporting steel rebar cages in drilled shaft excavations that will maintain the concrete cover specified in the Plans.

CONSTRUCTION REQUIREMENTS

A. Contractor Experience Requirements.

Prior to award of the contract, submit proof that the Contractor performing the work described in this special provision has successfully installed similar size and length drilled shafts, using similar installation methods in comparable ground conditions. Provide a list describing at least five projects completed over the past five years. Provide a single-page summary for each project including the following:

- A brief description of the project,
- The project's location and project date,
- The project's owner, and
- An owner reference, including an individual's name, relationship to the project, and current phone number.

The Contractor shall assign an on-site supervisor with at least three years of experience supervising construction of drilled shafts of similar size (diameter and depth) and scope to those shown in the Plans, and in similar geotechnical conditions to those described in the Plans. Provide a resume for the on-site supervisor documenting this experience. Project management level positions indirectly supervising on-site shaft construction operations are not acceptable for this experience requirement.

Provide drill rig operators that have at least one year of experience in construction of shaft foundations on the equipment proposed for this project using the methods proposed for this project (wet method drilled shaft construction, etc.). Submit a list of projects for each of the drill operator demonstrating at least one year of experience installing drilled shafts of similar size (diameter and depth) and scope to those shown in the Plans.

Submit the information documenting and satisfying the Contractor Experience Requirements within 10 business days after the award of the contract, to the NDDOT Construction Services Division.

B. Shaft Pre-Construction Conference.

Hold a drilled shaft preconstruction conference at the site a minimum of 10 calendar days before beginning drilled shaft construction work.

Have the following personnel attend the preconstruction conference:

- The Contractor's superintendent,
- On-site supervisors,
- Foremen in charge of:
 - Excavating the shaft,
 - Placing the casing and slurry, as applicable,
 - Placing steel reinforcing bars,
 - Placing concrete,
- If mineral or synthetic slurry will be used to construct the shafts, the slurry manufacturer's representative and Contractor's employees trained in the use of the mineral or synthetic slurry,
- The NDDOT Geotechnical Section.
- The Engineer.

Discuss the following at the preconstruction conference:

- Construction procedures,
- Personnel,
- Equipment, and
- Other elements of the approved Shaft Construction Submittal.

C. Shaft Installation Narrative.

Develop a Shaft Installation Narrative referencing the available subsurface data for the project. Submit the Shaft Installation Narrative to the Engineer for acceptance at least 21 calendar days before the Shaft Pre-Construction Conference.

In the Shaft Installation Narrative, account for potential ground movement due to the active landslide in the selection of drilling equipment, drill tooling, stabilization of the drilled shaft excavation, steel casing and reinforcement cage placement, and concrete placement operations. Include the following information in the Shaft Installation Narrative:

- 1) Proposed overall construction operation sequence.
- 2) Typical layout of drilling equipment, cranes, pump trucks, and any other equipment as necessary during all phases of drilled shaft construction. Describe the staging of equipment and sequencing of drilled shaft construction along the entire length of the structure. Include planned access paths to and from the drilled shaft locations. Provide a description of the working surface, such as crane mats, that will be used on the access bench, including an evaluation showing adequate bearing capacity of the working platform to support all proposed construction equipment. Account for sloping ground and the variable position of equipment on the access bench in the bearing capacity analysis.
- 3) The 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 why the equipment was selected and 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.
- 4) A list of potential problems that could occur during construction of the drilled shafts and proposed solutions. Include equipment breakdowns and related contingency plans. Include potential problems related to the subsurface conditions at the site, and landslide movement considering the rate of ground movement measured at the site.
- 5) Details of method(s) proposed to ensure drilled shaft stability (i.e., prevention of caving, bottom heave, using temporary casing, slurry, or other means) during excavation (including pauses and stoppages during excavation) and concrete placement.
- 6) A slurry mix design (if slurry is proposed), listing and describing all additives and their specific purpose in the slurry mix, with a discussion of their suitability to the anticipated subsurface conditions. Discuss the procedures for mixing, using, and maintaining the slurry.

- 7) A detailed plan for quality control of the selected slurry (if slurry is proposed), listing:
 - The tests to be performed,
 - Test methods to be followed,
 - Name and qualifications of individual(s) completing testing, and
 - Slurry properties to achieve with consideration of the anticipated subsurface conditions and shaft construction methods, in accordance with the slurry manufacturer's recommendations and these Special Provisions.
- 8) A description and details of the storage and disposal plan for excavated material and drilling slurry (if applicable). Include permit applications and approved permits required for slurry storage and disposal.
- 9) The details of concrete placement, including proposed operational procedures for pumping methods, the estimated time for concrete placement, and a sample uniform yield form for plotting the approximate volume of concrete placed versus the depth of shaft for all shaft concrete placement.
- 10) A concrete mix design meeting the requirements of this Special Provision.

D. Reinforcing Steel Work Drawings.

Provide Reinforcing Steel Work Drawings. Prepare the work drawings in accordance with Section 105.08. Submit the Reinforcing Steel Work Drawings to the Engineer for acceptance at least 21 calendar days before the Shaft Pre-Construction Conference.

At a minimum include the following items on the Reinforcing Steel Work Drawings:

- 1) Procedure and sequence of steel reinforcing bar cage assembly.
- 2) The tie pattern, tie types, and tie wire gages for all ties on permanent reinforcing and temporary bracing.
- 3) Number and location of primary handling steel reinforcing bars used during lifting operations.
- 4) Type and location of all steel reinforcing bar splices. Include manufacturer specifications for mechanical couplers.
- 5) Details, locations and orientation of all internal, temporary bracing and supports, including a description of connections to the steel reinforcing bar cage.
- 6) Description of how temporary bracing and supports are to be removed.
- 7) Location of support points during transportation.
- 8) Cage weight and location of the center of gravity.
- 9) Number and location of pick points used for lifting for installation and for transport (if assembled off-site).
- 10) Crane charts and a description and/or catalog cuts for all spreaders, blocks, sheaves, and chokers used to equalize or control lifting loads.
- 11) The sequence and minimum inclination angle at which intermediate belly rigging lines (if used) are released.

- 12) Pick point loads at 0, 45, 60, and 90 degrees and at all intermediate stages of inclination where rigging lines are engaged or slackened.
- 13) Methods and temporary supports required for cage splicing.
- 14) For picks involving multiple cranes, the relative locations of the boom tips at various stages of lifting, along with corresponding net horizontal forces imposed on each crane.
- 15) Details and locations of reinforcing cage centralizers and bottom supports.

E. Slurry Technical Assistance Plan.

If mineral or synthetic slurry is used to construct the shafts, provide or arrange for technical assistance in the use of the slurry as specified in this special provision. Submit the following to the Engineer:

- The name and current phone number of the slurry manufacturer's technical representative assigned to the project.
- The frequency of scheduled visits to the project site by the slurry manufacturer's representative.
- The name(s) of the Contractor's personnel trained by the slurry manufacturer in the proper use of the slurry and assigned to the project. Include a copy of a signed training certification letter from the slurry manufacturer for each Contractor's employee listed, including the date of the training.

F. Shaft Excavation.

Excavate the shafts to the required depth as shown in the Plans.

Conduct shaft excavation operations, including casing installation and removal, such that the soil adjacent to the shaft for the full height of the shaft is not disturbed. 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.

Contain all water and drilling slurry for disposal. Collect and dispose of excavated soil and slurry without allowing erosion or runoff. Follow all local, state and federal laws and regulations for handling, collecting, storage, transporting and disposing of the drilled shaft spoils and slurry.

1. Tolerances.

Ensure that the center at the top of the shaft is within 6 inches of the horizontal location and 2 inches of the vertical location shown in the Plans. Maintain the vertical distance between the top of the shaft and the top of the rebar projecting from the top of the shaft as shown in the Plans. Ensure that the shaft is within 1.5 percent of plumb.

Regularly check the plumbness, alignment, and dimensions of the shaft during excavation of the shaft. Correct any deviations from the specified tolerances with a procedure approved by the Engineer.

2. Excavation Stops.

a. General.

Conduct the excavation in a continuous operation until the excavation of the shaft is completed, except for pauses and stops as noted.

Pauses for casing splicing, tooling changes, slurry maintenance, and removal of obstructions are permissible during excavation operations.

Stops are interruptions to shaft excavation operation for anything other than casing splicing, tooling changes, slurry maintenance, or removal of obstructions.

Do not exceed 16 hours for stops in uncased or partially cased excavations.

Do not exceed 65 hours for stops in fully cased excavations.

For stops exceeding the time durations specified above in excavations where mineral or synthetic slurry is not present, stabilize the excavation using one or both of the following methods:

- a) For an uncased excavation, before the end of the work day, install casing in the hole to the depth of the excavation. 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 the excavation prior to removing the casing and resuming shaft excavation. If the sounding operation indicates that caving has occurred, do not remove the casing or resume shaft excavation until stabilizing the excavation in conformance with the approved Shaft Installation Narrative Submittal.
- b) For both a cased and uncased excavation, backfill the hole with granular material. Backfill the hole to the ground surface if the excavation is not cased, or to a minimum of 5 feet above the bottom of temporary casing if the excavation is cased.

During stops, stabilize the shaft excavation to prevent bottom heave, caving, loss of slurry, and loss of ground. The Contractor bears full responsibility for selection and execution of the method(s) of stabilizing and maintaining the shaft excavation. Stabilize the shaft in conformance to the approved Shaft Installation Narrative Submittal.

b. Slurry Levels.

If slurry is present in the shaft excavation, maintain the minimum slurry level required by this special provision throughout the stoppage of the shaft excavation operation. Before resuming excavation, recondition the slurry to the required slurry properties.

3. Temporary Drilled Shaft Casing.

If using temporary drilled shaft casing for excavation stabilization, furnish temporary drilled shaft casing in accordance with this Special Provision and the approved Shaft Installation Narrative. Telescoping casing is not permissible.

