STATE OF MINNESOTA
COUNTY OF BECKER
PROPOSAL FOR HIGHWAY CONSTRUCTION

BIDS RECEIVED UNTIL 10:00 A.M. ON APRIL 10, 2025

PROPOSAL OF _____
(NAME OF FIRM)

_____
(ADDRESS)

_____
(TELEPHONE NUMBER) (FAX NUMBER)

TO FURNISH AND DELIVER ALL MATERIALS AND TO PERFORM ALL WORK IN ACCORDANCE WITH THE CONTRACT, THE PLANS AND THE APPROVED DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2020 EDITION" (USING ENGLISH UNITS), ON FILE IN THE OFFICE OF THE COMMISSIONER OF TRANSPORTATION EXCEPT AS STATED OTHERWISE IN THE SPECIAL PROVISIONS, WHICH ARE PART OF THIS PROPOSAL, FOR:

SAP 003-607-027 – CSAH 7 TH 10 to CSAH 9 Bit. Milling, Bit. Surfacing, ADA Improvements	**SAP 003-680-005 – CSAH 80** CSAH 7 to CSAH 7 Bit. Milling, Bit. Surfacing, ADA Improvements & Storm Sewer

STARTING DATE: May 19, 2025

COMPLETION DATE: September 19, 2025

I certify that this proposal was prepared by me or under my direct supervision, and that I am a licensed professional engineer under the laws of the State of Minnesota.

James D. Olson, P.E.

License Number 41294 Date 3/17/25

ON CONCERNING COLLUSIVE BIDDING, EVEN A REQUEST TO SUBMIT A COMPLIMENTARY BID, PLEASE CALL THE MINNESOTA ATTORNEY GENERAL'S OFFICE AT (651) 296-1796.

SPECIAL PROVISIONS FOR BECKER COUNTY PROJECT
SAP 003-607-027 & SAP 003-680-005

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BECKER COUNTY ADVERTISEMENT FOR BIDS
BIDS CLOSE APRIL 10, 2025

NOTICE TO CONTRACTORS – Electronic bids will be received until 10:00 a.m. on Thursday, April 10, 2025 by Becker County through the BidVault website located on Becker County's OneOffice website. Bids will be opened and read publicly at the Becker County Highway Department located at 1771 North Tower Road, Detroit Lakes, MN for the purpose of letting a contract for the following construction improvements:

SAP 003-607-027 – CSAH 7 TH 10 to CSAH 9 Bit. Milling, Bit. Surfacing, ADA Improvements	**SAP 003-680-005 – CSAH 80** CSAH 7 to CSAH 7 Bit. Milling, Bit. Surfacing, ADA Improvements & Storm Sewer

Major quantities of work are:

Mill Bituminous Surface – 25,335 SY
Bituminous Wear Course – 4197 Ton
RC Pipe Sewer – 379 LF
Concrete Walk – 35,918 SF
Concrete Curb & Gutter – 2883 LF
Concrete Driveway Pavement - 1948 SY
Erosion Control
Turf Establishment
Traffic Control Signing
Traffic Control Striping

To submit an electronic bid, contractors can access information, plans and bidding documents electronically through the County's OneOffice website at https://mn-co-becker.app.rtvision.com/oneoffice/bidding . To proceed you must click on Bidding and then select SAP 003-607-027 under Contracts. See instructions for downloading. Plans and proposal may be examined at the office of the Becker County Highway Department offices located at 1771 North Tower Road, Detroit Lakes, MN.

Electronic Bids must be accompanied by a corporate surety bond in an amount which is at least equal to 5% of the total bid and may be submitted electronically with BidVault using Surety 2000 or as a hard copy by mail or other delivery method, either as a corporate surety bond or a certified check made payable to the Becker County Treasurer. If not submitted electronically, the proposal guarantee must be received at the Becker County Highway Department, 1771 North Tower Road, Detroit Lakes, MN 56501, in a sealed envelope clearly marked with the name of the bidder, type of work and project number by 4:30 pm CST, the business day prior to the specified date of bid opening.

The County Board reserves the right to reject any or all bids, to waive informalities therein and to accept the bid deemed most advantageous to Becker County.

James D. Olson, P.E. Lic. No. 41294
Becker County Engineer

INSTRUCTIONS TO BIDDERS

1. Explanation to Bidders

Any explanation regarding the meaning or interpretation of contract drawings, specifications, or other contract documents must be requested in writing, with sufficient allowance of time for receipt of reply before the time of bid opening. Any such explanations or interpretations shall be made in the form of addenda to the documents and shall be furnished to all bidders, who shall submit all addenda with their bids. Oral explanations and interpretations made prior to the bid opening shall not be binding.

2. Bidder's Understanding

Bidders should visit the work site to ascertain by inspection pertinent local conditions such as locations, character and accessibility of the site, availability of facilities, location and character of existing work within or adjacent thereto, labor conditions, etc. The Owner shall make available to all prospective bidders, previous to the receipt of bids, information available as to subsoil conditions and surface topography at the work site. Such information shall be given, however, as the best factual information available without the assumption of responsibility for its accuracy or for any conclusions that the Contractor might draw therefrom.

3. Bid Requirements

Security required, if any, shall be submitted with the Proposal or ebid, failure to submit may be cause for rejection. The bidder shall furnish a certified check or bid bond as security in the amount required. Security deposited by unsuccessful bidders will be returned as soon as practicable after the opening.

4. Preparation of Bids

The following provisions apply in addition to (1206) Preparation of Proposal of DIVISION B General Requirements:

> Bidders must quote on all items appearing on the bid forms, unless specific directions in the advertisement, on the bid form, or in the specifications allow for partial bids. Failure to quote on all items may disqualify the bid. When quotations on all items are not required, bidders shall insert the words "no bids" where appropriate.

5. Award of Contract

(a) The Contract shall be awarded to the lowest responsible bidder as soon as practicable after the bid opening, subject to the reservation of paragraph 6 hereinafter.

(b) In determining if a bidder is responsible, the elements to be considered will include the following: whether the bidder involved has previously failed to perform properly or to complete contracts on time of a similar nature; has habitually and without just cause neglected the payment of bills or otherwise disregarded its obligations to subcontractors, material, or employees; whether the bidder involved maintains a permanent place of

business; has adequate personnel and equipment available to do the work properly and expeditiously; has suitable financial resources to meet the obligations incidental to the work; has the appropriate technical experience; has not submitted an unbalanced bid; All of the foregoing is in the sole judgment of the County.

(c) The County reserves the right to consider as unqualified to perform the contract work any bidder who does not habitually perform with its own forces the major portions of work involved.

(d) The ability of any bidder to obtain a performance bond or payment bond shall not be regarded as the sole test of such bidder's competency or responsibility.

(e) The County reserves the right to waive any informality in bids at its discretion.

6. Rejection of Bids

The County reserves the right to reject any and all bids.

To Becker County Board of Commissioners:

According to the advertisement of Becker County inviting proposals for the improvement of the section of highway hereinbefore named, and in conformity with the Contract, Plans, Specifications and Special Provisions pertaining thereto, all on file in the office of the Auditor of Becker County:

(I)(We) hereby certify that (I am) (we are) the only person(s) interested in this proposal as principal(s); that this proposal is made and submitted without fraud or collusion with any other person, firm or corporation at all; that an examination has been made of the site of the work and the Contract form, with the Plans, Specifications and Special Provisions for the improvement.

(I)(We) understand that the quantities of work shown herein are approximate only and are subject to increase or decrease; that all quantities of work, whether increased or decreased within the limits specified in MnDOT 1903 and 1402, are to be done at the unit prices shown on the attached schedule; that, at the time of opening bids, totals only will be read, but that comparison of bids will be based on the correct summation of item totals obtained from the unit prices bid, as provided in MnDOT 1301.

(I)(We) propose to furnish all necessary machinery, equipment, tools, labor and other means of construction and to furnish all materials specified, in the manner and at the time prescribed, all according to the terms of the Contract and Plans, Specifications, and the Special Provisions forming a part of this.

(I)(We) further propose to do all Extra Work that may be required to complete the contemplated improvement, at unit prices or lump sums to be agreed upon in writing before starting such work, or if such prices or sums cannot be agreed upon, to do such work on a Force Account basis, as provided in MnDOT 1904.

(I)(We) further propose to execute the form of Contract within 7 days after receiving written notice of award, as provided in MnDOT 1306.

(I)(We) further propose to furnish a Payment Bond and a Performance Bond each equal to the Contract Amount as required by MN Statute § 574.26, as security for the construction and completion of the improvement according to the Plans, Specifications and Special Provisions as provided in MnDOT 1305.

(I)(We) further propose to do all work according to the Plans, Specifications and Special Provisions, and to renew or repair any work that may be rejected due to defective materials or workmanship, before completion and acceptance of the Project by Becker County.

(I)(We) agree to all provisions of Minnesota Statutes, Section 181.59.

(I)(We) further propose to begin work and to prosecute and complete the same according to the time schedule set forth in the Special Provisions for the improvement.

(I)(We) assign to Becker County all claims for overcharges as to goods and materials purchased in connection with this Project resulting from antitrust violations that arise under the antitrust laws of the United States and the antitrust laws of the State of Minnesota. This clause also applies to subcontractors and first tier suppliers under this Contract.

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

NOTICE TO BIDDERS

Minnesota Statutes require prompt payment to subcontractors:

Minn. Stat. § 471.425 PROMPT PAYMENT OF LOCAL GOVERNMENT BILLS.

Subdivision 1. **Definitions.** For the purposes of this section, the following terms have the meanings here given them.

. . . (d) "Municipality" means any home rule charter or statutory city, county, town, school district, political subdivision or agency of local government. "Municipality" means the Metropolitan Council or any board or agency created under chapter 473.

. . . Subd. 4a. **Prompt payment to subcontractors**. Each contract of a municipality must require the prime contractor to pay any subcontractor within ten days of the prime contractor's receipt of payment from the municipality for undisputed services provided by the subcontractor. The contract must require the prime contractor to pay interest of 1-1/2 percent per month or any part of a month to the subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of $100 or more is $10. For an unpaid balance of less than $100, the prime contractor shall pay the actual penalty due to the subcontractor. A subcontractor who prevails in a civil action to collect interest penalties from a prime contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

Minn. Stat. § 15.72 PROGRESS PAYMENTS ON PUBLIC CONTRACTS; RETAINAGE.

. . . Subd. 2. **Retainage.** . . . (c) A contractor on a public contract for a public improvement must pay all remaining retainage to its subcontractors no later than ten days after receiving payment of retainage from the public contracting agency, unless there is a dispute about the work under a subcontract. If there is a dispute about the work under a subcontract, the contractor must pay out retainage to any subcontractor whose work is not involved in the dispute, and must provide a written statement detailing the amount and reason for the withholding to the affected subcontractor.

NOTICE TO BIDDERS

TRAFFIC CONTROL
PREVAILING WAGE COVERAGE

The following defines the United States Department of Labor's interpretation of contract labor provision coverage for employees who work for traffic control companies and /or perform traffic control duties.

Non-covered Supplier Designated Duties:

Employees of bona fide "Material Persons/Suppliers" are not covered. A Material Person/Supplier is limited to supply, delivery, and routine maintenance (once a week) of barricades, cones, flashers, etc. to the job site.

The following functions, except as qualified in "6." below, do not come under the prevailing wage requirements of the contracts:

1. Supply and delivery of traffic control devices such as barricades, cones, barrels, flashers and signboards.

2. Routine and periodic maintenance service (usually once a week).

3. Removal of equipment from job site.

4. In connection with delivery, they may drop the equipment at a central stockpile location or at various locations along the project. Employees of company may set-up the equipment as long as such set-up is by dropping barrels and cones from the back of a moving truck.

5. Maintenance would consist of inspecting and cleaning the equipment, replacing broken or lost equipment, replacing barricades knocked down or out of line, and changing light bulbs and barricades.

6. If an employee spends more than 20% of their workweek performing the above duties on a Davis-Bacon (Federal-Aid) project or other Davis-Bacon (Federal-Aid) projects, prevailing wage rates would apply for the time so spent.

Covered Contractor or Subcontractor Duties:

The following functions are covered under the contract labor provisions. Any contractor performing these duties will need to be listed on a Request to Sublet form and their employees performing the duties will need to be listed on a Certified Payroll form and submitted following the appropriate procedures.

Related and continuing traffic control services such as, but not limited to:

1. Moving barricades and barriers as construction work progresses.
2. Moving barricades for lane closures and changes.
3. Painting traffic lines.
4. Sandblasting to remove traffic lines.
5. Applying and removing traffic tape.
6. Setting up barrels or barricades other than those dropped from the back of a moving truck.
7. Digging postholes to erect temporary warning signs (only).
8. Erection of advance temporary warning signs.
9. Placing temporary signboards.

On Federal-aid Projects (only) when there is no appropriate classification listed under either the state or federal wage determinations, a classification wage rate will be negotiated using the procedures under FHWA 1273, REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS, Part IV. PAYMENT OF PREDERTERMINED MINIMUM WAGE, Subp. 2. Classifications.

MINNESOTA DEPARTMENT OF TRANSPORTATION
NOTICE TO BIDDERS:
SUSPENSIONS/DEBARMENTS
THIS NOTICE APPLIES TO STATE-FUNDED AND FEDERALY-FUNDED PROJECTS

Do not use suspended or debarred parties as subcontractors or material suppliers on this project!
Both the federal government and the State of Minnesota suspend and debar vendors. Review the list of suspended and debarred vendors before submitting a bid or a request to sublet. If your bid is based on using a suspended or debarred vendor, you will not be entitled to additional compensation for replacing the suspended or debarred vendor with a qualified vendor.

State Suspensions and Debarments
The State of Minnesota's list of suspended and debarred vendors is maintained by the Minnesota Department of Administration, Office of State Procurement, and can be found at this link: https://mn.gov/admin/osp/government/suspended-debarred/index2.jsp . This list includes parties suspended and debarred by the Minnesota Department of Transportation and the Minnesota Department of Administration.

Federal Suspensions and Debarments
The federal government maintains a searchable database of suspensions and debarments, called the System for Award Management (SAM), which is found at this link: https://www.sam.gov/SAM/ . You can use the "Search Records" function without registering for an account.

September 29, 2023

STATE FUNDED ONLY CONSTRUCTION CONTRACTS
SPECIAL PROVISIONS DIVISION A - LABOR

I. INTRODUCTION

A. **Policy Statement.** It is in the public interest that public buildings and other public works projects be constructed and maintained by the best means and the highest quality of labor reasonably available and that persons working on public works projects be compensated according to the real value of the services they perform.[1]

B. **State Regulations Govern.** This Contract is subject to the Minnesota Prevailing Wage Act[2], Minnesota Fair Labor Standards Act[3], Minnesota Rules[4], Minnesota Department of Labor and Industry (MnDLI) Wage Decision(s), and the MnDLI Truck Rental Rate Schedule.

C. **Purpose.** These provisions: (1) outline your obligations under state and federal laws, rules and regulations; (2) explain the requirements necessary to demonstrate compliance; and (3) explain the processes that the Department will undertake to ensure compliance.

D. **Questions or Resources.** Please visit the Minnesota Department of Transportation (MnDOT) Labor Compliance Unit (LCU) website at: www.dot.state.mn.us/const/labor.

II. DEFINITIONS

Many of the terms used in these provisions are defined in MnDOT's Standard Specifications for Construction,[5] unless defined below.

A. **Apprentice.** A Worker at least 16 years of age who is employed to learn an apprenticeable trade or occupation in a registered apprenticeship program.[6]

B. **Bona Fide.** Made or carried out in good faith; authentic.[7]

C. **Certified Payroll Report (CPR).** A report comprised of two components; (1) a payroll report, and (2) a statement of compliance report.[8]

D. **Contractor.** An individual or business entity that is engaged in construction or construction service-related activities including trucking activities either directly or indirectly through a Contract, or by Subcontract with the Prime Contractor, or by a further Subcontract with any other person or business entity performing Work.[9]

E. **Employer.** An individual, partnership, association, corporation, business trust, or other business entity that hires a Worker.[10]

F. **Fringe Benefit.** An employment benefit given in addition to a Worker's wages or salary.[11]

G. **Independent Truck Owner/Operator (ITO).** An individual, partnership, or principal stockholder of a corporation who owns or holds a vehicle under lease and who contracts that vehicle and the owner's services to an entity which provides construction services to a public works project.[12]

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[1] Minn. Stat. 177.41
[2] Minn. Stat. 177.41 to 177.44
[3] Minn. Stat. 177.21 to 177.35
[4] Minn. R. 5200.1000 to 5200.1120
[5] MnDOT Standard Specifications for Construction, Section 1103
[6] Minn. Stat. 178.011, Subdivision 2
[7] The American Heritage College Dictionary, Third Edition, 2000
[8] Minn. R. 5200.1106, Subpart 10
[9] Minn. R. 5200.1106, Subpart 2(D)
[10] Minn. Stat. 177.42, Subdivision 7
[11] The American Heritage College Dictionary, Third Edition, 2000
[12] Minn. R. 5200.1106, Subpart 7(A)

H. **Journeyworker.** A person who has attained a level of skill, abilities, and competencies recognized within and industry as having mastered the skills and competencies required for the trade or occupation.[13]

I. **Prime Contractor.** An individual or business entity that enters into a Contract with the Department.[14]

J. **Subcontract.** A Contract that assigns some obligations of a prior Contract to another party.[15]

K. **Substantially In Place.** Mineral aggregate is deposited on the project site directly or through spreaders where it can be spread from or compacted at the location where it was deposited.[16]

L. **Total Prevailing Wage Rate.** The sum of the prevailing hourly "basic" and "fringe" rate that is established in a Wage Decision.

M. **Trucking Broker (Broker).** An individual or business entity, the activities of which include, but are not limited to: contracting to provide trucking services in the construction industry to users of such services, contracting to obtain such services from providers of trucking services, dispatching the providers of the services to do Work as required by the users of the services, receiving payment from the users in consideration of the trucking services provided, and making payment to the providers for the services.[17]

N. **Trucking Firm/Multiple Truck Owner (MTO).** Any legal business entity that owns more than one vehicle and hires the vehicles out for services to Trucking Brokers or Contractors on public works projects.[18]

O. **Truck Rental Rate Schedule.** A document prepared by the MnDLI through a Contractor survey process that identifies the required hourly Total Prevailing Wage Rate and operating cost for various types of trucks that perform hauling activities (Work) under a Contract that is funded in whole or in part with state funds.[19]

P. **Wage Decision.** A document prepared by the MnDLI through a Contractor survey process that identifies the required hourly basic rate of pay and hourly Fringe Benefits for various labor classifications that perform Work under a Contract that is funded in whole or in part with state funds.[20]

Q. **Work (Work).** All construction activities associated with a public works project, including any required hauling activities on-the-site-of or to-or-from a public works project and conducted pursuant to a Contract, regardless of whether the construction activity or Work is performed by the Prime Contractor, subcontractor, Trucking Broker, Trucking Firm (MTO), ITO, independent contractor, or employee or agent of any of the foregoing entities.[21]

R. **Worker (Laborer or Mechanic).** A Worker in a construction industry labor class identified in or pursuant to Minnesota Rules 5200.1100, Master Job Classifications.[22]

III. APPLICATION & UNDERSTANDING

A. **Provisions & Prevailing Wage Rates Apply.** These provisions, along with the prevailing Wage Decision(s) that are incorporated into the Contract, apply to all Contractors contracting to do all or part of the Work.[23]

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[13] Minn. Stat. 178.011, Subdivision 9
[14] Minn. R. 5200.1106, Subpart 2(C)
[15] The American Heritage College Dictionary, Third Edition, 2000
[16] Minn. R. 5200.1106, Subpart 5(C)
[17] Minn. R. 5200.1106, Subpart 7(C)
[18] Minn. R. 5200.1106, Subpart 7(B)
[19] Minn. R. 5200.1105
[20] Minn. R. 5200.1020 to 5200.1060
[21] Minn. R. 5200.1106, Subpart 2(A)
[22] Minn. R. 5200.1106, Subpart 5(A)
[23] Minn. Stat. 177.44, Subdivision 1

B. **Truck Rental Rates Apply.** The Truck Rental Rate Schedule incorporated into the Contract applies to all hired trucking entities that perform covered hauling activities related to the project.[24]

C. **Prevailing Wage Terms Must Be Included in All Contracts.** The Prime Contractor is required to ensure that all subcontractors performing Work receive the Contract Wage Decision(s), Truck Rental Rate Schedule, and a copy of these provisions with their written Subcontracts, agreements and/or purchase orders.[25]

D. **Responsible for Understanding All Requirements.** Each Contractor is responsible for understanding all laws, rules, regulations, plans, and specifications that are incorporated physically, or by reference, into the Contract.[26]

E. **E-Verify.** For services valued in excess of $50,000, the Contractor certifies that as of the date of services performed on behalf of State, the Contractor will have implemented or be in the process of implementing the federal E-Verify program for all newly hired employees in the United States who will perform work under the contract. The Prime Contractor is responsible to collect all subcontractor certifications and may do so utilizing the E-Verify Subcontractor Certification Form available at http://www.mmd.admin.state.mn.us/doc/EverifySubCertForm.doc. All subcontractor certifications must be kept on file with the Prime Contractor and made available to the State upon request.

IV. VENDOR REGISTRATION

Vendor Registration Required. A Contractor that performs Work, supplies material, or product must be registered with MnDOT. The Contractor must complete and submit a vendor form[27] to the MnDOT LCU[28], along with all applicable documentation that is required. This registration process is separate and distinct from other state agency requirements.

V. LABOR CLASSIFICATIONS

A. **Labor Classification Assignment.** A Worker must be paid at least the Total Prevailing Wage Rate in the same or most similar trade or occupation.[29] To determine the appropriate labor classification for a Worker, a Contractor must refer to the Wage Decision(s) incorporated into the Contract, the labor classification descriptions for laborers and special crafts established in Minnesota Rules or the United States Department of Labor's Dictionary of Occupational Titles.[30]

B. **Labor Classification Clarification & Disputes.** A Contractor needing assistance in determining a labor classification must submit a Classification Clarification Request[31] to the MnDOT LCU for a written decision. If the Contractor chooses to contest the classification assignment, it must provide written notice to the MnDOT LCU. The MnDOT LCU will forward the matter to the MnDLI for a final ruling.

C. **Performing Work in Multiple Labor Classifications.** For Workers performing Work in multiple labor classifications, the Contractor must compensate at a minimum the Total Prevailing Wage Rate, and report the hours worked, in each applicable labor classification.[32]

VI. WAGE DECISION(S) & WAGE RATE(S)

A. **Applicability of a Highway and Heavy Wage Decision.** A highway and heavy Wage Decision applies to a Worker that is engaged in a construction activity or performing Work to construct or maintain a highway or other public works project, such as a road, street, airport runway, bridge,

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[24] Minn. Stat. 177.44, Subdivision 3
[25] MnDOT Standard Specifications for Construction, Section 1801
[26] MnDOT Standard Specifications for Construction, Section 1701
[27] www.dot.state.mn.us/const/labor/documents/forms/contractorform2016.pdf or www.dot.state.mn.us/const/labor/documents/forms/truckvendorform2016.pdf
[28] lcusupport.dot@state.mn.us
[29] Minn. Stat. 177.44, Subdivision 1
[30] Minn. R. 5200.1101 and 1102 and USDOL Dictionary of Occupational Titles
[31] http://www.dot.state.mn.us/const/labor/documents/forms/classification-clarification-request.pdf
[32] Minn. Stat. 177.44, Subdivision 1

power plant, dam or utility[33] that is external to a sheltered enclosure (structure). This includes, but is not limited to, the following Work: site clearing; grading; excavating backfilling; paving; curbs; gutters; sidewalks; culverts; bridges; lighting systems; traffic management systems; installing of utilities out from an exterior meter; fuel islands; communication towers; or other activities similar to highway and/or heavy Work.

B. **Applicability of a Commercial Wage Decision.** A commercial Wage Decision applies to a Worker that is engaged in a construction activity or performing Work to construct a sheltered enclosure (structure) with walk-in access for the purpose of housing persons, machinery, equipment or supplies.[34] This includes, but is not limited to, the following Work: constructing foundations, aprons, stoops; framing walls; installing windows, doors, tiling, plumbing, electrical, HVAC systems; roofing; installing utilities into the building from an exterior meter.

C. **Pay According to Wage Decision(s).**

1. **Contract with One Wage Decision.** If the Contract contains one Wage Decision, the Contractor must examine the Wage Decision and compensate the Worker at a minimum the Total Prevailing Wage Rate for the appropriate labor classification(s).

2. **Contract with Multiple Highway/Heavy Wage Decisions.** If the Contract contains multiple Highway/Heavy Wage Decisions, the Contractor must examine each Wage Decision and compensate the Worker, at a minimum, the Total Prevailing Wage Rate that is the greatest[35] for the appropriate labor classification(s).

3. **Contract with Highway/Heavy and Commercial Wage Decision(s).** If the Contract contains a Highway/Heavy and Commercial Wage Decision(s), the Contractor must first determine which Wage Decision is applicable to the Worker. The Contractor must then compensate the Worker, at a minimum, the Total Prevailing Wage Rate for the appropriate labor classification(s).

D. **Must Pay Total Prevailing Wage Rate.** A Contractor must compensate each Worker, at a minimum, the Total Prevailing Wage Rate(s) for all hours worked on the project for the appropriate labor classification(s).[36]

E. **Missing Wage Rate.** If a Wage Decision fails to include a wage rate for a labor classification(s) that will be utilized on a project, the Contractor must obtain a wage rate prior to furnishing an estimate, quote or bid.[37]

1. **Wage Rate Request.** A Contractor must complete a Request for Rate Assignment form[38] and submit it to the MnDOT LCU[39] for processing.

2. **No Contract Price Adjustment for Missing Wage Rate.** If MnDLI determines that a higher wage rate applies, the Department will not reimburse the Contractor.

F. **Salaried Worker.** A salaried Worker is not exempt from these Provisions. A Contractor must convert the Worker's salary to an average hourly rate of pay by dividing the Worker's salary by the total number of hours Worked (government and non-government) during the pay period.[40] A salaried Worker must be included on a CPR.

G. **Reduction in Standard (Private) Contractual Regular Rate of Pay Prohibited.** A Contractor must not reduce a Worker's standard, contractual regular rate of pay when the prevailing wage rate(s) certified by the MnDLI is less.[41]

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[33] Minn. R. 5200.1010, Subdivision 3
[34] United States Department of Labor All Agency Memorandum #130
[35] Minn. Stat. 177.44, Subdivision 4
[36] Minn. Stat. 177.44, Subdivision 1
[37] Minn. R. 5200.1030, Subpart 2a(C)
[38] http://www.dot.state.mn.us/const/labor/documents/forms/request-for-rate-assignment.doc
[39] lcusupport.dot@state.mn.us
[40] Refer to Appendix A
[41] Minn. Stat. 181.03, Subdivision 1(2)

H. **Prohibited Payment Practices.** A Contractor is prohibited from taking (accepting) a rebate for the purpose of reducing or otherwise decreasing the value of the compensation paid.

