

December 1, 2023

ADDENDUM 3 – JOB 23636

TO: All prospective bidders on Projects IM-6-029(164)163, Job No. 23636 scheduled for the December 8, 2023 bid opening.

The following revision(s) shall be made:

Plan Revisions:

See attached summary from Jason Thorenson, P.E. dated December 1, 2023 for an explanation.

Request for Proposal Revisions:

- Remove and replace pages 5 thru 8 of 10 of the Proposal pages located at the beginning of the Request for Proposal with pages revised December 1, 2023.
- Bid Item Changes are summarized in the Plan Addendum Summary and Approval.

This addendum is to be incorporated into the bidder's proposal for this project. AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.



for PHILLIP MURDOFF, P.E. – CONSTRUCTION SERVICES ENGINEER
80: jwj
Enclosure

PLAN ADDENDUM SUMMARY AND APPROVAL

| PROJECT INFORMATION | | | |
|--------------------------|---|-----------------------|---------------|
| Project: | IM-6-029(164)163 | PCN: | 23636 |
| Location: | Various Structures – Grand Forks District | | |
| Date: | 12/01/2023 | Lead Designer: | Jacob Gathman |
| Bid Opening Date: | 12/8/2023 | JOB#: | 23636 |
| | | Addendum#: | 3 |

| PLAN SHEET CHANGES | | |
|--------------------|-------|--|
| Section | Sheet | Description |
| 2 | 1 | Added SP for Commercial Grade HMA. |
| 6 | 1 | Added Note 704-P03 for ramp detour of ML traffic and Note 430-P03 for patching ramps. Also added a line to Note 704-P01 for added sheet 100-12A. |
| 8 | 1-2 | Updated quantity sheets to changes listed below. |
| 100 | 1 | Added quantities from new sheet 100-12A for ramp detour of ML traffic. |
| 100 | 12A | Added sheet showing traffic control for ramp detour of ML traffic. |
| 170 | 3,12 | Modified roadway canopy notes. |

| CHANGES MADE TO BID ITEMS FOR JOB | | | | | |
|-----------------------------------|------|----------------------------------|------|-------------------|------------------|
| Spec | Code | Description | Unit | Previous Quantity | Revised Quantity |
| 430 | 500 | Commercial Grade Hot Mix Asphalt | Ton | 0 | 200 |
| 704 | 1000 | Traffic Control Signs | Unit | 3,908 | 4848 |
| 704 | 1052 | Type III Barricade | Ea | 14 | 26 |
| 704 | 1060 | Delineator Drums | Ea | 140 | 220 |
| 704 | 1095 | Type B Flasher | Ea | 0 | 6 |
| 704 | 1500 | Obliteration of Pavement Marking | SF | 400 | 1,260 |
| 762 | 0420 | Short Term 4In Line-Type R | LF | 16,800 | 17,660 |
| 762 | 0426 | Short Term 24In Line-Type R | LF | 24 | 72 |

APPROVAL

Should the revisions described above be processed as a plan addendum?

Yes No

Jason Thorenson

 Jason Thorenson, P.E. – Bridge Engineer

12/1/23
 Date

BID ITEMS

Project: IM-6-029(164)163 (PCN-23636)

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 | 0111 | REMOVAL OF CONCRETE | L SUM | 1. | | | | |
| 003 | 202 | 0132 | REMOVAL OF BITUMINOUS SURFACING | SY | 497. | | | | |
| 004 | 202 | 0169 | REMOVAL OF END SECTION-ALL TYPES & SIZES | EA | 6. | | | | |
| 005 | 202 | 0174 | REMOVAL OF PIPE ALL TYPES AND SIZES | LF | 539. | | | | |
| 006 | 203 | 0113 | COMMON EXCAVATION-WASTE | CY | 78. | | | | |
| 007 | 210 | 0102 | CLASS 1 EXCAVATION-SITE 1 | L SUM | 1. | | | | |
| 008 | 210 | 0103 | CLASS 1 EXCAVATION-SITE 2 | L SUM | 1. | | | | |
| 009 | 251 | 0200 | SEEDING CLASS II | ACRE | .370 | | | | |
| 010 | 251 | 2000 | TEMPORARY COVER CROP | ACRE | .370 | | | | |
| 011 | 253 | 0101 | STRAW MULCH | ACRE | .740 | | | | |
| 012 | 255 | 0102 | ECB TYPE 2 | SY | 124. | | | | |
| 013 | 261 | 0112 | FIBER ROLLS 12IN | LF | 1,174. | | | | |
| 014 | 302 | 0050 | TRAFFIC SERVICE AGGREGATE | TON | 240. | | | | |
| 015 | 302 | 0120 | AGGREGATE BASE COURSE CL 5 | TON | 280. | | | | |
| 016 | 401 | 0050 | TACK COAT | GAL | 1,294.200 | | | | |

BID ITEMS

Project: IM-6-029(164)163 (PCN-23636)

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 | 401 | 0070 | FOG SEAL | GAL | 1,234.500 | | | | |
| 018 | 411 | 0100 | MILLING PAVEMENT SURFACE | TON | 2,682. | | | | |
| 019 | 430 | 0043 | SUPERPAVE FAA 43 | TON | 2,894. | | | | |
| 020 | 430 | 0500 | COMMERCIAL GRADE HOT MIX ASPHALT | TON | 200. | | | | |
| 021 | 430 | 1000 | CORED SAMPLE | EA | 35. | | | | |
| 022 | 430 | 5815 | PG 58S-34 ASPHALT CEMENT | TON | 173.500 | | | | |
| 023 | 602 | 0130 | CLASS AAE-3 CONCRETE | CY | 542.400 | | | | |
| 024 | 602 | 1250 | PENETRATING WATER REPELLENT TREATMENT | SY | 1,700. | | | | |
| 025 | 612 | 0115 | REINFORCING STEEL-GRADE 60 | LBS | 1,776. | | | | |
| 026 | 612 | 0116 | REINFORCING STEEL-GRADE 60-EPOXY COATED | LBS | 140,024. | | | | |
| 027 | 702 | 0100 | MOBILIZATION | L SUM | 1. | | | | |
| 028 | 704 | 0100 | FLAGGING | MHR | 100. | | | | |
| 029 | 704 | 1000 | TRAFFIC CONTROL SIGNS | UNIT | 4,848. | | | | |
| 030 | 704 | 1018 | LANE CLOSURE-SIGNAL CONTROL/FLAGGING CONTROL | EA | 1. | | | | |
| 031 | 704 | 1041 | ATTENUATION DEVICE-TYPE B-55 | EA | 2. | | | | |
| 032 | 704 | 1045 | ATTENUATION DEVICE-TYPE B-75 | EA | 2. | | | | |

BID ITEMS

Project: IM-6-029(164)163 (PCN-23636)