Provide enough temporary casing to meet the needs of the anticipated construction method. 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 or causing damage to the completed shaft and without disturbing the surrounding soil. As the temporary casing is withdrawn, maintain the concrete and slurry inside the casing at a level sufficient to balance the hydrostatic pressure outside the casing.

4. Bottom of Shaft Excavation.

Use 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 over the shaft base area immediately prior to placing concrete.

Sound the bottom of the excavated shaft with 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.

After observing the Contractor inspecting each shaft for cleanliness and depth, the Engineer will approve each shaft excavation prior to the Contractor proceeding with construction.

5. Required Use of Slurry in Shaft Excavation.

Use slurry to maintain a stable excavation during excavation and concrete placement operations once water begins to enter the shaft excavation at an infiltration rate of 12 inches of depth or more in 1 hour. If the rate of infiltration exceeds 12 inches per hour, concrete is placed via tremie methods, and the excavation is determined by the Engineer to be stable, slurry may be omitted at the discretion of the Engineer.

If concrete is to be placed in the dry, pump all accumulated water in the shaft excavation down to a 3-inch maximum depth prior to beginning concrete placement operations.

G. Slurry Methods.

1. Slurry Technical Assistance.

If slurry other than water slurry is used, the manufacturer's representative, as identified to the Engineer in accordance with the Slurry Technical Assistance Plan, shall:

- a) Provide technical assistance for the use of the slurry.
- b) Be at the site prior to introduction of the slurry into the first drilled hole requiring slurry
- c) Remain at the site during the construction of at least the first shaft excavated, to adjust the slurry mix to the specific site conditions.

After the manufacturer's representative is no longer present at the site, the Contractor's employee trained in the use of the slurry, as identified the Slurry Technical Assistance Plan, shall 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.

2. Minimum Level of Slurry in the Excavation.

Meet the following requirements:

- a) Sustain the height of the slurry as required to prevent bottom heave, caving, and sloughing.
- b) If necessary, provide casing, or other measures in addition to slurry, to prevent bottom heave, caving, and sloughing.
- c) Minimum slurry level:
 - Mineral Slurries: 5 feet or more above the depth where infiltration into the excavation first occurred.
 - Water Slurries: 10 feet or more above the depth where infiltration into the excavation first occurred.
 - Synthetic Slurries 10 feet or more above the depth where infiltration into the excavation first occurred.

3. Slurry Sampling and Testing.

a. General.

When synthetic slurry is used, keep a written record of all additives and the concentrations of the additives in the synthetic slurry. Provide these records to the Engineer after installation of the first drilled shaft. Provide revised data to the Engineer if changes are made to the type or concentration of additives during construction.

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.

b. Test Frequency and Sample Locations

Collect slurry samples in conformance with Table 8.

TABLE 8		
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, recirculate, 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, recirculate, 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, recirculate, and clean slurry as required to achieve conforming test results before placing concrete.

4. Maintenance of Slurry Properties.

Clean, recirculate, de-sand, or replace the slurry to maintain the required slurry properties.

5. Maintenance of a Stable Drilled Shaft Excavation.

Demonstrate to the satisfaction of the Engineer that stable excavation conditions are being maintained. If the Engineer determines that stable conditions are not being maintained, take immediate action to stabilize the excavation. Submit a revised Shaft Installation Narrative that addresses the problem and prevents future instability. Do not continue with shaft construction until the damage that has occurred is repaired in accordance with the specifications and until receiving the Engineer's approval of the revised Shaft Installation Narrative.

6. Slurry and Spoils Disposal.

Dispose of the slurry and slurry-contaminated spoils in accordance with the approved the Shaft Installation Narrative and Section 107.17 of the Standard Specifications.

H. Assembly and Placement of Reinforcement Steel.

1. Steel Reinforcing Bar Cage Assembly.

In accordance with the approved Work Drawings, rigidly brace the reinforcing cage to retain its configuration during handling and construction. Support shaft reinforcing bar cages on a continuous surface to the extent possible during fabrication and transport. Locate all rigging connections at primary handling bars, as identified in the approved Work Drawings. Provide internal bracing at each support and lift point. Do not include individual or loose bars. Remove internal bracing that would impede concrete placement prior to lowering the reinforcement cage into the excavation.

Position and fasten the reinforcement to provide the minimum clearances as shown on the Plans and to ensure no displacement of the reinforcing steel bars occurs during placement of the concrete. Hold the steel reinforcing bars in the same position throughout the concrete placement operation.

2. Centralizers.

At each level of centralizers, provide one centralizer per foot of excavation diameter and evenly distribute the centralizers around the perimeter of the reinforcing bar cage. Do not exceed a longitudinal spacing of 20 feet between adjacent levels of centralizers.

Utilize centralizers with adequate dimensions to provide the minimum concrete cover shown in the Plans and to ensure proper positioning of the cage is maintained during placement of the concrete.

3. Bottom Supports.

Provide cylindrical concrete feet (bottom supports) or other means in accordance with the approved Work Drawings, to ensure that the bottom of the cage is maintained the proper distance above the base of the shaft as shown on the Plans. Do not utilize skids or chairs constructed of steel or other electrically conductive material. The reinforcing cage may be hung from casing to provide the required concrete cover at the bottom of the shaft.

I. Non-Destructive Testing (NDT) of Drilled Shafts.

Conduct NDT of drilled shafts, consisting of Crosshole Sonic Log (CSL) testing and Thermal Integrity Profile (TIP) testing in accordance with the plans and special provisions. Furnish and install access tubes for Crosshole Sonic Log (CSL) testing and provide CSL testing in accordance with the Special Provision for Crosshole Sonic Log Tests. Furnish and install thermal sensor wires for Thermal Integrity Profile (TIP) testing and provide TIP testing in accordance with the Special Provision for Thermal Integrity Profile Tests.

J. Concrete Placement.

1. General.

Commence concrete placement immediately after approval of the completed excavation by the Engineer. Place concrete in one continuous operation to the top of the shaft. Ensure that concrete placement from successive trucks overlaps with no interruption in concrete placement.

During concrete placement, monitor and minimize the difference in the level of concrete inside and outside of the steel reinforcing bar cage. Conduct concrete placement operations to maintain the differential concrete head at a 1-foot maximum.

2. Dry Excavation.

If 3 inches of water or less is present at the base of the excavation immediately prior to concrete placement and the infiltration rate of water into the excavation prior to concrete placement is less than 12 inches of depth per hour, 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 any 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.

3. Wet Excavation.

If greater than 3 inches or more of water or slurry is present at the base of the excavation immediately prior to concrete placement, place the concrete at the bottom of the shaft by using a watertight tremie pipe having a minimum inside diameter of 8 inches and equipped with an attached hopper.

Keep the discharge end of the tremie pipe at the bottom of the shaft during placement of the concrete until the concrete level in the excavation is at least 5 feet above the discharge end of the tremie pipe.

Include a device to seal out water from the discharge end of the tube on the tremie pipe while it is first filled with concrete. Alternatively, use a plug 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 to discharge from the end of the tremie pipe.

Throughout the concrete placement operation, keep the discharge end of the tremie pipe submerged in the concrete at least 5 feet and maintain a sufficient level of concrete in the tremie pipe contain to prevent water from entering the pipe. Monitor the elevation of the top of the reinforcement cage to ensure it does not deviate beyond project tolerances.

Place concrete in a single continuous operation, resulting in a shaft composed of seamless, uniform concrete. Overpump the concrete in the excavation until uniform concrete visually free from slurry, soil, and laitance reaches the top elevation of the shaft. Remove excess concrete and contaminated concrete above the top elevation of the shaft.

4. Concrete Vibration.

When placing concrete in a dry excavation, remove all contaminated concrete, laitance, loose gravel, and sediment on the upper surface of the drilled shaft concrete and vibrate the upper 5 feet of the drilled shaft concrete in accordance with Section 602.04 C.2., "Vibration." If a temporary casing is used, remove it before vibration. Vibration is not required if a temporary casing is used and removed with a vibratory hammer during the concrete placement operation.

5. Testing and Repair of Concrete Placed in a Wet Excavation.

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. If no voids or joints are discovered, responsibility for coring costs will be in accordance with Section 109.03, "Negotiated Price."

6. Cleaning and Removal of Placed Drilled Shaft Concrete.

Thoroughly clean the projecting reinforcing steel and permanent casing and other tubes attached to the reinforcing cage of all accumulations of splashed concrete, slurry, and other debris immediately following concrete placement and removal of casing and slurry.

Remove all accumulations of soil, loose aggregate, contaminated concrete, or other debris on the surface of the drilled shaft concrete to expose fresh concrete and smooth any high spots on the upper surface of the exposed fresh concrete. Verify that the top of the drilled shaft and rebar cage is in conformance with the planned elevation.

7. Protection Fresh Concrete.

Do not install casing or conduct drilled shaft excavation within three shaft diameters center-to-center of a completed drilled shaft within 24 hours of the completion of concrete placement.

8. Uniform Yield Form.

Complete a uniform yield form for shafts constructed with tremie concrete placement methods and for all shafts to be tested using TIP, consistent with the sample form submitted as part of the approved Shaft Installation Narrative, for each shaft. Submit the completed form to the Engineer within 24 hours of completing the concrete placement in the shaft.

9. Rejection of Shafts and Revisions to Concrete Placement Operations.

If the Engineer determines that the concrete for a given shaft is structurally inadequate, that shaft will be rejected. Suspend subsequent placement of concrete until submitting written changes to the Shaft Installation Narrative. Describe the actions that will be taken to ensure concrete is structurally adequate. Do not continue with shaft installation until the revised Shaft Installation Narrative is approved by the Engineer.