I. **Prohibited Deductions.** No deductions, direct or indirect, may be made for the items listed below which when subtracted from wages would reduce the wages below Minnesota's minimum wage rate as established in section 177.24[42]

1. **Uniforms.** Purchased or rented uniforms or specifically designed clothing that is required by the Employer, by the nature of employment, or by statute, or as a condition of employment, which is not generally appropriate for use except in that employment.

2. **Equipment.** Purchased or rented equipment used in employment, except tools of a trade, a motor vehicle, or any other equipment which may be used outside the employment. The cost of the Worker's use of equipment used outside of employment, such as tools, a motor vehicle, cell phone, may be deducted only if an agreement between the Employer and employee existed prior to the deduction.

3. **Supplies.** Consumable supplies required in the course of employment.

4. **Travel Expenses.** Travel expenses in the course of employment except those incurred in traveling to and from the employee's residence and place of employment.

VII. HOURS OF WORK

A. **Work Performed Under the Contract.** A Worker performing Work is subject to prevailing wage for all hours associated with the Contract[43], unless the Worker is exempt under state law.[44]

B. **Wait Time Subject to Prevailing Wage.** A Worker who is required to remain on the project and is waiting to Work because of the fault of the Contractor is considered "engaged to wait" and subject to prevailing wage for the time spent, unless the Worker is completely relieved of duty and free to leave the project for a defined period of time.

VIII. FRINGE BENEFITS

A. **Funded Fringe Benefit Plan Criteria.** In order for a funded Fringe Benefit (e.g., health/medical insurance, disability insurance, life insurance, pension, etc.) to be considered and creditable towards the Total Prevailing Wage Rate it must be:[45]

1. a contribution irrevocably made by a Contractor on behalf of an Worker to a financially responsible trustee, third person, fund, plan, or program;

2. carried out under a financially responsible plan or program;

3. legally enforceable;

4. communicated in writing to the Worker; and

5. made available to the Worker once he/she has met all eligibility requirements.

B. **Unfunded Fringe Benefit Plan Criteria.** In order for a unfunded Fringe Benefit (e.g., vacation, holiday, sick leave, etc.) to be considered and creditable towards the Total Prevailing Wage Rate it must be:[46]

1. reasonably anticipated to provide a benefit;

2. a commitment that can be legally enforced;

[42] Minn. Stat. 177.24, Subdivision 4(1-4)
[43] Minn. Stat. 177.44, Subdivision 1
[44] Minn. Stat. 177.44, Subdivision 2 or Minn. R. 5200.1106, Subpart 4
[45] Minn. Stat. 177.42, Subdivision 6
[46] Minn. Stat. 177.42, Subdivision 6

3. carried out under a financially responsible plan or program;

4. communicated in writing to the Worker; and

5. made available to the Worker once he/she has met all eligibility requirements.

C. **Fringe Benefit Contributions for Hours Worked.** A Contractor that provides Fringe Benefits to a Worker must make contributions, not less than quarterly[47], for all hours worked,[48] including overtime hours, unless it's a defined benefit or contribution plan that provides for immediate participation and immediate or essentially immediate vesting **(see subpart D2 of this section)**.

D. **Hourly Fringe Benefit Credit.** An hourly Fringe Benefit credit toward the Total Prevailing Wage Rate must be determined separately for each Worker based on one or more of the following methods:

1. **Monthly, Quarterly or Annual Computation Methods.** A Contractor must compute its monthly, quarterly or annual cost of a particular Fringe Benefit and divide that amount by the estimated total number of hours worked (government and non-government) during the time frame used.[49] Typical plans that require monthly, quarterly or annual computations include but are not limited to: health/medical insurance, disability insurance, life insurance, vacation, holiday, sick leave and defined benefit or contribution pension plans that do not provide for immediate participation and immediate or essentially immediate vesting.

2. **Fringe Benefit Credit not Requiring Monthly, Quarterly or Annual Computation Methods.** A defined benefit or contribution pension plan that allows for a higher hourly rate of contribution for government work (prevailing wage) than non-government (non-prevailing wage) will be fully credited only if the plan provides for immediate participation and immediate or essentially immediate vesting.

E. **Wages In Lieu of Fringe Benefits.** A Contractor that does not provide full Fringe Benefits must compensate a Worker the difference between the Total Prevailing Wage Rate and the rate actually paid for the appropriate labor classification(s). The compensation paid is considered wages and subject to tax liabilities.

1. **Overtime**. The cash equivalent (wages paid) made in lieu of Fringe Benefits is excluded from the overtime calculation requirement, unless the cash equivalent (wages paid) is part of the Worker's standard straight time wage.

F. **Administrative Costs Not Creditable.** Administrative expenses incurred by a Contractor in connection with the administration of a Bona Fide Fringe Benefit plan are not creditable towards the Total Prevailing Wage Rate.

G. **Federal, State & Local Fringe Benefit Credit Prohibited.** No credit is allowed for benefits required by federal, state or local law, such as: worker's compensation, unemployment compensation, and social security contributions.[50]

IX. OVERTIME

A. **Overtime after 8 Hours per Day or 40 Hours per Week.** A Contractor must not permit or require a Worker to work longer than the prevailing hours of labor unless the Worker is paid for all hours in excess of the prevailing hours at a rate of at least 1.5 times the hourly basic rate of pay.[51] The prevailing hours of labor is defined as not more than 8 hours per day and more than 40 hours per week.[52]

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[47] 29 CRF, Part 5.5(a)(1)(i)
[48] Government and non-government Work
[49] Refer to Appendix B
[50] Minn. Stat. 177.42, Subdivision 6
[51] Minn. Stat. 177.44, Subdivision 1 and Refer to Appendix D
[52] Minn. Stat. 177.42, Subdivision 4

B. **Wages in Lieu of Fringe Benefits Overtime.** Wages paid in Lieu of Fringe Benefits must be paid for all hours worked under the contract.

C. **Multiple Labor Classifications and Overtime.** A Worker employed in multiple labor classifications throughout a workweek must be compensated at the applicable labor classification overtime rate in effect during the hours worked in excess of 8 hours per day or 40 hours per week.

D. **Federal Fair Labor Standards Act (FLSA) and Overtime.** A Contractor subject to the FLSA may be subject to additional overtime compensation requirements.

X. PAYROLLS AND STATEMENTS

A. **Reporting.** Each Contractor that is performing Work must submit a CPR(s) to the Department.

1. **Payroll Report (Paper).** Each Contractor performing Work must submit a paper (written) payroll report to the Department. The payroll report is available on the MnDOT LCU website.[53]

2. **Statement of Compliance (Paper).** Each Contractor's paper (written) payroll report must include a paper (written) "Statement of Compliance Form". The "Statement of Compliance Form" must: (1) state whether or not Fringe Benefits are provided to a Worker; (2) provide a description of each benefit, the hourly contribution made on behalf of each Worker, along with fund/plan information; and (3) a signature attesting that the payroll and Fringe Benefit information provided is truthful and accurate.[54]

3. **Electronic Reporting.** If the Contract is subject to electronic reporting, each Contractor performing Work must submit a CPR(s) using the AASHTOWare, Civil Rights Labor (CRL) system. Refer to the **Special Provisions Division S – "Electronic Submission of Payrolls and Statements"** which is incorporated into and found elsewhere in the Contract for detailed requirements.

B. **Biweekly Payroll Reporting and Payment of Wages.** A CPR(s) must be submitted no later than 14 calendar days after the end of each Contractor's pay period[55] to the Department. A Contractor must pay its employees at least once every 14 calendar days.[56]

C. **Payroll Report Data.** Each payroll report must include all Workers that performed Work and provide at a minimum the following information:[57]

1. Contractor's name, address, and telephone number.
2. State project number.
3. Contract number (if applicable).
4. Project number.
5. Payroll report number.
6. Project location.
7. Workweek end date.
8. Each Worker's name, home address, and social security number.[58]
9. Labor classification(s) title(s) and optional three-digit code for each Worker.

[53] www.dot.state.mn.us/const/labor/certifiedpayroll.html
[54] Minn. R. 5200.1106, Subpart 10
[55] Minn. Stat. 177.43, Subdivision 3
[56] Minn. Stat. 177.30 (a)(4)
[57] Minn. Stat. 177.30 (a)(1-4) and Minn. R. 5200.1106, Subpart 10
[58] Minn. R. 5200.1106, Subpart 10A & Minn. Stat. 13.355, Subdivision 1

10. Hours worked daily and weekly in each labor classification, including overtime hours, for each Worker.

11. Wage rate paid to each Worker for straight time and overtime.

12. Authorized legal deductions for each Worker.

13. Project gross amount, weekly gross amount, and net wages paid to each Worker.

D. **Prime Contractor to Ensure Compliance.** The Prime Contractor must review the CPR(s) submitted by each lower tier Contractor and sign the "Statement of Compliance Form".[59] The Prime Contractor must ensure that each lower tier Contractor's CPR(s) include all Workers that performed Work and accurately reflect labor classifications, hours worked, regular and overtime rates of pay, gross earnings for the project and Fringe Benefits.[60]

E. **Retention of CPR(s).** The Prime Contractor must keep its written CPR(s), including those of all lower tier Contractors, for three (3) years after the final payment is issued.[61]

F. **Retention of Employment-Related Records.** Each Contractor must keep employee records, including, but not limited to: Fringe Benefit statements, time cards, payroll ledgers, check registers and canceled checks[62] for at least three (3) years after the final payment is issued.[63] Other laws may have longer retention requirements.

G. **Detailed Earning Statement.** At the end of each pay period, each Contractor must provide every Worker, in writing or by electronic means, an accurate, detailed earnings statement.[64]

H. **Reports and Records Request.** Upon a request from the Department, the Prime Contractor must promptly furnish copies of CPR(s) for its Workers and those of all lower tier Contractors, along with employment-related records, documents, and agreements that the Department considers necessary to determine compliance.[65]

XI. APPRENTICES, TRAINEES AND HELPERS

A. **Apprentice.** An Apprentice will be permitted to Work at less than the prevailing basic hourly rate only if the Apprentice is:

1. Registered with the U.S. Department of Labor (DOL), Bureau of Apprenticeship and Training or MnDLI Division of Voluntary Apprenticeship.[66]

2. Performing Work of the trade, as described in the apprenticeship agreement.

3. Compensated according to the rate specified in the program for the level of progress.[67]

4. Supervised by a Journeyworker from the same company, in accordance with the program ratio requirements.[68]

B. **Ratio Requirement.** If an approved apprenticeship program fails to define a ratio allowance, the first Apprentice must be supervised by a Journeyworker within the same trade or occupation. Any subsequent Apprentice must be supervised by an additional three Journeyworkers.[69]

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[59] MnDOT Standard Specifications for Construction, Section 1701
[60] MnDOT Standard Specifications for Construction, Section 1801
[61] Minn. Stat. 177.30 (a)(5)
[62] Minn. R. 5200.1106, Subpart 10
[63] Minn. Stat. 177.30(a)(5)
[64] Minn. Stat. 181.032
[65] Minn. Stat. 177.44, Subdivision 7; Minn. Stat. 177.33(a)(5)
[66] Minn. R. 5200.1070, Subpart 1
[67] Minn. R. 5200.1070, Subpart 1 and Refer to Appendix C
[68] Minn. Stat. 178.036, Subdivision 5
[69] Minn. Stat. 178.036, Subdivision 5

C. **Failure to Comply with Apprenticeship Requirements.** If a Contractor fails to demonstrate compliance with the terms established in this section, the Contractor must compensate the Apprentice not less than the applicable Total Prevailing Wage Rate for the actual classification of labor performed.[70]

D. **Trainee and Helper.** A trainee or helper is not exempt from prevailing wage under state law. The Contractor must assign the trainee or helper a labor classification that is the "same or most similar"[71] and compensate the trainee or helper for the actual Work performed regardless of the trainee's or helper's skill level.

XII. INDEPENDENT CONTRACTORS, OWNERS, SUPERVISORS, AND FOREMAN

A. **Independent Contractor.** An independent contractor (IC) that is not an Independent Truck Owner/Operator (ITO), who is performing Work must be properly classified and compensated.[72] The IC must submit a CPR(s) to the Department. If the IC does not receive an hourly wage, but instead a weekly, biweekly, monthly or quarterly distribution for performance, the IC must calculate its hourly rate of pay by dividing the weekly, biweekly, monthly, or quarterly company distribution by all hours worked during that time frame and report the information on a CPR. If necessary, the Department may request documentation from the IC to determine how the hourly wage rate was calculated.[73]

B. **Owners, Supervisors and Foreman.** An owner, supervisor, or foreman performing Work is subject to prevailing wage and must be properly classified, compensated and reported.[74]

XIII. TRUCKING

A. **Covered Hauling Activities.** A Contractor must ensure that all Workers, including hired Trucking Brokers, MTOs and ITOs are paid the applicable Total Prevailing Wage Rate or truck rental rate for the following Work:

1. The hauling of any or all stockpiled or excavated materials on the project work site to other locations on the same project even if the truck leaves the work site at some point.[75]

2. The delivery of materials from a non-commercial establishment to the project and the return haul to the starting location either empty or loaded.[76]

3. The delivery of materials from another construction project site to the public works project and the return haul, either empty or loaded. Construction projects are not considered commercial establishments.[77]

4. The hauling required to remove any materials from the project to a location off the project site and the return haul, either empty or loaded from other than a commercial establishment.[78]

5. The delivery of materials or products by trucks hired by a Contractor, subcontractor, or agent thereof, from a commercial establishment.[79]

6. The delivery of sand, gravel, or rock, by or for a commercial establishment, which is deposited "substantially in place," either directly or through spreaders from the transporting vehicles is work under the contract. In addition, the return haul to the off-site facility empty or loaded is also considered work under the contract.[80]

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[70] Minn. R. 5200.1070, Subpart 3
[71] Minn. Stat. 177.44, Subdivision 1
[72] Minn. Stat. 177.44, Subdivision 1
[73] Minn. Stat. 177.30(a)(5); Minn. Stat. 181.723
[74] Minn. Stat. 177.44, Subdivision 1
[75] Minn. R. 5200.1106, Subpart 3B(1)
[76] Minn. R. 5200.1106, Subpart 3B(2)
[77] Minn. R. 5200.1106, Subpart 3B(3)
[78] Minn. R. 5200.1106, Subpart 3B(4)
[79] Minn. R. 5200.1106, Subpart 3B(5)
[80] Minn. R. 5200.1106, Subpart 3B(6)

B. **Hauling Activities Not Subject to Prevailing Wage or Truck Rental Rates.** A Contractor may exclude a Worker, including hired Trucking Brokers, MTOs and ITOs from prevailing wage or truck rental rates for the Work described in (1-2) of this section. However, this Work may be considered hours worked and subject to standard compensation pursuant to the Minnesota Fair Labor Standards Act.

1. The delivery of processed or manufactured goods to a public works project by the employees of a commercial establishment including truck owner-operators hired by and paid by the commercial establishment, unless it is the delivery of mineral aggregate that is incorporated into the work under the contract by depositing the material substantially in place.[81]

2. The delivery of oil offsite, as an example, to a Prime Contractor's permanent (commercial) asphalt mixing facility that is not to, from, or on the project Work site.[82]

C. **Repair, Maintenance & Waiting to Load Time.** An ITO and MTO must be paid the truck rental rate for time spent repairing or maintaining the truck owner-operator's equipment, and for waiting to load or unload if the repair, maintenance, or wait time is the fault of the Trucking Broker, Contractor, its agent or employees.[83]

D. **Month End Trucking Report.** A Contractor that acquires the services of an ITO or MTO must submit a "MnDOT – MTO and/or ITO Month-End Trucking Report", and a "MnDOT – Month-End Trucking Statement of Compliance Form" to the Department for each month hauling activities are performed under the Contract.[84] The forms are available on the MnDOT LCU website.[85]

E. **Broker Fee.** A truck broker contracting to provide trucking services directly to a prime contractor or subcontractor is allowed to assess a broker fee.

XIV. OFF-SITE FACILITIES

A. **Off-Site Facility Activities Subject to Prevailing Wage.** A Contractor must ensure that all Workers performing Work at a covered off-site facility are paid the applicable Total Prevailing Wage Rate for the following Work:

1. The processing or manufacturing of material at a Prime Contractor's off-site facility that is not a separately held commercial establishment.[86]

2. The processing or manufacturing of material at an off-site facility that is not considered a commercial establishment.[87]

B. **Off-Site Facility Activities Not Subject to Prevailing Wage.** A Contractor may exclude a Worker from prevailing wage for the following work:

1. The processing or manufacturing of material or products by or for a commercial establishment.[88]

2. The work performed by Workers employed by the owner or lessee of a gravel or borrow pit that is a commercial establishment, even if the screening, washing or crushing machines are portable.[89]

XV. SUBCONTRACTING PART OF THE CONTRACT

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[81] Minn. R. 5200.1106, Subpart 4(C)
[82] J.D. Donovan, Inc. vs. Minnesota Department of Transportation, 878 N.W.2d 1 (2016)
[83] Minn. R. 5200.1106, Subpart 8(A)(1)
[84] Minn. R. 5200.1106, Subpart 10
[85] http://www.dot.state.mn.us/const/labor/forms.html
[86] ALJ Findings of Fact, Conclusions of Law, and Recommendation, Conclusions (7), Case #12-3000-11993-2
[87] Minn. R. 5200.1106, Subpart 3(A)
[88] Minn. R. 5200.1106, Subpart 4(A)
[89] Minn. R. 5200.1106, Subpart 4(B)

The Prime Contractor must include the Contract Special Provisions, Wage Decision(s) and Truck Rental Rate Schedule in all Subcontracts, agreements and purchase orders with lower tier Contractors.[90] This requirement also applies to all lower tier subcontractors.

XVI. SITE OF WORK REQUIREMENTS

A. **Poster Board.** The Prime Contractor must construct and display a poster board containing all required posters. The poster board must be accurate, legible, and accessible to all project Workers from the first day of Work until the project is one hundred percent (100%) complete.[91] A poster board at an off-site location, or inside a construction trailer, does not meet this requirement..

B. **How to Obtain a Poster Board.** The Prime Contractor may obtain the required posters and the necessary contact information that is required to be inserted on each poster by visiting the MnDOT LCU website.[92]

C. **Employee Interviews.** The Contractor must permit representatives from the Department or other governmental entities[93] to interview Workers at any time during working hours on the project.[94]

XVII. CHILD LABOR

A. **No Worker under the Age of 18.** No Worker under the age of 18 is allowed to perform Work on a Project Site, except pursuant to Section XVII B below.[95]

B. **Parental Supervision.** A Worker under the age of 18 may perform Work on a Project Site if all of the following criteria are met:

1. The Contractor (Employer) is not subject to FLSA.
2. The Worker is employed in a corporation owned solely by one or both parents.
3. The Worker is supervised by the parent(s).
4. The Worker is not working in a hazardous occupation.[96]

C. **Removal of Minor from Project.** The Engineer or inspector may remove a Worker that appears to be under the age of 18 from the Project Site until the Contractor or Worker can demonstrate proof of age and compliance with all applicable federal and state regulations.[97]

XVIII. NON-COMPLIANCE AND ENFORCEMENT

A. **Case-by-Case Enforcement.** The Department has the authority to enforce the prevailing wage law on a case-by-case.[98]

B. **Prime Contractor Responsible for Unpaid Wages.** The Prime Contractor will be held liable for any unpaid wages to its Workers or those of any lower tier Contractor.[99]

C. **Enforcement Options.** If evidence shows that a Contractor has violated prevailing wage requirements, or these Special Provisions, the Department may, after written notice, implement one or more of the following:

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[90] MnDOT Standard Specifications for Construction, Section 1801
[91] Minn. Stat. 177.44, Subdivision 5
[92] www.dot.state.mn.us/const/labor/posterboards
[93] MnDLI, U.S. DOL, , U.S. Department of Transportation, Federal Highways Administration
[94] MnDOT Standard Specifications for Construction, Section 1511
[95] Minn. R. 5200.0910, Subpart F; 29 CFR Part 570.2(a)(ii)
[96] Minn. R. 5200.0930, Subpart 4
[97] Minn. Stat. 181A.06, Subdivision 4; MnDOT Standard Specifications for Construction, Section 1701
[98] *See* International Union of Operating Engineers, Local 49 v. MnDOT, No. C6-97-1582, 1998 WL 74281, at *2 (Minn. App. Feb. 24, 1998)
[99] MnDOT Standard Specifications for Construction, Section 1801

1. **Withholding Payment.** The Department may withhold from the Prime Contractor payments relating to prevailing wage underpayments.[100]

2. **Non-Responsible Contractor.** The Department may reject a bid from a Prime Contractor that has received two (2) or more Determination Letters within a three (3) year period from the Department finding an underpayment by the Contractor to its own employees.[101]

3. **Default.** The Department may take the prosecution of the Work out of the hands of the Prime Contractor, place the Contractor in default, and terminate the Contract for failure to comply.[102]

4. **Suspension or Debarment.** The Department may refer violations and matters of non-compliance by a Contractor to the Minnesota Department of Administration for suspension or debarment proceedings.[103]

5. **County Attorney.** The Department may refer suspected criminal violations by Contractor to the appropriate local county attorney for prosecution.[104]

6. **Financial Penalties.** Any Contractor who violates the state prevailing wage law is guilty of a misdemeanor and may be fined not more than $300 or imprisoned not more than 90 days or both. Each day that the violation continues is a separate offense.[105] A Contractor may be fined up to $1,000 for each failure to maintain records.[106]

7. **False Claims Act Violation.** All required payroll and certification reports are legal documents; knowing falsification of the documents by a Contractor may result in civil action and/or criminal prosecution[107] and may be grounds for debarment proceedings.[108]

8. **Compliance Order.** The Department may request that MnDLI issue a compliance order to a Contractor for violations of the state prevailing wage law. If the Contractor is found to have committed a violation, liquidated damages and other costs may be assessed against the Employer.[109]

9. **Private Right of Action.** The Department may direct an employee to pursue a civil action in district court against its Employer for failure to comply with the proper payment of wages.[110] If the Employer is found to have committed a violation, liquidated damages and other costs may be assessed against the Employer.[111]

10. **Fringe Benefits; Misdemeanor.** A Contractor that is obligated to deposit Fringe Benefit contributions on behalf of a Worker into a financially responsible trustee, third person, fund, plan, or program and fails to make timely contributions is guilty of a gross misdemeanor or other violations under federal law.[112]

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[100] MnDOT Standard Specifications for Construction, Section 1906
[101] Minn. Stat. 16C.285
[102] MnDOT Standard Specifications for Construction, Section 1808
[103] Minn. R. 1230.1150, Subpart 2(A)(4)
[104] Minn. Stat. 177.44, Subdivision 7
[105] Minn. Stat. 177.44, Subdivision 6
[106] Minn. Stat. 177.30(b)
[107] Minn. Stat. 15C.02; , Minn. Stat. 161.315; Minn. Stat. 177.32; Minn. Stat. 177.43, Subdivision 5, Minn. Stat. 609.63
[108] Minn. Stat. 161.315 and Minn. Stat. 609.63
[109] Minn. Stat. 177.43, Subdivision 6a
[110] Minn. Stat. 177.27, Subdivision 8
[111] Minn. Stat. 177.27, Subdivision 10
[112] Minn. Stat. 181.74, Subdivision 1

THE FOLLOWING APPENDICES ARE FOR EXPLANATORY PURPOSES ONLY. FOR SPECIFIC QUESTIONS, PLEASE CONTACT LCU.[113]

APPENDIX A — SALARIED WORKER WAGE COMPUTATION

Salaried Workers. In order to convert the Worker's salary into an hourly rate of pay, divide the employee's weekly, bi-weekly or monthly earnings by the total number of hours Worked (government and non-government), including overtime hours for the time period used.[114]

$800.00 (weekly salary) / 40 (total weekly hours) = $20.00

$1,600.00 (bi-weekly salary) / 80 (total bi-weekly hours) = $20.00

$3,200.00 (monthly salary) / 160 (total monthly hours) = $20.00

APPENDIX B — FRINGE BENEFIT CREDIT

Fringe Benefit Credit Calculation. The Employer contributes monthly ($600.00) for medical insurance on behalf of a Worker. In order to calculate the projected hourly credit that the Employer can take, the Employer should: (1) add the monthly contributions for each Worker, (2) multiply by twelve (12) months, and (3) divide the total cost of the benefit by the total hours worked (government and non-government)[115] (see annual example below). Quarterly and monthly examples are also provided.

Annual: **($600.00) x (12 months) = $7,200.00**
($7,200.00) / (2080 hours) = $3.46 per hour credit

Quarterly: **($600.00) x (3 months) = $1,800.00**
($1,800.00) / (520 hours) = $3.46 per hour credit

Monthly: **($600.00) x (1 month) = $600.00**
($600.00) / (173 hours) = $3.47 per hour credit

End of Year Self-Audit. At the end of the calendar year, the Contractor must conduct an audit to determine if the hourly fringe benefit credit taken for each Worker was accurate. The Contractor must calculate the total annual fringe benefits paid on behalf of each Worker and divide that amount by the total number of hours worked (government and non-government) by that Worker. If the hourly fringe benefit credit was less than what was reported on a CPR, the contractor must compensate the Worker the hourly difference, multiplied by the total hours worked under the Contract.

APPENDIX C — APPRENTICE RATE OF PAY

State Requirements. The Apprentice must be compensated according his/her level of progress, which is expressed as a percentage of the Journeyworker wage that is established in the program.

Journeyworker Wage Established in Program = $25.00

Apprentice Level of Progress = 60%

($25.00) * (.60) = $15.00

[113] lcusupport.dot@state.mn.us or (651) 366-4238
[114] United States Department of Labor Field Operation Handbook, Section 15f08
[115] United States Department of Labor Field Operation Handbook, Section 15f12

Overtime Hourly Rate of Pay. Here is the formula to calculate the required minimum overtime.[116]

OT = (PW * .5) + (HW) + (RF) + (F)

Definition of OT Acronyms

OT: overtime.
PW: the basic hourly prevailing wage rate established in a federal and/or state prevailing Wage Decision.
HW: hourly wage rate paid to a Worker.
RF: remaining fringe, which means the difference between the Contract hourly Fringe Benefit rate and the actual hourly Fringe Benefit rate paid by the Contractor to a third party on behalf of a Worker.
F: Fringe Benefit contributions that are bona-fide and contributed by an Employer to a third party on behalf of a Worker.

The Total Prevailing Wage Rate for a Worker is $30.00, which is comprised of an hourly basic rate of $20.00 and an hourly fringe rate of $10.00. The table below includes various hourly basic and Fringe Benefit payments that a Contractor could potentially make to a Worker.