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 | 1052 | TYPE III BARRICADE | EA | 26. | | | | |
| 034 | 704 | 1060 | DELINEATOR DRUMS | EA | 220. | | | | |
| 035 | 704 | 1067 | TUBULAR MARKERS | EA | 119. | | | | |
| 036 | 704 | 1087 | SEQUENCING ARROW PANEL-TYPE C | EA | 2. | | | | |
| 037 | 704 | 1095 | TYPE B FLASHERS | EA | 6. | | | | |
| 038 | 704 | 1500 | OBLITERATION OF PAVEMENT MARKING | SF | 1,260. | | | | |
| 039 | 704 | 3511 | STATE FURNISHED MEDIAN BARRIER | LF | 1,160. | | | | |
| 040 | 706 | 0550 | BITUMINOUS LABORATORY | EA | 1. | | | | |
| 041 | 706 | 0600 | CONTRACTOR'S LABORATORY | EA | 1. | | | | |
| 042 | 709 | 0100 | GEOSYNTHETIC MATERIAL TYPE G | SY | 530. | | | | |
| 043 | 714 | 1310 | PIPE CONC REINF 60IN CL III | LF | 320. | | | | |
| 044 | 714 | 3055 | END SECT-CONC REINF 60IN | EA | 4. | | | | |
| 045 | 748 | 0141 | CURB & GUTTER-TYPE 1 SPECIAL | LF | 120. | | | | |
| 046 | 754 | 0110 | FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING | SF | 21. | | | | |
| 047 | 754 | 0112 | FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING | SF | 17. | | | | |
| 048 | 754 | 0168 | DELINEATORS-TYPE D | EA | 2. | | | | |

BID ITEMS

Project: IM-6-029(164)163 (PCN-23636)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

| Item No. | Spec No. | Code No. | Description | Unit | Approx. Quantity | Unit Price | | Amount | |
|----------|----------|----------|--|-------|------------------|------------|-----|----------|----|
| | | | | | | \$\$\$\$ | 000 | \$\$\$\$ | 00 |
| 049 | 754 | 0206 | STEEL GALV POSTS-TELESCOPING PERFORATED TUBE | LF | 46. | | | | |
| 050 | 762 | 0420 | SHORT TERM 4IN LINE-TYPE R | LF | 17,660. | | | | |
| 051 | 762 | 0426 | SHORT TERM 24IN LINE-TYPE R | LF | 72. | | | | |
| 052 | 762 | 0430 | SHORT TERM 4IN LINE-TYPE NR | LF | 23,660. | | | | |
| 053 | 762 | 0436 | SHORT TERM 24IN LINE-TYPE NR | LF | 390. | | | | |
| 054 | 762 | 1104 | PVMT MK PAINTED 4IN LINE | LF | 32,212. | | | | |
| 055 | 762 | 1124 | PVMT MK PAINTED 24IN LINE | LF | 195. | | | | |
| 056 | 764 | 0131 | W-BEAM GUARDRAIL | LF | 466. | | | | |
| 057 | 764 | 0145 | W-BEAM GUARDRAIL END TERMINAL | EA | 8. | | | | |
| 058 | 764 | 0151 | REMOVE W-BEAM GUARDRAIL & POSTS | LF | 691. | | | | |
| 059 | 764 | 2081 | REMOVE END TREATMENT & TRANSITION | EA | 8. | | | | |
| 060 | 930 | 3000 | BRIDGE BENCH MARKS | SET | 2. | | | | |
| 061 | 930 | 7012 | ROADWAY CANOPY | L SUM | 1. | | | | |
| 062 | 930 | 8686 | AGGREGATE SLOPE PROTECTION | SY | 792. | | | | |
| 063 | 930 | 9223 | CRACK SEALING | LF | 6. | | | | |
| | | | TOTAL SUM BID | | | | | | |

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PLAN SECTIONS

LIST OF STANDARD DRAWINGS

| Section | Page(s) | Description |
|---------|---------|----------------------------------|
| 1 | 1 | Title Sheet |
| 2 | 1 | Table of Contents |
| 4 | 1 | Scope of Work |
| 6 | 1 - 2 | Notes |
| 6 | 3 | Environmental Notes |
| 8 | 1 - 2 | Quantities |
| 10 | 1 | Basis of Estimate |
| 20 | 1 - 2 | General Details |
| 30 | 1 | Typical Sections |
| 40 | 1 | Removals |
| 50 | 1 | Hydraulic Data |
| 51 | 1 | Allowable Pipe List |
| 60 | 1 | Plan & Profile |
| 75 | 1 - 2 | Wetland Impacts |
| 76 | 1 | Temporary Erosion Control |
| 77 | 1 | Permanent Erosion Control |
| 81 | 1 | Survey Coordinate and Curve Data |
| 100 | 1 - 17 | Work Zone Traffic Control |
| 110 | 1 - 3 | Signing |
| 130 | 1 - 4 | Guardrail |
| 170 | 1 - 18 | Bridges and Box Culverts |
| 200 | 1 | Cross Sections |

| Number | Description |
|----------------------|--|
| D-101-1, 2, 3, 4 | NDDOT Abbreviations |
| D-101-10 | NDDOT Utility Company and Organization Abbreviations |
| D-101-20, 21 | Line Styles |
| D-101-30, 31, 32, 33 | Symbols |
| D-704-1 | Attenuation Device |
| D-704-2 | Traffic Control For Coring Of Hot Bituminous Pavement |
| D-704-7 | Breakaway Systems For Construction Zone Signs - Perforated Tube |
| D-704-8 | Breakaway Systems For Construction Zone Signs - U-Channel Post |
| D-704-9 | Construction Sign Details - Terminal And Guide Signs |
| D-704-10 | Construction Sign Details - Regulatory Signs |
| D-704-11, 11A | Construction Sign Details - Warning Signs |
| D-704-13 | Barricade And Channelizing Device Details |
| D-704-14 | Construction Sign Punching And Mounting Details |
| D-704-16 | Lane Closure On A Two Lane Road Using Traffic Control Signals |
| D-704-17 | Sign Layout For One Lane Closure Two Lane Roadway |
| D-704-18 | Sign Layout For Interstate System One Lane Closure |
| D-704-22 | Construction Truck And Temporary Detour Layouts |
| D-704-27 | Mobile Operation (Pavement Marking) |
| D-704-35 | Sign Layout For One Lane Closure - Interstate System |
| D-704-50 | Portable Sign Support Assembly |
| D-704-51 | Portable Precast Concrete Median Barrier (Temporary Usage) |
| D-706-1 | Bituminous Laboratory |
| D-714-1 | Reinforced Concrete Pipe Culverts And End Sections (Round Pipe) |
| D-714-25M | Transverse Mainline Pipe Installation Detail - Multiple Pipes More Than 4 Feet Below Top of Subgrade |
| D-748-1 | Curb & Gutter And Valley Gutter |
| D-754-22A | Typical Interchange Delineation |
| D-754-23 | Perforated Tube Assembly Details |
| D-754-24, 25 | Mounting Details Perforated Tube |
| D-754-24A | Breakaway Coupler System For Perforated Tubes |
| D-754-28, 32 | Sign Punching, Stringer and Support Location Details Regulatory, Warning and Guide Signs |
| D-754-55 | Sign Punching, Stringer and Support Location Details - Route Marker Signs |
| D-762-2 | Interstate Pavement Marking 4 Lane Divided Highway |
| D-762-4 | Pavement Marking |
| D-762-11 | Short-Term Pavement Marking |
| D-764-20 | Short Term End Treatment For Bridges (Attenuation Device Method) |
| D-764-21 | Short Term End Treatment For Bridges (Guardrail Method) |
| D-764-38 | MGS Flared Energy Absorbing Terminal - Wood Post |
| D-764-40 | MGS W-Beam Guardrail General Details |
| D-764-48 | Typical Grading at Bridge Ends with MGS W-Beam Guardrail |
| D-764-50 | MASH SoftStop End Terminal - Steel Post |
| D-764-51 | MASH Sequential Kinking Terminal - Wood Post |
| D-764-60 | MGS W-Beam Transition with Approach Curb to Concrete Single Slope or Jersey Barrier |
| D-764-61 | Single Slope to Thrie Beam Connector Plate Details |
| D-900-1 | Bridge Bench Marks |

