



North Dakota Department of Transportation

Grant Levi, P.E.
Director

Jack Dalrymple
Governor

May 5, 2016

ADDENDUM 1 – JOB 1

TO: All prospective bidders on project SC-CNOA-CNOB-0119(057), Job No. 1 scheduled for the May 13, 2016 bid opening.

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

Plan Revisions:

See attached summary from William Doerr, PE; Brosz Engineering, Inc., dated May 3, 2016 for an explanation.

Request for Proposal Revisions:

Remove and replace page 7 of 11 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed page revised 5/5/2016.

Page 7 of 11:

Item 420 0090 MC800 LIQUID ASPHALT; 52,765 GAL was deleted.

Item 420 0108 PASS-CR; 52,765 GAL was added.

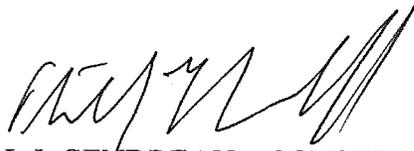
Item 420 0111 CRS2P EMULSIFIED ASPHALT; 48,546 GAL was deleted.

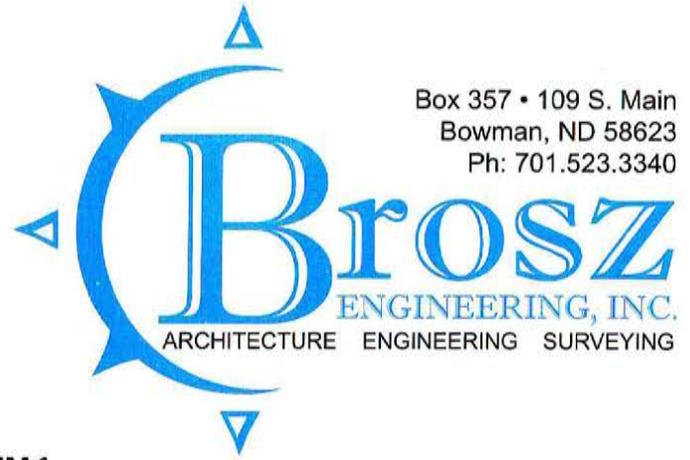
Item 420 0112 HFMS 2 EMULSIFIED ASPHALT; 48,546 GAL was added.

Add SP 3(14) Temporary Erosion and Sediment Best Management Practices

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

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


CAL J. GENDREAU – CONSTRUCTION SERVICES ENGINEER
80:plm
Enclosure



Box 357 • 109 S. Main
Bowman, ND 58623
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May 3, 2016

**ADDENDUM 1
JOB NO. 1**

TO: All prospective bidders and suppliers on Project SC-CNOA-CNOB-CNOC-0119(057), Job No. 1 in Adams County, scheduled for the May 13, 2016 bid opening.

The following revisions shall be made:

Plan Revisions:

Remove and replace sheets 2-1, 6-1, 8-1 & 10-1 with the enclosed sheets revised 05/03/16.

Request for Proposal Revision:

Add SP 3(14) Temporary Erosion and Sediment Best Management Practices.

- Section 2, Sheet 1: SP 3(14) Temporary Erosion and Sediment Best Management Practices was added to the Special Provisions List.
- Section 6, Sheet 1: Plan Note 420-P02 SEAL COAT COMPATIBILITY TEST was added. Plan Note 420-P03 COVER COAT MATERIAL was modified.
- Section 8, Sheet 1: Bid Items 420-0090 MC800 LIQUID ASPHALT (52,765 GAL) & 420-0111 CRS2P EMULSIFIED ASPHALT (48,546 GAL) were removed. Bid Items 420-0108 PASS-CR (52,765 GAL) & 420-0112 HFMS2 EMULSIFIED ASPHALT (48,546 GAL) were added.
- Section 10, Sheet 1: The following change in material was made: 420-0090 MC800 LIQUID ASPHALT & 420-0111 CRS2P EMULSIFIED ASPHALT were removed, 420-0108 PASS-CR & 420-0112 HFMS2 EMULSIFIED ASPHALT were added.

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

Sincerely,

William Doerr, PE
Project Engineer
Brosz Engineering, Inc.