OT CALCULATION FORMULA AND EXAMPLES
OT = (PW * .5) + (HW) + (RF) + (F)

Hourly Wage Paid	Fringe Benefits Paid	Payment To Employee (PW * .5) + (HW) + (RF)	Fringe Payment + (F)	Total Payment = OT
$ 20.00	$ 10.00	($ 20.00 * .5) + ($ 20.00) + ($ 0.00) = $ 30.00	+ $ 10.00	= $ 40.00
$ 18.00	$ 12.00	($ 20.00 * .5) + ($ 18.00) + ($ 0.00) = $ 28.00	+ $ 12.00	= $ 40.00
$ 22.00	$ 8.00	($ 20.00 * .5) + ($ 22.00) + ($ 0.00) = $ 32.00	+ $ 8.00	= $ 40.00
$ 30.00	$ 0.00	($ 20.00 * .5) + ($ 30.00) + ($ 0.00) = $ 40.00	+ $ 0.00	= $ 40.00
$ 24.00	$ 4.00	($ 20.00 * .5) + ($ 24.00) + ($ 2.00) = $ 36.00	+ $ 4.00	= $ 40.00

Regarding the last example the Contractor would be required to pay an additional $2.00 to the Worker, which is wages in lieu of fringe for a straight time hourly rate of $26.00 not $24.00.

A Contractor subject to the Fair Labor Standards Act (FLSA) may be subject to additional overtime compensation requirements.

[116] United States Department of Labor Field Operation Handbook, Section 15k

MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY PREVAILING WAGES FOR STATE FUNDED CONSTRUCTION PROJECTS

THIS NOTICE MUST BE POSTED ON THE JOBSITE IN A CONSPICUOUS PLACE

Construction Type: Highway and Heavy

Region Number: 04

Counties within region:

- BECKER-03
- BIG STONE-06
- CLAY-14
- DOUGLAS-21
- GRANT-26
- MAHNOMEN-43
- OTTERTAIL-56
- POPE-61
- STEVENS-75
- SWIFT-76
- TRAVERSE-78
- WILKIN-84

Effective: 2024-11-18

This project is covered by Minnesota prevailing wage statutes. Wage rates listed below are the minimum hourly rates to be paid on this project.

All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at a rate of one and one half (1 1/2) times the basic hourly rate. *Note: Overtime pay after eight (8) hours on the project must be paid even if the worker does not exceed forty (40) hours in the work week.*

Violations on MnDOT highways and road projects should be reported to:

Department of Transportation
Office of Construction
Transportation Building MS650
John Ireland Blvd
St. Paul, MN 55155
(651) 366-4209

All other prevailing wage violations and questions should be sent to:

Department of Labor and Industry
Prevailing Wage Section
443 Lafayette Road N
St Paul, MN 55155
(651) 284-5091
DLI.PrevWage@state.mn.us

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
LABORERS (101 - 112) (SPECIAL CRAFTS 701 - 730)					
101	LABORER, COMMON (GENERAL LABOR WORK)	2024-11-18	32.23	22.88	55.11
		2025-05-01	34.50	24.26	58.76

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
102	LABORER, SKILLED (ASSISTING SKILLED CRAFT JOURNEYMAN)	2024-11-18	32.23	22.88	55.11
		2025-05-01	34.50	24.26	58.76
103	LABORER, LANDSCAPING (GARDENER, SOD LAYER AND NURSERY OPERATOR)	2024-11-18	25.00	0.00	25.00
104	FLAG PERSON	2024-11-18	27.50	20.74	48.24
105	WATCH PERSON	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
106	BLASTER	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
107	PIPELAYER (WATER, SEWER AND GAS)	2024-11-18	35.73	22.88	58.61
		2025-05-01	38.00	24.26	62.26
108	TUNNEL MINER	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
109	UNDERGROUND AND OPEN DITCH LABORER (EIGHT FEET BELOW STARTING GRADE LEVEL)	2024-11-18	29.00	20.74	49.74
110	SURVEY FIELD TECHNICIAN (OPERATE TOTAL STATION, GPS RECEIVER, LEVEL, ROD OR RANGE POLES, STEEL TAPE MEASUREMENT; MARK AND DRIVE STAKES; HAND OR POWER DIGGING FOR AND IDENTIFICATION OF MARKERS OR MONUMENTS; PERFORM AND CHECK CALCULATIONS; REVIEW AND UNDERSTAND CONSTRUCTION PLANS AND LAND SURVEY MATERIALS). THIS CLASSIFICATION DOES NOT APPLY TO THE WORK PERFORMED ON A PREVAILING WAGE PROJECT BY A LAND SURVEYOR WHO IS LICENSED PURSUANT TO MINNESOTA STATUTES, SECTIONS 326.02 TO 326.15.	2024-11-18	21.39	14.90	36.29
111	TRAFFIC CONTROL PERSON (TEMPORARY SIGNAGE)	2024-11-18	23.04	17.10	40.14
112		2024-11-18	22.15	12.77	34.92

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
	QUALITY CONTROL TESTER (FIELD AND COVERED OFF-SITE FACILITIES; TESTING OF AGGREGATE, ASPHALT, AND CONCRETE MATERIALS); LIMITED TO MN DOT HIGHWAY AND HEAVY CONSTRUCTION PROJECTS WHERE THE MN DOT HAS RETAINED QUALITY ASSURANCE PROFESSIONALS TO REVIEW AND INTERPRET THE RESULTS OF QUALITY CONTROL TESTERS. SERVICES PROVIDED BY THE CONTRACTOR.				
SPECIAL EQUIPMENT (201 - 204)					
201	ARTICULATED HAULER	2024-11-18	33.58	26.79	60.37
		2025-05-05	34.60	29.17	63.77
202	BOOM TRUCK	2024-11-18	30.21	22.55	52.76
203	LANDSCAPING EQUIPMENT, INCLUDES HYDRO SEEDER OR MULCHER, SOD ROLLER, FARM TRACTOR WITH ATTACHMENT SPECIFICALLY SEEDING, SODDING, OR PLANT, AND TWO-FRAMED FORKLIFT (EXCLUDING FRONT, POSIT-TRACK, AND SKID STEER LOADERS), NO EARTHWORK OR GRADING FOR ELEVATIONS	2024-11-18	25.00	2.00	27.00
204	OFF-ROAD TRUCK	2024-11-18	51.13	3.48	54.61
205	PAVEMENT MARKING OR MARKING REMOVAL EQUIPMENT (ONE OR TWO PERSON OPERATORS); SELF-PROPELLED TRUCK OR TRAILER MOUNTED UNITS.	2024-11-18	35.00	13.24	48.24
HIGHWAY/HEAVY POWER EQUIPMENT OPERATOR					
GROUP 2		2024-11-18	34.94	26.79	61.73
		2025-05-05	36.03	29.17	65.20
302	HELICOPTER PILOT (HIGHWAY AND HEAVY ONLY)				
303	CONCRETE PUMP (HIGHWAY AND HEAVY ONLY)				
304	ALL CRANES WITH OVER 135-FOOT BOOM, EXCLUDING JIB (HIGHWAY AND HEAVY ONLY)				

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
305	DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR OTHER SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS THREE CUBIC YARDS AND OVER MANUFACTURER.S RATED CAPACITY INCLUDING ALL ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)				
306	GRADER OR MOTOR PATROL				
307	PILE DRIVING (HIGHWAY AND HEAVY ONLY)				
308	TUGBOAT 100 H.P. AND OVER WHEN LICENSE REQUIRED (HIGHWAY AND HEAVY ONLY)				
GROUP 3		2024-11-18	33.92	26.79	60.71
		2025-05-05	34.96	29.17	64.13
309	ASPHALT BITUMINOUS STABILIZER PLANT				
310	CABLEWAY				
311	CONCRETE MIXER, STATIONARY PLANT (HIGHWAY AND HEAVY ONLY)				
312	DERRICK (GUY OR STIFFLEG)(POWER)(SKIDS OR STATIONARY) (HIGHWAY AND HEAVY ONLY)				
313	DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS, UP TO THREE CUBIC YARDS MANUFACTURER.S RATED CAPACITY INCLUDING ALL ATTACHMENTS (HIGHWAY AND HEAVY ONLY)				
314	DREDGE OR ENGINEERS, DREDGE (POWER) AND ENGINEER				
315	FRONT END LOADER, FIVE CUBIC YARDS AND OVER INCLUDING ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)				
316	LOCOMOTIVE CRANE OPERATOR				
317	MIXER (PAVING) CONCRETE PAVING, ROAD MOLE, INCLUDING MUCKING OPERATIONS, CONWAY OR SIMILAR TYPE				
318	MECHANIC . WELDER ON POWER EQUIPMENT (HIGHWAY AND HEAVY ONLY)				
319	TRACTOR . BOOM TYPE (HIGHWAY AND HEAVY ONLY)				
320	TANDEM SCRAPER				
321	TRUCK CRANE . CRAWLER CRANE (HIGHWAY AND HEAVY ONLY)				
322	TUGBOAT 100 H.P AND OVER (HIGHWAY AND HEAVY ONLY)				
GROUP 4		2024-11-18	33.58	26.79	60.37
		2025-05-05	34.60	29.17	63.77
323	AIR TRACK ROCK DRILL				
324	AUTOMATIC ROAD MACHINE (CMI OR SIMILAR) (HIGHWAY AND HEAVY ONLY)				
325	BACKFILLER OPERATOR				
326	CONCRETE BATCH PLANT OPERATOR (HIGHWAY AND HEAVY ONLY)				
327	BITUMINOUS ROLLERS, RUBBER TIRED OR STEEL DRUMMED (EIGHT TONS AND OVER)				
328	BITUMINOUS SPREADER AND FINISHING MACHINES (POWER), INCLUDING PAVERS, MACRO SURFACING AND MICRO SURFACING, OR SIMILAR TYPES (OPERATOR AND SCREED PERSON)				
329	BROKK OR R.T.C. REMOTE CONTROL OR SIMILAR TYPE WITH ALL ATTACHMENTS				
330	CAT CHALLENGER TRACTORS OR SIMILAR TYPES PULLING ROCK WAGONS, BULLDOZERS AND SCRAPERS				
331	CHIP HARVESTER AND TREE CUTTER				
332	CONCRETE DISTRIBUTOR AND SPREADER FINISHING MACHINE, LONGITUDINAL FLOAT, JOINT MACHINE, AND SPRAY MACHINE				
333	CONCRETE MIXER ON JOBSITE (HIGHWAY AND HEAVY ONLY)				

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
334	CONCRETE MOBIL (HIGHWAY AND HEAVY ONLY)				
335	CRUSHING PLANT (GRAVEL AND STONE) OR GRAVEL WASHING, CRUSHING AND SCREENING PLANT				
336	CURB MACHINE				
337	DIRECTIONAL BORING MACHINE				
338	DOPE MACHINE (PIPELINE)				
339	DRILL RIGS, HEAVY ROTARY OR CHURN OR CABLE DRILL (HIGHWAY AND HEAVY ONLY)				
340	DUAL TRACTOR				
341	ELEVATING GRADER				
342	FORK LIFT OR STRADDLE CARRIER (HIGHWAY AND HEAVY ONLY)				
343	FORK LIFT OR LUMBER STACKER (HIGHWAY AND HEAVY ONLY)				
344	FRONT END, SKID STEER OVER 1 TO 5 C YD				
345	GPS REMOTE OPERATING OF EQUIPMENT				
346	HOIST ENGINEER (POWER) (HIGHWAY AND HEAVY ONLY)				
347	HYDRAULIC TREE PLANTER				
348	LAUNCHER PERSON (TANKER PERSON OR PILOT LICENSE)				
349	LOCOMOTIVE (HIGHWAY AND HEAVY ONLY)				
350	MILLING, GRINDING, PLANNING, FINE GRADE, OR TRIMMER MACHINE				
351	MULTIPLE MACHINES, SUCH AS AIR COMPRESSORS, WELDING MACHINES, GENERATORS, PUMPS (HIGHWAY AND HEAVY ONLY)				
352	PAVEMENT BREAKER OR TAMPING MACHINE (POWER DRIVEN) MIGHTY MITE OR SIMILAR TYPE				
353	PICKUP SWEEPER, ONE CUBIC YARD AND OVER HOPPER CAPACITY(HIGHWAY AND HEAVY ONLY)				
354	PIPELINE WRAPPING, CLEANING OR BENDING MACHINE				
355	POWER PLANT ENGINEER, 100 KWH AND OVER (HIGHWAY AND HEAVY ONLY)				
356	POWER ACTUATED HORIZONTAL BORING MACHINE, OVER SIX INCHES				
357	PUGMILL				
358	PUMPCRETE (HIGHWAY AND HEAVY ONLY)				
359	RUBBER-TIRED FARM TRACTOR WITH BACKHOE INCLUDING ATTACHMENTS (HIGHWAY AND HEAVY ONLY)				
360	SCRAPER				
361	SELF-PROPELLED SOIL STABILIZER				
362	SLIP FORM (POWER DRIVEN) (PAVING)				
363	TIE TAMPER AND BALLAST MACHINE				
364	TRACTOR, BULLDOZER (HIGHWAY AND HEAVY ONLY)				
365	TRACTOR, WHEEL TYPE, OVER 50 H.P. WITH PTO UNRELATED TO LANDSCAPING (HIGHWAY AND HEAVY ONLY)				
366	TRENCHING MACHINE (SEWER, WATER, GAS) EXCLUDES WALK BEHIND TRENCHER (HIGHWAY AND HEAVY ONLY)				
367	TUB GRINDER, MORBARK, OR SIMILAR TYPE				
368	WELL POINT DISMANTLING OR INSTALLATION (HIGHWAY AND HEAVY ONLY)				
GROUP 5		2024-11-18	31.71	26.79	58.50

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
		2025-05-05	32.64	29.17	61.81
369	AIR COMPRESSOR, 600 CFM OR OVER (HIGHWAY AND HEAVY ONLY)				
370	BITUMINOUS ROLLER (UNDER EIGHT TONS)				
371	CONCRETE SAW (MULTIPLE BLADE) (POWER OPERATED)				
372	FORM TRENCH DIGGER (POWER)				
373	FRONT END, SKID STEER UP TO 1C YD				
374	GUNITE GUNALL (HIGHWAY AND HEAVY ONLY)				
375	HYDRAULIC LOG SPLITTER				
376	LOADER (BARBER GREENE OR SIMILAR TYPE)				
377	POST HOLE DRIVING MACHINE/POST HOLE AUGER				
378	POWER ACTUATED AUGER AND BORING MACHINE				
379	POWER ACTUATED JACK				
380	PUMP (HIGHWAY AND HEAVY ONLY)				
381	SELF-PROPELLED CHIP SPREADER (FLAHERTY OR SIMILAR)				
382	SHEEP FOOT COMPACTOR WITH BLADE . 200 H.P. AND OVER				
383	SHOULDERING MACHINE (POWER) APSCO OR SIMILAR TYPE INCLUDING SELF-PROPELLED SAND AND CHIP SPREADER				
384	STUMP CHIPPER AND TREE CHIPPER				
385	TREE FARMER (MACHINE)				
GROUP 6		2024-11-18	31.06	26.79	57.85
		2025-05-05	31.95	29.17	61.12
387	CAT, CHALLENGER, OR SIMILAR TYPE OF TRACTORS, WHEN PULLING DISK OR ROLLER				
388	CONVEYOR (HIGHWAY AND HEAVY ONLY)				
389	DREDGE DECK HAND				
390	FIRE PERSON OR TANK CAR HEATER (HIGHWAY AND HEAVY ONLY)				
391	GRAVEL SCREENING PLANT (PORTABLE NOT CRUSHING OR WASHING)				
392	GREASER (TRACTOR) (HIGHWAY AND HEAVY ONLY)				
393	LEVER PERSON				
394	OILER (POWER SHOVEL, CRANE, TRUCK CRANE, DRAGLINE, CRUSHERS, AND MILLING MACHINES, OR OTHER SIMILAR HEAVY EQUIPMENT) (HIGHWAY AND HEAVY ONLY)				
395	POWER SWEEPER				
396	SHEEP FOOT ROLLER AND ROLLERS ON GRAVEL COMPACTION, INCLUDING VIBRATING ROLLERS				
397	TRACTOR, WHEEL TYPE, OVER 50 H.P., UNRELATED TO LANDSCAPING				
TRUCK DRIVERS					
GROUP 1		2024-11-18	28.92	21.35	50.27
601	MECHANIC . WELDER				
602	TRACTOR TRAILER DRIVER				
603					

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
	TRUCK DRIVER (HAULING MACHINERY INCLUDING OPERATION OF HAND AND POWER OPERATED WINCHES)				
GROUP 2		2024-11-18	35.66	18.07	53.73
604	FOUR OR MORE AXLE UNIT, STRAIGHT BODY TRUCK				
GROUP 3		2024-11-18	31.93	25.00	56.93
605	BITUMINOUS DISTRIBUTOR DRIVER				
606	BITUMINOUS DISTRIBUTOR (ONE PERSON OPERATION)				
607	THREE AXLE UNITS				
GROUP 4		2024-11-18	31.93	25.00	56.93
608	BITUMINOUS DISTRIBUTOR SPRAY OPERATOR (REAR AND OILER)				
609	DUMP PERSON				
610	GREASER				
611	PILOT CAR DRIVER				
612	RUBBER-TIRED, SELF-PROPELLED PACKER UNDER 8 TONS				
613	TWO AXLE UNIT				
614	SLURRY OPERATOR				
615	TANK TRUCK HELPER (GAS, OIL, ROAD OIL, AND WATER)				
616	TRACTOR OPERATOR, UNDER 50 H.P.				
SPECIAL CRAFTS					
701	HEATING AND FROST INSULATORS	2024-11-18	17.50	0.00	17.50
702	BOILERMAKERS	2024-11-18	46.00	31.93	77.93
		2025-01-01	48.35	31.93	80.28
703	BRICKLAYERS	2024-11-18	35.88	23.20	59.08
704	CARPENTERS	2024-11-18	36.49	28.29	64.78
		2025-01-01	36.49	28.29	64.78
		2025-05-01	41.69	28.29	69.98
705	CARPET LAYERS (LINOLEUM)	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
706	CEMENT MASONS	2024-11-18	45.17	24.22	69.39
707	ELECTRICIANS	2024-11-18	46.00	30.00	76.00
		2025-07-01	50.86	30.00	80.86

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
711	GROUND PERSON	2024-11-18	40.14	0.00	40.14
712	IRONWORKERS	2024-11-18	41.19	35.68	76.87
713	LINEMAN	2024-11-18	36.26	6.93	43.19
714	MILLWRIGHT	2024-11-18	44.38	28.92	73.30
		2025-01-01	44.38	28.92	73.30
		2025-05-01	48.13	29.41	77.54
715	PAINTERS (INCLUDING HAND BRUSHED, HAND SPRAYED, AND THE TAPING OF PAVEMENT MARKINGS)	2024-11-18	32.38	25.28	57.66
		2025-05-01	34.98	25.28	60.26
716	PILEDRIVER (INCLUDING VIBRATORY DRIVER OR EXTRACTOR FOR PILING AND SHEETING OPERATIONS)	2024-11-18	45.71	29.73	75.44
		2025-01-01	45.71	29.73	75.44
		2025-05-01	49.46	30.23	79.69
717	PIPEFITTERS . STEAMFITTERS	2024-11-18	47.91	20.04	67.95
719	PLUMBERS	2024-11-18	44.78	23.04	67.82
721	SHEET METAL WORKERS	2024-11-18	27.00	3.33	30.33
723	TERRAZZO WORKERS	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
724	TILE SETTERS	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
725	TILE FINISHERS	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
727	WIRING SYSTEM TECHNICIAN	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
728	WIRING SYSTEMS INSTALLER	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			

LABOR CODE AND CLASS		EFFECT DATE	BASIC RATE	FRINGE RATE	TOTAL RATE
729	ASBESTOS ABATEMENT WORKER	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			
730	SIGN ERECTOR	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US			

DEPARTMENT OF LABOR AND INDUSTRY

Dec. 18, 2023

Notice of truck rental rate certification and effective date

The Department of Labor and Industry (DLI) commissioner has certified the minimum truck rental rates for state-funded highway projects effective Dec. 18, 2023. This certification follows the publication of the Notice of Truck Rental Rate Determination in the State Register on Nov. 27, 2023, and the informal conference held pursuant to Minnesota Rules, part 5200.1105 on Dec. 11, 2023.

According to Minnesota Rules, part 5200.1105, the purpose of the informal conference was for DLI to obtain further input regarding the determined rates prior to the certification. No written input regarding the determination was received by DLI prior to the informal conference.

The truck rental rate is determined for each equipment type by adding the average hourly cost of operating the vehicle to the certified prevailing-wage rate for the driver. The average hourly operating costs are determined by voluntary survey of truck owner operators, trucking contractors and trucking firms. Cost data used in DLI's analysis must be representative of five trucking firms of various size and five independent truck owner operators for each type of truck.

The determination of the minimum truck rental rates by region are as follows.

Three-axle units

Region	Effective date	607 driver rate	Operating cost	Truck rental rate
Region 1	Certification date	$58.61	$37.35	$95.96
	Increase May 1, 2024	$61.54	$37.35	$98.89
Region 2	Certification date	$51.97	$37.35	$89.32
	Increase May 1, 2024	$54.57	$37.35	$91.92
Region 3	Certification date	$45.02	$37.35	$82.37
Region 4	Certification date	$51.97	$37.35	$89.32

Region	Effective date	607 driver rate	Operating cost	Truck rental rate
	Increase May 1, 2024	$54.57	$37.35	$91.92
Region 5	Certification date	$39.50	$37.35	$76.85
Region 6	Certification date	$54.16	$37.35	$91.51
Region 7	Certification date	$46.65	$37.35	$84.00
Region 8	Certification date	$32.16	$37.35	$69.51
Region 9	Certification date	$56.36	$37.35	$93.71
Region 10	Certification date	$55.96	$37.35	$93.31

Four or more axle units

Region	Effective date	604 driver rate	Operating cost	Truck rental rate
Region 1	Certification date	$58.71	$51.50	$110.21
	Increase May 1, 2024	$61.65	$51.50	$113.15
Region 2	Certification date	$52.11	$51.50	$103.61
	Increase May 1, 2024	54.72	$51.50	$106.22
Region 3	Certification date	$38.51	$51.50	$90.01
Region 4	Certification date	$53.73	$51.50	$105.23
Region 5	Certification date	$44.00	$51.50	$95.50
Region 6	Certification date	$54.26	$51.50	$105.76

Region 7	Certification date	$46.20	$51.50	$97.70
Region 8	Certification date	$43.75	$51.50	$95.25
Region 9	Certification date	$56.46	$51.50	$107.96
Region 10	Certification date	$56.06	$51.50	$107.56

Tractor

Region	Effective date	602 driver rate	Operating cost	Tractor-only truck rental rate	Plus trailer operating cost	Tractor trailer rental rate
Region 1	Certification date	$59.29	$54.96	$114.25	$11.46	$125.71
	Increase May 1, 2024	$62.25	$54.96	$117.21	$11.46	$128.67
Region 2	Certification date	$52.66	$54.96	$107.62	$11.46	$119.08
	Increase May 1, 2024	$55.29	$54.96	$110.25	$11.46	$121.71
Region 3	Certification date	$48.35	$54.96	$103.31	$11.46	$114.77
Region 4	Certification date	$38.30	$54.96	$93.26	$11.46	$104.72
Region 5	Certification date	$42.00	$54.96	$96.96	$11.46	$108.42
Region 6	Certification date	$39.50	$54.96	$94.46	$11.46	$105.92
Region 7	Certification date	$45.40	$54.96	$100.36	$11.46	$111.82
Region 8	Certification date	$48.45	$54.96	$103.41	$11.46	$114.87
Region 9	Certification date	$48.75	$54.96	$103.71	$11.46	$115.17

Region 10	Certification date	$48.45	$54.96	$103.41	$11.46	$114.87

The current operating costs and truck rental rates may be reviewed by accessing DLI's website at https://dli.mn.gov/business/employment-practices/prevailing-wage-minimum-truck-rental-rates. Questions about the truck rental rates or the informal conference notice below can be answered by calling 651-284-5192.

The minimum truck rental rate for these four types of trucks in the State's 10 highway and heavy construction areas will be effective for all highway and heavy construction projects financed in whole or part with state funds advertised for bid on or after the day the notice of certification is published in the *State Register*.

Sincerely,

Nicole Blissenbach

DLI commissioner

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DIVISION S

S-1 CONTACT INFORMATION

Direct questions about this Project, including pre-bid questions, to Jim Olson or Brian Shepard at the Becker County Highway Department at (218) 847-4463.

S-2 SPECIAL PROVISIONS RELATING TO TRIBAL EMPLOYMENT

REVISED 06/30/22

The Department promotes and encourages Indian employment on transportation Projects on or near reservations, consistent with 23 USC §140 (d).

This Project is on or near a reservation. The Contractor must work with the tribal government to use Indian labor in performing Contract Work. The Contractor must contact the Tribal employment rights officers, Liz Andersen at 218-935-3699 or liz.andersen@whiteearth-nsn.gov or Kim St. Clair at 218-935-6268 or kim.stclair@whiteearth-nsn.gov from the White Earth Reservation to identify Indian employment opportunities.

If the Contractor or Subcontractor is not in compliance with these Special Provisions, the Department will address the noncompliance with the Contractor or Subcontractor and the Tribal employment rights officer. The Contractor must meet with the Tribal employment rights officer to discuss Indian employment issues if requested by the tribe.

The Contractor must submit the Indian Employment Tracking Form, http://www.dot.state.mn.us/civilrights/indian-employment.html, to the Department's Office of Civil Rights no later than 90 Calendar Days after receipt of the semi-final estimate as defined in MnDOT 1908.2 and as per 1516.3(7) Completion of Work. If the Contractor fails to submit the form, the Engineer may assess a Monetary Deduction, in accordance with the Contract. The form must list all Indians who were hired for the Project, by the Contractor or a Subcontractor, after being referred by one of the federally-recognized tribal TERO offices in Minnesota.

If the Contractor is considering suspending or terminating an employee referred by the Tribal employment rights officer, the Contractor must notify the Tribal employment rights officer to seek assistance in resolving the problem prior to releasing the employee. Nothing in these Special Provisions is intended to interfere with the Contractor's ability to dismiss any employee for cause including, but not limited to, lack of adequate skills or training, inability to perform because of State or Federal law, or breach of the Contractor's safety standards or other standards of conduct.

Indian employment requirements supplement, but do not replace, other equal opportunity requirements.

S-3 PROTECTION OF FISH AND WILDLIFE RESOURCES

REVISED 06/28/24

SP2020-7

S-3.1 Compliance with Environmental Documentation

The Project is located in an area with protected fish & wildlife resources and/or threatened & endangered species. The Contractor must protect these resources in accordance with State and Federal regulations and must implement all applicable avoidance and minimization measures (AMMs).