SPECIAL PROVISIONS

| Number | Description |
|------------|--|
| SSP 2 | Federal Migratory Bird Treaty Act |
| SP 100(23) | Architectural Surface Finish |
| PSP 54(23) | Permits and Environmental Considerations |
| SP 350(23) | Comercial Grade Asphalt |

Revised 11/30/23

| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
|-------|------------------|-------------|-----------|
| ND | IM-6-029(164)163 | 6 | 1 |

NOTES

- 108-P01 WORK RESTRICTIONS: Complete all work on the pipe replacement during the crossroad closure for work on Bridge 29-167.722.
- 202-P01 REMOVAL OF BITUMINIOUS SURFACING: Include all costs to remove the existing bituminous surfacing and base in the price bid for "Removal of Bituminous Surfacing."
- 203-P01 EXCAVATION: Include all costs for excavation required to maintain traffic during pipe replacement and embankment to restore the roadway profile in the price bid for "PIPE CONC REINF 60IN CL III."
- 216-P01 WATER: Include all costs for water in the price bid for "AGGREGATE BASE COURSE CL 5."
- 430-P01 FAA SUPERPAVE 43: Include all cost to place prime coat and blotter material CL 44 in the contract unit price for "FAA SUPERPAVE 43".
- 430-P02 PAVEMENT PATCHING AT ABUTMENTS: Place the aggregate base and 5½" HMA at the abutments (detailed on the Patching, Milling, and Paving at Bridge Ends sheet) prior to milling and overlaying the crossroad at each interchange.
- 430-P03 PAVEMENT PATCHING ON RAMPS: A quantity of 200 tons of Commercial Grade Hot Mix Asphalt has been provided for patching ramps before using ramp detours at locations determined by the Engineer.
- 704-200 STATE FURNISHED MEDIAN BARRIER: Obtain (93) 22.5" x 12.5' concrete barriers. They can be picked up and returned to the Grand Forks District yard at 1951 N Washington in Grand Forks ND 58201. Contact the Grand Forks District office at 701-787-6500 to facilitate the exchanges.
- Section 704.04 J "Precast Concrete Median Barrier (State Furnished)" applies to the contract item "State Furnished Median Barrier".
- Payment for the State Furnished Median Barrier will follow Section 704.06 D "Precast Concrete Median Barrier (State Furnished)". Include all costs associated with median barriers in the contract unit price for "State Furnished Median Barrier".

- 704-450 LANE CLOSURE - SIGNAL CONTROL/FLAGGING CONTROL: Install either the signal controlled lane closure on Standard D-704-16 or the flagging controlled lane closure on Standard D-704-17.
- Obtain an electrical source for traffic signals. Solar powered signals may be used. Place generators a minimum of 60 feet from the roadway centerline unless the generator and signal are part of a trailer mounted unit.
- Place utility poles and equipment a minimum of 60 feet from the roadway centerline and place power conductors a minimum of 6 inches below the ground surface. Remove poles after they are no longer necessary.
- The Engineer will measure individual traffic control devices, other than the signal system and flaggers, shown on the standards. Payment will be made at the respective contract unit price.
- Include the cost of either a traffic signal system or flaggers in the contract unit price for "Lane Closure – Signal Control/Flagging Control".
- 704-511 OBLITERATION OF PAVEMENT MARKINGS: Mask pavement markings designated for obliteration as specified in Section 704.04 N.2, "Masking".
- 704-P01 TRAFFIC CONTROL: Traffic control quantities are based on using two active lane closures on I-29 mainline and one lane closure on the crossroad.
1. Standard D-704-18 – used for interstate lane closure;
 2. Standard D-704-35 – used for ramp access during interstate lane closure;
 3. Sheet 100-2 and 100-3 – used for pipe installation;
 4. Sheets 100-4 through 100-12 – used for crossroad detours.
 5. Sheet 100-12A – used for ramp detour of mainline traffic.
- 704-P02 BRIDGE DETOUR RESTRICTIONS: Complete all bridge work and remove all detour traffic control on the first bridge before beginning work on the second bridge.
- 704-P03 MAINLINE TRAFFIC DETOUR: Use of a ramp detour during bridge deck removal, barrier removal, and canopy placement and removal over a mainline roadway is restricted to 10 calendar days for the mainline roadway closure in that direction of travel at each structure.
- Liquidated damages for failure to meet the requirements of this note will be in accordance with Section 108.07.
- Work will be stopped if the detour ramp traffic exceeds 10 calendar days without written approval from the Engineer.



12/01/23

ESTIMATE OF QUANTITIES

| | | | |
|-------|------------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | IM-6-029(164)163 | 8 | 1 |

REVISED 12/01/2023

| SPEC CODE | ITEM DESCRIPTION | UNIT | MAINLINE | TOTAL |
|-----------|---|-------|----------|---------|
| ----- | ----- | ----- | ----- | ----- |
| 103 | 0100 CONTRACT BOND | L SUM | 1 | 1 |
| 202 | 0111 REMOVAL OF CONCRETE | L SUM | 1 | 1 |
| 202 | 0132 REMOVAL OF BITUMINOUS SURFACING | SY | 497 | 497 |
| 202 | 0169 REMOVAL OF END SECTION-ALL TYPES & SIZES | EA | 6 | 6 |
| 202 | 0174 REMOVAL OF PIPE ALL TYPES AND SIZES | LF | 539 | 539 |
| 203 | 0113 COMMON EXCAVATION-WASTE | CY | 78 | 78 |
| 210 | 0102 CLASS 1 EXCAVATION-SITE 1 | L SUM | 1 | 1 |
| 210 | 0103 CLASS 1 EXCAVATION-SITE 2 | L SUM | 1 | 1 |
| 251 | 0200 SEEDING CLASS II | ACRE | 0.37 | 0.37 |
| 251 | 2000 TEMPORARY COVER CROP | ACRE | 0.37 | 0.37 |
| 253 | 0101 STRAW MULCH | ACRE | 0.74 | 0.74 |
| 255 | 0102 ECB TYPE 2 | SY | 124 | 124 |
| 261 | 0112 FIBER ROLLS 12IN | LF | 1,174 | 1,174 |
| 302 | 0050 TRAFFIC SERVICE AGGREGATE | TON | 240 | 240 |
| 302 | 0120 AGGREGATE BASE COURSE CL 5 | TON | 280 | 280 |
| 401 | 0050 TACK COAT | GAL | 1,294.2 | 1,294.2 |
| 401 | 0070 FOG SEAL | GAL | 1,234.5 | 1,234.5 |
| 411 | 0100 MILLING PAVEMENT SURFACE | TON | 2,682 | 2,682 |
| 430 | 0043 SUPERPAVE FAA 43 | TON | 2,894 | 2,894 |
| 430 | 0500 COMMERCIAL GRADE HOT MIX ASPHALT | TON | 200 | 200 |
| 430 | 1000 CORED SAMPLE | EA | 35 | 35 |
| 430 | 5815 PG 58S-34 ASPHALT CEMENT | TON | 173.5 | 173.5 |
| 602 | 0130 CLASS AAE-3 CONCRETE | CY | 542.4 | 542.4 |
| 602 | 1250 PENETRATING WATER REPELLENT TREATMENT | SY | 1,700 | 1,700 |
| 612 | 0115 REINFORCING STEEL-GRADE 60 | LBS | 1,776 | 1,776 |
| 612 | 0116 REINFORCING STEEL-GRADE 60-EPOXY COATED | LBS | 140,024 | 140,024 |
| 702 | 0100 MOBILIZATION | L SUM | 1 | 1 |
| 704 | 0100 FLAGGING | MHR | 100 | 100 |
| 704 | 1000 TRAFFIC CONTROL SIGNS | UNIT | 4,848 | 4,848 |
| 704 | 1018 LANE CLOSURE-SIGNAL CONTROL/FLAGGING CONTROL | EA | 1 | 1 |
| 704 | 1041 ATTENUATION DEVICE-TYPE B-55 | EA | 2 | 2 |
| 704 | 1045 ATTENUATION DEVICE-TYPE B-75 | EA | 2 | 2 |
| 704 | 1052 TYPE III BARRICADE | EA | 26 | 26 |