BID ITEMS

Project: SC-CNOA-CNOB-CNOC-0119(057) (PCN-21357)

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 | 202 | 0135 | REMOVAL OF BITUMINOUS SURFACING | TON | 26,636. | | | | |
| 003 | 202 | 0169 | REMOVAL OF END SECTION-ALL TYPES & SIZES | EA | 1. | | | | |
| 004 | 203 | 0102 | COMMON EXCAVATION-TYPE B | CY | 27,355. | | | | |
| 005 | 203 | 0109 | TOPSOIL | CY | 13,628. | | | | |
| 006 | 216 | 0100 | WATER | M GAL | 1,803. | | | | |
| 007 | 251 | 0200 | SEEDING CLASS II | ACRE | 88. | | | | |
| 008 | 251 | 2000 | TEMPORARY COVER CROP | ACRE | 88. | | | | |
| 009 | 253 | 0101 | STRAW MULCH | ACRE | 176. | | | | |
| 010 | 261 | 0112 | FIBER ROLLS 12IN | LF | 6,370. | | | | |
| 011 | 261 | 0113 | REMOVE FIBER ROLLS 12IN | LF | 3,185. | | | | |
| 012 | 302 | 0100 | SALVAGED BASE COURSE | TON | 45,855. | | | | |
| 013 | 302 | 0244 | GRANULAR MATERIAL FOR SUBGRADE REPAIR | TON | 64,762. | | | | |
| 014 | 420 | 0108 | PASS-CR | GAL | 52,765. | | | | |
| 015 | 420 | 0112 | HFMS2 EMULSIFIED ASPHALT | GAL | 48,546. | | | | |
| 016 | 420 | 0143 | COVER COAT MATERIAL CL 42-MODIFIED | TON | 1,583. | | | | |

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

TEMPORARY EROSION AND SEDIMENT BEST MANAGEMENT PRACTICES

1. GENERAL

Install, maintain and remove appropriate Temporary Best Management Practices (BMPs).

Definitions:

- A. Temporary Erosion and Sediment BMPs** 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 BMPs are installed.
- B. Permanent Erosion and Sediment BMPs** 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 BMPs for a site may consist of identical BMPs. In these cases, the temporary erosion and sediment BMPs may be used as the permanent erosion and sediment BMPs if they meet the following criteria:

1. The BMP 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 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 a BMP in working condition. These actions may consist of repairing failures of the BMP 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 a BMP does not necessarily constitute noncompliance as long as the BMP 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.

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

Change the location of temporary erosion and sediment BMPs 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 BMPs that have been installed, changed, or removed.

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

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

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

Install stabilization BMPs (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 BMPs as long as required to contain sediment runoff. Inspect the temporary erosion and sediment BMPs 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 BMPs within the timelines established in the applicable permits. If conditions do not permit access to the BMP, corrective actions can be taken by installing additional BMPs. 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 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 BMPs 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.

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 BMPs.
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 BMPs 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.

3. 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 liquidated damage 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.

4. BASIS OF PAYMENT

BMP 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 BMPs for temporary and permanent installations. The same bid items may be used for temporary and permanent BMPs.

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

BMP 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 BMPs 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 BMPs

No payment will be made for replacing temporary erosion and sediment BMPs 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 BMPs as required in the Contract.

No payment will be made for replacing temporary erosion and sediment BMPs 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."

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LIST OF SPECIAL PROVISIONS (SP)

| <u>SP#</u> | <u>Description</u> |
|------------|--|
| 3(14) | Temporary Erosion and Sediment Best Management Practices |
| 5108(14) | Permits and Environmental Considerations |

LIST OF STANDARD DRAWINGS

| | |
|-------------|---|
| D-261-1 | Erosion Control Fiber Roll Placement Details |
| D-704-7 & 8 | Breakaway Systems for Construction Zone Signs |
| D-704-13 | Barricade and Channelizing Device Details |
| D-704-14 | Construction Sign Punching and Mounting Details |
| D-704-15 | Road Closure Layout |
| D-704-20 | Terminal and Seal Coat Sign Layouts |
| D-704-22 | Construction Truck and Temporary Detour Layouts |
| D-704-24 | Shoulder Closures and Bridge Painting Layouts |
| D-704-26 | Miscellaneous Sign Layouts |
| D-708-6 | Erosion and Siltation Controls Median or Ditch Inlet Protection |
| D-714-4 | Round Corrugated Steel Pipe Culverts and End Sections |