A BAT PROTECTION

The Project is located in an area inhabited by one or more protected bat species. The Contractor must ensure all operators, employees, and Contractors working in areas of known or presumed bat habitat are aware of environmental commitments and avoidance and minimization measures (AMMs) to protect both bats and their habitat. The Contractor must notify Project Subcontractors during the preconstruction meeting.

Contractor must direct temporary lighting, if used, away from wooded areas during the bat active season (April 1 to November 14, inclusive).

Contractor must immediately report (within 24 hours) all bat sightings, live or dead, to the Department's wildlife ecologist, https://www.dot.state.mn.us/environment/wildlife.html.

A.1 Tree Clearing Requirements

Restrict all activities to avoid tree clearing. No tree clearing allowed.

B BALD EAGLE PROTECTION

Bald Eagles are protected by the Bald and Golden Eagle Protection Act. No Bald Eagle nests are known within the project limits. However, if a Bald Eagle nest is discovered during Project activities, Contractor must stop Work and immediately report Bald Eagle nests to the Department's wildlife ecologist, https://www.dot.state.mn.us/environment/wildlife.html. Contractor must not Work within 300 feet of a Bald Eagle nest at any time. This includes foot traffic, vehicle parking, and/or equipment or material staging.

C MIGRATORY BIRD PROTECTION

Contractor must cover soil stockpiles when any surface of a stockpile is not in use for 48 hours or longer, Contractor must prevent bird nesting by either covering that surface with fabric or tarps or by grading that surface to a slope no steeper than 65 degrees.

S-4 TARGETED GROUP BUSINESS (TGB) AND VETERAN-OWNED SMALL BUSINESS

REVISED 06/30/22

SP2020-10

The Department's Targeted Group Business (TGB) and Veteran-owned Small Business programs are part of the Department's initiative to increase small business participation on State funded Projects. These programs are intended to provide eligible businesses with increased access to State contracting opportunities. Eligibility requirements for both programs are established pursuant to Minn. Stat. §16C.16 and Minn. Rule Parts 1230.1600 1820. TGBs and Veteran-owned Small Businesses bidding as Prime Contractors may receive a preference in the bid amount, and Contracts may include goals to increase participation of TGBs and Veteran-owned Small Businesses as Subcontractors.

Bidders are directed to the attached "Targeted Group Business (TGB) and Veteran-Owned Small Business Special Provisions" for details.

RESPONSIBLE CONTRACTOR

The Department cannot award a construction contract in excess of $50,000 unless the Bidder is a "responsible contractor" as defined in Minnesota Statutes §16C.285, subdivision 3. A Bidder submitting a Proposal for this Project must verify that it meets the minimum criteria specified in that statute by submitting the "Responsible Contractor Verification and Certification of Compliance" form. A company owner or officer must sign the "Responsible Contractor Verification and Certification of Compliance" form under oath verifying compliance with each of the minimum criteria. THE COMPLETED FORMS MUST BE SUMITTED WITH THE BID PROPOSAL.

A bidder must obtain a verification from each subcontractor it will have a direct contractual relationship with. At the Department's request, a bidder must submit signed subcontractor verifications. A contractor or subcontractor must obtain an annual verification from each motor carrier it has a direct contractual relationship with. A motor carrier must give immediate written notice if it no longer meets the minimum responsible contractor criteria. The requirement for subcontractor verifications does not apply to:

- Design professionals licensed under Minnesota Statutes §326.06; and
- A business or person that supplies materials, equipment, or supplies to a subcontractor on the Project, including performing delivering and unloading services in connection with the supply of materials, equipment, and supplies. But, a business or person must submit a verification if it delivers mineral aggregate such as sand, gravel, or stone that will be incorporated into the Work by depositing the material substantially in place, directly or through spreaders, from the transporting vehicle.

A bidder or subcontractor who does not meet the minimum criteria specified in the statute, or who fails to verify compliance with the criteria, is not a "responsible contractor" and is ineligible to be awarded the Contract for this Project or to work on this Project. Submitting a false verification makes the bidder or subcontractor ineligible to be awarded a construction contract for this Project. Additionally, submitting a false statement may lead to contract termination. If only one bidder submits a bid, the Department may, but is not required to, award a contract even if that bidder does not meet the minimum criteria.

S-5 EQUAL EMPLOYMENT OPPORTUNITY

REVISED 10/14/22

SP2020-11.1

The Equal Employment Opportunity (EEO) Special Provisions contain the EEO rules and regulations for federal and/or state funded highway construction Projects in Minnesota.

The source of funding determines which EEO regulations and workforce participation goals apply to a specific Project:

- If the Project contains any federal funding, and has a total dollar value exceeding $10,000, federal EEO regulations and workforce participation goals apply. The Minnesota Department of Transportation's Office of Civil Rights (MnDOT's Office of Civil Rights) monitors and reviews these Projects on behalf of the Federal Highway Administration (FHWA), under federal law (23 U.S.C. § 140) and its accompanying rules (23 C.F.R. § 230). The FHWA allows MnDOT's Office of Civil Rights to apply the state's workforce participation goals to federally funded construction Contracts.

- If the Project contains any state funding, and has a total dollar value exceeding $100,000, state EEO regulations and workforce participation goals apply. MnDOT's Office of Civil Rights monitors and reviews these Projects in conjunction with the Minnesota Department of Human Rights under state law (Minn. Stat. § 363A.36) and its accompanying rules (Minn. R. 5000.3520 - .3530).

- If the Project contains any state and federal funding, and meets the total dollar value thresholds outlined above, both federal and state EEO regulations, and workforce participation goals apply. MnDOT's Office of Civil Rights monitors and reviews these Projects via a single review and monitoring process that meets federal and state requirements.

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY

23 U.S.C. § 140, 23 C.F.R. § 230, 41 C.F.R. § 60, Minn. Stat. § 363A.36, Minn. R. 5000.3520 - .3530

A. The Contractor's attention is directed to the following:

1. Required Contract Provisions: Federal-Aid Construction Contracts Attachment (FHWA 1273) can be found here: https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=19624648

2. Equal Employment Opportunity (EEO) State and Federal Laws, Policies and Rules Attachment: Minnesota Affirmative Action Requirements (Pages 1-2); Violence-Free and Respectful Workplace (Pages 3-7); Specific Federal Equal Employment Opportunity Responsibilities (Pages 8-11); Standard Federal and State Equal Employment Construction Contract Specifications (Pages 12-15); Equal Opportunity Clause (Pages 16-17) can be found here: https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=19624471

B. The Contractor's compliance with 41 C.F.R. § 60-4, and Minn. Stat. § 363A.36 and its accompanying rules shall be based on the following: implementation of the Equal Opportunity Clause (Pages 16-17); adherence to the specific affirmative action obligations of the state and federal authorities outlined in these EEO Special Provisions and the Equal Employment Opportunity (EEO) State and Federal Laws, Policies and Rules Attachment; and good faith efforts to meet the applicable workforce participation goals detailed below.

C. Highway construction Contracts in excess of $100,000 in state funds and/or $10,000 in federal funds are subject to the workforce participation goals for minorities and women established by the Commissioner of the Minnesota Department of Human Rights (MDHR) under Minn. R. 5000.3520. The FHWA allows MnDOT's Office of Civil Rights to apply the state's workforce participation goals to federally funded construction Contracts. The Contractor's attention is directed to the following:

1. Workforce participation goals are percentages of total labor hours that minorities and women should perform in each trade on the Project. Compliance is measured against the total labor hours performed. The Contractor must ensure that labor hours for minorities and women remain substantially uniform in each trade for the duration of the Project.

2. Workforce participation goals are applied on a county-by-county basis.

3. For Projects spanning more than one county, the workforce participation goals of the assigned county apply. For statewide Projects, the highest workforce participation goals of any county located within the covered work area apply.

4. If the applicable workforce participation goals will not be met, the Contractor and any Subcontractor with estimated labor hours on the Project (except independent trucking operators) must demonstrate that specific and significant actions to recruit, hire, and retain minorities and women are being taken. The Contractor is responsible for ensuring Subcontractors are making these requisite good faith efforts.

D. The transfer of minorities and/or women, including employees and trainees, from different Projects or among Contractors for the sole purpose of meeting the workforce participation goals violates 41 C.F.R. § 60-4, and Minn. Stat. § 363A.36 and its accompanying rules. Such action is a breach of Contract.

E. The Contractor is directed to the following written notification requirements concerning Subcontracts:

1. If the Project is federally funded: The Office of Federal Contract Compliance Programs must receive written notification of any construction Subcontract over $10,000 executed at any tier within ten (10) working days of the Contract award.

2. If the Project is state funded: The Office of Equity and Inclusion for Minnesota Businesses, a division of MDHR, must receive written notification of any construction Subcontracts over $100,000 executed at any tier within ten (10) working days of the Contract award.

The written notification must provide the following information: Name, address, telephone number, and employee identification number of the Subcontractor; estimated amount of the Subcontract; Project location; and estimated start and end dates.

NOTICE TO CONTRACTOR AND SUBCONTRACTORS: REPORTING REQUIREMENTS

23 U.S.C. § 140, 23 C.F.R. § 230, Minn. Stat. § 363A.36, Minn. R. 5000.3520 - .3530

Workforce participation goals are applied on a county-by-county basis. For Projects spanning more than one county, the workforce participation goals of the assigned county apply. For statewide Projects, the highest workforce participation goals of any county located within the covered work area apply.

The workforce participation goals for this Project are:

Minority: 12%

Women: 9%

PRE-AWARD

A. The Contractor must complete and submit a Workforce Plan if the low bid amount is $5,000,000 or more.

B. The Workforce Plan includes the following documents:

1. Project Information Form: To be completed by the Contractor;

2. Contractor Workforce Commitment Form: To be completed by the Contractor and any Subcontractors with estimated labor hours on the Project;

3. Workforce Hours – Project Overview Form: To be completed by the Contractor; and

4. Total Company Workforce Report: To be completed by the Contractor and any Subcontractors upon request.

a. The Total Company Workforce Report can be found here: mndot.gov/civilrights/forms.html.

The Contractor must select the regional Workforce Plan template that corresponds with Project location. The Workforce Plan templates can be found here: mndot.gov/civilrights/bid-results.html.

C. Approval of the Workforce Plan by MnDOT's Office of Civil Rights (OCR) is a condition of Contract award.

D. Approval is contingent upon the following:

1. Completion and submission of the Workforce Plan within five (5) business days of the bid opening. The five-day (5) period begins the first full business day after the bid opening date;

2. Completion and submission of all responses to specific Workforce Plan inquiries made by MnDOT's Office of Civil Rights of the Contractor or any of its Subcontractors with estimated labor hours on the Project; and

3. Ability of the Contractor or any of its Subcontractors with estimated labor hours on the Project to demonstrate that specific and significant actions to recruit, hire, and retain minorities and/or women are being taken if the applicable workforce participation goals will not be met.

E. Failure to complete and submit the Workforce Plan will result in the bid being rejected for failure to meet a condition precedent.

F. The execution of a collective bargaining agreement granting a union exclusive referral rights does not preclude compliance with the requirements of this section. As such, the inability of a union to provide candidates for employment relieves neither the Contractor nor any of its Subcontractors with estimated labor hours on the Project of the requirement to demonstrate that specific and significant actions to recruit, hire, and retain minorities and/or women are being taken if the applicable workforce participation goals will not be met.

POST-AWARD

A. The Contractor is directed to the following requirements concerning payroll submission:

1. The Contractor and its Subcontractors must complete and submit payroll weekly via the Civil Rights Labor Management System (CRL). Workforce participation goals are percentages of total labor hours captured through Contractor payroll submission.

2. All Contractors working on federal-aid highway construction Contracts of at least $10,000 during the last week of July must report their workforce by job category, gender, and ethnicity. MnDOT's Office of Civil Rights compiles this data into a single report for the FHWA. Information on how to submit the required data can be found here: mndot.gov/civilrights/federal-aid-highway-construction-contractors-annual-eeo-report.html.

Failure to meet these post-award reporting requirements may result in the imposition of Contract sanctions, including withholding of progress payments.

B. MnDOT's Office of Civil Rights determines whether Contractors on highway construction Projects are meeting state and federal laws, rules, and regulations relating to EEO by conducting annual compliance reviews. Accordingly, it reserves the right to audit the Contractor or any of its Subcontractors.

C. Information concerning specific reporting requirements for On-the-Job Training and Tribal Employment is accessible via reference to the Index for Division S.

FINAL CLEARANCE

Pursuant to MnDOT Standard Specifications for Construction, Section 1516.3, "Completion of the Work, note (7), the Contractor must notify the Engineer and MnDOT Office of Civil Rights when work is complete. MnDOT's

Office of Civil Rights will issue a Final Clearance letter under MnDOT Standard Specifications for Construction, Section 1516.3, "Completion of the Work, note (7).

S-6 (1102) ABBREVIATIONS AND MEASUREMENT UNITS

RESTORED AND REVISED 06/30/23
SP2020-13.1

S-6.1 Add the following to Table 1102.1-1 in MnDOT 1102:

Acronym or Short Form	Full Name or Meaning
NPT	American National Standard Taper Pipe Thread
RMC	Rigid Metal Conduit
SMC	Schedule of Materials Control

S-6.2 Delete the following from Table 1102.1-1 in MnDOT 1102:

Acronym or Short Form	Full Name or Meaning
RSC	Rigid Steel Conduit

S-7 (1103) DEFINITIONS

RESTORED AND REVISED 06/30/23

SP2020-14

S-7.1 Delete and replace the definition for "Unit Day" in MnDOT 1103 with the following:

Unit Day
12:00 a.m. to 11:59 p.m. (0000-2359) or any portion thereof.

S-7.2 Delete and replace the definition for "Working Day" in MnDOT 1103 with the following:

Working Day
Any Calendar Day, exclusive of Saturdays, Sundays, and Holidays, on which weather and other conditions not under the control of the Contractor will permit construction operations to proceed with the normal working force engaged in performing critical work.

S-7.3 Add the following to MnDOT 1103:

Professional Land Surveyor
The Contract may require that the Contractor provide a Professional Land Surveyor, currently licensed by the State of Minnesota, to perform or supervise certain activities and/or responsibilities related to the Contract.

S-8 (1208) PROPOSAL GUARANTY

RESTORED 06/30/23
SP2020-17

S-8.1 Delete and replace MnDOT 1208 with the following:

The Bidder shall include with its Proposal a Proposal Guaranty that meets the following requirements:

(1) Equal to 5 percent of the total amount of the Proposal
(2) Made payable to the Department
(3) In the form of a bond

A Proposal Guaranty in the form of a bond must meet the following requirements:

(1) Issued by a corporation authorized by the Minnesota Department of Commerce to contract as a Surety in the State of Minnesota
(2) Conditioned on the execution of the Contract in accordance with 1306, "Execution and Approval of Contract"

S-9 (1507) UTILITY PROPERTY AND SERVICE

REVISED 01/27/23

SP2020-27

S-9.1 Delete and replace the second to the last paragraph of MnDOT 1507.1 with the following:

All utilities related to this Project are classified as "Level D," unless the Plans specifically state otherwise. This utility quality level was determined according to the guidelines of CI/ASCE 38-22, entitled to "Standard Guideline for Investigating and Documenting Existing Utilities."

S-9.2 Add the following to MnDOT 1507.2:

The Contractor shall acquire a Positive Response confirmation from the Department for all proposed excavations when the Gopher State One Call has indicated that proposed excavations may affect the Department's utilities. The Contractor may call the Department's Electrical Services Section (ESS) Dispatch Locating to confirm the status of Department-owned Utility infrastructure. Contractor can contact the Department's Electrical Services Section (ESS) Dispatch Locating at (651) 366-5750 or (651) 366-5751. The Contractor shall be responsible for all damage to Department-owned Utility infrastructure if the Contractor did not acquire a Positive Response confirmation from the Department.

S-9.3 4Add the following to MnDOT 1507.2:

The Work under this Contract will affect City of Lake Park utilities such as storm sewer, sanitary sewer, and water supply. Those affected utilities are included in the Plans for adjustment or relocation. The Contractor shall notify Todd Frank, Superintendent of Utility & Public Works at telephone 218-238-5337, before the date the Contractor intends to start Work. The Contractor shall give that office any information necessary for the responsible authorities to make suitable arrangements.

S-10 (1701) LAWS TO BE OBSERVED

RESTORED AND REVISED 06/30/23
SP2020-33

S-10.1 Delete and replace the second paragraph of MnDOT 1701.5B with the following:

For the purpose of paying out retainage, a Subcontractor's Work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and final documentation is received. Final documentation includes certified payrolls, Material certifications, haul road releases, pit releases, warranties, operating manuals,

product literature, verification of final quantities, and Contractor Affidavit (Form IC134). When the Department has made an incremental acceptance of a portion of the prime Contract, the Work of a Subcontractor covered by that acceptance is deemed to be satisfactorily completed.

S-10.2 Add the following to MnDOT 1701:

1701.6 EQUAL PAY

The Department cannot execute a Contract in excess of $500,000 with a business that has 40 or more employees on a single day during the prior 12 months in this State or a State where the business has its primary place of business unless the business has an equal pay certificate or has certified in the Electronic Bid File that the business is exempt. Bidders may find more information on the Equal Pay Certificate Requirement in Minnesota Statutes Section 363A.44 or at the Department of Human Rights, Equal Pay Certificate website (mn.gov/mdhr/certificates/equalpay).

1701.7 Compliance with Tax Law Requirements

The Department cannot make final payment to the Contractor until the Contractor demonstrates that it and all its Subcontractors have complied with the Income Tax withholding requirements of Minnesota Statutes, section 290.92 and section 270C.66 for wages paid for Work performed under the Contract. To establish compliance, the Contractor must submit a "Contractor Affidavit" either online or in paper form (IC134) to the Minnesota Department of Revenue. The Contractor will receive a written certification of compliance when the Department of Revenue determines that all withholding tax returns have been filed and all withholding taxes attributable to the Work performed on the Contract have been paid. The Contractor must then provide this written certification to the Department to receive final payment.

Every Subcontractor working on the Project must submit an approved "Contractor Affidavit" from the Minnesota Department of Revenue to the Contractor before the Contractor can file its own Contractor Affidavit. The Contractor is advised to obtain the certification from each Subcontractor as soon as the Subcontractor completes Work on the Project. Experience has shown that waiting until the Project is complete to obtain the forms from all Subcontractors is likely to result in significant additional Work for the Contractor as it will be difficult or impossible to collect all forms.

The Department of Revenue, in association with the Department of Employment and Economic Development, offers a free seminar to help Contractors understand tax law requirements. The Department strongly urges the Contractor and all Subcontractors to attend the "Employment Taxes & Employer Responsibilities Seminar" or similarly offered classes. You can find a schedule and more information on the Department of Revenue website (www.revenue.state.mn.us).

Complying with this requirement is considered part of the Work under this Contract. The Department will enforce this requirement equally with all other Contract requirements. The Contractor delay in complying with this requirement will cause the Department to delay final payment and Contract Acceptance. The Department may also report non-compliance to the Department of Revenue, which may result in enforcement action by the Department of Revenue.

Contractor Affidavit requirements and Form IC134 can be found on the Department of Revenue website (www.revenue.state.mn.us).

1701.8 Use of Equipment from Certain Telecommunications Supplier Prohibited

By signing this Contract, Contractor certifies that consistent with section 889 of the John McCain National Defense Authorization Act for fiscal year 2019, Public Law 115-233 (Aug. 13, 2018) the Contractor may not use funding covered by this Contract to procure or obtain, or extend, renew, or enter into any Contract to procure or obtain, any Equipment, system, or service that uses "covered telecommunications Equipment or services" (as that term is defined in section 889 of the Act) as a substantial or essential component of any system, or as critical technology as part of any system. The contractor must include this certification as a flow-down clause in any subcontract related to this Contract.

S-11 (1701) LAWS TO BE OBSERVED (CULTURAL RESOURCES – FEDERALLY AND STATE FUNDED)

REVISED 04/14/23

SP2020-38

S-11.1 Add the following to MnDOT 1701:

A For any Project that the Department funds or conducts, or that is located in Department Right-of-way, including owned or leased Natural Materials Resources, the following terms will apply:

A.1 The Department is responsible for obtaining a Cultural Resources Unit (CRU) findings letter.

A.2 Contractor will notify the Engineer if the Contractor intends to use any material from a proposed excavation area on land controlled by the Department. The Engineer must request a review from the Department's CRU before allowing a Contractor to use any material from a proposed excavation area on any land controlled by the Department. The review may take 60 Calendar Days after receipt of request, including up to 45 days for tribal consultation when necessary. If the Department's CRU determines that a survey is needed, the review period may be even longer. The contractor is responsible for ensuring that such reviews do not affect the timely completion of the Project, and for any delays due to the length of the review. Contractor may not base a claim for damages due to delay of Contract on the length of the review.

B If the Contractor selects the excavation and disposal of material from locations other than the Department's Right-of-way, the following terms will apply:

B.1 A CRU findings letter is not necessary.

B.2 Contractor must comply with Minnesota Statutes § 307.08, Minnesota Private Cemeteries Act, if applicable.

C If any human remains are encountered within the Project limits, the Contractor shall immediately stop Work in the vicinity, notify the Engineer, and request suspension of Work near the discovery area, in accordance with 1803.3.

S-12 (1717) AIR, LAND, AND WATER POLLUTION

NEW 06/28/24

SP2020-44.2

S-12.1 Add the following to MnDOT 1717.2:

The Contractor shall not use recycled concrete aggregate (RCA) in temporary work such as causeways, staging areas, or stockpiles that will be in contact with surface water or groundwater. The Contractor shall:

1) Manage stormwater runoff from temporary work such as laydown areas, staging areas, and stockpiles that contain RCA. Prevent any discharge outside of construction limits or into surface water that is turbid or has a pH of greater than 8.5 or less than 6.0.
2) Monitor runoff from temporary work containing RCA during every stormwater inspection. Check for pH and turbidity. Monitor more frequently if needed to maintain acceptable clarity and pH.
3) Provide a Site Management Plan showing how they will manage stormwater runoff, monitor the pH and clarity of runoff, and isolate crushed concrete from surface water and groundwater as described above.

S-13 (1717) AIR, LAND, AND WATER POLLUTION (CONCRETE GRINDING)

REVISED 10/14/22

SP2020-45

S-13.1 Add the following to MnDOT 1717:

1717.3 CONCRETE DIAMOND GRINDING OPERATIONS AND SLURRY MANAGEMENT

The Contractor must not permit residue and water to flow across adjacent Traffic Lanes, flow onto Shoulder, flow off Bridge decks, flow into gutters, or flow onto private property. The Contractor shall provide a Plan for both the on-site and off-site slurry management. The Contractor shall choose, and the Engineer will approve, the methods for slurry management in accordance with the following provisions.

Slurry Management is prohibited within federally recognized tribal land boundaries. Identification of federally recognized tribal land boundaries are found on the following website: http://mndot.maps.arcgis.com/apps/webappviewer/index.html?id=f303130822954064a7bfd76489507ec8 and will be identified in the Plans.

A ON-SITE SLURRY MANAGEMENT

On-site slurry management is prohibited within Areas of Environmental Sensitivity (AES). These areas will require off-Site slurry management. No slurry discharge is allowed in the AES or within the buffers (see Table SP1717-1) to an AES. Identification of the AES are as follows:

(1) Minnesota Department of Natural Resources (MnDNR) Public Waters Inventory (PWI).
(2) National Wetland Inventory (NWI).
(3) Calcareous fens.
(4) Permanent vegetation designated for preservation, such as areas adjacent to the Right-of-way identified as a 'Site of Biodiversity Significance' or 'Native Plant Community' by the MnDNR Minnesota Biological Survey (MBS).
(5) Prairie remnants, including but not limited to areas adjacent to Railroad Rights-of-way Prairies.
(6) Wooded areas with Specimen Trees.
(7) Locations with Federal or State listed Threatened or Endangered plant species.
(8) Locations with Federal or State listed Threatened or Endangered aquatic species.
(9) Historic properties.

Identification of items 1-5 are found on the Minnesota Geospatial Commons: https://gisdata.mn.gov/.

Identification of items 6-9 are provided by the Office of Environmental Stewardship (OES) staff through the Project's Early Notification Memo (ENM) process.

The Engineer will identify all AES in the Plans.

Other constraints within the Project that must be addressed in the Slurry Management Plan and require slurry collection are as follows:

(1) Roadways that utilize curb and gutter to convey storm water to catch basin inlets into a closed drainage system (storm sewers).
(2) Inlet Structures that utilize a piping system to convey storm water directly into stormwater treatment facilities or AES.
(3) Bridge deck grinding.
(4) Stormwater treatment ponds.
(5) Infiltration/filtration basins.

B OFF-SITE SLURRY MANAGEMENT (when slurry is collected and taken to a containment basin or treatment facility)

Any areas identified in Section A, along with other areas identified by the Engineer will require slurry collection in accordance with the following:

(1) Collect and transport slurry in water-tight haul units to prevent spills.

(2) Provide a temporary or permanent lined containment basin outside the Right-of-way to decant the collected slurry.

(3) Areas outside of the Right-of-way may require a separate National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit as per Minnesota Pollution Control Association (MPCA).

(4) Follow additional requirements described below under Slurry Management Plan.

C ON- SITE SLURRY MANAGEMENT (when slurry is spread during the diamond grinding operation)

The Engineer will allow the Contractor to spread the slurry within Department Right-of-way on the vegetated slope and median in accordance with the following requirements:

(1) Maximum Buildup of Slurry Sediment: The Contractor shall spread the slurry at a rate to prevent sediment buildup of greater than 1/2 inch in any location by:

(a) Spreading the slurry further up / down the slope with each subsequent pass of the grinder.

(b) Spread the material evenly on the adjacent slopes by using appropriate Equipment (i.e., chain drags, tine harrows, plug aeration, dissipater plate, etc.) to break up the material.

(c) Remove and haul off site any sediment buildup of greater than 1/2 inch.

(d) Other spreading methods, as approved by the Engineer.

(2) Vegetated Medians – The Engineer will allow slurry spreading within the entire Roadway median in accordance with the following:

(a) Maintain a vegetated buffer zone (as per Table SP1717-1) from any identifiable point of concentrated storm water flow. The following are examples of points of concentrated storm water flow in medians:

i. A transverse ditch bottom width of < 5 feet.
ii. Longitudinal scouring is apparent within median.
iii. An identifiable low point (V ditch) that runs parallel to the Roadway.

(b) Do not spread slurry in areas identified for protection in accordance with Section A.

(c) Maintain the vegetated buffer zones as per Table SP1717-1.

(3) Vegetated Outside Slopes – Deposit the slurry on either the in-slope or back-slope and maintain the vegetated buffer zones outlined in Table SP1717-1.

(4) In order to minimize sediment infiltration into drainage systems, the Contractor shall:

(a) Only place slurry in locations that flow away from the Roadway.

(b) Begin the slurry spreading operation a minimum of 1 foot from the paved Shoulder.