K. Remedial Action Plan.

Verify and repair zones of potentially inadequate concrete, as determined from CSL or TIP testing or by observation of the Engineer. Prior to beginning this work, provide a Remedial Action Plan to the Engineer for approval. Submit details in the plan that describe:

- Methods and equipment for directly accessing the zone(s) of potentially inadequate concrete either by excavating along the drilled shaft (for shallow zones on the perimeter of the shaft) or by coring into the drilled shaft and obtaining concrete core samples.
- Corrective actions and/or repairs.

For coring, use either a conventional double-tube, swivel-type core barrel with split liners or a wireline barrel with split inner liners. Use a new diamond coring bit. Replace the coring bit and core barrel as necessary to minimize core loss. Obtain core samples in accordance with ASTM D 2113 to a depth 5 feet below the bottom elevation of the potentially inadequate concrete or as directed by the Engineer. Obtain core samples with a minimum diameter of 3.0 inches. (Note that coring to replace an unusable CSL access tube can be 2.0 inches in diameter.) Preserve all core in wooden core boxes, identified as to location and depth, and make the core available for inspection by the Engineer.

For corrective actions and/or repairs, prepare supporting calculations and work drawings demonstrating the sufficiency of the proposed repairs. If grouting is proposed to repair zone(s) of potentially inadequate concrete, prepare the corrective actions in accordance with the current version of the Association of Drilled Shaft Contractors – International Association of Foundation Drilling (ADSC) – IAFD Standard Mitigation Plan. Submit all remedial correction actions, calculations and work drawings to the Engineer for review and approval.

Grout core holes in accordance with the Crosshole Sonic Log Test Special Provision.

METHOD OF MEASUREMENT

Drilled shafts will be measured by the linear foot from the top drilled shaft elevation shown on the Plans to the bottom depth of the drilled shaft excavation as indicated on the Plans. Access tubes for CSL testing and CSL testing will be measured in accordance with the Special Provision for Crosshole Sonic Log Tests.

BASIS OF PAYMENT

The unit price of drilled shafts shall be full compensation of the work, including but not limited to, making all excavations; hauling, stockpiling and disposal of excavated material; performing all necessary pumping; furnishing and placing required concrete, permanent casing, and reinforcement steel, including the reinforcement blocking, splices, chairs and the reinforcement projecting above the tops of the drilled shaft concrete necessary for splicing; all backfilling; furnishing, placement, and removal of temporary casings; permits, placement, maintenance, testing, storage, removal and disposal of slurry; and for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the work.

CSL Testing will be paid for in accordance with the Special Provision for Crosshole Sonic Log Tests.

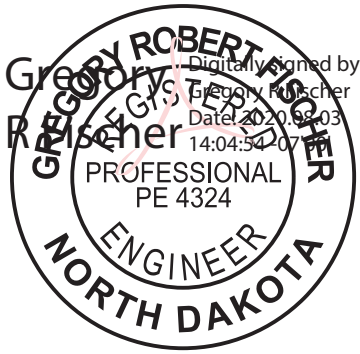
TIP Testing will be paid for in accordance with the Special Provision for Thermal Integrity Testing.

All materials and work necessary, including engineering analysis, testing, evaluation, and redesign, to investigate and effect corrections for unacceptable shafts or to replace such shafts shall be furnished to the Engineer's satisfaction at no additional cost to the Department. If the Engineer directs the Contractor to conduct coring of a potential defect, but no defect is encountered, the Department will pay for the coring and grouting costs.

The accepted quantities for drilled shafts will be paid for at the contract bid price for:

<u>Spec - Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
930-3995	5.0 ft Diameter Drilled Shaft	Linear Feet
930-3996	5.0 ft Diameter Drilled Shaft - Mod	Linear Feet
930-3997	6.0 ft Diameter Drilled Shaft	Linear Feet

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



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

GEOTECHNICAL INSTRUMENTATION

Project SOIB-NH-7-085(110)127 – PCN 22304

DESCRIPTION

This work consists of procuring, installing, and measuring geotechnical instrumentation pertaining to loads and deformations of selected structural components as specified.

DEFINITIONS

For the purpose of this special provision, the following terms are defined as follows:

- A. Instrumentation.** Drilled shaft movement sensors, ground anchor strain gauges, and data logging equipment.
- B. Crosshole Sonic Logging (CSL) Access Tubes.** Vertical steel tubes installed in drilled shafts to perform CSL testing. Selected CSL tubes will also be used for the installation of drilled shaft movement sensors.
- C. Ground Anchor Strain Gauges.** Instruments installed on ground anchor strands within the bonded and unbonded zone to measure distribution of load along anchor.

MATERIALS

A. Drilled Shaft Movement Sensor.

Furnish Drilled Shaft Movement Sensors (DSMS) for measuring drilled shaft displacement, such as SAAV, from Measurand, Inc., or approved equal.

B. Ground Anchor Strain Gauges.

Furnish strain or load measuring gauges, such as d-Cable, from Yieldpoint, Inc., TENSMEG – Tension Measuring Gauge, from RST Instruments Ltd., DYNA Force, from DSI International, Inc., or approved equal.

Size gauges appropriately for the anticipated range of load in the strand anchors. Provide a sufficient length of signal cable from each gauge to extend from gauge, out through head, and to final data logger location. Do not splice sensor wires in the field.

Utilize a portable readout unit that is compatible with anchor strain gauges to read the instruments during anchor testing and stressing.

C. Data Logging Equipment.

Furnish data logging equipment to facilitate automated reading of the DSMSs and ground anchor strain gauges. Provide data loggers, such as Sensemetrics THREAD, Campbell Scientific CR6, or approved equal, and appurtenant equipment and hardware to interface the data logging equipment with the DSMSs and ground anchor strain gauges.

Equip the data logging equipment with a cellular modem for remote data transmission and access to the instrumentation readings. Cellular signal strength at the site is sufficient to make voice calls with an iPhone equipped with Verizon service. Provide a single web-based interface for remote viewing and plotting of the instrumentation readings for all instruments and offsite storage of instrumentation readings, such as Sensemetrics Cloud Platform, Eagle.IO, or approved equal. Provide two years of service for the cellular modem and web-based interface.

Furnish solar panels and backup batteries to power the data logging equipment. Provide earth ground wiring and grounding rods for all data logging equipment in accordance with the manufacturer's recommendations.

D. Conduit.

Provide Schedule 40 PVC conduit or other electrical conduit as approved by the engineer to protect runs of signal wire between instruments and data logging equipment. Provide weatherproof joints and fittings to facilitate connections and terminations in the conduit.

E. Inclinator Casing

Furnish inclinometer casings as supplied by Slope Indicator Company (SINCO), Geokon, or approved equal.

Provide casing with:

- A 2.75-inch outside diameter, ABS plastic pipe with internal longitudinal grooves.
- Self-aligning couplings, caps, and fittings compatible with casing.
- All necessary installation tools and accessories.

CONSTRUCTION REQUIREMENTS

Provide and install all new instruments as indicated in the Plans, Special Provisions, and herein.

Collect data from the anchor strand gauges during stressing and lock-off, as described in the Ground Anchor Special Provision.

All instruments, data acquisition equipment, fixtures, cables, recorded data, data transfer and reduction software, and data templates become the property of the Department upon completion of the Contract. Transfer all hardware, recorded data, instrumentation warranties, calibration certificates, and software in working condition and within calibration to the Department upon completion of the Contract.

A. Quality Assurance.

Install the instrumentation in conformance to the manufacturer's requirements and these specifications.

Maintain the instrumentation systems within the manufacturer's calibration requirements for the duration of the project.

In the cases of instrument failure or other reasons for nonperformance during the term of the Contract, replace those instruments with acceptable instruments at no additional cost to the Department.

B. Instrumentation Specialist Qualifications.

The Contractor shall assign an Instrumentation Specialist to oversee the design, installation, and setup of the instrumentation system. Submit proof that the Instrumentation Specialist performing the work described in this special provision has successfully designed, installed, and setup similar instrumentation systems. Provide a list describing at least five projects completed over the past five years. Provide a single-page summary for each project including the following:

- A brief description of the project,
- The project's location and project date,
- The project's owner, and
- An owner reference, including an individual's name, relationship to the project, and current phone number.

Any technicians who will be involved in the installation and setup of the instrumentation shall have at least one year of experience in the installation and setup of geotechnical instrumentation and data acquisition systems. Submit a list of projects for the assigned technicians demonstrating the required experience. Limit the project list for each technician to two pages.

Submit the information, qualifications, and staff noted above within 10 business days after the award of the contract, to the NDDOT Construction Services Division.

C. Instrumentation Plan and Work Drawings.

Prepare an Instrumentation Plan and Work Drawings in accordance with Section 105.08, "Work Drawings." Prepare the Instrumentation and Work Drawings under the supervision and direction of a North Dakota Registered Engineer. Have the Registered Engineer sign and seal the Instrumentation Plan and Work Drawings. Submit the Instrumentation Plan and Work Drawings for review and approval 10 business days prior to beginning any drilled shaft or ground anchor construction activities. Include the following items:

- Schedule and outline of procedures for instrument installation.
- Comprehensive list and description of each type of instrument, including:
 - Name of manufacturer and model number, as appropriate.
 - Operating manuals and specifications.
 - Installation procedures for each type of instrument.
- Description of how inclinometer casing will be installed at the site, including
 - Proposed inclinometer locations.
 - The type of drill rig and drilling methods that will be used to drill the borehole.
 - Grouting mixes and methods for placing grout.
 - How the casing will be restrained from floating during grouting.
- Description of how DSMSs will be utilized for construction-phase monitoring before being installed in the drilled shafts.
- A description of the proposed data logging equipment, including:
 - Model number and manufacturer for all system components.
 - A description of how the components will be setup and interface with each other and the instruments.
 - A description and screenshots of the web-based interface that will be used to remotely access instrument readings.
- Work Drawings showing:
 - Instrumentation sensor locations.