ESTIMATE OF QUANTITIES

| | | | |
|-------|------------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | IM-6-029(164)163 | 8 | 2 |

REVISED 12/01/2023

| SPEC CODE | ITEM DESCRIPTION | UNIT | MAINLINE | TOTAL |
|-----------|---|-------|----------|--------|
| ----- | ----- | ----- | ----- | ----- |
| 704 | 1060 DELINEATOR DRUMS | EA | 220 | 220 |
| 704 | 1067 TUBULAR MARKERS | EA | 119 | 119 |
| 704 | 1087 SEQUENCING ARROW PANEL-TYPE C | EA | 2 | 2 |
| 704 | 1095 TYPE B FLASHERS | EA | 6 | 6 |
| 704 | 1500 OBLITERATION OF PAVEMENT MARKING | SF | 1,260 | 1,260 |
| 704 | 3511 STATE FURNISHED MEDIAN BARRIER | LF | 1,160 | 1,160 |
| 706 | 0550 BITUMINOUS LABORATORY | EA | 1 | 1 |
| 706 | 0600 CONTRACTOR'S LABORATORY | EA | 1 | 1 |
| 709 | 0100 GEOSYNTHETIC MATERIAL TYPE G | SY | 530 | 530 |
| 714 | 1310 PIPE CONC REINF 60IN CL III | LF | 320 | 320 |
| 714 | 3055 END SECT-CONC REINF 60IN | EA | 4 | 4 |
| 748 | 0141 CURB & GUTTER-TYPE 1 SPECIAL | LF | 120 | 120 |
| 754 | 0110 FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING | SF | 21 | 21 |
| 754 | 0112 FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING | SF | 17 | 17 |
| 754 | 0168 DELINEATORS-TYPE D | EA | 2 | 2 |
| 754 | 0206 STEEL GALV POSTS-TELESCOPING PERFORATED TUBE | LF | 46 | 46 |
| 762 | 0420 SHORT TERM 4IN LINE-TYPE R | LF | 17,660 | 17,660 |
| 762 | 0426 SHORT TERM 24IN LINE-TYPE R | LF | 72 | 72 |
| 762 | 0430 SHORT TERM 4IN LINE-TYPE NR | LF | 23,660 | 23,660 |
| 762 | 0436 SHORT TERM 24IN LINE-TYPE NR | LF | 390 | 390 |
| 762 | 1104 PVMT MK PAINTED 4IN LINE | LF | 32,212 | 32,212 |
| 762 | 1124 PVMT MK PAINTED 24IN LINE | LF | 195 | 195 |
| 764 | 0131 W-BEAM GUARDRAIL | LF | 466 | 466 |
| 764 | 0145 W-BEAM GUARDRAIL END TERMINAL | EA | 8 | 8 |
| 764 | 0151 REMOVE W-BEAM GUARDRAIL & POSTS | LF | 691 | 691 |
| 764 | 2081 REMOVE END TREATMENT & TRANSITION | EA | 8 | 8 |
| 930 | 3000 BRIDGE BENCH MARKS | SET | 2 | 2 |
| 930 | 7012 ROADWAY CANOPY | L SUM | 1 | 1 |
| 930 | 8686 AGGREGATE SLOPE PROTECTION | SY | 792 | 792 |
| 930 | 9223 CRACK SEALING | LF | 6 | 6 |

Revised 11/30/2023

| | | | |
|-------|------------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | IM-6-029(164)163 | 100 | 1 |