(c) Provide compost filter log for inlet protection.

(d) Leave compost filter log in place after Project is completed.

Table SP1717-1
Buffer Zone/Area Slurry Spreading is Not Allowed

Location	Vegetated Buffer Distance, ft
*Toe of in-slope or fill slope	5
*Toe of back-slope	5
Water level in roadside ditch or median ditch	5
Stormwater treatment ponds	100
Infiltration/filtration basins	100
Areas of Environmental Sensitivity	100
Stormwater inlet without inlet protection	100
Stormwater inlet with inlet protection	50
* Does not apply to median areas with a transverse ditch bottom width > 5 feet and standing water is not present.	

D SLURRY MANAGEMENT PLAN

Prior to grinding operations, the Contractor shall submit to the Engineer in writing the proposed Slurry Management Plan for approval. Grinding operations shall not begin until the Plan is approved by the Engineer.

The Slurry Management Plan shall include the following:

(1) When discharging on the slope, provide a method to identify discharge start and stop locations for the Equipment operator. Examples include:

(a) Lath and flagging tape

(b) Barrels

(c) The Engineer may approve other options as suggested by the Contractor.

(2) When using a containment basin:

(a) Provide an estimate of the expected volume of slurry on the Project and the volume of the containment basin.

(b) Ownership and location of the temporary containment basin.

(c) Method used to line the temporary containment basin. Examples include:

i. Clay (including thickness of clay layer)

ii. Impermeable membrane (including thickness of membrane).

(d) Describe management of water. Examples include:

i. Allowing the water to evaporate,

ii. Re-using the water in the grinding operation, slurry broadcast operation, in a commercially useful manner (include engineering need, i.e., dust control, grade compaction),

iii. Water sent via sanitary sewer (provide proper permits)

iv. Hauling to a water treatment facility; (provide the name of the treating facility).

(e) Describe management of the solids (fines). Examples include:

i. Using the solids as a fill material, a component in recycled Aggregate or any other commercially useful application (include engineering need),

ii. Solids transported to a reuse storage facility, MPCA permitted lined mixed municipal solid waste or industrial landfill. Furnish the Engineer with a document that identifies the name and location of the reuse storage facility or a MPCA permitted lined mixed municipal solid waste or industrial landfill.

(f) Describe restoration of the containment basin area. Include fill material, topsoil, seed mixtures and temporary covers.

(3) pH control Plan must include:

(a) Procedure used to maintain the pH of the slurry within the acceptable range,

(b) Example of pH test results log,

E CONTROL OF pH

Monitor and control the pH of the slurry for all slurry operations to maintain a pH between 6 and 12.

(1) Calibrate the test Equipment prior to start-up of daily operations.

(2) At the start-up of operations, test the pH at least once per hour to ensure it is within the acceptable limits.

(3) Once the pH control Plan is operational and producing consistent results, the testing frequency may be reduced to 4 tests per day.

(4) Keep a signed and dated log of all pH test results for each piece of Equipment collecting slurry and have available to the Engineer upon request.

F PRIOR TO CONCRETE GRINDING OPERATIONS

The Engineer will schedule a pre-grinding meeting at the Project Site. The Engineer and Contractor will review the Slurry Management Plan for approval, including identification of the AES, acceptable slurry management practices, and any other aspects of the Plan as determined by the Engineer.

G STOP WORK

Stop operations and perform the necessary corrective actions before proceeding when any of the following conditions occur:

(1) Raining during operations resulting in discharge of slurry into buffer areas,
(2) Equipment failing to contain or remove slurry,
(3) Defined Quality Control requirements are not followed,
(4) The slurry is discharged into areas not approved in the Slurry Management Plan,
(5) The pH is outside the designated range,
(6) The slurry discharges into waters of the State, or
(7) A spill.

Notify the State Duty Officer immediately if condition (6) or (7) occurs.

(800) 442-0798 (Outside the Twin Cities); (651) 649-5451 (Twin Cities Calling Area)

S-14 (1717) AIR, LAND, AND WATER POLLUTION (MPCA CONSTRUCTION STORM WATER PERMIT)

REVISED 04/14/23

SP2020-46

S-14.1 Add the following to MnDOT 1717.2:

D MPCA CONSTRUCTION STORM WATER PERMIT

The Contractor must complete the application for coverage under the State of Minnesota Construction Stormwater General Permit, MNR100001, which is part of the National Pollutant Discharge Elimination System (NPDES) and the State Disposal System (SDS) Program. This Construction Stormwater General Permit is administered by the Minnesota Pollution Control Agency (MPCA) and for the purpose of this provision will be referred to as the CSW Permit or simply the Permit. By completing the online CSW Permit application the Contractor becomes a co-permittee with the Department and must ensure compliance with the terms and conditions of the Permit that reference the "operator." A copy of the Permit is available at http://www.pca.state.mn.us/water/stormwater/stormwater-c.html or by calling 651-296-6300.

D.1 This Project requires a CSW Permit. The Department will initiate the on-line Permit application for this Project and share the application with the Contractor after Contract Award. The Service ID number for this Project is insert 6-digit service ID number. The Contractor must complete the application through the electronic online process and pay for the Permit on this Project. The application fee is Incidental.

The Contractor must follow the steps below to complete the CSW Permit application:

(1) Create User ID account with MPCA E-services (if Contractor already has an account, skip to next step).
(2) Provide the Contractor's E-services user ID to the Engineer and request that they share the Service application for the Service ID listed above.
(3) Wait to receive email from MPCA E-services that the permit is now shared.
(4) Log into E-Services.
(5) Select shared document.
(6) Select Section 5 Contacts, click on the "2. Contractor" tab, and replace the MnDOT contact information with the Contractor's contact information.
(7) Navigate to Section 11 Certification by clicking the "Continue" button in sections 5 through 10.
(8) Complete certification signature in Section 11.
(9) Complete payment section in Section 12.

The Contractor must complete the application process.

The Contractor must submit a copy of the MPCA confirmation and a signed Permit Affidavit form with the Contract and Bond – this is a condition precedent to Contract approval. The Contractor is not authorized to perform any Project Work which disturbs soil or which involves Work in waters of the State until the Permit is in effect and the Department has received the required documentation.

D.2 Contractor must provide an Erosion Control Supervisor as per MnDOT 2573.3. The Contractor is solely responsible for all inspections, maintenance, and records required in Section 11 of the Permit. Contractor must use standard forms for logging all required inspection and maintenance activities. Contractor must submit all inspection and maintenance forms used on this Project to the Engineer weekly for retention in accordance with the permit. The Contractor must also have the forms available for on-site review.

Contractor must immediately notify the Engineer of site visits by Local Permitting Authorities performed in accordance with Section 24.10 of the Permit. The Contractor must obtain the Engineer's approval before starting any Work required by regulatory authorities which (1) the Contractor believes will result in additional compensation from the Department; or (2) will impact the design or requirements of the Contract documents or impact traffic.

D.3 The Contractor must use Best Management Practices to help minimize turbidity of surface waters and relieve runoff from extreme weather events. The Contractor must report a stormwater sediment release from the Project Site to the Minnesota Duty Officer and the Resident Engineer at the time the Contractor or Department discovers the release. The Contractor must also immediately contact the State Duty Officer (at 1-800-422-0798 or 1-651-649-5451) during any emergency situation involving an uncontrolled stormwater release.

Table SP1717-2
NPDES Permit Requirements

CSG Permit Requirements	Cross-Reference within this Contract
Obtain Permit Permit Compliance Submit Notice of Termination	MnDOT 1701, 1702; and 1717; Special Provisions: 1717 (MPCA Construction Stormwater Permit))
Certified Personnel in Erosion / Sediment Control Site Management Develop a Chain of Command	MnDOT 1506, 1717, and 2573; Special Provisions: 1717 (MPCA Construction Stormwater Permit)
Certified Personnel in Erosion / Sediment Control Site installation	MnDOT 2573
Project / Weekly Schedule (for Erosion / Sediment Control) Completing Inspection / Maintenance Log / Records	MnDOT 1717 and 2573; Special Provisions: 1717 (MPCA Construction Stormwater Permit)
Project Specific Construction Staging	The Plans; MnDOT 1717; Special Provisions: 1717 (MPCA Construction Stormwater Permit); and 1806 (Determination and Extension of Contract Time)
Temporary Erosion / Sediment Control	The Plans; MnDOT 2573, 2574. and 2575
Maintenance of Devices / Sediment removal Removal of Tracked Sediment Removal of Devices	The Plans; MnDOT 1717.2, 2573.3K, and 2573.3.R.; Special Provisions: 1717 (MPCA Construction Stormwater Permit)
Dewatering	MnDOT 2573.3A.6 and 3875; May also require DNR Permit
Temporary Work not shown in the Plans Grading areas (unfinished acres exposed to erosion)	MnDOT 1717, 2573, 2574, and 2575; Special Provisions: 1717 (MPCA Construction Stormwater Permit), 2574.3.A.1
Permanent Erosion / Sediment Control and Turf Establishment	The Plans; MnDOT 1717, 2573, 2574, and 2575; Special Provisions: 1717 (MPCA Construction Stormwater Permit)

S-15 (1801) SUBLETTING OF CONTRACT

REVISED 10/14/22

SP2020-50

S-15.1 Delete and replace the second sentence of the first paragraph of MnDOT 1801 with the following:

The Contractor may, with the Engineer's consent, sublet a portion of the Contract as long as the Contractor self-performs Work amounting to at least 30 percent of the total original Contract Amount.

S-15.2 Delete the second paragraph of MnDOT 1801.

S-16 (1802) QUALIFICATIONS OF WORKERS

NEW 06/30/23

SP2020-50.2

S-16.1 Delete and Replace MnDOT 1802 with the following:

The Contractor shall provide workers with sufficient skill and experience to perform the Work assigned to them. Upon request by the Engineer, the Contractor shall submit evidence of qualification for any person engaged in special Work requiring professional training or certification. If any Subcontractor employed by the Contractor or any person employed by the Contractor or by a Subcontractor fails to perform assigned Work in a proper and skillful manner, or becomes intemperate, disorderly, abusive, or harassing, or shows signs of impairment from drug or alcohol use, the Contractor shall remove that Subcontractor or person from the Project as directed in writing by the Engineer. The Contractor shall not employ that Subcontractor or person again on any portion of the Project unless approved in writing by the Engineer. If the Contractor fails to remove a Subcontractor or person as directed by the Engineer, or fails to provide suitable and sufficient personnel for the proper prosecution of the Work, the Engineer may suspend the Work until the Contractor complies with the direction from the Engineer.

S-17 (1803) PROGRESS SCHEDULES (BAR CHART/CPM SCHEDULE)

REVISED 01/27/23

SP2020-51

S-17.1 Delete and replace MnDOT 1803 with the attached (1803) Project Schedules.

S-17.2 Modify the attached (1803) Project Schedules with the following:

A This Contract allows for the use of a "Bar Chart Schedule" as the Project Schedule for the Project. The Contractor shall meet the requirements of 1803.1, "Bar Chart

S-18 (1804) PROSECUTION OF WORK (ADA)

REVISED 01/21/22

SP2020-52

S-18.1 Add the following to MnDOT 1804:

1804.3 ADA REQUIREMENTS

Pedestrian facilities on this Project must be constructed according to Public Right of Way Accessibility Guidelines (PROWAG) http://www.dot.state.mn.us/ada/pdf/PROWAG.pdf.The appropriate pedestrian ramp details for each quadrant are included in the Plan. The Engineer may provide additional details to those provided in the Plan that meet PROWAG and MnDOT ADA Standards (http://www.dot.state.mn.us/ada/pdf/MnDOT-ada-standards.pdf) as the need arises and field conditions dictate.

A Designate a certified person to assess proposed sidewalk layouts at each site at the preconstruction meeting. Certification is obtained by passing MnDOT's ADA Construction Certification Course, with in the past 3 years. For class dates and locations please refer to the following link at: http://www.dot.state.mn.us/ada/training.html.

A minimum of one person per project must possess a valid ADA Construction Certification card anytime ADA work is being performed on the project. If work on electrical components is the only ADA work taking place on the project the electrician must have in their possession a current MnDOT Signals and Lighting Certification.

ADA work includes: assessment of proposed sidewalk layouts at each site before work begins, determining and marking removal limits for work pertaining to pedestrian facilities, ADA related removals and grading, forming and finishing of concrete at pedestrian facilities, paving pedestrian crossings, placing bituminous pedestrian facilities, final grading, and pavement markings. Any ADA work not listed above can be added at the discretion of the Engineer. An ADA Certified person is not required on site if the only work being performed concerns electrical components such as traffic signals and Accessible Pedestrian Signal (APS) push button installations.

B Pedestrian facilities must be constructed to meet the following criteria:

(1) Pedestrian Access Routes (PAR) must be constructed to meet the following:

(a) Minimum 4 feet width.

(b) A maximum cross slope of 2.0%.

(c) Vertical discontinuities must be less than 1/4 inches.

(d) Must provide positive drainage without allowing any ponding and maintain existing drainage flow patterns unless indicated otherwise in the Plan.

(e) All grade breaks shall be constructed perpendicular to the path of travel.

(f) Maximum 5% running slope unless adjacent roadway profile exceeds 5%.

(2) Landings are part of the PAR and must be constructed to meet the following:

(a) 4 feet by 4 feet minimum width and shall match full width of incoming PAR.

(b) Maximum slope of 2.0% in all directions.

(c) Required at all locations where the PAR changes directions or inverse running slopes are greater than 2.0%.

(d) Must be connected to the PAR.

(e) Shall be constructed as a single plane surface having no grade breaks.

(3) Ramps are part of the PAR and must be constructed to meet either of the following criteria:

(a) Longitudinal slopes less than 5% in the direction of travel requires no landing at the top of the ramp (unless the PAR changes direction).

(b) Longitudinal slopes between 5 - 8.3% in the direction of travel require a landing at the top of the ramp.

C The Contractor and the Engineer shall work together to construct all pedestrian facilities set forth in the plans and in 1804.3B above.

Before any ADA construction begins the Project Engineer will schedule and facilitate an onsite pre-activity meeting that shall consist of a project walk through with the Prime Contractor and the Concrete Flatwork Contractor's MNDOT ADA Construction Certified person. This pre-activity meeting should discuss and document potential issues, any known plan changes, potential discrepancies, and any modifications to the construction plan. The project team should discuss the ADA construction schedule and incorporate into the requirements of MnDOT 1803 (Progress Schedules) including the 2-week look ahead meetings for ADA activities. The discussion should include the sequence of removals and grading, utility placement and relocations, concrete curb and gutter, curb ramp, sidewalk, driveway placements, signals and lighting, temporary pedestrian access including both commercial and residential access, Temporary Pedestrian Access Routes/Alternate Pedestrian Access Routes, and traffic control staging. The Contractor should discuss what equipment, formwork, and materials are to be utilized on the project and how the pedestrian facilities will be constructed.

Notify the Engineer if the plan or site conditions do not allow PROWAAG and MnDOT ADA standards to be met, the Contractor shall consult with the Engineer to determine a resolution. The Engineer shall respond to the Contractor, in a timely manner (up to 24 hours), with a solution on how to proceed. The Contractor shall mitigate any potential delays by progressing other available work on the project.

Pedestrian facilities constructed that are not in accordance with the Plan, do not meet requirements in 1804.3B above, or do not follow the agreed upon resolution with the Engineer, will be corrected by the Contractor at no expense to the Department.

The following Hold Points will be utilized in the construction of pedestrian facilities:

(1) Removal Limits

The Contractor and the Engineer shall use the appropriate ramp, sidewalk, and driveway details in the Plan, and calculate the removal limits for the sidewalk and curb and gutter. If it is determined that the removal limits will exceed the plan removal limits by more than 10 feet and the plan removal limits are not adequate to meet PROWAG and MnDOT ADA Standards the Contractor shall consult with the Engineer to determine a solution. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may finish the removals.

(2) Curb and Gutter at Quadrants

Prior to pouring the curb and gutter at curb ramps the Contractor and the Engineer must verify:

(a) that the curb and gutter will work with any vertical constraints (doorways, steps, bus stops, outwalks and landing areas).

(b) zero height curb, and curb transitions will be located as shown in the Plans and will provide an adequate detectable edge as shown on Standard Plan 5-297.250 (Sheet 4 of 6).

(c) verify curb tapers are constructed at correct heights so that positive boulevard slopes and drainage is maintained away from landings and sidewalks, to the newly constructed curb and gutter sections.

(d) gutter flow lines shall provide positive drainage, maintain existing drainage patterns including existing gutter inflows/outflows. The curb and gutter shall be constructed as detailed in the Plan with a defined flow line and have no vertical discontinuities over 1/4 inch. For required flow line corrections including curb line raises and curb ramp cross slope "tabling", see Standard Plan 5-297.250 (Sheet 6 of 6). Curb shall be poured at 3 percent inflow around the radius or at a minimum distance of 10 feet from any zero height curb section when machine placed. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.

(3) Curb and Gutter at Roadway Sections

Prior to pouring curb and gutter at roadway sections the Contractor must verify:

(a) proposed curb and gutter heights will work with existing roadway and shoulder slopes.

(b) The Contractor shall verify prior to placing the pedestrian facilities that positive drainage is maintained. within public Right of Way (RW), as well as maintaining existing off RW drainage. The Contractor shall check to ensure all top back of curb elevations will allow for adequate boulevard slopes, PAR slopes, and widths as shown on Standard Plan 5-297.254 (Sheet 4 of 4) while maintaining vertically constrained match points (doorways, steps, bus stops, outwalks and landing areas).

(c) The Contractor shall check all driveway locations and widths and conform to construction plans, Sidewalk & Driveway Standard Plan 5-297.254 and Driveway Table for all driveway details including curb heights and curb tapers. Driveway curb sections and aprons shall be constructed to minimize changes in the sidewalk width, alignment, and profile. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.

(d) When curb ramps are adjacent to bituminous roadways the concrete curb and gutter and curb ramps including concrete flares shall be tied. Drill and grout of tie bars will be required as per MNDOT 2321 and in accordance with the details shown in Standard Plan 5-297.250 (Sheet 6 of 6).

(4) Grading, Forming and Finishing

Foundation Preparation work shall consist of constructing all necessary Subgrade Preparation, Aggregate Base, and Grading as indicated in MNDOT 2106, 2112, 2211, MNDOT Standard Plans 5-297.250 (Sheet 6 of 6), and project plans. The testing for pedestrian facilities grading shall be in accordance with the Schedule of Materials Control.

After the curb and gutter has been correctly poured, and the Contractor has set the sidewalk forms, the Contractor shall verify prior to placing the curb ramps and sidewalks that positive drainage is maintained within public RW, as well as maintaining existing off RW drainage, and that all the requirements in 1804.3B above will be achieved.

(a) Ramps

In addition, the longitudinal slopes shown in the Construction Plans and the Standard Plan shall be utilized unless these conditions cannot be met. The starting point for setting the forms on the controlling ramp leg, landing, and sidewalk slopes should be the following:

Steep (S) = 7%

Flat (F) = 4%

Landing = 1%

Sidewalk Cross Slope = 1.5%

If any of these requirements cannot be met the Contractor shall meet with the Engineer to determine the best solution. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may proceed with the curb ramp and sidewalk pour.

(b) Landings

An initial landing is the first required landing of a pedestrian ramp. All initial landings required at the top of a ramped sloped surface (greater than 2% longitudinal slope), shall be formed and placed separately in an independent concrete pour. This does not include initial landings placed at roadway grade such as depressed corners, parallel ramps, rural flat landings, or flat cut-throughs. Secondary landings consist of all landings beyond the initial landing. These secondary landings do not require a separate landing pour. The Contractor shall verify initial landing alignments and elevations to ensure ramp slopes are correct prior to placing curb and gutter. At a minimum this must include string line verification or the setting of landing forms

(c) Driveways

Driveways with concrete aprons matching into concrete sidewalks shall form and place the apron independent of the concrete sidewalk placement. The Contractor shall consult with the Engineer if separate concrete placements for specific driveway locations must be placed monolithic to maintain project schedule or maintain usage of commercial driveways.

All subgrade preparation and grading for the driveways, including placement of select grading materials and aggregate base, shall be completed prior to constructing any concrete driveway flatwork including both concrete walk sections and concrete apron sections.

All necessary subgrade preparation and aggregate base placement for the entire ramp construction limit shall be done before the initial landing is constructed at each location.

D It shall be the responsibility of the Contractor, or Contractor's Surveyor if applicable, to lay out all proposed work at each intersection in accordance with the Plan and requirements listed in this Special Provision. The Contractor may confer with the Engineer for guidance in laying out the proposed work, but it will be the Contractor's responsibility to ensure the proposed work meets all the requirements of this Special Provision. This layout includes, but is not limited to placement of grade

breaks, curb transitions, gutter flow lines, truncated dome placement, crosswalk marking placement, flares, landing limits, removal limits, driveway tie in limits, and ramp limits. It is important that the Contractor lay out this work properly to achieve the construction of a compliant pedestrian facility. The Department's surveyor will only stake points and elevations provided in the Plan. For custom designs, other than specific dimensions provided in the Plan, the Contractor shall be expected to scale dimensions from the Plan as needed to construct the facility. If scaled dimensions do not allow for a facility to be constructed to meet the requirements of this Special Provision, the Contractor shall follow the process listed in1804.3C above. This layout work shall be incidental.

E The Contractor shall utilize measures and methods when working near existing buildings that will avoid damaging the building's face or structure. The contractor will be responsible for any damage to the building's face or structure, both below and above ground. Any damage resulting from Contractor's operations will be repaired at the Contractor's expense to the satisfaction of the Engineer.

F The Contractor shall sawcut all concrete curb ramp, sidewalk, and driveway contraction joints. The only exception to the saw cutting contraction joints requirements will be for tooling relief joints on large driveway placements, and long sidewalk placements to prevent random cracks, and for tooling joints on minor repairs.

The Contractor shall snap chalk lines for contraction joint layouts and discuss with the Engineer the locations of all saw cutting, tooled contraction relief joints, and any modifications to Standard Plans.

The Contractor and Engineer shall coordinate and agree on all expansion joint layouts before any concrete placements.

The Contractor shall saw cut curb and gutter contraction joints within the PAR including contraction joints at zero-inch height curb locations.

G The Contractor will round all joints and edges with a 1/4 inch radius grooving or edging tool within the PAR where minor tooling is permitted. This requirement includes all curb and gutter joints at zero inch height curb sections at curb ramps. Contraction joints shall extend to at least 30 percent of walk thickness. The Contractor shall also have the option of providing saw cuts to construct the sidewalk joints. If saw cutting, provide 1/8 inch wide contraction joints within the PAR, including all curb and gutter joints at zero inch height curb sections. When greater than 50 feet of continuous sidewalk runs are constructed the Contractor shall saw cut all joints. This work shall be incidental.

The top grade break of walkable flares needs a visual joint to indicate a change in grade. To eliminate the use of excessive contraction joints in the quadrant the visual joint shall meet MnDOT 2521.3D.2, except the depth requirement is reduced to 1/4 inch.

All saw cutting, tooling, expansion joint material, and separation joint material shall be incidental to payment of curb and gutter, sidewalks, driveways, curb ramps, and landings.

The Contractor shall use an approved ¼ inch Separation Material Type F at back of curb in sections where there is concrete boulevard or driveways as per Standard Plans 5-297.254 (Sheet 3 of 4). Separation material shall match the full height dimension of adjacent concrete.

The Contractor shall use an approved 1/2 inch expansion material meeting MNDOT Specification 3702 type A- E between the outside edge of sidewalk and existing building or structures. No expansion or separation material shall not be placed in the longitudinal joint between the sidewalk and boulevard joint, unless it is necessary to provide expansion at fixed structures.

At locations where sidewalk is adjacent to existing buildings, extend walk up to the edge of building and place 1/2 inch preformed joint filler 1/2 inch lower than top of walk whenever possible. Furnish and install Backer Rod of appropriate diameter when joints are 1/4 inch wide or greater, clean surfaces and apply approved Silicone Joint Sealant to flush with top of walk. If the transverse sidewalk and boulevard joint layouts cannot be aligned,

use approved preformed joint filler with a maximum 1/8 inch width and place between the sidewalk and boulevard to prevent contraction joints from migrating into the adjacent concrete panels.

H The minimum continuous and unobstructed clear width of a Pedestrian Access Route shall be 4.0 feet. All new or reconstructed sidewalk widths shall match or exceed in place sidewalk and in no case shall it be less than 5.0 feet in width except at locations where obstructions cannot be moved or at driveways where slopes exceed the maximum allowable grades. The cross slope of the sidewalk or shared use path shall not exceed 2%, and shall be measured perpendicular to the path of travel across the entire surface width of the sidewalk or shared use path. Curb ramps should match proposed sidewalk PAR width and shall match full shared use path widths. Whenever possible, the entire landings should be placed in a single concrete placement. If this is not possible due to construction staging, follow requirements for reinforcement bar placement and tie adjacent landings together.

In areas where the sidewalk is to be constructed around fixed structures and the grade has been changed, the sidewalk shall be finished around these structures to the satisfaction of the Engineer at no additional cost.

I Longitudinal joint reinforcement- Concrete sidewalks and trails with one or more unrestricted edges that are greater than 7 ft. wide for 4-inch concrete walk, and greater than 10 ft. wide for 6-inch concrete walk shall be constructed according to Concrete Walk Adjacent to Turf detail per Standard Plan 5-297.254 (Sheet 3 of 4).

4-inch concrete walk that requires longitudinal joint reinforcement shall be constructed monolithic as a full width concrete placement using cast in place tie bars.

6-inch concrete walk that requires longitudinal joint reinforcement may use drill and grout or cast in-place tie bars for multiple adjacent concrete placements.

Place tie bar steel to the depth and location shown on the plans. Do not place tie bars within 1' of transverse joint over transverse contraction joints.

Architectural elements such as brick pavers, concrete stamping, and multiple colored concrete placements shall be kept outside the curb ramps and landing areas. Any architectural elements that do not maintain a consistent flat smooth surface shall not be used within the PAR.

If these conditions cannot be met, the Contractor shall consult with the Engineer to determine a resolution per 1804.3C above. Once the Engineer and the Contractor reach an agreement on how to proceed, the Contractor may proceed. If the Contractor constructs pedestrian push button systems or pedestrian facilities which do not meet the criteria or the agreed upon resolution with the Engineer, the Contractor will be responsible for correcting the deficiencies with no compensation paid for the corrective work.

The Contractor must adhere to the following practices:

(1) All push button station bases shall be installed using a breakaway pedestal base, see Typical APS Pedestrian Push Button Location and MnDOT Approved Products List. The pedestal base shall be fastened to the station foundation using 4 5/8 inch (UNC) x 7 1/2 inch stainless steel anchor rods. The push button station foundation shall be constructed as part of the sidewalk by increasing the sidewalk dimension to a 12 inch minimum thickness and an 18 inch minimum diameter to top of sidewalk surface. The push button station foundation shall be placed as part of the landing. All construction joints/grade breaks shall be located outside of foundation area and designated landing area.