- Proposed location(s) for all components of the data logging equipment.
- Proposed routing of all cabling, including routing of the DSMS cables through and along the cap beam.
- Details including conduit, covers, protection of signal cables, and backfill.
- Documentation of calibration for instruments and readout devices.

D. Installing Instrumentation.

Install instruments in accordance with manufacturer's recommendations and as described herein.

1. Inclinator Casing.

- a. Select the installation locations for the inclinometer casing to be within the areas indicated in the Plans and to avoid conflicts with the proposed improvements, grading, and construction activities. After obtaining the approval of the Engineer for the selected inclinometer locations, drill a borehole and install 2.75-inch diameter inclinometer casing at the selected locations and to the depths indicated in the Plans.
- b. Orient inclinometer casing so that the orthogonal grooves are positioned parallel and perpendicular to the final grading contours shown in the Plans.
- c. Install a protective enclosure at the top of the inclinometer casing. Ensure that the protective enclosure is compatible with the DSMS and associated hardware. Fill the protective enclosure with Class 43 chips after installation.
- d. Grout the casing in place using tremie methods. Use a tremie tube with side discharge ports. Attach tremie tube to the outside of casing using wire or tape, or place the tremie pipe in the borehole after inclinometer casing is installed. Do not place grout through the inside of the inclinometer casing. Utilize a grout mix that is in accordance with the casing manufacturer's recommendations.

To prevent the casing from floating out of the borehole during grouting, anchor the bottom of the casing or utilize other methods approved by the Engineer. Do not restrain the top of the casing.

Completely fill the annular void between the borehole and inclinometer casing with bentonite-cement grout pumped through the tremie tube. If the initial grout settles, place additional grout so the final grout level is within six inches of the ground surface.

2. Drilled Shaft Movement Sensor – Temporary Installation.

- a. Before beginning site grading, temporarily install the DSMSs to be subsequently installed in drilled shafts in the inclinometer casings indicated in the Plans. Install the DSMSs with a compression assembly so the DSMSs can be removed after the construction-phase monitoring period. Use unsensorized segments as necessary for the installation.
- b. Temporarily connect the DSMSs to the data logging system and ensure that the system is functioning. Provide the Department with access to the web-based monitoring platform, including graphs of the DSMS profile change versus depth. Do

not begin site grading until the Department has confirmed that the web-based monitoring platform is functioning.

- c. Protect the instruments and data logging system from damage during construction. Do not allow the DSMS to become damaged or stuck in the inclinometer casing due to slope movement. If slope movement is sufficient to necessitate the removal of the DSMS from the inclinometer casing, the Department may choose to have the Contractor install a new inclinometer casing to facilitate continued monitoring. Payment for the additional inclinometer casing will be at the unit cost for item Instrumentation - Inclinometer. If the inclinometer casing is replaced, reinstall the DSMS in the new inclinometer casing and re-establish the web-based monitoring system at no cost to the Department.
- d. Remove the DSMS from the temporary installation in the inclinometer casing and associated data logging equipment after the associated drilled shaft to permanently receive the DSMS is accepted by the Engineer. Install the instrumentation in the drilled shaft in accordance with this Special Provision.

3. Drilled Shaft Movement Sensor – Permanent Installation.

- a. Install DSMS in the drilled shafts identified in the plans in accordance with the manufacturer's instructions. Install the DSMS in the CSL access tube located either furthest uphill or downhill from the centerline of the cap beam. Locate the top of the DSMS sensorized length within 5 feet of the top of the CSL access tube, and locate the bottom of the DSMS sensorized length within 5 feet of the bottom of the CSL access tube. Install the DSMSs in each shaft to receive a DSMS after the shaft has been accepted by the Engineer.

Install the DSMSs directly inside the CSL access tube with a compression assembly.

Alternatively, the DSMS can be installed inside 1-inch diameter PVC electrical conduit placed inside the CSL access tube. Before installing the DSMS in the PVC conduit, install the conduit inside the CSL access tube and completely fill the annulus between the conduit and the CSL access tube with grout in accordance with the CSL Special Provision. Cover the top of the conduit to prevent the intrusion of foreign matter and debris until the DSMS is installed inside the conduit. Use a length of chain attached to the bottom of the PVC conduit or other methods recommended by the DSMS manufacturer to counteract buoyancy during grouting. Allow the grout to cure for at least 24 hours, then install the DSMSs in the conduit.

- b. Connect DSMSs to the data logging equipment as indicated in the approved Instrumentation Plan and Work Drawings. Provide all necessary connections, conduit, and cabling to connect DSMSs to the data logger system.
- c. If cable extensions or connections are required, utilize factory or shop installed connectors.
- d. Protect DSMSs through project acceptance. Repair or replace any damage to instrumentation resulting from construction activities at no additional cost to the Department.

4. Ground Anchor Strain Gauges.

- a. Install ground anchor strain gauges and signal cables at the strand anchor manufacturer's shop location. Install gauges prior to corrosion protection installation. Complete corrosion protection after strand gauges are attached to the anchor, without damaging to gauge, gauge cable, strand anchor, or compromising corrosion protection of ground anchor.
- b. Ensure strand anchor corrosion protection is intact after gauges and signal cables are attached.
- c. Protect instrument signal cables and gauges during transportation and installation of instrumented anchors.
- d. Connect ground anchor strain gauges to the data logging equipment as indicated in the approved Instrumentation Plan and Work Drawings. Provide all necessary connections, conduit, and cabling to connect the ground anchor strain gauges to the data logger system.
- e. If cable extensions or connections are required, factory or shop installed connectors should be used.
- f. All strain gauges must function after installation for the system to be deemed acceptable. If one or more strain gauges do not function after installation, install a replacement instrumented anchor at no additional cost to the department.

5. Data Logging Equipment.

- a. Install all components of the data logging equipment in accordance with the approved Instrumentation Plan and Work Drawings.
- b. Affix the serial number of each instrument to its corresponding connecting cable at the point where it attaches to the data logging equipment.
- c. Connect components of the data logging equipment to the earth ground.
- d. Complete activation of cellular connectivity.
- e. Configure the data logging equipment to measure and collect data from all instruments at a frequency of once per hour and provide a power cycling of the digital cellular modem once a day. Provide output in measure units as follows:
 - DSMS: profile of cumulative displacement.
 - Ground anchor strain gauges: Measured raw strain and total anchor load (load per strand times the number of strands in a given anchor).
- f. Protect the data logging equipment through project acceptance. Repair or replace any datalogging equipment damaged as by construction activities at no cost to the Department.

- g. Upon completion of installation, setup, and programming of data logging equipment, the Instrumentation Specialist will provide on-site walk through and training of system operations with Department staff.
- h. Configure a web-based platform for remote access and plotting of instrumentation readings. Provide the Department staff with access to the website.

6. Conduit.

- a. Protect runs of signal wire between instruments and data logging equipment with weatherproof electrical conduit. Utilize conduit to protect locations where the signal wires would otherwise be exposed to the elements. Utilize conduit where the signal wires pass through the concrete cap beam.
- b. Select the conduit diameter to fit the number of wires to be installed.
- c. Ensure that connections in the conduit are weatherproof. Provide weatherproof fittings to prevent the intrusion of water at termination points and any junction boxes.

E. Maintenance.

During the Contract term, protect and maintain all instruments in accordance with manufacturer's recommended procedures.

Report all damaged or non-functional instrumentation to the Engineer immediately. Repair or replace damaged instrumentation, as a result of construction activities, at no additional cost to Department.

F. Instrument Monitoring.

Provide access and necessary assistance to enable the Engineer to view data online through web-based platform.

Record measurements of strand anchor strain gages during each hold point of the ground anchor performance tests and ground anchor extended creep tests schedule in accordance with the Ground Anchor Special Provision, unless otherwise directed by the Engineer. Record ground anchor strain gauge measurements at lock-off, 24 hours after lock off, and 7 days after lock-off for each instrumented ground anchor. Provide the data to the Engineer with the extended creep test data in accordance with the Ground Anchor Special Provision.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

The Department will pay for accepted quantities at the contract price as follows:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
930-4200	Instrumentation – Inclinometer	Linear Feet
930-4221	Instrumentation – Drilled Shaft Movement Sensor	Linear Feet
930-4210	Instrumentation – Strain Gauge	Each
930-4225	Instrumentation – Data Logging Equipment	Lump Sum

The unit price of the installed instruments is for full compensation of the work including but not limited to costs associated with the instrumentation specialist's labor, per diem, and travel costs.

The unit price for Instrumentation – Inclinometer is for full compensation of the work including but not limited to: costs associated with drilling the inclinometer boreholes and grouting the inclinometer casing; costs associated installation and removal of DSMSs in the inclinometer casing; and costs for furnishing all tools, labor, equipment, materials, and incidentals necessary to complete the work.

The unit price for Instrumentation – Drilled Shaft Movement Sensor is for full compensation of the work including but not limited to: costs associated with testing, installation, and programming and documentation by the Instrumentation Specialist; costs associated with installation and removal of the DSMS in the inclinometer casings for construction-phase monitoring; and costs for furnishing all tools, labor, equipment, materials, and incidentals necessary to complete the work.

The unit price for Instrumentation – Strain Gauge is for full compensation of the work including but not limited to: costs associated with installing gauges onto ground anchor, including travel expenses to the manufacturer's plant for strand anchor gauge attachment; costs associated with manufacturer's preparation of strand for gauge installation and restoration of Class 1 corrosion protection onto strand anchor; preparation of submittals; instrumentation monitoring; maintenance of instruments and data reports; acquisition of instrumentation; calibration of instrumentation; costs for data collection, readout devices, data cables; and for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the work.

The unit price for Instrumentation – Data Logging Equipment is for full compensation of the work including but not limited to: procurement of all data logging equipment meeting these specifications; wiring, conduit, and cable connections; earth ground rod and wiring; all costs associated with testing, installation, programming, documentation, and assistance to NDDOT during system handover by the Instrumentation Specialist; two years of cellular modem and web monitoring service; construction-phase monitoring and movement of the equipment from its construction-phase location to its permanent location; and costs for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the work.