| SIGN NUMBER | SIGN SIZE | DESCRIPTION | AMOUNT REQUIRED | UNITS PER AMOUNT | UNITS SUB TOTAL |
|-------------------|----------------|---|-----------------|------------------|-----------------|
| E5-1-48 | 48"x48" | EXIT GORE | | 35 | |
| G20-1-60 | 60"x24" | ROAD WORK NEXT MILES | | 28 | |
| G20-1b-60 | 60"x24" | NO WORK IN PROGRESS (Sign and installation only) | | 18 | |
| G20-2-48 | 48"x24" | END ROAD WORK | 7 | 26 | 182 |
| G20-4-36 | 36"x18" | PILOT CAR FOLLOW ME (Mounted to back of pilot car) | | 18 | |
| G20-4b-36 | 36"x30" | WAIT FOR PILOT CAR | | 18 | |
| G20-50a-72 | 72"x36" | ROAD WORK NEXT MILES RT & LT ARROWS | | 43 | |
| G20-52a-72 | 72"x24" | ROAD WORK NEXT MILES RT or LT ARROW | | 36 | |
| G20-55-96 | 96"x48" | SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT | 7 | 59 | 413 |
| M1-1-24 | 24"x24" | INTERSTATE ROUTE MARKER (Post and installation only) | 8 | 10 | 80 |
| M1-1-36 | 36"x36" | INTERSTATE ROUTE MARKER (Post and installation only) | 15 | 11 | 165 |
| M1-4-24 | 24"x24" | U.S. ROUTE MARKER (Post and installation only) | | 10 | |
| M1-5-24 | 24"x24" | STATE ROUTE MARKER (Post and installation only) | | 10 | |
| M3-1-24 | 24"x12" | NORTH (Mounted on route marker post) | 4 | 7 | 28 |
| M3-1-36 | 36"x18" | NORTH (Mounted on route marker post) | 3 | 10 | 30 |
| M3-2-24 | 24"x12" | EAST (Mounted on route marker post) | | 7 | |
| M3-3-24 | 24"x12" | SOUTH (Mounted on route marker post) | 5 | 7 | 35 |
| M3-3-36 | 36"x18" | SOUTH (Mounted on route marker post) | 3 | 10 | 30 |
| M3-4-24 | 24"x12" | WEST (Mounted on route marker post) | | 7 | |
| M4-8-24 | 24"x12" | DETOUR (Mounted on route marker post) | 8 | 7 | 56 |
| M4-8-30 | 30"x15" | DETOUR (Mounted on route marker post) | 6 | 4 | 24 |
| M4-9-30 | 30"x24" | DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT | | 15 | |
| M4-10-48 | 48"x18" | DETOUR (INSIDE ARROW) RIGHT or LEFT (Mounted on barricade) | 4 | 7 | 28 |
| M5-1-21 | 21"x15" | ADVANCE TURN ARROW RT or LT (Mounted on route marker post) | 2 | 7 | 14 |
| M5-1-30 | 30"x21" | ADVANCE TURN ARROW RT or LT (Mounted on route marker post) | | 9 | |
| M5-2(I)-30 | 30"x21" | DIRECTIONAL ARROW UP AND DIAGONAL RT or LT (Mtd on rte mrkr post) | 2 | 9 | 18 |
| M6-1-21 | 21"x15" | DIRECTIONAL ARROW RT or LT (Mounted on route marker post) | 6 | 7 | 42 |
| M6-1-30 | 30"x21" | DIRECTIONAL ARROW RT or LT (Mounted on route marker post) | | 9 | |
| M6-2(I)-30 | 30"x21" | DIRECTIONAL ARROW DIAGONAL RT or LT (Mounted on route marker post) | 3 | 9 | 27 |
| M6-3-21 | 21"x15" | DIRECTIONAL ARROW UP (Mounted on route marker post) | | 7 | |
| M6-3(I)-30 | 30"x21" | DIRECTIONAL ARROW UP (Mounted on route marker post) | 4 | 9 | 36 |
| R1-1-48 | 48"x48" | STOP | 4 | 32 | 128 |
| R1-2-60 | 60"x60" | YIELD | | 29 | |
| R2-1-36 | 36"x48" | SPEED LIMIT (Portable only) | | 30 | |
| R2-1-48 | 48"x60" | SPEED LIMIT | 18 | 39 | 702 |
| R2-1aP-24 | 24"x18" | MINIMUM FEE \$80 (Mounted on Speed Limit post) | 13 | 10 | 130 |
| R3-2-48 | 48"x48" | NO LEFT TURN | 1 | 35 | 35 |
| R4-1-48 | 48"x60" | DO NOT PASS | | 39 | |
| R4-7-48 | 48"x60" | KEEP RIGHT | | 39 | |
| R5-1-48 | 48"x48" | DO NOT ENTER | | 35 | |
| R6-1-54 | 54"x18" | ONE WAY RIGHT or LEFT (Mounted on STOP or DO NOT ENTER post) | | 14 | |
| R7-1-12 | 12"x18" | NO PARKING ANY TIME | | 11 | |
| R10-6-24 | 24"x36" | STOP HERE ON RED | 3 | 16 | 48 |
| R11-2-48 | 48"x30" | ROAD CLOSED (Mounted on barricade) | 6 | 12 | 72 |
| R11-2a-48 | 48"x30" | STREET CLOSED (Mounted on barricade) | 2 | 12 | 24 |
| R11-3a-60 | 60"x30" | ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade) | | 15 | |
| R11-3c-60 | 60"x30" | STREET CLOSED MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade) | | 15 | |
| R11-4a-60 | 60"x30" | STREET CLOSED TO THRU TRAFFIC (Mounted on barricade) | | 15 | |
| W1-3-48 | 48"x48" | REVERSE TURN RIGHT or LEFT | | 35 | |
| W1-4-48 | 48"x48" | REVERSE CURVE RIGHT or LEFT | 1 | 35 | 35 |
| W1-4b-48 | 48"x48" | TWO LANE REVERSE CURVE RIGHT or LEFT | | 35 | |
| W1-6-48 | 48"x24" | ONE DIRECTION LARGE ARROW | | 26 | |
| W3-1-48 | 48"x48" | STOP AHEAD | 2 | 35 | 70 |
| W3-3-48 | 48"x48" | SIGNAL AHEAD | 3 | 35 | 105 |
| W3-4-48 | 48"x48" | BE PREPARED TO STOP | | 35 | |
| W3-5-48 | 48"x48" | SPEED REDUCTION AHEAD | 9 | 35 | 315 |
| W4-2-48 | 48"x48" | LANE ENDS RIGHT or LEFT | 6 | 35 | 210 |
| W5-1-48 | 48"x48" | ROAD NARROWS | 1 | 35 | 35 |
| W5-8-48 | 48"x48" | THRU TRAFFIC RIGHT LANE | | 35 | |
| W5-9-48 | 48"x48" | ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW | | 35 | |
| W6-3-48 | 48"x48" | TWO WAY TRAFFIC | | 35 | |
| W8-1-48 | 48"x48" | BUMP | | 35 | |
| W8-3-48 | 48"x48" | PAVEMENT ENDS | | 35 | |
| W8-7-48 | 48"x48" | LOOSE GRAVEL | | 35 | |
| W8-11-48 | 48"x48" | UNEVEN LANES | | 35 | |
| W8-12-48 | 48"x48" | NO CENTER LINE | | 35 | |
| W8-17-48 | 48"x48" | SHOULDER DROP-OFF SYMBOL | | 35 | |
| W8-53-48 | 48"x48" | TRUCKS ENTERING HIGHWAY | | 35 | |
| W8-54-48 | 48"x48" | TRUCKS ENTERING AHEAD or FT or MILE | | 35 | |
| W8-55-48 | 48"x48" | TRUCKS CROSSING AHEAD or FT or MILE | | 35 | |
| W8-56-48 | 48"x48" | TRUCKS EXITING HIGHWAY | | 35 | |
| W9-3a-48 | 48"x48" | CENTER LANE CLOSED SYMBOL | | 35 | |
| W13-1P-30 | 30"x30" | MPH ADVISORY SPEED PLAQUE (Mounted on warning sign post) | | 14 | |
| W14-3-64 | 64"x48" | NO PASSING ZONE | | 28 | |
| W16-2P-30 | 30"x24" | FEET PLAQUE (Mounted on warning sign post) | | 10 | |
| W20-1-48 | 48"x48" | ROAD WORK AHEAD or FT or MILE | 9 | 35 | 315 |
| W20-2-48 | 48"x48" | DETOUR AHEAD or FT or MILE | 4 | 35 | 140 |
| W20-3-48 | 48"x48" | ROAD or STREET CLOSED AHEAD or FT or MILE | 3 | 35 | 105 |
| W20-4-48 | 48"x48" | ONE LANE ROAD AHEAD or FT or MILE | 3 | 35 | 105 |
| W20-5-48 | 48"x48" | RIGHT or CENTER or LEFT LANE CLOSED AHEAD or FT or MILE | 6 | 35 | 210 |
| W20-7-48 | 48"x48" | FLAGGER | 2 | 35 | 70 |
| W20-8-18 | 18"x18" | STOP - SLOW PADDLE Back to Back | 2 | 5 | 10 |

| SIGN NUMBER | SIGN SIZE | DESCRIPTION | AMOUNT REQUIRED | UNITS PER AMOUNT | UNITS SUB TOTAL |
|-------------|-----------|---|-----------------|------------------|-----------------|
| W20-52P-54 | 54"x12" | NEXT MILES (Mounted on warning sign post) | | 12 | |
| W21-1-48 | 48"x48" | WORKERS | | 35 | |
| W21-2-48 | 48"x48" | FRESH OIL | | 35 | |
| W21-3-48 | 48"x48" | ROAD MACHINERY AHEAD or FT or MILE | | 35 | |
| W21-5-48 | 48"x48" | SHOULDER WORK | | 35 | |
| W21-5a-48 | 48"x48" | RIGHT or LEFT SHOULDER CLOSED | | 35 | |
| W21-5b-48 | 48"x48" | RIGHT or LEFT SHOULDER CLOSED AHEAD or FT or MILE | | 35 | |
| W21-6-48 | 48"x48" | SURVEY CREW | | 35 | |
| W21-50-48 | 48"x48" | BRIDGE PAINTING AHEAD or FT | | 35 | |
| W21-51-48 | 48"x48" | MATERIAL ON ROADWAY | | 35 | |
| W21-52-48 | 48"x48" | PAVEMENT BREAKS | | 35 | |
| W21-53-48 | 48"x48" | RUMBLE STRIPS AHEAD | | 35 | |
| W22-8-48 | 48"x48" | FRESH OIL LOOSE ROCK | | 35 | |
| W24-1-48 | 48"x48" | DOUBLE REVERSE CURVE | | 35 | |