PLAN NOTES

| | | | | |
|------------------|-------|----------------------------|-------------|-----------|
| Revised 05/03/16 | STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| | ND | SC-CNOA-CNOB-CNOC(0119)057 | 6 | 1 |

- 100-P01 COORDINATION OF PROJECTS: Another project within the vicinity of this project will be under contract during the 2016 construction season, CNOC-SRF-0001(051), PCN 21356, which is a reconstruction and hot mix asphalt project on Mirror Lake Road and Cemetery Road south of US Hwy 12 near Hettinger.
- 107-710 HAUL ROADS: Before submitting a proposal, contact the appropriate State, County, Township or City officials to determine if there are any roadways that will be designated as "no haul routes".
- 202-P01 REMOVAL OF BITUMINOUS SURFACING: Salvage the removed material and stockpile it onsite. Reincorporate the removed material into the Salvaged Base Course. The Engineer will determine final quantity by field measurement and unit weight calculations based on samples obtained from the stockpile.
- 202-P02 REMOVAL OF BITUMINOUS SURFACING: Include the cost of the full depth vertical saw cuts adjacent to pavement removal areas, specified in Section 202.04 A "General", in the contract unit price for "Remove & Salvage Bituminous Surfacing."
- 203-010 SHRINKAGE: 35 percent additional volume is included for shrinkage in earth embankment.
- 203-385 AVERAGE HAUL: No average haul has been computed for this project.
- 203-P01 COMMON EXCAVATION-TYPE B: Incorporate the material being removed from the subgrade repair areas into the embankment located outside of the roadbed. This has been figured into the earthwork summary. Include all costs to complete this work in the contract unit price for "Common Excavation - Type B."
- 203-P02 COMMON EXCAVATION-TYPE B: Segment excavation and subgrade repair operations into a length of roadway capable of being completed in one day. If the operation is not completed at day's end, provide traffic control that meets nighttime operations and NDDOT standards at no additional expense.
- 203-P03 COMMON EXCAVATION-TYPE B: Volume will be computed in cubic yards by the average end area method. The measurement of accepted quantities of excavation will be measured in its original position by cross sectioning before the topsoil is removed. Final cross-sections will be taken after the topsoil is replaced.
- 302-P01 GRANULAR MATERIAL FOR SUBGRADE REPAIR: Provide a material to be used for backfilling the subgrade repair areas that meets the following requirements:
- 100% Passing the 1" Sieve
 - 35% Max Passing the No. 200 Sieve
 - LL < 40
 - PI < 10
- The Engineer will test and approve the material based on the average of 5 samples taken from the stockpile.
- 420-P01 SEAL COAT: Protect the existing concrete driveways from oil overspray. Include all labor and materials necessary to protect the concrete in the contract unit price for the seal coat bid items.

- 420-P02 SEAL COAT COMPATIBILITY TEST: Perform an Aggregate/Emulsion Compatibility Test to ensure the aggregate will be sufficiently coated by emulsion residue and resist coating loss from adverse water exposure. Provide the Engineer with a copy of the compatibility test results in Report format prior to seal coat operations. The Engineer will approve or disapprove the aggregate or emulsion materials based on the compatibility test.
- 420-P03 COVER COAT MATERIAL: Provide cover coat materials that meets the following requirements:

| Sieve Size or Testing Method | Aggregate Class | |
|-------------------------------|--|-------------|
| | 42-Modified | 43-Modified |
| | Percent Passing or Testing Requirement | |
| 1/2 inch | 100 | |
| 3/8 inch | 40-70 | 100 |
| No. 4 | | 20-70 |
| No. 8 | 2-20 | 0-17 |
| No. 16 | | |
| No. 50 | | |
| No. 200 | 0-3 | 0-3 |
| ND T 113, Shale (max %) | 8.0% | |
| ND T 96 L.A. Abrasion (max %) | 40% | |
| NDDOT 4, Fractured Faces | 50% shall have 2 fractured faces | |

- 704-P01 TRAFFIC CONTROL FOR GRADING, GRAVELING, SUBGRADE REPAIRS AND CHIP SEAL APPLICATION: Provide traffic control consisting of a temporary lane closure, flagging and a pilot car. Flagging and Pilot Car will not be paid for during the chip seal according to specification 420.04 F.