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

THERMAL INTEGRITY PROFILING

Project SOIB-NH-7-085(110)127 – PCN 22304

DESCRIPTION

This work consists of furnishing equipment, materials, and experienced labor to complete thermal integrity profiling (TIP) testing of completed drilled shafts and to prepare test reports in accordance with Method B of ASTM D 7949.

MATERIALS

A. Embedded Thermal Sensor Wires.

Furnish embedded thermal sensor wires conforming to ASTM D 7949.

B. Data Acquisition System.

Furnish a computer-based data acquisition system conforming to ASTM D 7949 and capable of regularly recording temperature readings from the embedded thermal sensor wires at a user-defined time interval.

CONSTRUCTION REQUIREMENTS

A. TIP Testing Consultant.

Submit a resume of the TIP Consultant retained by the Contractor, for approval by the Engineer. List 5 projects over the past 3 years consisting of similar sized drilled shafts (diameter and length) constructed in similar conditions. Limit the resume length to 5 pages. Use a ND licensed Professional Engineer to supervise the testing, interpretation of collected data, and reporting of the results.

B. Thermal Wire Installation.

1. Drilled Shafts Requiring Thermal Sensor Wires.

Install thermal sensor wires in the drilled shafts designated by the Engineer during construction.

2. Attachment of Thermal Sensor Wires.

Attach the thermal wires to the rebar cage at the locations indicated in the Plans. Install the wires in accordance with the manufacturer's recommendations and ASTM D 7949. Install the thermal sensor wires from the top of the shaft to within 6 inches of the bottom of the rebar cage. Ensure that the wires are not damaged during installation of the rebar cage and placement of concrete.

C. TIP Testing.

Perform TIP testing and analysis on each drilled equipped with thermal sensor wires. Conduct TIP testing in accordance with ASTM D 7949, Method B. Prior to TIP testing, provide the Engineer and TIP Consultant with a record of:

- The as-constructed shaft length with top and bottom shaft elevations.
- A plot of the field placed concrete volume versus the theoretical hole volume.
- The thermal wire cable serial numbers installed showing their corresponding location in the shaft.
- The shaft installation date and time.

Connect the thermal sensor wires and begin recording temperature readings before or immediately after concrete placement. Collect and record data at 15-minute intervals for up to 48 hours until the peak temperature is reached or as recommended by the TIP Consultant.

D. Reporting.

Submit a report stamped by a ND Professional Engineer to the Engineer for review and acceptance that contains the following:

- All items specified in ASTM D 7949, Section 8.
- Graphical displays of all temperature measurements versus depth for each reading time. Incorporate adjustments in accordance with the testing equipment manufacturer's guidance to account for end effects at the top and bottom of shaft.
- Indication of unusual temperatures, particularly significantly cooler deviations of the local average at any depth compared to the overall average over the entire shaft length.
- The overall average temperature.
- Variations in temperature between thermal sensor wires at each depth and any corresponding misalignment of the rebar cage from center.
- A discussion and assessment of the data quality, and integrity of the tested drilled shaft, including a comparison the TIP results to CSL results (if CSL tested).

E. Engineer's Final Acceptance of TIP and CSL Tested Drilled Shafts.

The Engineer will determine final acceptance of each drilled shaft tested based on the TIP and CSL test report(s) (if completed) received for the tested shafts, and will provide a response to the Contractor within 5 working days after receiving the test report(s).

For shafts determined to be unacceptable by the Engineer, submit a plan for further investigation or remedial action in accordance with Special Provision 736(14).

METHOD OF MEASUREMENT

Drilled shafts will be measured in accordance with the Special Provision for Drilled Shafts.

TIP testing will be measured by each drilled shaft tested and accepted by the Engineer.

BASIS OF PAYMENT

The unit price of TIP testing shall be full compensation for each drilled shaft tested including, but not limited to: furnishing thermal sensor wires; attaching thermal sensors to the rebar cage; providing a data acquisition system to record temperature readings during testing; providing experienced personnel to conduct the TIP testing; furnishing adequate equipment to complete the tests; preparing the TIP report that includes presentation of the TIP data, interpretation of the TIP data, and assessment of drilled shaft's integrity; submittal of report; and for furnishing all tools, labor, equipment, materials and incidentals necessary to complete the TIP testing work.

The accepted quantities for TIP testing will be paid for at the Contract unit price per each tested drilled shaft tested reported to be free of addressable flaws and defects. The Mod 1 pay item shall be used for 6-foot diameter drilled shafts.

<u>Spec - Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
930-4260	Thermal Integrity Profiling Test	Each
930-4261	Thermal Integrity Profiling Test – Mod 1	Each

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

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

MASS CONCRETE

Project # SOIB-7-085(110)127 – PCN 22304

DESCRIPTION

This work consists of controlling the temperature of mass concrete elements for the purpose of minimizing thermal cracking during the curing process. This special provision was developed using ACI 301-16 "Specifications for Structural Concrete".

MATERIALS

Item	Section
Admixtures	808
Fly Ash	820

CONSTRUCTION REQUIREMENTS

A. Mass Concrete Elements.

The following elements in the permanent structure for Mass Concrete:

- Cap Beams

B. Mass Concrete Mix Design.

1. General.

Develop a mix design for each mass concrete element with a maximum w/c ratio of 0.44.

A new mix design is required for changes in any of the following:

- Aggregate source;
- Cementitious material;
- Total water weight by more than 3%; or
- Changes in admixture manufacturer.

If changes are made to the mix design, re-submit the mix design for review and verification. Do not use the revised mix design until it is reviewed and verified.

If placed concrete is out of tolerance with the mix design as defined in this section, remove and replace the concrete with material that meets the tolerances of the accepted mix design.

2. Compressive Strength.

For lab results, the 28-day strength may be attained at 56 days for mix designs that include fly ash. Individual strength test below 80% of f'_c at 28 days will not be accepted.

Apply a correction factor of 0.92 when using 4 inch x 8 inch concrete cylinders.

3. Finely Divided Mineral Admixtures.

Use fly ash in the mix at a rate between 25 and 40 percent of the total cementitious material.

4. Admixtures.

Include admixtures and dosage rates in the concrete mix design. Do not use admixtures that contain chloride.

5. Sample Preparation and Testing.

Develop trial batches and prepare the samples according to ACI 301, "Specification for Structural Concrete". Perform testing of the trial batches in an AASHTO laboratory accredited for Concrete.

Test the plastic properties of the concrete after all admixtures are added.

Cure all concrete cylinders used for compressive strength according to AASHTO T 23.

6. Mix Design Documentation.

Include the following test data:

- Fine Aggregate:
 - Weight (lbs - SSD);
 - Source;
 - Type;
 - Specific gravity; and
 - Percent Absorption;
- Coarse Aggregate:
 - Weight (lbs – SSD);
 - Source;
 - Size;
 - Specific gravity; and
 - Percent Absorption
- Cement:
 - Weight;
 - Source;
 - Specific gravity; and
 - Type;
- Fly Ash:
 - Weight (lbs)
 - Source; and
 - Specific Gravity;
- Weight of Water (lbs.).
- Admixtures:
 - Type;
 - Brand Name; and
 - Dosage;
- Water/Cement Ratio (including all cement and fly ash); and
- The following test results:
 - Concrete Temperature;
 - Tested Slump;
 - Tested Air Content;
 - Unit weight;

- Yield;
- Tested Strength moist room cured testing at following days:
 - 3;
 - 7;
 - 14;
 - 28; and
 - 56 days, if required;
- Strength Gain Curves; and

Create a 9 yard trial batch of each mix design to assess workability near the project site. If the trial batch is not workable, modify the mix design or batching sequence and retest. Resubmit any changes in the mix design to Materials and Research.

C. Thermal Control Plan (TCP).

Develop a Thermal Control Plan (TCP) according to ACI 301 Section 8.1.4 “Submittals” with the following additions:

- Identify the thermal modeling software used and provide a copy of the software with one license for use by the Engineer.
- Include the following site and element data used for modeling:
 - Input parameters;
 - Output data;
 - Results;
 - Summary of findings; and
 - Thermal control direction for each element.
- Describe the methods used to control the maximum temperature and temperature differentials for each element.

D. Submittals.

1. General.

Deliver the samples, the mix design, and the TCP to the Materials and Research Division for review 45 calendar days before placing mass concrete. Materials and Research Division will review and verify the TCP for completion.

Supply the Department samples that are the same source as the proposed mix design. Attach a tag to the samples identifying the Departments project number and type of material.

Supply samples of material based on the minimum sample size in Table 1. Provide additional material upon request.

Table 1
Minimum Mix Design Sample Size

Material	Sample Size
Cement	100 lb
Fly Ash	35 lb
Aggregate	1000 lb
Admixtures	1/2 pint each

2. Mix Design Acceptance.

Acceptance of the mix design is based upon trial batching and testing results.

The Engineer has 45 calendar days to review the mix design or any resubmitted mix design.

If the mix design is rejected, develop a new mix design and resubmit.

E. Temperature Limitations and Monitoring.

1. General.

Monitor the temperature conditions from the time of concrete placement until the interior temperature of the concrete is within 35°F of the ambient temperature.

Provide concrete to the project that does not exceed 70°F at time of placement.

2. Use of Ice.

Ice may be used to reduce the heat of hydration. If ice is used, use ice particles smaller than 3/8 inch. The quantity of ice used will replace an equal weight of mixing water.

Blend concrete so there is no ice during placement.

3. Temperature Monitoring and Recording Devices and Locations.

Place temperature monitoring and recording devices in the locations shown in ACI 301 Section 8.3.1.2(a) "Monitoring of Temperatures" with the following exception.

Provide a temperature monitoring and recording device that operates in a range of 0 to 200°F (±2°F).