SPECIAL SIGNS

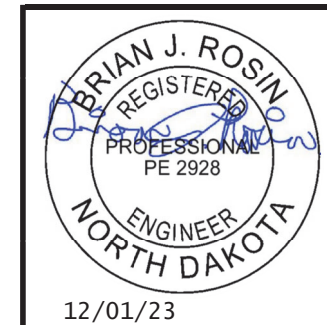
| CONSIGN | DESCRIPTION | AMOUNT REQUIRED | UNITS PER AMOUNT | UNITS SUB TOTAL |
|----------|---|-----------------|------------------|-----------------|
| Consign1 | 11"x6' DETOUR I-29 NORTHBOUND CLOSED USE EXIT 164 | 1 | 92 | 92 |
| Consign2 | 12'-6"x6' DETOUR EXIT 168 EASTBOUND CLOSED USE EXIT 164 | 1 | 102 | 102 |
| Consign3 | 11"x6' DETOUR I-29 SOUTHBOUND CLOSED USE EXIT 172 | 1 | 92 | 92 |
| Consign4 | 12'-6"x6' DETOUR EXIT 168 WESTBOUND CLOSED USE EXIT 172 | 1 | 102 | 102 |
| Consign5 | 11"x6' DETOUR I-29 NORTHBOUND CLOSED USE EXIT 161 | 1 | 92 | 92 |
| Consign6 | 12'-6"x6' DETOUR EXIT 164 EASTBOUND CLOSED USE EXIT 161 | 1 | 102 | 102 |
| Consign7 | 11"x6' DETOUR I-29 SOUTHBOUND CLOSED USE EXIT 168 | 1 | 92 | 92 |
| Consign8 | 12'-6"x6' DETOUR EXIT 164 WESTBOUND CLOSED USE EXIT 168 | 1 | 102 | 102 |

SPEC & CODE

| | | | |
|----------|-----------------------|-------------|------|
| 704-1000 | TRAFFIC CONTROL SIGNS | TOTAL UNITS | 4848 |
|----------|-----------------------|-------------|------|

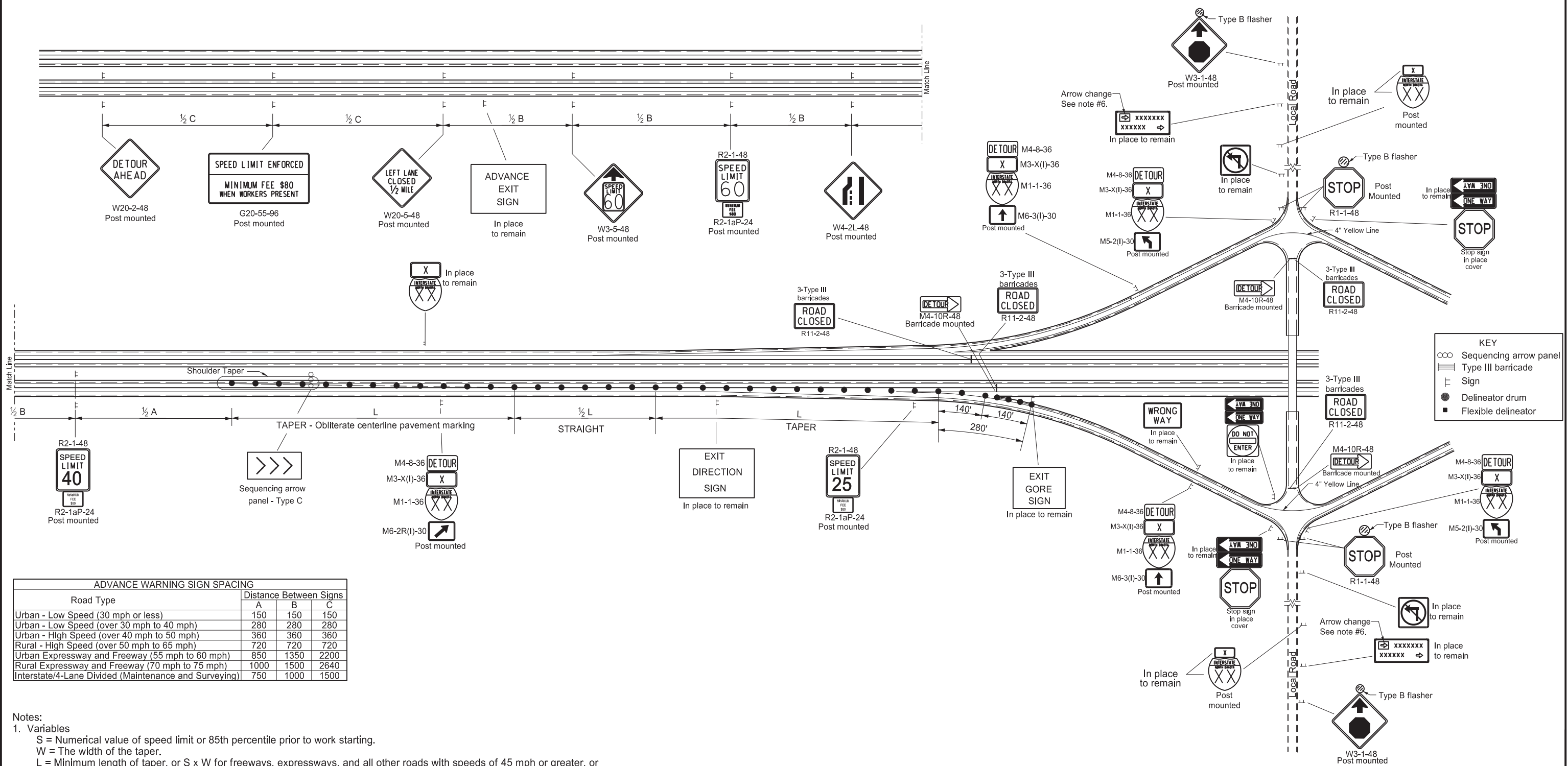
| SPEC & CODE | DESCRIPTION | UNIT | QUANTITY |
|-------------|--|------|----------|
| 704-0100 | FLAGGING | MHR | 100 |
| 704-1018 | LANE CLOSURE-SIGNAL CONTROL/FLAGGING CONTROL | EACH | 1 |
| 704-1041 | ATTENUATION DEVICE-TYPE B-55 | EACH | 2 |
| 704-1045 | ATTENUATION DEVICE-TYPE B-75 | EACH | 2 |
| 704-1048 | PORTABLE RUMBLE STRIPS | EACH | |
| 704-1050 | TYPE I BARRICADES | EACH | |
| 704-1052 | TYPE III BARRICADES | EACH | 26 |
| 704-1060 | DELINEATOR DRUMS | EACH | 220 |
| 704-1065 | TRAFFIC CONES | EACH | |
| 704-1067 | TUBULAR MARKERS | EACH | 119 |
| 704-1070 | DELINEATOR | EACH | |
| 704-1072 | FLEXIBLE DELINEATORS | EACH | |
| 704-1080 | STACKABLE VERTICAL PANELS | EACH | |
| 704-1081 | VERTICAL PANELS - BACK TO BACK | EACH | |
| 704-1085 | SEQUENCING ARROW PANEL - TYPE A | EACH | |
| 704-1086 | SEQUENCING ARROW PANEL - TYPE B | EACH | |
| 704-1087 | SEQUENCING ARROW PANEL - TYPE C | EACH | 2 |
| 704-1095 | TYPE B FLASHER | EACH | 6 |
| 704-1500 | OBLITERATION OF PVMT MK | SF | 1260 |
| 704-3501 | PORTABLE PRECAST CONCRETE MED BARRIER | LF | |
| 704-3510 | PRECAST CONCRETE MED BARRIER - STATE FURNISHED | EACH | |
| 704-3511 | STATE FURNISHED MEDIAN BARRIER | LF | 1160 |
| 762-0200 | RAISED PAVEMENT MARKERS | EACH | |
| 762-0420 | SHORT TERM 4IN LINE - TYPE R | LF | 17660 |
| 762-0426 | SHORT TERM 24IN LINE-TYPE R | LF | 72 |
| 762-0430 | SHORT TERM 4IN LINE - TYPE NR | LF | 23660 |
| 762-0436 | SHORT TERM 24IN LINE-TYPE NR | LF | 390 |