(2) Signal pole foundations which are being constructed in or adjacent to sidewalk shall be constructed in accordance with the applicable MnDOT Standard Plate 8120 or 8126. If a push button is proposed to be mounted on a signal pole, a MnDOT approved extension bracket shall be used. If a push button is proposed to be mounted on a signal pole, the APS push button shall meet the vertical, horizontal, and crosswalk skew requirements.

(3) All newly installed pedestal foundations when used as a push button station shall be constructed in accordance with applicable MnDOT Standard Plate 8112. Concrete for new foundation shall be placed either with or after the landing concrete is placed, and the top of the foundation surface shall be 1/4 inch maximum higher than the top of the landing surface. If a push button is placed on a new or existing pedestal pole, the push button shall be installed using three APS push button spacers (Saddle Adaptors), and the APS push button shall meet the vertical, horizontal, and crosswalk skew requirements.

S-19 (1806) DETERMINATION AND EXTENSION OF CONTRACT TIME

REVISED 01/27/23

SP2020-54

- ***This section provides the Contract time as specified in the paragraph of MnDOT 1806.1.***

S-19.1 Add the following to MnDOT 1806:

1806.5 Contract Time

A The Contractor must not perform Work that will restrict or interfere with traffic between 12:00 noon on the day before and 9:00 a.m. on the day after any consecutive combination of a Saturday, Sunday, and Holiday. The Contractor may request exceptions to this requirement. Exceptions must be approved in writing by the Engineer.

B The Contractor must complete all Work to meet the requirements of 1516.2, "Project Acceptance," under this Contract before **September 19, 2025**.

S-20 (1807) FAILURE TO COMPLETE THE WORK ON TIME

RESTORED 06/30/23

SP2020-56.1

S-20.1 Delete and replace the first paragraph of MnDOT 1807.1 with the following:

The Department will deduct liquidated damages from money due the Contractor for each Calendar Day that the Work remains incomplete after expiration of the Contract Time, according to the completion requirements of 1516.2, "Project Acceptance". The Engineer will deduct liquidated damages based on the original Contract Amount and Table 1807.1-1.

S-21 (1901) MEASUREMENT OF QUANTITIES

RESTORED 12/20/24

SP2020-58.1

S-21.1 Delete and replace the first paragraph of MnDOT 1901.8 with the following:

For measuring or proportioning Material by mass, the Contractor shall provide certified weights or weigh Material on calibrated, approved scales. The Contractor shall give the Engineer a copy of the inspection certificate.

S-21.2 Add the following to MnDOT 1901.8C:

The Contractor shall not provide a ticket to truck drivers if the weight of the load is in excess of the legal load limits in place.

S-21.3 Add the following to MnDOT 1901.8:

D Computerized Loader Bucket Scales

The Contractor may use computerized Loader Bucket Scales to weigh materials when the quantity of material included in the bid item list is 10,000 tons or less.

The Contractor shall equip loader bucket scales with an onboard computer that produces weigh tickets.

The Contractor shall load trucks on a level loading area and with the loader scale in dynamic mode and operate the loader scale in accordance with the manufacturer's guidelines.

The computerized loader bucket scale must be accurate to within 1.0 percent of the true weight of the applied load throughout the range of use.

D.1 Computerized Loader Bucket Scales – Comparison Test

Before the first use of the loader bucket scale on the project and any time the scale is recertified, the Contractor shall perform a comparison test using one of the following methods:

(a) Independent Scale Method.

After placing the load in a truck, weigh the loaded truck on a certified scale owned and operated by an entity other than the Contractor. Provide the tare weight of the truck along with the comparison weigh ticket.

(b) Certified Weighted Object Method.

Weigh an object on the project scale and compare its certified weight to the loader bucket scale readout. Use an object that is free of mud and dirt and has a certified weight of at least 60 percent of the capacity of the loader bucket.

Weld a plate onto the object showing its certified weight.

Provide an affidavit affirming the weight of the object, as measured on a certified scale.

Provide a new affidavit when requested by the Engineer or if changes are made to the object that will affect the certified weight.

D.2 Computerized Loader Bucket Scales – Random Comparison Tests

If a comparison test reveals that the scale is out of tolerance, repair and recertify the scale.

At any time, the Engineer may require the scale to be checked for accuracy utilizing any test method in 1908.D.1, "Computerized Loader Bucket Scales – Comparison Test".

The Engineer may prohibit the use of loader bucket scales if two consecutive tests fail.

D.3 Computerized Loader Bucket Scales – Documentation

The Contractor shall generate weigh tickets using the onboard computer and loader bucket scale printer and provide tickets to the truck driver. The Contractor shall provide daily haul summaries by computer-generated spreadsheet as provided by the Engineer. The Contractor shall provide the fully completed spreadsheet to the Engineer daily.

S-22 (1902) SCOPE OF PAYMENT

RESTORED 06/30/23

SP2020-59

S-22.1 Delete and replace MnDOT 1902 with the following:

The Contractor will receive compensation provided for in the Contract as full payment for providing Materials and performing Work in accordance with the Contract requirements. This includes compensation for all risk, loss, damage, and expense incurred by the Contractor for performing the Work required by the Contract. Payment is subject to 1720, "No Waiver of Legal Rights." The Department prohibits the Contractor from accepting payment from any other party for performing the Work required by the Contract, including any Incentive or bonus payment. The Department does not prohibit the following payments from third parties:

(1) Payments from sureties
(2) Quantity-based rebates or credits from suppliers
(3) Payments under another contract for excess material removed under this Contract

S-23 (2021) MOBILIZATION

REVISED 12/11/24

SP2020-72

S-23.1 Delete and replace Table 2021.5-1 of MnDOT 2021.5 with the following:

Table 2021.5-1
Mobilization Partial Payments

When	Contract Unit Price for mobilization is less than 10 percent of the total Contract amount, pay	Contract Unit Price for mobilization exceeds 10 percent of the total Contract amount, pay
Percent of Original Contract Amount Completed	**Percent of Mobilization**	**Percent of Original Contract Amount ***
5	50	5
15	75	7.5
25	100	10
90	100	—
*If the Contract Unit Price for mobilization exceeds 10 percent of the total original Contract amount, the Department may withhold (on any partial estimate) the portion in excess of 10 percent until the Contractor earns at least 90 percent of the original Contract amount.		

S-23.2 Add the following to MnDOT 2021.5:

The Engineer is authorized to pay actual costs for the payment and performance bond ahead of scheduled mobilization payments provided:

- The remaining amount to be paid for (2021) Mobilization is greater than the cost of the payment and performance bonds.
- The Contractor provides the actual invoice for the bonds.
- The Contractor provides proof of payment for the bonds
- The amount paid for the bonds is subtracted from subsequent mobilization payments.

S-24 (2106) EXCAVATION AND EMBANKMENT (COMPACTED VOLUME METHOD)

REVISED 10/14/22

SP2020-96.1

S-24.1 Add the following to the beginning of MnDOT 2106.5:

Embankment, such as required for additional backfilling a muck excavation, may be subject to the provisions of 1402, "Contract Revisions."

S-24.2 Delete and replace the last sentence of MnDOT 2106.5A with:

The Department will make monetary price adjustments for Excavation - Muck in accordance with Table 2106.5-1.

S-24.3 Delete and replace MnDOT Table 2106.5-1 in MnDOT 2106.5A with the following:

Table 2106.5-1
Monetary Price Adjustments for Excavation – Muck

Areas Where Muck is Shown in the Plan

Muck Location	Compensation
For the muck located at a depth between 0 to 5 feet below the Plan Depth	Muck Excavation Unit Price
For the muck located at a depth between 5 to 15 feet below the Plan Depth	Muck Excavation Unit Price plus $2.00 per cubic yard
For the muck located at a depth greater than 15 feet below the Plan Depth	Negotiated Price

Additional Areas Where Muck is not Shown in the Plan

Muck Location	Compensation
For the muck located between 0 to 10 feet below the Subgrade Excavation	Muck Excavation Unit Price
For the muck located at a depth greater than 10 feet to 20 feet below the Subgrade Excavation	Muck Excavation Unit Price plus $2.00 per cubic yard
For muck located at a depth greater than 20 feet below Subgrade Excavation	Negotiated Price

In addition to the monetary price adjustments listed above, compensation for additional muck excavation may be subject to the provisions of MnDOT 1402, "Contract Revisions" if additional shoring, dewatering, requisition of additional disposal site(s) because of increased volume of muck, or additional hauling beyond original disposal site(s), or other related activities are required.

S-25 (2232) MILL AND PATCH BITUMINOUS PAVEMENT (ADA)

REVISED 03/29/24

SP2020-115

S-25.1 DESCRIPTION

This Work consists of milling and patching bituminous pavement in accordance with the provisions of MnDOT 2232, MnDOT 2360, and (1804) PROSECUTION OF WORK (ADA).

S-25.2 MATERIALS

A Plant Mixed Asphalt Pavement..... MnDOT 2360.2

S-25.3 CONSTRUCTION REQUIREMENTS

A General

Mill the bituminous surface as shown on Standard Plan 5-297.250 (Sheet 3 of 6) Pavement Treatment Options in Front of Curb & Gutter detail prior to placing new curb and gutter. Place bituminous pavement over the milled surface after the new curb and gutter has been constructed.

Compact the bituminous pavement in accordance with MnDOT 2360.3D.2, "Ordinary Compaction" using conventional pneumatic-tired roller equipment.

B Bituminous Surface

Bituminous patch in front of curb ramp openings must not exceed 5 percent slope measured perpendicular to the gutter flow line or edge of roadway.

Bituminous surface must be flush or slightly higher within 1/4 inch of curb and gutter and adjacent bituminous tie ins. Any deviations greater than 1/4 inch within the curb ramp opening or crosswalk must be a diamond ground finished surface and in accordance with MnDOT 2360.3E.

C Surface Correction

If the Engineer determines that additional milling and patching is necessary, this pay item can be utilized to complete additional minor Roadway Work beyond the initial 2-foot width. This Work could consist of correcting surface deterioration, vertical discrepancies, or drainage, or similar activities in order to provide an ADA compliant street crossing.

S-25.4 METHOD OF MEASUREMENT

The Engineer will measure the area of pavement milled and patched.

S-25.5 BASIS OF PAYMENT

The Contract Unit Price for Mill and Patch Bituminous Pavement is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Mill and Patch Bituminous Pavement on the basis of the following schedule:

Item No.	Item	Unit
2232.618	Mill and Patch Bituminous Pavement	square foot

S-26 (2301) CONCRETE PAVEMENT

REVISED 12/20/24

SP2020-117

S-26.1 Delete and replace MnDOT 2301.2B.1(1) and MnDOT 2301.2B.1(2) with the following:

Use Type I or Type I/II cement complying with total alkalis (Na2Oe) no greater than 3.0 pounds per cubic yard of concrete resulting from the Portland cement.

S-26.2 Delete and replace MnDOT 2301.2B.3(1) and MnDOT 2301.2B.3(2) with the following:

Use Type IL, IS or IP cement complying with total alkalis (Na2Oe) no greater than 3.0 pounds per cubic yard of concrete resulting from the Portland cement content of the blend.

S-26.3 Delete and replace MnDOT 2301.2D.1(1) with the following:

(1) National Weather Service forecast for the construction area predicts air temperatures of 36°F or less within the next 24 hours.

S-26.4 Delete and replace the first paragraph of MnDOT 2301.2L with the following:

The Contractor assumes full responsibility for the concrete mix design and performance of the concrete. Acceptance of concrete is contingent on meeting all specification requirements, including but not limited to requirements related to field placement and performance.

SAP 003-607-027
SAP 003-680-005

S-26.5 Delete and replace Table 2301.2-4 of MnDOT 2301.2L.1 with the following:

Table 2301.2-4
Concrete Mix Design Requirements

Concrete Grade	Estimated Concrete Contract Quantity (yd^3) *	Mix Number	Maximum w/c ratio		Minimum Cement Content (lbs/yd^3)	Cementitious Content (lbs/ yd^3) ‖	Air Content %	Gradation Requirements	Minimum Aggregate Size Required	Maximum %SCM (Fly Ash/ Slag/ Ternary) †	Slump Range	3137 Spec.
			Fly Ash	Cement Only/ Slag/ Ternary								
A	≥ 3,500	3A21	0.40	0.42	385	475 – 615	7.0	Job Mix Formula	1 1/2" nominal	33/35/40	½ - 2" ‡	2D.3
		3A41	0.40	0.42							2 – 5"	
	< 3,500 and Minor Work and fill-ins not provided by the primary paving plant #	3A21S	0.42	0.42	385	475 – 615	7.0	3126 and Table 3137-4 Or Job Mix Formula	3/4" nominal	33/35/40	½ - 2" ‡	2D.3
		3A41S	0.42	0.42							2 – 5"	
		3A42 §	0.42	0.42	385	475 – 615	7.0	3126 and Table 3137-4	3/4" nominal	33/35/40 §	2 – 5"	
	Engineer Approved or Plan Allowed High-Early	3A21HE **	0.40	0.42	385	> 475 – 750	7.0	3126 and Table 3137-4 Or Job Mix Formula	3/4" nominal	33/35/40	½ - 2" ‡	2D.3
		3A41HE **	0.40	0.42							2 – 5"	

* Determined by multiplying the planned pavement area by the planned pavement thickness.
‖ Provide additional cementitious material to meet requirements in accordance with this section at no additional cost to the Department.
† Refer to Table 2301.2-2 and Table 2301.2-3 for ASR mitigation requirements.
‡ Adjust slump in accordance with 2301.3E.1, "Consistency."
# The 5th digit "S" indicates the concrete is for a small concrete paving Project or delivered from a secondary concrete plant for minor Work or fill-ins. The Concrete Engineer considers minor Work or fill-ins as gaps in concrete pavement, turn lanes, Intersections, or other pavement sections as determined by the Engineer, in conjunction with the Concrete Engineer.
§ The Concrete Engineer will allow a non-Project specific 3A42 mix design provided by a MnDOT certified ready-mix plant submitted in accordance with the first two paragraphs of 2461.2F.3, "Submittal Requirements." If the sand source requires mitigation with a minimum of 30% Class C fly ash in accordance with Table 2301.2-2, the Concrete Engineer will require a minimum of 30% Class C fly ash, 30% Class F fly ash, or 35% slag for all 3A42 mixes.
** The Contractor may use 100% Portland cement for High Early Concrete, provided no mitigation is required for the fine Aggregate and intermediate Aggregate in accordance with Table 2301-2 and coarse Aggregate in accordance with Table 2301.2-3. If mitigation is required, the Contractor is required to use a minimum of 15% of any supplementary cementitious material when designing High Early Concrete. The Contractor may use 100 percent Portland cement for any concrete, provided no mitigation is required for the fine Aggregate or intermediate Aggregate in accordance with Table 2301.2-2 or the coarse Aggregate in accordance with Table 2301.2-3. If mitigation is required, the Contractor is required to use a minimum of 15 percent of any supplementary cementitious Material.

S-26.6 Delete and replace MnDOT 2301.2L.2 with the following:

Design Grade A concrete mixes based on an absolute volume of 27.00 cubic feet and a target air content of 7.0 percent.

At least 21 Calendar Days before initial placement of the concrete, submit the appropriate Project specific mix design form to the Concrete Engineer for review. When required by Table 2301.2-4, include a job mix formula in accordance with 2301.2L.3, "Job Mix Formula." Use the most current forms, specific gravity, and absorption data available from the MnDOT Concrete Engineering website.

MnDOT will review the Contractor's proposed mix design solely for compliance with the applicable mix design properties in Table 2301.2-4 and Table 2301.2-5. The Department makes no guaranty or warranty, either express or implied, that compliance with mix design properties ensures compliance with any other requirements.

S-26.7 Delete and replace the third and fifth paragraphs of MnDOT 2301.3B.3 with the following:

In conjunction with the Engineer, perform a thorough on-site inspection of the concrete plant and complete MnDOT Form 2164, *Contact Report - Paving*. Sign the report to certify compliance with the paving requirements and to certify review of the continual maintenance of the plant.

If concrete is provided by a certified ready-mix plant, complete MnDOT Form 2164, "Contact Report - Addendum Ready-mix Paving" in accordance with 2301.3B.3.b "Certified Ready-mix Plant Lab - Office Requirements."

S-26.8 Delete and replace MnDOT 2301.3B.3.a(12)(e) with the following:

(e) A 4 burner 30-inch standard stovetop or stove and at least 2 additional burners to perform required Aggregate testing per the *Schedule of Materials Control*

S-26.9 Delete and replace MnDOT 2301.3B.3.b(4) with the following:

(4) At least 6 burners to perform required Aggregate testing per the *Schedule of Materials Control*

S-26.10 Delete and replace MnDOT 2301.3B.4(2) with the following:

(2) All Contractor plastic air content tests in the Air Content Charting chart

S-26.11 Add the following to the fourth paragraph of MnDOT 2301.3C.1:

(12) MnDOT Designation Plant/Unit Number (CPAV###)
(13) MnDOT Approved Sheet Number (JMF##-###)

S-26.12 Delete and replace the second and third paragraphs of MnDOT 2301.3C.2 with the following:

Test and record the individual gradation results using the QC - JMF Concrete Aggregate Report.

Calculate the moving average of 4 Contractor Aggregate gradation test results during production using the JMF Moving Average Summary workbook.

S-26.13 Delete and replace MnDOT 2301.3C.2.b with the following:

C.2.b Department Verification of JMF

The Engineer will randomly verify the Contractor combined Aggregate gradation results as defined in the Schedule of Materials Control.

If the individual fraction on any split sample results in a variation between the Contractor and the Engineer greater than that set forth in Table 2301.3-2, the parties shall follow the procedures for test result dispute resolution available from the Laboratory Manual.

Table 2301.3-2
Allowable Variations on Percent Passing Sieves

Sieve Size	Allowable Percentage
2 inch – 1 inch	±8
3/4 inch – 3/8 inch	±6
No. 4 – No. 40	± 4
No. 50	±3
No. 100	±2
No. 200	±0.6

S-26.14 Delete and replace the first sentence of MnDOT 2301.3C.3 with the following:

The Engineer will use the Contractor's combined Aggregate gradation (JMF) test results (QC and Verification) documented in the QC - JMF Concrete Aggregate Workbook, as verified by the Engineer in accordance with 2301.3C.2.b, "Department Verification of JMF," to determine eligibility for the Incentive in accordance with 2301.5I.1, "Optimized Aggregate Gradation Incentive."

S-26.15 Delete and replace MnDOT 2301.3C.5 with the following:

C.5 Water/Cement (W/C) Ratio

Provide and place concrete with a water/cement ratio not to exceed 0.40 when using fly ash and 0.42 when using cement only, slag or ternary. Make any adjustments immediately when the water/cement ratio exceeds 0.40 when using fly ash and 0.42 when using cement only, slag or ternary.

S-26.16 Add the following to MnDOT 2301.3C.6:

The Engineer will base the statistical analysis of acceptance for water/cement ratio on a per lot basis representing one day's paving. Each individual water/cement ratio determination is considered a sublot. The lot will represent the cumulative average of the sublot values. The Engineer will start a new lot and test if either of the following occurs:

(1) Mix design change due to a water/cement ratio test result exceeding 0.40 when using fly ash and 0.42 when using cement only, slag or ternary, or
(2) Cementitious type change in the mix design.

If the quantities of concrete produced result in no Engineer moisture testing for any given day, include the untested quantity of concrete into the next day's production and include that quantity of concrete in the sampling rate. If the untested quantity is on the last day of production, add that quantity to the previous day's production.

S-26.17 Delete and replace MnDOT 2301.3C.8.a with the following:

C.8.a BLANK

S-26.18 Delete and replace the fifth and sixth paragraphs of MnDOT 2301.3E.2 with the following:

When using string line to achieve the line and grade reference, tightly stretch and set the string line parallel to the established grade for the pavement surface to achieve grade reference. Set control reference and support the line at intervals to maintain the established grade and alignment. Set the string lines on both sides of the Roadway when constructing overlays.

S-26.19 Delete and replace the sixth paragraph of MnDOT 2301.3F with the following:

Set frame and ring castings to the elevation shown on the Plans during the paving operations. Do not form "box-outs" of castings unless approved by the Engineer. Placement of ring castings not to exceed 1/4 inch higher than the final pavement surface. Adjust frame castings to provide positive drainage not to exceed 1/4 inch lower than the final pavement surface.

S-26.20 Delete and replace the first sentence of MnDOT 2301.3F.5 with the following:

Use any approved construction header method as shown in the Standard Plan 5-297.221 when constructing construction headers, terminal headers, and permanent headers as shown on the Plans.

S-26.21 Delete and replace MnDOT 2301.3F.6.b with the following.

F.6.b BLANK

S-26.22 Delete and replace the third paragraph of 2301.3G with the following:

Construct tied longitudinal joints in accordance with the following:

(1) Provide and place straight tie bars on chairs, in stakes, utilizing tie bar basket assemblies, or by appropriate Equipment for depressing the bars to the specified location as shown on the Plans.
(2) For slipform paving, stake the tie bar steel to the Roadbed or use a mechanical device attached to the spreader or paver to place tie bar steel required for L1T joints as shown on the Plans. Space and depress the tie bar steel to the depth and location shown on the Plans. Do not place tie bars within 18 inches of transverse contraction joints.
(3) Keyway use is optional for fixed form construction of any thickness or for slipform construction with a pavement design thickness of 10 inches or greater.
(4) Use of keyway for any other applications requires approval by the Engineer.
(5) If the Contractor would like to install tie bars without a mechanical device, demonstrate the process to the Engineer for review and approval.
(6) If any processes for inserting tie bars causes distortion, damage, or cracking to the concrete surface or edge, the Engineer will require the Contractor to discontinue the tie bar placement method and drill and grout the remaining tie bars until an acceptable method is approved by the Engineer.

S-26.23 Add the following to MnDOT 2301.3H:

If dowel bars are not pre-coated with a manufacturer-applied bond breaker material or the coating has rubbed off, coat the dowel bars with a uniform coating of Material in accordance with 3902, "Form Coating Material," with the approval of the Engineer.

S-26.24 Delete the third paragraph of MnDOT 2301.3H.1.

S-26.25 Delete the second paragraph of MnDOT 2301.3H.2.

S-26.26 Delete and replace MnDOT 2301.3I with the following:

I Definition of a Lot and Sublot for Concrete Field Testing

The Engineer will select random locations for lots for concrete field testing as defined in the *Schedule of Materials Control*.

S-26.27 Delete and replace the first paragraph of MnDOT 2301.3J.4 with the following:

If a dowelled contraction joint has dowel bars out of acceptable alignment during placement in accordance with 2301.3J.3, "Alignment Tolerances," and the Standard Plan 5-297.221, scan both upstream and downstream from the misaligned transverse dowelled joints, from concrete placed in the same operation, until at least 3 joints comply.

S-26.28 Delete and replace MnDOT 2301.3K.1.a with the following:

K.1.a Texture Testing

The Engineer will identify the texture testing locations in accordance with the Schedule of Materials Control. The Engineer will verify the volume of the Contractor's testing container prior to the performing texture testing. The Engineer will use the MnDOT Thickness, Texture and MIT SCAN workbook to determine the random texture locations and will provide the Concrete Texture report to the Contractor before the start of paving.

Perform surface texture testing of the concrete pavement in the presence of the Engineer and provide the test results to the Engineer no later than 48 hours after pavement placement unless otherwise approved by the Engineer.

S-26.29 Delete and replace MnDOT 2301.3L.1 with the following:

L.1 Thickness Evaluation Procedure

The Engineer will evaluate each differing concrete pavement thickness required on the Project in accordance with the following:

(1) Through random quality control probing (QCP) or quality control scanning (QCS) and quality acceptance coring (QAC) measurements.
(2) Identify the thickness measurement using the MnDOT *Thickness, Texture and MIT-SCAN* workbook to determine the random testing locations in accordance with the *Schedule of Materials Control*.
(3) Provide the field probing or scanning report generated from the MnDOT *Thickness, Texture and MIT-SCAN* workbook to the Contractor before the start of paving.
(4) Adjust the location to ensure no measurements are taken within 1 foot of the pavement edge and within 4 feet of any transverse or longitudinal joint or other obstructions. If the pavement is placed to a variable cross-section thickness, adjust the location to within 2 feet of the outside lane edge.

S-26.30 Delete the third paragraph of MnDOT 2301.3L.2.

S-26.31 Delete and replace the first paragraph of MnDOT 2301.3.L.2.c with the following:

If a final individual probe or scan measurement shows a thickness deficiency greater than 1/2 inch from Plan thickness, take a quality control core (QC Core) at the probe or scan location to determine if the pavement is defective.

S-26.32 Delete and replace MnDOT 2301.3L.3, "Quality Acceptance Testing - Coring" with the following:

L.3 Quality Acceptance Testing – Coring

After concrete pavement placement, the Engineer will mark the QAC core locations in accordance with the *Schedule of Materials Control*. The Engineer will also mark any QC Core locations identified by QCP or QCS testing showing a thickness deficiency greater than 1/2 inch from Plan thickness.

The Contractor will core all marked locations.

The Engineer will allow coring after the concrete meets the requirement of 2301.3O, "Opening Pavement to Traffic." Use 3U58M concrete or another concrete mix approved by the Engineer to fill the core holes within 72 hours of coring at no additional cost to the Department. Provide traffic control for coring.

Cut 4-inch Nominal diameter cores at marked locations. Lay the cores next to the holes in a curing condition. Take precautions to ensure the quality of cores. The Engineer will not accept cores out of round, not perpendicular, or containing ridges.

The Engineer will field measure the core thickness to the nearest 1/8 inch, verify (field ID number) the cores, and record the field measurement on the field coring report generated from the MnDOT Thickness, Texture and MIT-SCAN workbook.

The Engineer will pick up the cores from the pavement and submerge the cores in a water tank maintained at a temperature from 60°F to 80°F at the Department field office for at least 28 Calendar Days after concrete placement.

The Engineer will transport the cores in a curing condition, unless older than 28 Calendar Days, to the MnDOT Office of Materials and Road Research.

The MnDOT Office of Materials and Road Research will determine the final pavement thickness by measuring the length of the cores (QC Core and QAC cores) using nine probe testing devices to obtain the average length of the core in one operation. The Department will report the lab measured core length to the nearest 0.05 inch. The Individual lab measured cores may require exploratory coring in accordance with 2301.3L.4, "Final Evaluation of Thickness Measurements."

After Department thickness verification, the Department will test the cores for compressive strength at 60 Calendar Days of age for information only. The Department will test 3 of the cores from the entire Project for rapid chloride permeability (RCP) in lieu of compressive strength testing for information only, unless otherwise directed by the Concrete Engineer.