4. Automatic Temperature Devices.

Provide Automatic Temperature Devices that begin recording immediately after completion of a pour and continue until 24 hours after the following conditions are met:

- Maximum temperature differential is reached and begins to drop;
- Maximum peak curing temperature is reached and begins to drop; and
- All formwork, insulation, and other temporary items have been removed from the mass concrete element and it is exposed to ambient temperature and the environment.

Physically verify the readings of the sensors for temperature and differential temperature every 4 hours to confirm the automatic temperature devices are working and address any issues that occur. Record all readings of the actively monitored temperature and differential temperatures.

Transmit all temperature readings, data logs, and graphs at the end of every 4 hour period to the Engineer by email.

5. Maximum Peak Curing Temperature.

Do not allow the maximum peak temperature to exceed 150°F.

6. Maximum Temperature Differential.

During the curing period, the measured temperature differential will not exceed 35°F.

7. Thermal Protection.

Remove thermal protections only after the following criteria are met:

- The temperature difference between the ambient air temperature and a point 2 inches inside the element has reached its maximum and is decreasing; and
- The temperature difference between a point 2 inches inside the element and the center of the element has reached its maximum and is decreasing.

Remove thermal protection gradually so that the rate of temperature reduction to the surface does not exceed 15°F during any 12 hour period. Continue removing the thermal protection until the concrete surface reaches the ambient air temperature.

F. Corrective Action.

If monitoring indicates that any temperatures differential exceeds 35°F or the maximum temperature exceeds 145°F, immediately contact the Engineer and take action to reduce the temperature to within acceptable range.

Revise the TCP to reduce the temperatures of the Mass Concrete for future Mass Concrete pours. Submit the revised TCP for review 14 days before the next Mass Concrete placement.

G. Cracks.

Inspect the Mass Concrete element and determine the nature of any cracking.

The Engineer will inspect all cracking that occurs on all mass concrete elements.

The Engineer and Bridge Division will make a determination on replacement or repair of the Mass Concrete element after all thermal control and cooling operations are complete.

H. Future Work.

Allow the concrete element to develop a minimum of 80% of the designed strength before loading with successive lifts of concrete or placement of elements.

Before superstructure construction, allow the substructure to achieve design strength.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Include the costs associated for Mass Concrete in the contract unit price of Class AAE-3 Concrete.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

ERIONITE CONTAINMENT

Project 7-085(110)127 – PCN 22304

DESCRIPTION

The location of this project and the construction history of the roadway indicate that the asphalt and aggregate base contain the mineral erionite. Information regarding the properties of erionite can be found at the North Dakota Department of Environmental Quality (NDDEQ) website:

<https://deq.nd.gov/Erionite/>

The presence of erionite requires special handling of the existing material.

CONSTRUCTION REQUIREMENTS

Salvage the existing surfacing using one or both of the following methods:

A. In Place Blending.

1. Crush and blend the existing asphalt pavement and aggregate base in place. Reincorporated existing material into the new base course.
2. Provide a mining/blending machine that meets the requirements of Section 153.01, "Reclaimer" with the additional capability of adding water to the blended aggregate and asphalt pavement during the crushing and blending operation,.
3. Keep the aggregate and crushed asphalt damp throughout the operation to minimize fugitive dust.

B. Off Site Blending.

1. General.

- a. Mill the existing asphalt pavement and reincorporate into the new base course.
- b. Provide a milling machine that meets the requirements of Section 156.03, "Milling Machine" with the additional capability of adding water directly to the asphalt pavement during milling operations.
- c. Keep the milled asphalt damp throughout the operation to minimize fugitive dust.

2. Hauling.

Cover loads of removed material to prevent loss of material during hauling operations.

3. Stockpiling and Mixing Plant.

Removed material may be crushed or screened to meet gradation requirements. If crushing or screening is performed, obtain approval from the Engineer and the NDDEQ of a Dust Prevention Plan before crushing or screening.

A cold feed system may be used in blending the material with the virgin aggregate. If a cold feed system is used, it shall meet the requirements of Section 154.01 G, "Cold-Feed Control."

C. Traffic and Maintenance.

1. Keep aggregate and blended base courses damp at all times until the courses are covered with asphalt pavement or prime.
2. Have personnel on the project at all times to monitor the moisture of exposed courses and apply water as necessary to prevent fugitive dust caused by public and construction traffic.

D. Exclusion Areas.

Do not use erionite containing salvaged base for Traffic Service Aggregate or on approaches.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

MACHINE HYGIENE

PROJECT 7-085(110)127 – PCN 22304

DESCRIPTION

The North Dakota Department of Transportation (NDDOT) in cooperation with the Federal Highway Administration (FHWA) have made the following environmental commitments to the National Parks Service (NPS) for all work within NPS lands:

- Machinery Hygiene;
- Noxious Weed Management Plan; and
- All commitments as outlined in Section 6 of the plans.

Commented [GEN1]: Do any of these commitments exist.

DEFINITIONS

Contractor Controlled Areas: are 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 or waste areas, etc.).

Decontaminate: means to remove all mud, dirt, and plant material.

Decontamination Site: refers to any location where decontamination is being performed, which shall be situated on ground away from drainages and waterways.

Noncompliance: is any action or inaction that violates the regulations imposed by the applicable permits or the requirements of this Special Provision or other contract documents.

Noxious Weeds: are those plants deemed detrimental to public health, agriculture, recreation, wildlife and/or property by the North Dakota Department of Agriculture, and/or the NPS.

Off-Road Equipment includes any non-road engines (e.g. generators, welders, etc.), equipment and vehicles that leave the roadway, and any licensed trucks and vehicles used to excavate, remove, and haul vegetation, debris, and topsoil.

Service Vehicles: include vehicles that stay on the roadway, travelling frequently in and out of the project area, that are used to transport personnel, tools, equipment, supplies, and construction materials to and from the project site, with the exception of excavated materials (borrow, topsoil, aggregate, etc.).

NPS Lands: are lands designate by federal law as managed by NPS for the Public.

CONSTRUCTION REQUIREMENTS

A. Machine Hygiene.

1. General.

Decontaminate on road and off-road equipment prior to accessing the project site or any Contractor controlled site to prevent the spread of noxious weeds.

2. Coordination.

At least 10 work days prior to commencement of any construction activities, coordinate with the Engineer, McKenzie County Weed Control Officer (701)842-4131, and the McKenzie Ranger District, (701) 842-2393 to perform a noxious weed inventory along the project corridor where existing right-of-way or easements occur, as well as in areas outside of right-of-way, such as borrow and/or waste sites, haul routes, and any other contractor controlled areas.

During this inventory if noxious weeds are found to be present in these areas, the Contractor shall treat or removed the vegetation in a manner acceptable to the NPS. This inventory will be at the start of each growing season during which construction occurs. Perform the noxious weed inventory at the beginning of each growing season that construction will occur.

3. Decontamination Requirements.

Decontaminate all on road and off road equipment before entering project sites for the first time. Equipment used within the areas established to be free of noxious weeds as described herein does not need to be decontaminated each time it enters the project sites.

Repeat decontamination of any equipment utilized on another job prior to reentry of project sites. Conduct decontamination on site or outside of the project site, NPS lands.

Service vehicles do not need to be decontaminated.

4. Decontamination Procedures.

a. Offsite Decontamination.

Pressure wash all on road and off-road equipment at an offsite location. Remove all caked on dirt, mud, and plant material.

Perform pressure washing at an offsite, dedicated washing station, with proper containment and disposal of wash water and solid waste to avoid the spread of noxious weeds.

b. Inspection.

Inspect all on and off road equipment for the following before accessing the project sites:

- Dirt;
- Mud; and
- Plant material.

The following tools are typically required for inspection:

- Mirrors;
- Tools required to access internal components;
- Probes;
- Gloves;
- Safety glasses;
- Containers for any contaminated material; and
- Check list for inspection points (including, but not limited to, components of the cabin, engine underside, tracks/wheels, blades/buckets, booms/arms, accessories/attachments, bumper/brush guard, and running boards).

c. Onsite Decontamination.

Onsite Decontamination consists of vacuuming, sweeping, and physical removal of caked on mud/dirt or plant material.

Do not use water for onsite decontamination. Sweep and/or vacuum cabins.

Caked on mud/dirt and large vegetative debris shall be physically removed using hand tools, including, but not limited to, brooms, brushes, scrapers, and shovels.

Collect all waste and debris that is removed from the equipment and place the material in sealed refuse containers. Dispose of the material at the appropriate landfill.

Collect waste and debris removed from the equipment. Seal material in refuse containers and dispose of the materials at the appropriate landfill.

5. Documentation and Reporting.

Document all decontamination (both on and off project site) and inspection of all on road and off-road equipment that accesses project sites. A log book shall be maintained by the Machinery Hygiene Supervisor to document the following for each piece of on road and off-road equipment accessing the project sites:

- 1) was pressure washed prior to arrival at the project site,
- 2) was inspected onsite for noxious weeds and passed said inspection (i.e., was free of mud, dirt and vegetative debris).

The log book shall include applicable equipment identification, dates, responsible parties, locations, and methods.

Weekly provide copies of this documentation to the Engineer, NPS, and USFS McKenzie Ranger District (701) 842-2393.

6. Personnel.

Provide a Machinery Hygiene Supervisor that meets the following requirements.

a. Qualifications: The Prime Contractor shall name a supervisor that:

- i. Is an employee of the Prime Contractor.
- ii. Is familiar with project specifications, plans and this Special Provision.
- iii. Has the ability to identify noxious weeds that may be present in McKenzie County, North Dakota.
- iv. Has at least one year of experience supervising personnel.

b. Duties: Have the supervisor:

- i. Adhere to this Special Provision.
- ii. Be on the decontamination site to supervise the decontamination and inspection of equipment, and required documentation.
- iii. Distribute documentation of decontamination and inspection as described herein.

7. Performance.

The Engineer will determine if the Contractor is in compliance through inspection of the log book.