NOTE:
If additional signs are required, units will be calculated using the formula from Section III-18.06 of the Design Manual.
<http://www.dot.nd.gov/>



Traffic Control Devices List

| | | | | |
|----------------------|-------|------------------|-------------|-----------|
| Sheet Added 11/30/23 | STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| | ND | IM-6-029(164)163 | 100 | 12A |



| Road Type | Distance Between Signs | | |
|---|------------------------|------|------|
| | A | B | C |
| Urban - Low Speed (30 mph or less) | 150 | 150 | 150 |
| Urban - Low Speed (over 30 mph to 40 mph) | 280 | 280 | 280 |
| Urban - High Speed (over 40 mph to 50 mph) | 360 | 360 | 360 |
| Rural - High Speed (over 50 mph to 65 mph) | 720 | 720 | 720 |
| Urban Expressway and Freeway (55 mph to 60 mph) | 850 | 1350 | 2200 |
| Rural Expressway and Freeway (70 mph to 75 mph) | 1000 | 1500 | 2640 |
| Interstate/4-Lane Divided (Maintenance and Surveying) | 750 | 1000 | 1500 |

- Notes:
- Variables
 - S = Numerical value of speed limit or 85th percentile prior to work starting.
 - W = The width of the taper.
 - L = Minimum length of taper, or S x W for freeways, expressways, and all other roads with speeds of 45 mph or greater, or W x S x S/60 for urban, residential, and other streets with speeds of 40 mph or less.
 - Space delineator drums used for tapering traffic at dimension "S" and space delineator drums used for tangents at two times "S".
 - Sequencing Arrow Panels
 - Place panels at the beginning of the taper when possible. Where shoulder width does not provide sufficient room, move the panel closer to the work area and place on the roadway surface.
 - Re-establish the speed limit. Determine the exact speed limit in the field, dependent on location and conditions.
 - Cover existing speed limit signs within a reduced speed zone.
 - Furnish 0.40" aluminum panels large enough to cover the existing legend with green background and white legend Type IV reflective sheeting to change sign messages.
 - Sign G20-55-96 is not required if this layout is part of other traffic control that contains this sign.

| POSTED OR 85 th PERCENTILE SPEED | STOP CONDITION Min. (FT) |
|---|--------------------------|
| 35 mph | 100 ft |
| 40 mph | 125 ft |
| 45 mph | 175 ft |
| 50 mph | 250 ft |
| 55 mph | 325 ft |
| 65 mph | 475 ft |

- TYPE B FLASHERS: 6 EA
- TYPE III BARRICADES: 12 EA
- DELINEATOR DRUMS: 80 EA
- OBLITERATION OF PAVEMENT MARKING: 405 SF
- SHORT TERM 4IN LINE-TYPE R Yellow Edge Line: 430 LF
- SHORT TERM 24IN LINE-TYPE R Stop Bars: 24 LF

Interstate Mainline Closure Using Ramps With Crossroad Closed and Mainline Detour Provided

Bridge Deck Replacement
Pipe Replacement

Minto and Lake Ardock Interchanges



12/01/23

| | | | | |
|-------------------|-------|------------------|-------------|-----------|
| REVISED 12-1-2023 | STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| | ND | IM-6-029(164)163 | 170 | 3 |

900 ELEVATION CHECK POINTS: Place six bolts on the top of the barriers, in accordance with Std D-900-1, to serve as elevation check points. Include the cost for this item in the unit price bid for Class AAE-3 concrete.

930 ROADWAY CANOPY: A roadway canopy is required to be constructed above the traveled roadway prior to conducting any construction activities over traffic. The canopy is an added safeguard and does not relieve the Contractor from any responsibility for the safety of the public.

Submit the canopy details, including materials that will be used, to the Engineer for review. The canopy will provide a minimum vertical clearance of 15'-6" above the traveled roadway. The canopy will be extended a minimum distance of 5'-0" beyond the outside edge of deck of the structure and a minimum distance of 5'-0" beyond the edge of the driving lanes beneath the structure.

The canopy will remain in place until the new deck is complete. The canopy may be supported from the ground or suspended from the beams. Complete the installation of the canopy in a minimum amount of time and with the least inconvenience to the public.

Once the bridge barrier is completed, remove the canopy. A quantity of 0.5 L SUM will be paid at this location. Payment for "Roadway Canopy" includes the construction, maintenance, and removal of canopy system.

930 AGGREGATE SLOPE PROTECTION: Remove the existing concrete slope protection and place foundation fill and aggregate slope protection on the embankment slopes as shown. Place the foundation fill in accordance with Section 210.04 B.3.

Clear the subgrade of rubbish and vegetation before placing the aggregate slope protection. Thoroughly compact all loose material. Excavate or backfill as required to obtain the plan cross-section or lines and grades established in the field.

The gradation of the material used to form the slope protection is given in the following chart;

| Sieve Size | % Passing |
|------------|-----------|
| 2" | 100% |
| 3/4" | 5-35% |
| #4 | 0-5% |

The minimum fractured face requirement of the aggregate is 50% by weight on the portion of the aggregate retained on the No. 4 sieve. To be considered fractured, the rock must have at least one fractured face.

Deposit, spread, consolidate, and shape the aggregate by mechanical or hand methods to provide a uniform depth and density and produce a uniform surface appearance. Apply MC-250 that meets the requirements of Section 818.02 C, "Medium-Curing Cutback Asphalt" at an approximate rate of 1.8 gallons per square yard. The bituminous materials are to penetrate to a depth of not less than one-half the required thickness of the aggregate. Protect adjacent structure surfaces against bituminous splatter.

Include all costs for labor, materials, and equipment to complete this work, including the removals of the existing concrete slope protection and the foundation fill, in the unit price bid for "Aggregate Slope Protection."

930 CRACK SEALING: After the penetrating water repellent has been applied and is dry, the Engineer will perform a visual inspection of the concrete pier cap to determine the need for crack sealing. Mark and repair all cracks appearing on the outer surfaces 0.007" or greater in width or as designated by the Engineer.

Immediately before applying the sealer, clean the cracks by removing all dust and debris with compressed air. Seal the cracks with a two-part epoxy in accordance with the manufacturer's recommendations. Chase crack with the sealant application to limits of the crack, including those portions that are narrower than 0.007" wide. Use Paulco TE-2501 (Viking Paints, Inc.), Dural 50 LM (Euclid Chemical Co.), TK-9000 or TK-2110 (TK Products), or an approved equal epoxy sealer.

Include all work and materials associated with crack sealing of the concrete pier cap in the price bid for "Crack Sealing."



| | |
|-------------------------|--------------|
| LAKE ARDOCH INTERCHANGE | |
| NOTES | |
| DRAWING NO. | 29-163.699-3 |

| | | | | |
|-------------------|-------|------------------|-------------|-----------|
| REVISED 12-1/2023 | STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| | ND | IM-6-029(164)163 | 170 | 12 |

900 ELEVATION CHECK POINTS: Place six bolts on the top of the barriers, in accordance with Std D-900-1, to serve as elevation check points. Include the cost for this item in the unit price bid for Class AAE-3 concrete.