S-26.33 Delete and replace MnDOT 2301.3L.4, "Evaluation of Cores to Determine Acceptance," with the following:

L.4 Final Evaluation of Thickness Measurements

The Engineer will evaluate the MnDOT lab measured thickness cores and QCS scans to determine the final average thickness for each Plan thickness (PT) in accordance with Table 2301.3-6. If all cores and scans meet the design Plan thickness requirements of the Project, the Engineer will consider the final average core thickness for each Plan thickness acceptable.

Table 2301.3-6
Concrete Pavement Thickness

Individual Lab Measured Cores and QCS Scans	Exploratory Coring Required	Resolution
≥ PT	No	The Engineer will evaluate in accordance with 2301.5I.5.b, "Final Average Thickness"
≤ PT – 1/2 inch	No	The Engineer will evaluate in accordance with 2301.5I.5.b, "Final Average Thickness"
> PT – 1/2 inch to 1 inch	2301.3L.5, "Exploratory Coring"	The Engineer will evaluate in accordance with 2301.5I.5.a(1), "Defective Pavement Area > 1/2 inch to 1 inch
> PT – 1 inch	2301.3L.5, "Exploratory Coring"	The Engineer will evaluate in accordance with 2301.5I.5.a(2), "Defective Pavement Area > 1 inch

S-26.34 Delete and replace the fourth paragraph of MnDOT 2301.3N.2 with the following:

Immediately after completing the wet-cut sawing of the joints, use water under nozzle pressure to remove the sawing residue from each joint and the pavement surfaces. Immediately after completing early-entry sawing of the joints, use air blasting to remove the sawing residue from each joint.

S-26.35 Delete and replace the first paragraph of MnDOT 2301.3O with the following:

Do not open a new pavement slab to general public traffic or operate paving or other heavy Equipment on it for 7 Calendar Days, or until the concrete has reached a minimum flexural strength of 300 pounds per square inch, or minimum compressive strength of 2,000 pounds per square inch; whichever occurs first.

S-26.36 Delete Table 2301.3-7 from 2301.3O.

S-26.37 Delete and replace the third paragraph of MnDOT 2301.3O with the following:

Cast and cure the field control specimens in accordance with 2461.3G.5.d, "Strength Specimens for Concrete Paving." Provide moist curing environments in accordance with 2461.3G.5.b(2), "Moist Curing Environment." The Engineer will test the field control specimens for flexural strength in accordance with the Concrete Manual or compressive strength in accordance with 2461.3G.5.c, "Field Control Strength Cylinders."

S-26.38 Delete and replace 2301.3O.1 with the following:

O.1 Early Opening of Pavement to Traffic

For earlier opening to general public traffic as required by the Engineer, the Engineer will allow the Contractor to design and construct a section of pavement of High-early strength concrete in accordance with 2301.2-4 at important Road crossings, Intersections, driveway entrances, or other locations as shown on the Plans or directed by the Engineer.

S-26.39 Delete and replace 2301.3Q.1 with the following:

Q.1 Random or Uncontrolled Cracking

Repair or replace pavement with random or uncontrolled cracks as directed by the Engineer, in conjunction with the Concrete Engineer. Submit the intended repair technique to the Engineer for approval. Perform pavement repairs at no additional cost to the Department. If the repair fails, replace the pavement at no additional cost to the Department. The Engineer will accept repairs in accordance with 1516, "Acceptance."

S-26.40 Delete and replace 2301.4G with the following:

G Supplemental Pavement Reinforcement
The Engineer will measure supplemental pavement reinforcement by weight.

S-26.41 Delete and replace the first paragraph of MnDOT 2301.5D with the following:

Unless the Plans include a separate Contract Item, the Engineer will consider the Contract square yard price for Concrete Pavement to include the cost of constructing the pavement, including the cost of batch Materials and mixing operations; plant-lab office; producing the concrete; fine grading; forming, including headers; providing and installing keyway and keyway bars, tie bars, taper steel, stopper bars, and other reinforcement bars; installing structural rumble strips; delivering; depositing; placing; spreading; screeding; vibration monitoring; finishing; texturing; curing; protecting; sawing; sealing; probing; scanning; and coring and filling the core holes.

S-26.42 Delete and replace the first paragraph of MnDOT 2301.5E with the following:

Unless the Plans include a separate Contract Item, the Engineer will consider the Contract square yard price for Place Concrete Pavement to include the cost of constructing the pavement, including fine grading; forming, including headers; providing and installing keyway and keyway bars, tie bars, taper steel, stopper bars, and other reinforcement bars; installing structural rumble strips; delivering; depositing; placing; spreading; screeding; vibration monitoring; finishing; texturing; curing; protecting; sawing; sealing; probing; scanning; and coring and filling the core holes.

S-26.43 Delete and replace Table 2301.5-2 of MnDOT 2301.5I.2 with the following:

Table 2301.5-2
W/C Ratio Incentive/Disincentive

When using fly ash		When using cement only, slag or ternary	
W/C Ratio Lot Result	**Incentive/Disincentive per cubic yard***	**W/C Ratio Lot Result**	**Incentive/Disincentive per cubic yard***
≤ 0.37	+$3.00	≤ 0.39	+$3.00
0.38	+$1.75	0.40	+$1.75
0.39	+$0.50	0.41	+$0.50
0.40	$0.00	0.42	$0.00
0.41	−$0.50	0.43	−$0.50
0.42	−$1.75	0.44	−$1.75
≥ 0.43	The Engineer, in conjunction with the Concrete Engineer, will determine the concrete suitability for the intended use in accordance with 1503, "Conformity with Contract Documents," and 1512, "Unacceptable and Unauthorized Work." This may include testing on the hardened concrete.	≥ 0.45	The Engineer, in conjunction with the Concrete Engineer, will determine the concrete suitability for the intended use in accordance with 1503, "Conformity with Contract Documents," and 1512, "Unacceptable and Unauthorized Work." This may include testing on the hardened concrete.
*Apply Incentive/Disincentive for Concrete Pavement based on the theoretical volume of concrete used by multiplying the measured square yard of concrete by the thickness shown on the Plans. Apply Incentive/Disincentive for Structural Concrete based on the daily cubic yards batched of Structural Concrete as verified by the computerized batch ticket printouts from the plant, with consideration of any waste.			

S-26.44 Delete and replace the title of MnDOT 2301.5I.5.a(1) with the following:

I.5.a(1) Defective Pavement Area > 1/2 inch to 1 inch

S-26.45 Delete and replace MnDOT 2301.5I.5.b with the following:

I.5.b. Final Average Thickness

The Engineer will determine the final average thickness using all of the cores and scans for each separate Plan thickness, except under the following conditions:

(1) Exploratory cores taken to identify the defective pavement area, the Engineer will exclude the cores within the defective pavement area from the final average thickness calculation and substitute the two outside exploratory cores that are within Plan thickness minus 1/2 inch for the defective pavement area.
(2) The length of core or scan exceeds the Plan thickness plus 0.30 inch, the Engineer will limit the core or scan length to the plan thickness plus 0.30 inch.
(3) All cores and scans meet the design Plan thickness.
(4) If the final average thickness for each Plan thickness is deficient by more than the Plan thickness minus 0.10 inch, the Department may apply the monetary deduction to the Plan thickness in accordance with Table 2301.5-5.

S-27 (2357) BITUMINOUS TACK COAT

REVISED 01/27/23

SP2020-130.1

S-27.1 Delete and replace the Emulsified Asphalt section of MnDOT 2357.2A with the following:

Emulsified Asphalt

AASHTO M 208, "Standard Specification for Cationic Emulsified Asphalt," dilution of the emulsion is only allowed by the supplier. No field dilution is allowed. The storage tank for diluted emulsion must have a recirculation system or agitator that will prevent settlement or separation of the Material.

Table 2357.2-1
Residual Asphalt Content

	Minimum Residual Asphalt Content		
Emulsion	**Undiluted**	**Diluted (7:3), D30**	**Diluted (8.5:1.5), D15**
CSS-1 or CSS-1h	57 percent	40 percent	N/A
CQS-1h	N/A	N/A	53 percent

S-27.2 Delete and replace Table 2357.3-1 in MnDOT 2357.3D with the following:

Table 2357.3-1
Tack Coat Application Rates

	Application Rates – gallon/square yard			
Material Type	**CSS-1 or CSS-1h**	**CSS-1 or CSS-1h**	**CQS-1h**	**MC ‖**
Surface Type	**Undiluted Emulsion**	**Diluted* Emulsion (7:3), D30**	**Diluted* Emulsion (8.5:1.5), D15**	**Cutback**
New Asphalt	0.04 to 0.06	0.06 to 0.09	0.05 to 0.07	0.05 to 0.07
Old Asphalt† and PCC	0.05 to 0.09	0.07 to 0.135	0.08 to 0.10	0.09 to 0.11
Milled Asphalt and Milled PCC	0.06 to 0.09	0.09 to 0.135	0.09 to 0.11	0.09 to 0.11

Notes:
* As provided by the asphalt emulsion supplier (see 2357.2A, "Bituminous Material")
‖ Use when approved by the Engineer
† Older than 1 year

S-27.3 Delete and replace MnDOT 2357.5A with the following:

A Monetary Adjustments

The Department must apply Incentives and Disincentives and may apply monetary deductions for Bituminous Tack Coat. The amounts of these adjustments are deemed reasonable.

The Engineer in conjunction with the Bituminous Engineer may deduct up to 5 percent of the mixture Unit Price for failures related to 3151, "Bituminous Material".

S-28 (2360) PLANT MIXED ASPHALT PAVEMENT (LOCAL GOVERNMENT UNIT)

REVISED 06/30/22

All projects shall be subject to the surface requirements shown on Table 2360.3-5.

S-28.1 Use the following to remove Longitudinal Joint Cores.

S-28.2 Delete and replace the first paragraph of MnDOT 2360.3D.1 with the following:
S-28.3 Compact the pavement to at least the minimum required Maximum Density values in accordance with Table 2360.3-1.

S-28.4 Delete and replace Table 2360.3-2of MnDOT 2360.3D.1 with BLANK.

S-28.5 Delete and replace MnDOT 2360.3D.1.j with the following:
S-28.6 D.1.j Companion Core Testing
S-28.7 The Department will select at least one of the two companion cores per lot to test for verification.

S-28.8 Delete and replace MnDOT 2360.3D.1.n with BLANK.

S-28.9 Delete and replace MnDOT 2360.3D.1.p with BLANK.

S-28.10 Delete and replace Table 2360.5-6 of MnDOT 2360.5B.13 with BLANK.

S-28.11 Delete and replace Table 2360.5-7 of MnDOT 2360.5B.13 with BLANK.

S-29 (2461) STRUCTURAL CONCRETE

REVISED 12/20/24

SP2020-145

S-29.1 Delete and replace the second sentence of MnDOT 2461.2E.1.e with the following:

Use "EX" for exposed Aggregate mixes, "CO" for colored concrete mixes, and "FRC" for fiber reinforced concrete mixes.

S-29.2 Delete and replace Table 2461.2-5 of MnDOT 2461.2E.2.a(2) with the following:

Table 2461.2-5
Concrete Mix Design Requirements for Grout and Lean Mix Backfill Mixes

Mix Number	Maximum W/C Ratio	Water Content (pounds)	Cement Content (pounds)	Fly Ash Content (pounds)	Fine Aggregate Calculation (pounds)	Coarse Aggregate Calculation (pounds)	Percent Air Content	Slump Range	Minimum 28-Calendar Day Compressive Strength, f'c
1A Grout*	0.50	379	758	0	100 percent †	0	3.0	As needed	4000 psi
3A Grout *	0.44	379	865	0	100 percent †	0	10.0	As needed	4000 psi
Lean Mix‖	1.00	375	125	250	50 percent†	50 percent† ǂ	N/A	10 inches ± 1 inch	#

* Do not provide 1A or 3A grout containing coarse Aggregate or fly ash.
‖ Coarse Aggregate quality meets requirements of 3137.2D.1, "Coarse Aggregate for General Use."
† After adding the specified quantities of cement, fly ash, and water, provide the remaining Aggregate to an absolute volume 27.00 – 27.27 cubic feet.
ǂ Meeting #67 gradation as shown in Table 3137.2-4.
\# Maximum 28-Calendar Day compressive strength of 1500 psi.

S-29.3 Delete and replace the first sentence of MnDOT 2461.2E.2 with the following:

Acceptance of concrete is contingent on meeting all specification requirements, including but not limited to requirements related to field placement and performance.

S-29.4 Delete and replace the second paragraph of 2461.2E.2.b with the following:

The Contractor assumes full responsibility for the concrete mix design and performance of the concrete, including meeting all specification requirements.

S-29.5 Delete and replace Table 2461.2-6 of MnDOT 2461.2E.2.b(1) with the following:

Table 2461.2-6
Concrete Mix Design Requirements (Not applicable to High-Performance Concrete or Mass Concrete)

Concrete Grade	Mix Number	Intended Use *	Maximum W/C Ratio ‖	Maximum Cementitious Content (pounds/ cubic yard)	Maximum percent SCM (Fly Ash/ Slag/Ternary)	Design Slump Range (inches)	Minimum 28-day Compressive Strength, f'c	3137, "Coarse Aggregate for Portland Cement Concrete."
B Bridge Substructure	3B52	Abutment, stems, wingwalls, paving brackets, pier columns, pier caps, pier struts	0.45	750	30/35/40	2 - 5	4000 psi	2D.1
F Flatwork	3F32	Curb and gutter	0.42	750	30/35/0	1/2 - 3 #	4500 psi	2D.1
	3F52 3F57EX † 3F52CO ‡	Sidewalk, curb and gutter, slope paving, median Sidewalk, driveway entrances, ADA pedestrian Sidewalk	0.45	750	25/30/0	2 – 5	4500 psi	2D.1
G General Concrete	1G52	Footings and pilecap	0.55	750	30/35/40	2 - 5	4500 psi	2D.1
	3G52	Footings, pilecap, walls, cast-in-place manholes and catch basins, fence posts, signal bases, Light Pole foundations, erosion control Structures, cast-in-place box culverts, Culvert headwalls, open flumes, cast-in-place wall stems	0.45	750	30/35/40	2 - 5	4500 psi	2D.1
M Median Barrier	3M12	Slipform barrier, Median barrier, non-bridge	0.42	750	30/35/40	1/2 - 1 #	4500 psi	2D.1
	3M52	Barrier, Median barrier, non-bridge	0.45	750	30/35/40	2 – 5	4500 psi	2D.1
P Piling	1P42	MSE and gravity wall leveling pad	0.63	750	30/35/40	2 – 4	3000 psi	2D.1
	1P62	Piling, spread footing leveling pad	0.63	750	30/35/40	3 – 6	3000 psi	2D.1
R Pavement Rehabilitation	3R52	CPR – Full-depth concrete repairs, concrete base	0.45	750	30/35/40	2 – 5	4000 psi	2D.3
S Bridge Superstructure	3S12	Slipform Bridge barrier, parapets, end post	0.42	750	30/35/40	1/2 - 1 #	4000 psi	2D.2
	3S52	Median barrier, raised median, pilaster, curb, Sidewalk, approach panel, formed Bridge barrier, parapet, end post, collar	0.45	750	30/35/40	2 - 5	4000 psi	2D.2
X Miscellaneous Bridge	1X62	Cofferdam seals, rock sockets, drilled shafts	0.45	750	30/35/40	3 – 6	5000 psi	2D.1
	3X62	Drilled shafts above the frost line	0.45	750	30/35/40	3 – 6	5000 psi	2D.1

SAP 003-607-027
SAP 003-680-005

Concrete Grade	Mix Number	Intended Use *	Maximum W/C Ratio ‖	Maximum Cementitious Content (pounds/ cubic yard)	Maximum percent SCM (Fly Ash/ Slag/Ternary)	Design Slump Range (inches)	Minimum 28-day Compressive Strength, f'c	3137, "Coarse Aggregate for Portland Cement Concrete."
Y Bridge Deck	3Y42-M § 3Y42-S §	Bridge decks, integral abutment diaphragms, pier continuity diaphragms, expansion joint replacement mix	0.45	750	30/35/40	2 - 4	4000 psi	2D.2
	3Y47 **	Deck patching mix	0.45	750	30/35/40	2 – 4	4000 psi	2D.2

If the intended use is not included elsewhere in the Specification or Special Provisions, use mix 3G52, unless otherwise directed by the Engineer.
‖ The minimum Water/Cement (W/C) ratio is 0.30.
† Mix 3F57EX requires the use of Coarse Aggregate Designation "7", "2" or "3" for the 4th digit in accordance with Table 2461.2-3.
‡ Identify the specific color used on the Certificate of Compliance. Colored concrete is only allowed when specified in the Plans or the Contract.
# Adjust slump in accordance with 2461.3G.7.a, "Concrete Placed by the Slip-Form Method," for slip-form concrete placement.
§ The "-S" indicates a Bridge deck with a structural slab and "-M" indicates a monolithic Bridge deck.
** Mix 3Y47 requires the use of Coarse Aggregate Designation "7" or "3" for the 4th digit in accordance with Table 2461.2-3.

S-29.6 Delete and replace the first sentence of MnDOT 2461.2E.2.b(2) with the following:

Design High-early (HE) concrete to achieve the minimum design strength and time required in accordance with Table 2461.2-7.

S-29.7 Delete and replace Table 2461.2-7 of MnDOT 2461.2E.2.b(2) with the following:

Table 2461.2-7
High-Early (HE) Concrete Requirements
(Not applicable to Bridge Superstructure or Mass Concrete)

Mix Number	Concrete Grades Allowed	Minimum Design Time	Maximum W/C Ratio	Maximum Cementitious Content (pounds/ cubic yard)*	Slump Range	Minimum Design Strength	Minimum 28-Calendar Day Compressive Strength, f'c	3137 "Coarse Aggregate for Portland Cement Concrete"
1PHE62 ‖	P	-	0.63	750	3 – 6 inches	-	3000 psi	2.D.1
3HE32	F	48 hours	0.42	750	1/2 – 3 inches †	2000 psi	4500 psi	2.D.1
3HE52	F	48 hours	0.42	750	2 – 5 inches	2000 psi	4500 psi	2.D.1
3HE52	B and G	48 hours	0.42	750	2 – 5 inches	3000 psi	4500 psi	2.D.1
3YHE52	Y (Repairs Only)	48 hours	0.42	750	2 – 5 inches	3000 psi	4000 psi	2.D.2
3RHE52	R (Repairs Only)	48 hours	0.42	750	2 – 5 inches	2000 psi	4000 psi	2.D.3

* Supplementary cementitious Materials allowed.
‖ Used only for placing concrete in piles during freezing temperatures, provide 30 percent additional cement to the concrete mix for concrete 10 feet below the ground line or water line in accordance with 2451.3D.6, "Cast-in-Place Concrete Piles."
† Adjust slump in accordance with 2461.3G.7.a, "Concrete Placed by the Slip-Form Method."

S-29.8 Delete and replace Table 2461.2-8 of MnDOT 2461.2E.2.b(3) with the following:

Table 2461.2-8
Project Specific Contractor Designed Mixes

Concrete Grade	Intended Use	Specification	3137 "Coarse Aggregate for Portland Cement Concrete"
A	Concrete Pavement	2301, "Concrete Pavement"	2.D.3
M, V, W, Z	Precast Concrete	2462, "Precast Concrete"	Varies
HPC	High Performance Concrete	2401, "Concrete Bridge Construction"	2.D.2
MC	Mass Concrete	Special Provision 2401	Varies
SCC	Self-consolidating Concrete	Special Provision 2401	Varies
CLSM, LCCF	Cellular Concrete Grout	2519, "Cellular Concrete"	None
Non-MnDOT Designated	Per Contract	Per Contract	Per Contract
All concrete grades	Delivery Time is > 90 minutes	2461.3G.3.a, "Delivery Time Beyond 90 minutes"	Varies

S-29.9 Delete and replace the first, second, and third paragraphs of MnDOT 2461.2E.3 with the following:

At least 21 Calendar Days before initial placement of the concrete, submit the appropriate General concrete mix design form to the Concrete Engineer for review. Use the most current forms, specific gravity, and absorption data available from the MnDOT Concrete Engineering website.

Design the concrete mix to an absolute volume of 27.00 – 27.27 cubic feet.

MnDOT will review the Contractor's proposed mixture design solely for compliance with applicable mix design properties in 2461.2. The Department makes no guaranty or warranty, either express or implied, that compliance with mix design properties ensures compliance with any other requirements.

S-29.10 Delete and replace Table 2461.2-11 of MnDOT 2461.2E.4 with the following:

Table 2462.2-11
Mix Design Adjustments/Requirements

	Type of Change or Adjustment	Mix Design Resubmittal Requirements
Level 1 mixes	Cementitious Sources Admixture Sources Admixture Dosage Rate	No resubmittal required
	Aggregate Sources Aggregate Proportions Any cementitious proportion (≤ 15% max fly ash)	Resubmittal of Mix Design
	Any cementitious proportion (> 15% max fly ash)	Resubmittal in accordance with 2461.2E.3.a, "Preliminary Test Data Requirements for Level 2 Mixes"
Level 2 mixes	Cementitious Sources Admixture Dosage Rate	No resubmittal required
	Aggregate Source, no change in Aggregate Class ≤ 5% Total Cementitious ≤ 10% Individual Aggregate Weights	Resubmittal of Mix Design
	Aggregate Source and Class of Coarse Aggregate Supplementary Cementitious Proportion > 5% Total Cementitious > 10% Individual Aggregate Weights Admixture Sources	Resubmittal in accordance with 2461.2E.3.a, "Preliminary Test Data Requirements for Level 2 Mixes"
* Only one (1) increase in total cementitious allowed per mix design, next adjustment requires resubmittal in accordance with 2461.2E.3.a, "Preliminary Test Data Requirements for Level 2 Mixes"		

S-29.11 Delete and replace MnDOT 2461.2E.5 with the following:

E.5 MnDOT Review of Continual Acceptance of Contractor Mix Designs

The Concrete Engineer will review test results relating to each individual Contractor concrete mix design. The Concrete Engineer will review the following test results:

(1) Plant and Field Test Results
(2) Compressive Strength at 28 Calendar Days
(3) Monthly Aggregate Quality Testing

Provided the concrete continues to meet specification requirements, the Contractor will have that mix design available for future use.

S-29.12 Add the following to MnDOT 2461.3D.1:

D.1.g Fiber Proportioning

Do not incorporate fiber packaging materials into the Concrete. The Engineer considers the following fiber addition methods acceptable on all jobs:

(1) Open bag and distribute fibers on Aggregate belt at Ready-mix Concrete plant

(2) Open bag, break apart any fiber clumps, and introduce fibers into Ready-mix Concrete truck in a well-distributed manner

Any alternate methods to add fibers to the concrete mix must be submitted for acceptance by the Engineer and demonstrated by a successful trial placement.

Ensure fibers are uniformly dispersed in the Concrete to avoid balling. Balling of fibers is defined as a 2 inch diameter or greater conglomerate of fibers at the point of placement. The Engineer will consider any balling more prevalent than 1 per load of Concrete as unacceptable and may reject the load of concrete.

S-29.13 Delete and replace MnDOT 2461.3D.1.b with the following:

D.1.b Weighing Equipment and Tolerances

Weigh or measure concrete mixture ingredients using load cells or meters for Ready-mix and paving concrete to within the targeted batch weight in accordance with the following:

(1) Water – 1 percent
(2) Cement – 1 percent or 30 pounds, whichever is greater
(3) Other cementitious Materials – 3 percent or 30 pounds, whichever is greater
(4) Aggregates – 2 percent
(5) Admixtures – 3 percent

In accordance with 1503, the Producer will make plant adjustments when out of tolerance values are reoccurring on the same day or over a period of 7 calendar days.

S-29.14 Delete and replace MnDOT 2461.3F.1.a(7) with the following:

(7) Supply a working email address, including an active internet connection with availability for Department use, at the certified ready-mix plant.

S-29.15 Delete and replace the first paragraph of MnDOT 2461.3F.2 with the following:

Provide one computerized Certificate of Compliance with each truckload of ready mixed concrete at the time of delivery. The Department defines computerized to mean a document that records mix design quantities from load cell and meters.

S-29.16 Delete and replace the second sentence of MnDOT 2461.3F.2 with the following:

If the computer that generates the Certificate of Compliance malfunctions, the Engineer may allow the Contractor to finish any pours in progress if the Producer issues a handwritten or computer-generated Department Form 0042, *Certificate of Compliance* with each load. The Engineer will not allow the Producer to begin new pours without a working computerized Certificate of Compliance.

S-29.17 Add the following to MnDOT 2461.3F.2:

(22) Fibers, brand, and dosage per cubic yard
(23) Ready-Mix Sheet Number (RMX###-###), JMF Sheet Number (JMF##-###), or PS Sheet Number (PS##-###)
(24) MnDOT Designation Plant/Unit Number (RM###)

S-29.18 Delete and replace MnDOT 2461.3F.3.c with the following:
Place concrete meeting the aggregate gradation requirements in the Work.

Identify QC companion gradation samples with the following information:

(1) Date
(2) Test number
(3) Time

(4) Type of Material
(5) Plant
(6) Sampling Location

If any gradation fails, immediately take second gradation. If the second gradation passes, resume testing as required. The Engineer will not allow the second gradation as a substitute for the next required QC gradation. If the second gradation fails, refer to Table 2461.5-1 for additional requirements. The Engineer will not allow a verification companion gradation as a substitute for a QC gradation.

S-29.19 Delete the second paragraph of MnDOT 2461.3F.3.d.

S-29.20 Delete and replace the first and second paragraphs of MnDOT 2461.3F.3.e with the following:

The Producer will complete and maintain the Concrete Ready-mix Plant QC Workbook in Real Time for all materials and sources incorporated into the concrete mix, using their full name for the diary and each test performed.

S-29.21 Add the following to MnDOT 2461.3G after the third paragraph:

Do not start concrete placement when it is raining or snowing.

S-29.22 Add the following to MnDOT 2461.3G.2:

The Contractor and Engineer will perform random sampling and testing in accordance with ASTM C172, Standard Practice for Sampling Freshly Mixed Concrete; ASTM C1064, Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete; and the Schedule of Materials Control.

S-29.23 Add the following to MnDOT 2461.3G.5:

For all cast-in-place concrete as specified in 2461, including HE concrete, place concrete meeting the strength requirements of Table 2461.2-6 and Table 2461.2-7 unless otherwise specified in the Contract into the Work. Unless otherwise included in the Plans, HE concrete requires approval of the Engineer before incorporation into the Work.