Equipment that is in non-compliance will not be allowed to remain on the project site until decontamination has occurred.

B. Noxious Weed Plan.

1. Development and Submission of Noxious Weed Plan

Develop and submit a Noxious Weed Plan at the preconstruction conference. Include the following information:

- Personnel involved in the Noxious Weed Inspections;
- List of noxious weed species;
- Inspection for noxious weed intervals, including example documentation;
- Method of identifying and notifying construction personnel of weed location until treatment;
- Treatment method of any noxious weeds found;
- Spill plan for chemicals used in treatment; and
- Disposal methods for weeds removed.

The Engineer will have 10 days to review the plan.

If more information is required for the Noxious Weed Plan, resubmit the plan to the Engineer and the Engineer will have 10 days to review.

2. Update to Noxious Weed Plan.

Update the Noxious Weed Plan throughout the duration of the project based on field conditions.

Provide the updated Noxious Weed Plan to the Engineer.

C. Noxious Weed Inspections.

Perform noxious weed inspections at the intervals shown in the Noxious Weed Plan.

Document the noxious weed inspections and treatments in a log book.

Provide the log book to the Engineer upon request.

BASIS OF PAYMENT

Pay Item	Pay Unit
Machine Hygiene	Lump Sum

Payment for Machine Hygiene will be based on the following table.

Original Contract Amount Earned	Payment of Machine Hygiene
5%	25%
25%	50%
75%	75%
95%	100%

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

WINTER SUSPENSION

Project: SOIB-NH-7-085(110)127 - PCN 22304

DESCRIPTION

This project is scheduled to have a 2-year construction schedule. Winter suspension will be from November 21, 2021 to May 1, 2022. Complete the work listed below in the year for which it is listed. Do not perform work outside the year for which it is listed without the Engineer's written permission.

Year 1 – 2021: Complete all work listed in Note 105-P01 ORDER OF OPERATIONS in the Plans. Install temporary seed and temporary erosion control items as shown in Section 76 of the Plans for Winter Suspension.

Year 2 – 2022: Complete HMA milling and overlay work on US Hwy 85. Install permanent seed and permanent erosion control items as shown in Section 77 of the Plans.

WINTER SUSPENSION REQUIREMENTS

Meet the following conditions before beginning winter suspension:

- A. US Hwy 85 is fully open to traffic;
- B. Reset all permanent signs where existing conditions have been altered or where signs have been removed;
- C. Place topsoil, temporary seed, and stabilize all disturbed areas;
- D. Remove construction equipment and materials from the Right of Way; and
- E. Remove all portable traffic control devices.

Schedule a winter suspension walk-through with the Engineer 2 days before the anticipated winter suspension. The Engineer may require the completion of additional items of work relating to the suspension before issuing suspension.

If the winter suspension requirements are not met, Liquidated Damages of \$5000 per calendar day will be charged from November 21, 2021 until May 1, 2022 or until the winter suspension requirements are met.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
PERMITS AND ENVIRONMENTAL CONSIDERATIONS
NON-REPORTING NATIONWIDE 3 SECTION 404 PERMIT
MAINTENANCE

This Special Provision incorporates a Non-Reporting US Army Corps of Engineers (USACE) Nationwide 3 Section 404 Permit. A Non-Reporting Nationwide 3 Section 404 Permit is utilized in situations where USACE jurisdictional water impacts meet specific criteria allowing maintenance activities in jurisdictional waters of the US without preconstruction notification (permit application). To use the Non-Reporting Permit the conditions listed in the attached Fact Sheets and Regional Conditions must be followed.

The Contractor shall be responsible for complying with all the terms and conditions as contained in the attached Fact Sheets and Regional Conditions. Bidders shall become familiar with all standard conditions and special conditions when submitting their bid for this project. The Fact Sheet and Regional Conditions for a Nationwide 3 Section 404 Permit are attached.

- **Nationwide 3 Non-Reporting Section 404 Permit**

The Non-Reporting Nationwide 3 USACE 404 Permit authorizes maintenance activities to previously authorized structures or fills resulting in temporary impacts to jurisdictional waters of the US. All temporarily impacted areas will be restored to original contours.

The contractor shall be responsible for obtaining permits for impacts not authorized by this Non-Reporting Nationwide 3 Permit.

**FACT SHEET
NATIONWIDE PERMIT 3
(2017)**

MAINTENANCE

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to pre- construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre- construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Section 10 and 404)

Nationwide Permit 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 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 NWP 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 Fills.

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.

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. The permittee 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 NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

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 the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. 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 designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, 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 designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat 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. In cases where the non-Federal applicant has identified listed species or critical habitat 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 critical habitat, or until ESA section 7 consultation 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 with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.

(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 their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts 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) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, 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. 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, which may include background research, consultation, oral history interviews, sample field investigation, and 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. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and 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.

(d) 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.

If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you 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 NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 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 in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined 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) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than 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. Restored riparian areas should consist of native species. 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)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(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 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.

Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. *Specifically for North Dakota, the North Dakota Department of Health has issued water quality certification for projects under this Nationwide Permit provided the attached Construction and Environmental Disturbance Requirements are followed. On Tribal Lands, Water Quality Certification is denied for all Nationwide Permits. Applicants must work with EPA to obtain individual water quality certification. Contact: USEPA, Region 8, 401 Certification Program – 8WP-AAP, 1595 Wynkoop Street, Denver, Colorado 80202-1129. (303-312-6909)*

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)). 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 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 prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not 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.

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 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 is not authorized by NWP until the appropriate Corps office issues the section 408 permission 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. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. 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) 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. For single and complete linear projects, 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. 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, intermittent, and ephemeral 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 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 designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat 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 activity that requires 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 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 the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. 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 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) 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 (iv) 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 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 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).

**2017 NATIONWIDE PERMITS
REGIONAL CONDITIONS
OMAHA DISTRICT
STATE OF NORTH DAKOTA**

The following Nationwide Permit Regional Conditions will be used in the State of North Dakota. Regional conditions are placed on Nationwide Permits to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resource concerns.

1. Wetlands Classified as Peatlands – Revoked for use

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38 and 45, are revoked for use in peatlands. Peatlands are permanently or seasonally saturated and inundated wetlands where conditions inhibit organic matter decomposition and allow for the accumulation of peat. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay.

2. Wetlands Classified as Peatlands – Preconstruction Notification Requirement

For Nationwide Permits 3, 5, 20, 32, 38 and 45 permittees must notify the Corps in accordance with General Condition 32 (Pre-Construction Notification) prior to initiating any regulated activity impacting peatlands.

3. Waters Adjacent to Natural Springs – Preconstruction Notification Requirement

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) for regulated activities 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.

4. Missouri River, including Lake Sakakawea and Lake Oahe – Pre-construction Notification Requirement

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity occurring in or under the Missouri River, including Lake Sakakawea and Lake Oahe. In addition, any activity occurring in an off channel area (marinas, bays, etc.) of any of these waterbodies, a preconstruction notification is required.

5. Spawning Areas

Spawning restrictions and important fish habitat areas, if applicable, can be accessed on the North Dakota Game & Fish Department's website at:

<http://gf.nd.gov/gnf/conservation/docs/spawning-restriction-exclusions.pdf>

No regulated activity within the Red River of the North shall occur between 15 April and 1 July. Spawning season restrictions do not apply to projects involving dredging or other discharges of less than 25 cubic yards of material in any jurisdictional water.

6. Counter-Sinking Culverts and Associated Riprap – All Nationwide Permits

In streams with intermittent or perennial flow and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural streambed 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.

Riprap inlet and outlet protection shall be placed to match the height of the culvert invert.

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	0.5 ft
Pipe diameter <8.0 ft	>640 acres	1.0 ft
Pipe diameter ≥ 8.0 ft	All drainage sizes	1.0 ft
Box culvert	All drainage sizes	1.0 ft

REGIONAL CONDITIONS APPLICABLE TO SPECIFIC NATIONWIDE PERMITS

Nationwide Permit 7 – Outfall Structures and Associated Intake Structures and Nationwide Permit 12 – Utility Line Activities.

Intake Structures – Intake screens with a maximum mesh opening of ¼-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 ½-foot per second.

Pumping plant sound levels will not exceed 75 dB at 50 feet.

Intakes located in Lake Sakakawea, above river mile 1519, and on the Yellowstone River, are subject to the following conditions:

- The intakes shall be floating.
- At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.

- If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.
- 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 ¼ foot per second.

Intakes located in Lake Sakakawea, below river mile 1519, and the Missouri River below Garrison Dam are subject to the following conditions:

- The intakes shall be submerged.
- At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.
- The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.
- 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.

Intakes and associated utility lines that are proposed to cross sandbars in areas designated as piping plover critical habitat are prohibited.

Utility Lines

- 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.

Nationwide Permit 11 – Temporary Recreational Structures – Boat Docks

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:

- 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 watermark. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer's Office.
- Any boat dock shall be anchored to the top of the high bank.
- 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.

Section 10 Waters located in the State of North Dakota are:

Bois de Sioux River
James River
Missouri River
Red River of the North
Upper Des Lacs Lake
Yellowstone River

Nationwide Permit 13 – Bank Stabilization

Permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity. The notification must also include photo evidence of erosion in the area. Prohibited materials found at <http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/487696/prohibited-restricted-materials.aspx> cannot be used in waters of the United States.

Nationwide Permit 23 – Approved Categorical Exclusions

Permittees must notify the Corps in accordance with General Condition No. 32 (Pre-Construction Notification) prior to initiating any regulated activity. In addition to information required by General Condition 32 (Pre-Construction Notification), permittees must identify the approved categorical exclusion that applies and provide documentation that the project fits the categorical exclusion.