930 ROADWAY CANOPY: A roadway canopy is required to be constructed above the traveled roadway prior to conducting any construction activities over traffic. The canopy is an added safeguard and does not relieve the Contractor from any responsibility for the safety of the public.

Submit the canopy details, including materials that will be used, to the Engineer for review. The canopy will provide a minimum vertical clearance of 15'-6" above the traveled roadway. The canopy will be extended a minimum distance of 5'-0" beyond the outside edge of deck of the structure and a minimum distance of 5'-0" beyond the edge of the driving lanes beneath the structure.

The canopy will remain in place until the new deck is complete. The canopy may be supported from the ground or suspended from the beams. Complete the installation of the canopy in a minimum amount of time and with the least inconvenience to the public.

Once the bridge barrier is completed, remove the canopy. A quantity of 0.5 L SUM will be paid at this location. Payment for "Roadway Canopy" includes the construction, maintenance, and removal of canopy system.

930 AGGREGATE SLOPE PROTECTION: Remove the existing concrete slope protection and place foundation fill and aggregate slope protection on the embankment slopes as shown. Place the foundation fill in accordance with Section 210.04 B.3.

Clear the subgrade of rubbish and vegetation before placing the aggregate slope protection. Thoroughly compact all loose material. Excavate or backfill as required to obtain the plan cross-section or lines and grades established in the field.

The gradation of the material used to form the slope protection is given in the following chart;

| Sieve Size | % Passing |
|------------|-----------|
| 2" | 100% |
| 3/4" | 5-35% |
| #4 | 0-5% |

The minimum fractured face requirement of the aggregate is 50% by weight on the portion of the aggregate retained on the No. 4 sieve. To be considered fractured, the rock must have at least one fractured face.

Deposit, spread, consolidate, and shape the aggregate by mechanical or hand methods to provide a uniform depth and density and produce a uniform surface appearance. Apply MC-250 that meets the requirements of Section 818.02 C, "Medium-Curing Cutback Asphalt" at an approximate rate of 1.8 gallons per square yard. The bituminous materials are to penetrate to a depth of not less than one-half the required thickness of the aggregate. Protect adjacent structure surfaces against bituminous splatter.

Include all costs for labor, materials, and equipment to complete this work, including the removals of the existing concrete slope protection and the foundation fill, in the unit price bid for "Aggregate Slope Protection."

930 CRACK SEALING: The Engineer will perform a visual inspection of the concrete pier cap to determine the need for crack sealing. Mark and repair all cracks appearing on the outer surfaces 0.007" or greater in width or as designated by the Engineer.

Immediately before applying the sealer, clean the cracks by removing all dust and debris with compressed air. Seal the cracks with a two-part epoxy in accordance with the manufacturer's recommendations. Chase crack with the sealant application to limits of the crack, including those portions that are narrower than 0.007" wide. Use Paulco TE-2501 (Viking Paints, Inc.), Dural 50 LM (Euclid Chemical Co.), TK-9000 or TK-2110 (TK Products), or an approved equal epoxy sealer.

Include all work and materials associated with crack sealing of the concrete pier cap in the price bid for "Crack Sealing."



| | |
|-------------------|--|
| MINTO INTERCHANGE | |
| NOTES | |

| | |
|-------------|--------------|
| DRAWING NO. | 29-167.722-3 |
|-------------|--------------|

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Job 23636, IM-6-029(164)163

Deck Replacement & Joint Seal, Pipe Replacement & Slope Protection

INDEX OF PROVISIONS

Road Restriction Permits

Hot Line Notice

Price Schedule for Miscellaneous Items dated February 15, 2023 (PS-1)

SP DBE Program - Race Conscious dated March 1, 2022

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

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

SP Certified Payrolls, dated 9-6-17

SP Project Payment Reporting

NOTICE – Bridge Painter

Labor Rates from U.S. Department of Labor dated November 3, 2023 (Mod. No. 1)

On-The-Job Training Program 2023

SSP 2 Federal Migratory Bird Treaty Act

SSP 5 Limitations of Operations

SSP 8 Federal Prohibition on Certain Technological Hardware

SSP 10 E-Ticketing

SSP 11 Buy America

SSP 12 Public Liability and Property Damage Insurance

SP 100(23) Architectural Surface Finish

Revised 12-1-2023

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SP 350(23) Commercial Grade Asphalt

PSP 54(23) Permits and Environmental Considerations

SP Fuel Cost Adjustment Clause dated September 8, 2006

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

COMMERCIAL GRADE HOT MIX ASPHALT

PROJECT 6-029(164)163 – PCN 23636

DESCRIPTION

This work consists of supplying a Commercial Grade Hot Mix Asphalt that meets the requirements of Section 430, “Hot Mix Asphalt (HMA)”, with the following revisions.

MATERIALS

Add the following to the end of Section 430.03 “Materials”.

F. Commercial Grade Hot Mix Asphalt.

Provide commercial grade asphalt that meets the requirements of FAA 43 or better designations in Section 430.03 C, “Superpave Mix Properties”.

The requirements of the following sections will not be applied to commercial grade asphalt:

- Section 430.04 B, “Engineer’s Quality Assurance Plan”;
- Section 430.04 C.2, “Determination of Specific Gravity”; and
- Section 430.04 E, “QC Testing”.

Section 430.04 D “Mix Design” is replaced with the following requirements:

Submit a mix design that was previously approved under another Department contract. Include the project number and PCN of the previous project.

If using a stationary plant, use a mix design previously approved by the Department within the last year. Include the date that the mix design was approved.

If a previously approved mix design is not available, submit a new mix design to the Engineer at least 10 calendar days before placement of material. The Engineer will request materials to use in mix design verification before approving the mix design.

CONSTRUCTION REQUIREMENTS

A. Contractor Personnel.

Replace Section 430.04 A “Contractor Quality Control (QC) with the following:

Provide personnel meeting the requirements of NDDOT Technical Certification Program for the following tests:

- ND T 2 – Sampling of Aggregates; and
- NDDOT 5 Sampling and Splitting Field Verification of Hot Mix Asphalt (HMA) Samples.

B. Engineer’s Acceptance Testing:

Replace Section 430.04 M “Acceptance” with the following:

The Engineer will perform acceptance tests at the frequency shown in Table 1. At times directed by the Engineer, obtain aggregate samples from the cold feed belt according to ND T 2.

| Table 1 | |
|--|-------------------------------------|
| Testing Frequencies | |
| Test/Assessment | Minimum Testing Requirements |
| ND T 11 Materials Finer than No. 200 Sieve | 1 per production day. |
| ND T 27 Sieve Analysis of Fine and Coarse Aggregate | 1 per production day |
| ND T 304 Fine Aggregate Angularity | 1 per production day |
| ND T 166 Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens | 1 per project |
| ND T 209 Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt | 1 per project |

The Engineer will determine the percentage of air voids when determining the maximum theoretical density. Provide mix with between 2 and 6 percent air voids, when calculated on the Maximum Density Worksheet (SFN 50289).

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

| Pay Item | Pay Unit |
|--|-----------------|
| Commercial Grade Asphalt Hot Mix Asphalt | Ton |

Include the cost of aggregate, asphalt cement, prime coat, class 44 blotter sand, tack coat and fog coat in the contract unit price for “Commercial Grade Asphalt.”

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