Traffic control device quantities are based on the list below. Provide additional devices at no additional cost to the Department.

1. Standard D-704-12
2. Standard D-704-15, layout A
3. Standard D-704-20, layout G and H
4. Standard D-704-22, layout K and L
5. Standard D-704-24, layout R
6. Standard D-704-26, layout CC, EE and GG

When installing layout H from Standard D-704-20, do not post mount the signs.

This document was originally issued and sealed by William Doerr, Registration Number PE-7113, on 05/03/16 and the original document is stored at the office of Brosz Engineering, Inc. in Bowman, ND

ESTIMATE OF QUANTITIES

| | | | | | |
|---------|----------|-------|-----------------------------|---------|-------|
| Revised | 05/03/16 | STATE | PROJECT NO. | SECTION | SHEET |
| | | ND | SC-CNOA-CNOB-CNOC-0119(057) | 8 | 1 |

| <u>SPEC</u> | <u>CODE</u> | <u>ITEM DESCRIPTION</u> | <u>UNIT</u> | <u>TOTAL</u> |
|-------------|-------------|--|-------------|--------------|
| 103 | 0100 | CONTRACT BOND | L SUM | 1 |
| 202 | 0135 | REMOVAL OF BITUMINOUS SURFACING | TON | 26,636 |
| 202 | 0169 | REMOVAL OF END SECTION-ALL TYPES & SIZES | EA | 1 |
| 203 | 0102 | COMMON EXCAVATION-TYPE B | CY | 27,355 |
| 203 | 0109 | TOPSOIL | CY | 13,628 |
| 216 | 0100 | WATER | M GAL | 1,803 |
| 251 | 0200 | SEEDING CLASS II | ACRE | 88 |
| 251 | 2000 | TEMPORARY COVER CROP | ACRE | 88 |
| 253 | 0101 | STRAW MULCH | ACRE | 176 |
| 261 | 0112 | FIBER ROLLS 12IN | LF | 6,370 |
| 261 | 0113 | REMOVE FIBER ROLLS 12IN | LF | 3,185 |
| 302 | 0100 | SALVAGED BASE COURSE | TON | 45,855 |
| 302 | 0244 | GRANULAR MATERIAL FOR SUBGRADE REPAIR | TON | 64,762 |
| 420 | 0108 | PASS-CR | GAL | 52,765 |
| 420 | 0112 | HFMS2 EMULSIFIED ASPHALT | GAL | 48,546 |
| 420 | 0143 | COVER COAT MATERIAL CL 42-MODIFIED | TON | 1,583 |
| 420 | 0144 | COVER COAT MATERIAL CL 43-MODIFIED | TON | 1,217 |
| 420 | 0160 | BLOTTER MATERIAL CL 44 | TON | 426 |
| 702 | 0100 | MOBILIZATION | L SUM | 1 |
| 704 | 0100 | FLAGGING | MHR | 1,300 |
| 704 | 1000 | TRAFFIC CONTROL SIGNS | UNIT | 1,522 |
| 704 | 1052 | TYPE III BARRICADE | EA | 10 |
| 704 | 1060 | DELINEATOR DRUMS | EA | 10 |
| 704 | 1067 | TUBULAR MARKERS | EA | 100 |
| 704 | 1080 | STACKABLE VERTICAL PANELS | EA | 100 |
| 704 | 1185 | PILOT CAR | HR | 650 |
| 709 | 0151 | GEOSYNTHETIC MATERIAL TYPE R1 | SY | 52,252 |
| 714 | 5040 | PIPE CORR STEEL .064IN 30IN | LF | 10 |
| 714 | 5045 | PIPE CORR STEEL .064IN 36IN | LF | 5 |
| 752 | 0911 | TEMPORARY SAFETY FENCE | LF | 2,279 |
| 762 | 1104 | PVMT MK PAINTED 4IN LINE | LF | 85,088 |
| 766 | 0100 | MAILBOX - ALL TYPES | EA | 9 |