GENERAL CONDITIONS (REGIONAL ADDITIONS)

General Condition 32 Notification– Pre-construction Notification

Prospective permittees should be aware that a field aquatic resources delineation may be required for applications where notification is required in accordance with General Condition 32 (Pre-Construction Notification) and/or mitigation may be required. Specific guidelines outlining the aquatic resources delineation process in the State of North Dakota and the Corps 1987 Wetland Delineation Manual and applicable Regional supplements to the Manual can be accessed on the North Dakota Regulatory Office's website at: <http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx>



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION

FUEL COST ADJUSTMENT CLAUSE
Revision Date: 9/8/2006

Introduction

This Special Provision provides for price adjustments to the Contract when significant changes in the cost of motor fuels and burner fuels occur while completing the Contract work. Participation in fuel cost adjustment program is not mandatory. A Contractor is not required to notify the Department at the time of submitting bids whether the Contractor will or will not participate in the fuel cost adjustment provision.

The North Dakota Department of Transportation (NDDOT) will send the low responsible bidder a "Fuel Cost Adjustment Affidavit" (SFN 58393) with the proposed Contract. The Contractor shall return a completed Fuel Adjustment Affidavit with the signed Contract as specified in Standard Specification Section 103.06, Execution and Approval of the Contract. The affidavit shall be returned on all Contracts with this provision even if the Contractor elects not to participate in the provision.

Compensation adjustments for motor fuels and burner fuels consumed in prosecuting the Contract shall be determined by the Engineer in accordance with the provisions set forth herein. Compensation adjustments will be assessed monthly for the cost of the motor fuels and burner fuels whenever the Current Fuel Index (CFI) is outside the given threshold of the Base Fuel Index (BFI) for the Contract.

If the Contractor has a fixed price for fuel for motor or burner fuels to complete the work, no fuel cost adjustments will be made for that fuel type. If there is no fixed fuel price for motor or burner fuels, participation in the Fuel Adjustment provision is the decision of the prime Contractor.

If the prime Contractor decides not to participate, no fuel cost adjustments will be made to the Contract for the Contractor or any subcontractors. If the prime Contractor elects to participate in the fuel cost adjustment provision, the prime Contractor shall include the anticipated fuel cost of subcontractors who wish to participate. If fuel cost adjustments are made to the Contract, the prime Contractor shall ensure that participating subcontractors including second and lower tier, are included in the adjustments in proportion to the percentage of work and anticipated fuel cost by that subcontractor.

Fuel Indexes

Each month, NDDOT will record the average wholesale price for No. 2 diesel fuel and the average wholesale price for unleaded gasoline (87 octane). The monthly average will be the average of the daily rack prices for the month as reported by DTN Energy for Fargo ND.

The burner fuel index will be the No. 2 diesel fuel index regardless of the type of burner fuel actually used.

The Base Fuel Index (BFI) price for motor fuels and burner fuel to be used in the Contract will be the average wholesale price for the month prior to the bid opening.

The Current Fuel Index (CFI) price for motor fuels and burner fuel to be used for each monthly adjustment will be the average wholesale price for the month prior to the adjustment month.

Fuel Ratio

For motor fuels diesel and unleaded gas, the fuel ratio of the Contract will be determined by dividing the Contractor's affidavit costs for each motor fuel by the original Contract amount.

For burner fuels, the fuel ratio of the contract will be determined by dividing the Contractor's affidavit cost for burner fuels by the original Contract amount of plant-mixed hot bituminous pavement paid by the ton. Asphalt cement, binders and other miscellaneous bituminous items shall not be included.

The fuel ratio of the contract for motor and burner fuels will remain the same throughout the length of the contract. The sum of the affidavit fuel costs shall not exceed 15% of the original Contract amount.

The fuel ratio for the three fuel types will be determined by the following equation:

Fuel Ratio_(x, y, z) = Affidavit Cost_(x, y, z) / Original Contract Amount_(x, y, z)		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel
Fuel Ratio _(x, y, z)	=	Fuel ratio of the contract for each respective fuel type
Affidavit Cost _(x, y, z)	=	Fuel costs from Fuel Adjustment Affidavit (SFN 58393)
Original Contract Amount _(x, y)	=	Total of the original contract amount excluding lane rental, and Part B of the bid (when A+B bidding is used), if applicable.
Original Contract Amount _(z)	=	Total original contract amount for all hot bituminous pavement bid items combined, excluding bid items for asphalt cement, sawing and sealing joints, coring, etc. Only hot bituminous pavement bid items measured by the Ton will be included in the calculation.

Cost Change

The monthly change in fuel costs will be determined by the following equation:

Cost Change_(x, y, z) = (CFI_(x, y, z) - BFI_(x, y, z)) / BFI_(x, y, z)		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel (use diesel prices)
Cost Change _(x, y, z)	=	The relative change in the current CFI and the BFI for each fuel type
CFI _(x, y, z)	=	Current Fuel Index for each fuel type
BFI _(x, y, z)	=	Base Fuel Index for each fuel type

Contract Adjustments

Contract adjustments will be made for the cost of motor and burner fuels whenever the cost change exceeds a ±0.10 threshold. No fuel cost adjustment will be made for work done under liquidated damages. Adjustments will be determined for Motor Fuel (diesel), Motor Fuel (unleaded), and Burner Fuel (burner) separately and shall be computed on a monthly basis.

When the cost change is greater than 0.10, the rebate to the Contractor for each fuel type shall be computed according to the following formulas:

$FCA_{(x, y, z)} = \text{Fuel Ratio}_{(x, y, z)} \times \text{Estimate}_{(x, y, z)} \times (\text{Cost Change}_{(x, y, z)} - 0.10)$		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel
$FCA_{(x, y, z)}$	=	Fuel Cost Adjustment for each of the fuel types
$\text{Fuel Ratio}_{(x, y, z)}$	=	Fuel Ratio for each of the fuel types
$\text{Estimate}_{(x, y)}$	=	The monthly total of work done on estimates issued in the current month excluding incentive or disincentive payments, pay factor adjustments and any work completed under liquidated damages.
$\text{Estimate}_{(z)}$	=	The monthly total of hot bituminous pavement work done on estimates issued in the current month, excluding bid items for asphalt cement, sawing and sealing joints, coring, etc. Only hot bituminous pavement bid items measured by the Ton will be included in the calculation. Hot bituminous pavement work completed under liquidated damages will not be included.
$\text{Cost Change}_{(x, y, z)}$	=	The monthly change in fuel costs for each of the fuel types

When the cost change is less than -0.10, the credit to the Department for each fuel type shall be computed according to the following formulas:

$FCA_{(x, y, z)} = \text{Fuel Ratio}_{(x, y, z)} \times \text{Estimate}_{(x, y, z)} \times (\text{Cost Change}_{(x, y, z)} + 0.10)$		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel
$FCA_{(x, y, z)}$	=	Fuel Cost Adjustment for each of the fuel types
$\text{Fuel Ratio}_{(x, y, z)}$	=	Fuel Ratio for each of the fuel types
$\text{Estimate}_{(x, y)}$	=	The monthly total of work done on estimates issued in the current month excluding any incentive or disincentive payments, pay factor adjustments and any work completed under liquidated damages.
$\text{Estimate}_{(z)}$	=	The monthly total of hot bituminous pavement work done on estimates issued in the current month, excluding bid items for asphalt cement, sawing and sealing joints, coring, etc. Only hot bituminous pavement bid items measured by the Ton will be included in the calculation. Hot bituminous pavement work completed under liquidated damages will not be included.
$\text{Cost Change}_{(x, y, z)}$	=	The monthly change in fuel costs for each of the fuel types

Payments

Adjustments will be determined by the Engineer monthly. Adjustments will be made under the following spec and code for each fuel type:

109 0100	Motor Fuels (Diesel)
109 0200	Motor Fuels (Unleaded)
109 0300	Burner Fuel

When significant payment adjustments are made on final estimates to account for final in-place measured quantities, the Engineer may prorate the adjustments back to the months when the work was done.

Attachments

For informational purposes, a 'Fuel Cost Adjustment Affidavit' (SFN 58393) is included as Attachment A.

FUEL COST ADJUSTMENT AFFIDAVIT

North Dakota Department of Transportation, Construction Services
SFN 58393 (8-2017)

SP Fuel Cost Adjustment Clause
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Attachment A

PCN	Project Number
The Contractor is not required to notify the Department at the time of submitting bids whether he will or will not participate in the fuel cost adjustment program. The Contractor shall return the affidavit on all Contracts with this Provision even if the Contractor elects not to participate.	
Check the box for each fuel type that has a fixed price. No adjustments in fuel price will be made for the boxes that are checked. <input type="checkbox"/> Diesel <input type="checkbox"/> Unleaded <input type="checkbox"/> Burner	
Does your company elect to participate in a fuel adjustment for this contract for the fuels that do not have a fixed price? No adjustments in fuel prices will be made if No is checked . <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, provide the total dollars for each of the applicable fuels:	
Diesel (D)	
Unleaded (U)	
Burner Fuel (B)	
Sum (D+U+B)	% of Original Contract Amount *
*The sum of the D, U, and B may not exceed 15% of the original contract amount.	
Under the penalty of law for perjury of falsification, the undersigned,	
Name (print or type)	Title (print or type)
Contractor (print or type)	
hereby certifies that the documentation is submitted in good faith, that the information provided is accurate and complete to the best of their knowledge and belief, and that the monetary amount identified accurately reflects the cost for fuel, and that they are duly authorized to certify the above documentation on behalf of the company.	
I hereby agree that the Department or its authorized representative shall have the right to examine and copy all Contractor records, documents, work sheets, bid sheets and other data pertinent to the justification of the fuel costs shown above.	
Signature	Date

Acknowledgement

State of	
County of	
Signed and sworn to (or affirmed) before me on this day _____ (month, day, year)	
Name of Notary Public or other Authorized Officer (Type or Print)	Affix Notary Stamp
Signature of Notary Public or other Authorized Officer	
Commission Expiration Date (if not listed on stamp)	