Surfacing

Salvaged Base Course @ 1.875 Ton/CY
 Granular Material for Subgrade Repair @ 1.75 Ton/CY
 PASS-CR @ 0.50 Gal/SY
 HFMS2 Emulsified Asphalt @ 0.46 Gal/SY
 Cover Coat Material CL 42-Modified @ 30 Lbs/SY
 Cover Coat Material CL 43-Modified @ 23 Lbs/SY
 Blotter Material CL 44 @ 8 Lbs/SY

Removals

Removal of Bituminous Surfacing @ 1.875 Ton/CY
 (includes bituminous surfacing and base)

Water

25 MGal/Mile for Dust Palliative
 20 Gal/Ton for Aggregates
 10 Gal/Ton for Select Backfill
 10 Gal/CY for Embankment

Topsoil

4" Removal and Replacement Depth

| 28' Finished Section with Chip Seal | | 28' Finished Section with Subgrade Repair and Chip Seal | | 28' Finished Section without Chip Seal | |
|-------------------------------------|---------------|---|---------------|--|-------------|
| Begin Station | End Station | Begin Station | End Station | Begin Station | End Station |
| 1+42 | 71+00 | 71+00 | 155+00 | 318+00 | 321+00 |
| 155+00 | 165+00 | 165+00 | 180+00 | | |
| 180+00 | 242+00 | 242+00 | 285+00 | | |
| 285+00 | 304+00 | 304+00 | 318+00 | | |
| Total Stations = | 160.58 | Total Stations = | 156.00 | Total Stations = | 3.00 |

| Spec-Code | Material | Unit | Width (ft) | Quantity per Station | Sub-Total | Width (ft) | Quantity per Station | Sub-Total | Width (ft) | Quantity per Station | Sub-Total | Total | Unit |
|-----------|--|------|------------|----------------------|-----------|------------|----------------------|-----------|------------|----------------------|-----------|--------|------|
| 202-0135 | Removal of Bituminous Surfacing (1.875 Ton/CY) | Ton | 24 | 83.34 | 13,383 | 24 | 83.34 | 13,002 | 24 | 83.34 | 251 | 26,636 | Ton |
| 302-0100 | Salvaged Base Course (1.875 Ton/CY) | Ton | 28 | 143.48 | 23,041 | 28 | 143.48 | 22,383 | 28 | 143.48 | 431 | 45,855 | Ton |
| 420-0108 | PASS-CR (0.50 Gal/SY) (1st Application) | Gal | 30 | 166.67 | 26,764 | 30 | 166.67 | 26,001 | --- | --- | --- | 52,765 | Gal |
| 420-0112 | HFMS2 Emulsified Asphalt (0.46 Gal/SY) (2nd Application) | Gal | 30 | 153.34 | 24,624 | 30 | 153.34 | 23,922 | --- | --- | --- | 48,546 | Gal |
| 420-0143 | Cover Coat Material CL 42-Modified (30 Lbs/SY) (1st Application) | Ton | 30 | 5.00 | 803 | 30 | 5.00 | 780 | --- | --- | --- | 1,583 | Ton |
| 420-0144 | Cover Coat Material CL 43-Modified (23 Lbs/SY) (2nd Application) | Ton | 30 | 3.84 | 617 | 30 | 3.84 | 600 | --- | --- | --- | 1,217 | Ton |
| 420-0160 | Blotter Material CL 44 (8 Lbs/SY) (1 Application) | Ton | 30 | 1.34 | 216 | 30 | 1.34 | 210 | --- | --- | --- | 426 | Ton |

This document was originally issued and sealed by William Doerr Registration Number PE- 7113, on 05/03/16 and the original document is stored at the office of Brosz Engineering, Inc. in Bowman, ND

Basis of Estimate
 Cemetery Road
 Adams County, ND