S-29.24 Delete 2461.3G.5.b(2) and replace with the following:

(2) Mark cylinder for identification of the represented unit or section of concrete

S-29.25 Delete and replace Table 2461.3-3 of MnDOT 2461.3G.6.a(1) with the following:

Table 2461.3-3
Chronological Testing Ages of Strength Specimens

Type of Concrete	Testing Ages*
Concrete Pavement as defined in 2301, "Concrete Pavement"	Test at least 2 sets of strength specimens before and the remaining sets after the anticipated opening strength
Normal Strength Concrete as defined in 2461, "Structural Concrete"	1, 3, 7, 14, and 28-Calendar Days
High-early (HE) Concrete as defined in 2461, "Structural Concrete"	12 hours, 1, 2, 7, and 28-Calendar Days
Ultra High-Early (UHE) Concrete as defined in 2302, Concrete Pavement Rehabilitation"	3, 4, and 8 hours, 1 and 14-Calendar Days
* The Contractor may adjust the testing ages if approved by the Engineer, in conjunction with the Concrete Engineer.	

S-29.26 Delete and replace the second sentence of MnDOT 2461.3G.7 with the following:

The Contractor and Engineer will perform random sampling and testing in accordance with ASTM C172, Standard Practice for Sampling Freshly Mixed Concrete; ASTM C143, Standard Test Method for Slump of Hydraulic-Cement Concrete; ASTM C1611, Standard Test Method for Slump Flow of Self-Consolidating Concrete; and the Schedule of Materials Control.

S-29.27 Delete and replace the second sentence of MnDOT 2461.3G.8 with the following:

The Contractor and Engineer will perform random sampling and testing in accordance with *ASTM C172, Standard Practice for Sampling Freshly Mixed Concrete*; *ASTM C231, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method*; and the Schedule of Materials Control.

S-29.28 Delete and replace the fourth paragraph of MnDOT 2461.3G.8 with the following:
Test the air content at the point of delivery (eg., end of concrete chute) unless otherwise specified in the Contract.

S-29.29 Delete and replace MnDOT 2461.5A.2.d with the following:

A.2.d Moving Average Below f'c

If the moving average of 3 consecutive strength tests is less than the required f'c, the Concrete Engineer will review the strength test results and determine if a new mix design is required in accordance with Table 2461.2-6 or Table 2461.2-7.

The Concrete Engineer in conjunction with the Engineer will remove any strength test results from the moving average if the following occurs:

(1) After investigation, the cause for the deficient concrete strength is due to improper handling, curing, or testing of the cylinder
(2) Cylinders kept in the field longer than 7-Calendar Days that negatively impact the moving average calculation
(3) The suspect concrete was removed and replaced
(4) Dispute resolution coring identified the concrete acceptable to remain in place

For the quantity of non-conforming concrete not meeting the moving average of 3 consecutive strength tests, the Engineer will make determinations regarding the disposition, payment, or removal of the concrete in accordance with Table 2461.5-5.

Table 2461.5-5
All Concrete Grades

Moving average of 3 consecutive strength tests	Monetary Deductions for Moving Average Failure *
> 96.0 percent of f'c	No deductions for the Materials placed as approved by the Engineer.
91.0 percent to 96.0 percent of f'c	$20.00 per cubic yard or 10 percent of the Contractor-provided invoice for quantity represented by test that brought moving average into non-conformance.
≥ 87.5 percent and ≤ 91.0 percent of f'c	$50.00 per cubic yard or 25 percent of the Contractor-provided invoice for quantity represented by test that brought moving average into non-conformance.
< 87.5 percent of f'c	Remove and replace concrete in accordance with 1503, "Conformity with Contract Documents," and 1512, "Unacceptable and Unauthorized Work," as directed by the Engineer. If the Engineer, in conjunction with the Concrete Engineer, determines the concrete can remain in-place, the Engineer will adjust the concrete at a reduction of $100.00 per cubic yard or 50 percent of the Contractor-provided invoice for quantity represented by test that brought moving average into non-conformance.

S-30 (2503) PIPE SEWERS

RESTORED AND REVISED 06/30/23

SP2020-158

S-30.1 Delete and replace MnDOT 2503.2E with the following:

E Geotextile, Type 3 3733

S-30.2 Add the following to MnDOT 2503.3:

G. Geotextile

Use Geotextile 3733 Type 1 to wrap concrete pipe joints or for other drainage applications.

S-31 (2503) CONNECT TO EXISTING STORM SEWER

REVISED 09/27/24

SP2020-159

S-31.1 DESCRIPTION

This Work consists of connecting new pipe or a new Structure into an existing storm sewer in accordance with MnDOT 2503 and MnDOT 2506.

S-31.2 MATERIALS — See Standard Specifications for Construction.

S-31.3 CONSTRUCTION REQUIREMENTS

Neatly cut the existing pipe off and trim flush with the proposed pipe or inside wall of proposed Structure.

Provide a clean, water-tight connection between the new pipe or structure and the existing storm sewer.

Remove and replace unacceptable damage to the existing storm sewer at no cost to the Department in accordance with MnDOT 1512.

S-31.4 METHOD OF MEASUREMENT

The Engineer will measure the number of connections constructed.

S-31.5 BASIS OF PAYMENT

The Contract Unit Price for Connect to Existing Storm Sewer is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Connect to Existing Storm Sewer on the basis of the following schedule:

Item No.	Item	Unit
2503.602	Connect to Existing Storm Sewer	each

S-32 (2504) CHANGES IN LOCAL GOVERNMENT UNIT (LGU) SYSTEM

REVISED 01/27/23

SP2020-164

S-32.1 DESCRIPTION

This Work consists of modifications to the LGU, City of Lake Park utility systems including, the excavation and subsequent backfill necessary to expose the watermains, sewers, etc. for the purpose of disconnecting or connecting to the new Work. The Work shall be performed in accordance with MnDOT Standard Specifications and the Special Provisions included in this Proposal Package.

S-32.2 MATERIALS

See Special Provisions.

S-32.3 CONSTRUCTION REQUIREMENTS

A General

The Work to be done is on water main facilities owned by the LGU, City of Lake Park.

Notify the Engineer and the LGU at least 48 hours in advance of doing the Work.

The LGU will have a representative at the construction site during this Work.

B Inspection

All inspection and testing requirements will be in accordance with the LGU Special Provisions.

Deficiencies detected by testing, and/or inspection, will be corrected by the Contractor at their own expense.

The responsibility of the LGU Inspector shall not extend to modifying the Contract. The Engineer will retain the exclusive right to determine if the Contractor has satisfactorily performed the work covered by this Special Provision.

S-33 (2506) MANHOLES AND CATCH BASINS

REVISED 09/27/24

SP2020-164.1

S-33.1 Delete and replace MnDOT 2506.2B with the following:

B Masonry Mortar (Mortar) 3107

S-33.2 Delete and replace MnDOT 2506.3G with the following:

Provide vertical adjustment of access castings made to the planned elevation on the Structure. Meet the criteria that full support for the casting is obtained above the cone section. Limit thickness of each adjusting ring to 6 inches or less. Encase adjusting rings in mortar according to the Plan.

Construct new structures so the height above the cone does not exceed 9 inches, including mortar but not including the frame. Use no more than 2 adjusting rings.

Reconstruct in-place structures so the height above the cone does not exceed 12 inches, including mortar but not including the frame. Use no more than 3 adjusting rings. If these criteria cannot be met by vertical adjusting Work, reconstruct the Structure.

For upward adjustment of castings, the Contractor may use any of the Structure Materials or applicable construction methods specified in this subsection, provided they are compatible with the in-place construction. The Contractor may use auxiliary ring castings and adjusting rings as shown on the Plans.

S-34 (2506) MANHOLES AND CATCH BASINS (ADJUSTING RINGS)

REVISED 10/14/22

SP2020-165

S-34.1 Add the following to MnDOT 2506.2:

Adjusting Rings manufactured from High Density Polyethylene (HDPE) are approved as an alternate to concrete adjusting rings.

S-34.2 Add the following to MnDOT 2506.3:

Seal HDPE adjusting rings with the product recommended by the manufacturer.

S-35 (2521) WALKS

REVISED 06/28/24

SP2020-170.4

S-35.1 Add the following to MnDOT 2521.2A:

A.4 Concrete Truck Aprons ..... Mix No. 3F52

S-35.2 Delete and replace the first paragraph of MnDOT 2521.3D.2 with the following:

For 4 inch walk thickness, divide the walk into square panels of uniform size no greater than 36 square feet. For 6-inch walk thicknesses, divide the walk into square panels of uniform size no greater than 81 square feet.

S-35.3 Delete and replace the third paragraph of MnDOT 2521.3D.2 with the following:

Sawcut all concrete curb ramp, concrete walk, and concrete truck aprons. To reduce the risk of random cracking, the Engineer will allow tooling joints on long sidewalk placements. Sawing of tooled joints is required. The Engineer will allow tooling or sawing joints in the concrete median walk located outside of the pedestrian circulation path. If tooling, round joints with a 1/4 inch radius grooving tool and round edges with an edging tool having a radius no greater than 1/2 inch.

S-35.4 Delete and replace the title of MnDOT 2521.3G to the following:

G Concrete Protection from Backfilling and Loading

S-35.5 Delete the first paragraph of MnDOT 2521.3G and replace with the following:

For a minimum of 24 hours after placement of the concrete, do not perform vibration or backfilling operations adjacent to the concrete, drill into concrete, or operate construction equipment and public traffic loading on the concrete.

Perform adjacent vibratory and backfilling operations or drilling into concrete at least 72 hours after placing the concrete or after the concrete reaches a compressive strength of at least 2,000 pounds per square inch.

The Engineer will allow construction equipment and public traffic loading on newly placed concrete at least 72 hours after placing the concrete or after the concrete reaches a compressive strength of at least 3,000 pounds per square inch and the following:

(1) When moving on and off the concrete, construct a ramp to prevent damage to the concrete edges and joints.
(2) Protect the concrete surface and joints from damage due to heavy loads or Equipment in accordance with 1513, "Restrictions on Movement and Storage of Heavy Loads and Equipment." Sweep the surface free of debris before placing the protective Material or tracked Equipment onto the slab.
(3) Operate Equipment on the concrete without causing damage. If damage results, suspend operations, and take corrective action as approved by the Engineer. Do not operate the Equipment wheels or tracks within 4 inches of the concrete edge.
(4) When hauling Aggregate and other Materials across newly constructed concrete, keep the concrete surface free of debris by sweeping or other method as approved by the Engineer to prevent spalling of the joints and edges.

The Engineer will cast, cure, and test the concrete field control specimens in accordance with 2461.3G.5.c, "Field Control Strength Cylinders." If damage results from any of these operations, the Engineer will suspend operations until the Contractor takes corrective action and obtains the Engineer's approval of a new method. The Engineer may require removal and replacement of the damaged concrete in accordance with 1503, "Conformity with Contract Documents," and 1512, "Unacceptable and Unauthorized Work." Add the following to MnDOT 2521.3D.2:

For concrete truck aprons, construct joints according to 2301.3N, "Joint Construction Operations," and Standard Plan 5-297.221.

S-35.6 Add the following to MnDOT 2521.4:

In the case of transitions from one thickness or design to another, the Engineer will measure the entire transition for payment under the item with the higher Contract Unit Price.

S-35.7 Delete and replace the first paragraph of MnDOT 2521.5 with the following:

Payment for concrete walk (colored) at the Contract price per unit of measure is full compensation for cost to providing concrete walk and concrete truck aprons to the specified lines, grade and minimum thickness specified in the Plans, including but not limited to: forming, joint filler Material, colored concrete test panels, furnishing and placing the concrete, reinforcement bars, expansion joint material, concrete compaction by vibration, concrete curing, and protecting the completed Work from damage.

S-36 (2521) DRILL AND GROUT REINF BAR (EPOXY COATED) (ADA)

REVISED 03/29/24

SP2020-171

S-36.1 DESCRIPTION

This Work consists of furnishing, drilling, grouting, and inserting No. 4 epoxy coated reinforcement bars in accordance with MnDOT 2521, MnDOT 2531 and (1804) PROSECUTION OF WORK (ADA).

S-36.2 MATERIALS

A Epoxy Coated Reinforcement Bars ..... MnDOT 3301

B Non-shrink Grout or Epoxy ..Adhesive Non-shrink Grouts or Epoxies (non-bridge applications) APL

S-36.3 CONSTRUCTION REQUIREMENTS

Drill and grout or cast-in-place reinforcement bars as shown on MnDOT Standard Plan 5-297.250 (Sheets 3, 4 and 6) with a minimum 2 inch concrete cover.

Protect newly placed concrete from damage by adjacent vibratory, vibratory drilling or backfilling operations for a minimum of 24 hours. Perform vibratory operations and backfilling 72 hours after placing the concrete or after the concrete reaches a compressive strength of at least 2,000 psi.

For cast-in-place reinforcement bars, install reinforcement bars through holes in the forms.

S-36.4 METHOD OF MEASUREMENT

The Engineer will measure the number of epoxy coated reinforcement bars placed.

S-36.5 BASIS OF PAYMENT

The Contract Unit Price for Drill and Grout Reinforcement Bar (Epoxy Coated) is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Drill and Grout Reinforcement Bar (Epoxy Coated) on the basis of the following schedule:

Item No.	Item	Unit
2521.602	Drill and Grout Reinf Bar (Epoxy Coated)	each

S-37 (2531) CONCRETE CURBING

REVISED 06/28/24

SP2020-172.1

S-37.1 Delete the third and fifth paragraph of MnDOT 2531.3E and replace with the following:

Tool or saw concrete curb, curb and gutter, and driveway pavement joints to a depth to prevent random/uncontrolled cracking. Unless stated otherwise in Standard Plan 5-297.250, use an edging tool with a radius no greater than 1/2 inch to round outside edges and longitudinal joints.

Sawcut concrete driveway pavement contraction joints. To reduce the risk of random cracking, the Engineer will allow tooling joints on large concrete driveway pavement placements. When tooling concrete driveways, round joints with a 1/4 inch radius grooving tool. Sawing of tooled joints on concrete driveways is required.

S-37.2 Delete and replace the title of MnDOT 2531.3H with the following:

H Concrete Protection from Backfilling and Loading

S-37.3 Delete the first paragraph of 2531.3H and replace with the following:

For a minimum of 24 hours after placement of the concrete, do not perform vibration or backfilling operations adjacent to the concrete, drill into concrete, or operate construction equipment and public traffic loading on the concrete.

Perform adjacent vibratory and backfilling operations or drilling into concrete at least 72 hours after placing the concrete or after the concrete reaches a compressive strength of at least 2,000 pounds per square inch.

The Engineer will allow construction equipment and public traffic loading on newly placed concrete 72 hours after placing the concrete or after the concrete reaches a compressive strength of at least 2,000 pounds per square inch and the following:

(1) When moving on and off the concrete, construct a ramp to prevent damage to the concrete edges and joints.
(2) Protect the concrete surface and joints from damage due to heavy loads or Equipment in accordance with 1513, "Restrictions on Movement and Storage of Heavy Loads and Equipment." Sweep the surface free of debris before placing the protective Material or tracked Equipment onto the slab.
(3) Operate Equipment on the concrete without causing damage. If damage results, suspend operations, and take corrective action as approved by the Engineer. Do not operate the Equipment wheels or tracks within 4 inches of the concrete edge.
(4) When hauling Aggregate and other Materials across newly constructed concrete, keep the concrete surface free of debris by sweeping or other method as approved by the Engineer to prevent spalling of the joints and edges.

The Engineer will cast, cure, and test the concrete field control specimens in accordance with 2461.3G.5.c, "Field Control Strength Cylinders." If damage results from any of these operations, the Engineer will suspend operations until the Contractor takes corrective action and obtains the Engineer's approval of a new method. The Engineer may require removal and replacement of the damaged concrete in accordance with 1503, "Conformity with Contract Documents," and 1512, "Unacceptable and Unauthorized Work."

S-37.4 Delete and replace the third sentence of MnDOT 2531.4B with the following:

In the case of transitions from one thickness or design to another, the Engineer will measure the entire transition for payment under the item with the higher Contract Unit Price.

S-37.5 Delete and replace the first sentence of MnDOT 2531.5A.2 with the following:

The Engineer will consider concrete Work with deviations 3/8 inch or greater in any 10 foot length of curb and gutter, either horizontal or vertical, as unacceptable Work.

S-38 (2531) CONCRETE SILL (ADA)

NEW 03/29/24

SP2020-173

S-38.1 DESCRIPTION

This Work consists of constructing a concrete sill at the back of concrete curb and gutter in accordance with MnDOT 2531, MnDOT 3301, and (1804) PROSECUTION OF WORK (ADA).

S-38.2 MATERIALS – See Standard Specifications for Construction

A Reinforcement Bars ..... MnDOT 3301 and Standard Plan 5-297.254 (Sheet 4 of 4)

B Preformed Joint Filler, Type F .....Concrete, Vinyl Separation Material APL

S-38.3 CONSTRUCTION REQUIREMENTS

Construct Concrete Sill in accordance with MnDOT 2531.3B, the third paragraph of MnDOT 2531.3C, MnDOT 2531.3D and MnDOT Standard Plan 5-297.254 (Sheet 4 of 4).

Install tie bars and separation material in accordance with MnDOT Standard Plan 5-297.254 (Sheet 4 of 4).

S-38.1 METHOD OF MEASUREMENT

The Engineer will measure the length of Concrete Sill constructed along the back of curb.

S-38.1 BASIS OF PAYMENT

The Contract Unit Price for Concrete Sill is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Concrete Sill on the basis of the following schedule:

Item No.	Item	Unit
2531.603	Concrete Sill	linear foot

S-39 (2531) CONCRETE CURB AND GUTTER (ADA)

REVISED 03/29/24

SP2020-173.1

S-39.1 DESCRIPTION

This Work consists of constructing Concrete Curb and Gutter in accordance with MnDOT 2531, MnDOT 2211 and (1804) PROSECUTION OF WORK (ADA).

S-39.2 MATERIALS – See Standard Specifications for Construction

Aggregate for Surface and Base Courses .....MnDOT 3138

S-39.3 CONSTRUCTION REQUIREMENTS

Grade and compact the aggregate base in accordance with MnDOT 2211 and MnDOT 2106.3G.2, "Quality Compaction", for the Concrete Curb and Gutter.

Construct concrete curb and gutter in accordance with MnDOT Standard Plan 5-297.250. Transition the existing curb and gutter section to the new curb and 24-inch gutter section within five feet to ten feet from the zero-height curb.

Modify the proposed gutter width to not protrude into the adjacent travel lane.

If the curb and gutter removal limit shown in the Plans is less than three feet from the next joint, locate the sawcut at the next joint.

Drainage patterns shall not be altered unless called for in the Plans or accepted by the Engineer.

S-39.4 METHOD OF MEASUREMENT

The Engineer will measure the length of Concrete Curb and Gutter constructed along the face of the curb.

S-39.5 BASIS OF PAYMENT

The Contract Unit Price for Concrete Curb and Gutter is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Concrete Curb and Gutter on the basis of the following schedule:

Item No.	Item	Unit
2531.603	Concrete Curb and Gutter	linear foot

S-40 (2531) CONCRETE CURB DESIGN V (ADA)

REVISED 03/29/24

SP2020-174

S-40.1 DESCRIPTION

This Work consists of constructing Concrete Curb Design V of varying heights up to 8 inches in accordance with MnDOT 2531, MnDOT 2521, and (1804) PROSECUTION OF WORK (ADA).

S-40.2 MATERIALS – See Standard Specifications for Construction

S-40.3 CONSTRUCTION REQUIREMENTS

Concrete Curb Design V may be constructed independent of, or integral to, the adjacent sidewalk. Match the bottom elevation of the Concrete Curb Design V to the bottom elevation of the adjacent sidewalk slab.

When Concrete Curb Design V is constructed independent of the sidewalk, clean the joint to maximize the bond between the walk and Concrete Curb Design V. Align the joint locations in the Concrete Curb Design V with the joint locations in the adjacent concrete walk.

The locations requiring the use of Concrete Curb Design V will be as shown in the Plans or as determined in the field by the Engineer. Determine the height and length of the Concrete Curb Design V and obtain Engineer approval prior to curb construction. Engineer's approval is required for any additional Concrete Curb Design V to be placed on the Project.

S-40.4 METHOD OF MEASUREMENT

The Engineer will measure the length of Concrete Curb Design V constructed, along the face of the curb. Curb height is measured from the top of the adjacent concrete curb ramp walk to the top of the curb.

Pedestrian concrete approach nose adjacent to the pedestrian ramp will be measured as 2 feet of Concrete Curb Design V. No measurement will be made for pedestrian concrete approach nose adjacent to Roadway curb and gutter.

S-40.5 BASIS OF PAYMENT

The Contract Unit Price for Concrete Curb Design V is compensation in full for Equipment, Materials and Labor required to complete the Work.

Lengths of Concrete Curb Design V that is constructed integral and never reach 3-inch height will be paid for as Concrete Walk.

The Department will pay for Concrete Curb Design V on the basis of the following schedule:

Item No.	Item	Unit
2531.603	Concrete Curb Design V	linear foot

S-41 (2531) TRUNCATED DOMES

REVISED 03/29/24

SP2020-175

S-41.1 DESCRIPTION

This Work consists of furnishing and installing Truncated Dome Systems at pedestrian curb ramps in accordance with MnDOT 2531, MnDOT 2521, (1804) PROSECUTION OF WORK (ADA), and Standard Plate 7038.

S-41.2 MATERIALS

A Detectable Warning Surfaces ..... APL

S-41.3 CONSTRUCTION REQUIREMENTS

No cutting of coated colored truncated domes is allowed. Obtain Engineer's acceptance prior to cutting uncoated uncolored truncated domes. Minimum cut section surface area is two square feet. Grind cut edges smooth. A maximum of one cut section is allowed per pedestrian ramp.

Firmly press truncated domes into concrete filling the vent holes on the truncated dome plates.

Finish the concrete surface flush to within a tolerance of 1/16 inch with the detectable warning surface plate edge. Provide a 3-inch maximum concrete border around the edges of the truncated domes surface in accordance with Standard Plans No. 5-297.250.

Place the detectable warning surface plates flush to within a tolerance of 1/16 inch with adjacent plates.

The zero-inch height curb locations may be adjusted up to 6 inches laterally if radial dome sections are used.

Truncated domes shall provide a visual contrast to the concrete ramp of either dark on light or light on dark.

S-41.4 METHOD OF MEASUREMENT

The Engineer will measure the area of truncated domes installed in accordance with MnDOT 1901.2.

The Engineer will measure the length of radial truncated domes along the long chord.

S-41.5 BASIS OF PAYMENT

The Contract Unit Price for Truncated Domes is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Truncated Domes on the basis of the following schedule:

Item No.	Item	Unit
2531.618	Truncated Domes	square foot

S-42 (2563) TRAFFIC CONTROL

REVISED 09/27/24

SP2020-197

S-42.1 DESCRIPTION

This Work consists of furnishing, installing, maintaining, and removing all traffic control devices required to provide safe movement of traffic and pedestrians through the Project at all times from commencement of the Work until Project Acceptance. Maintain roads and pedestrian facilities undergo improvements in a condition that accommodates public traffic. Do not close roads or pedestrian facilities, except as authorized. The Engineer may modify the requirements for traffic control as deemed necessary.

The Contractor is not responsible for snow removal from roads or pedestrian facilities open to public traffic. Do not suspend operations for the winter until meeting the requirements of 1803.4, "Temporary Suspensions". During authorized winter suspension, the Department will maintain traffic control devices. If traffic control devices are damaged or destroyed, the Department will pay the Contractor the value of the device as determined by the Engineer.

All temporary traffic management must conform to and be installed in accordance with:

- the "Minnesota Manual on Uniform Traffic Control Devices" (MN MUTCD);
- the "Minnesota Temporary Traffic Control Field Manual" (Field Manual);
- the "Speed Limits in Work Zones Guidelines";
- the "Minnesota Flagging Handbook";
- the "MnDOT Standard Signs and Markings Manual";
- the Plan;
- all applicable standard Specifications and Special Provisions.

Manuals listed above may be found at: http://www.dot.state.mn.us/trafficeng/publ/index.html

S-42.2 MATERIALS

A Temporary Signs and Devices

Reflectorize all signs, paddles, and other traffic control devices including those used for daytime operations. Fabricate temporary rigid signs and devices with retroreflective sheeting material of the appropriate color listed on the Approved Products List (APL) for either "Sheeting for Rigid Temporary Work Zone Signs, Delineators, and Markers (Type IX and XI)" or "Sheeting for Rigid Permanent Signs, Delineators, and Markers (Type IX and XI)". The sheeting Materials APL is located at the following link: http://www.dot.state.mn.us/products/signing/sheeting.html.

Inplace signs that still apply during temporary operations need no change in sign sheeting.

B Truck/Trailer Mounted Attenuators

The Approved Products List for "Mobile Crash Attenuators" is found at: http://www.dot.state.mn.us/products/temporarytrafficcontrol/mobilecrashattenuators.html

C Flashing Arrow Boards

On Projects requiring flashing arrow boards, provide Work Zone Data Exchange compliant arrow boards.

D Crashworthy Signs, Traffic Control Devices, and Ballast

Ground mounted signs and traffic control devices must be crashworthy and meet the crash testing requirements of the AASHTO Manual for Assessing Safety Hardware 2016 (MASH-16). The Department may require a letter of compliance stating that all signs and traffic control devices comply with MASH-16 requirements. The Letter of Compliance must include drawings of the different signs and devices along with a copy of the FHWA issued Letter of Eligibility or MnDOT MASH Crashworthy Evaluation.

See MnDOT Technical Memorandum No. 19-03-T-01 for information and timelines on the allowable use of crashworthy devices tested under NCHRP-350. https://techmemos.dot.state.mn.us/techmemo.aspx

Trailer mounted devices are not crash tested and must be delineated when deployed and removed when not needed.

The approved ballast system for signs and devices mounted on temporary portable supports is sandbags, unless it is designed, crash tested, and approved for the specific device. Add a deicer during freezing conditions to prevent the sand from freezing. Place sandbags at the base of the sign or traffic control device. Do not use any ballast that causes a sign or traffic control device to become hazardous to motorists or workers.

S-42.3 CONSTRUCTION REQUIREMENTS

A Traffic Control Plan, Maintenance, and Inspection

A.1 Submit proposed traffic control changes to the Engineer for acceptance if the Contractor modifies the traffic control Plan or Field Manual layout. Submit the proposed traffic control Plan at least seven days before implementation. If Field Manual layouts are used, specify layout number(s) but do not submit the layouts from the Field Manual. Do not implement the proposed traffic control modification until accepted by the Engineer.

A.2 Immediately repair or replace all traffic control devices that become damaged, moved or destroyed, and all ballasts that are damaged, destroyed, or otherwise fail to stabilize the device.

A.3 Meet the traffic control device quality standards as required in the Field Manual. Immediately replace unacceptable traffic control devices. Signs that are dirty and result in a noticeable loss of reflectivity at night are considered unacceptable and must be cleaned or replaced. Respond promptly to any call from the Engineer concerning the notification of unacceptable traffic control devices.

A.4 Provide the names, addresses, and phone numbers of at least three individuals responsible for placing and maintaining traffic control devices to the Engineer at the Pre-construction Conference. These individuals will be "on call" 24 hours per day, seven days per week during the times any temporary traffic control devices are in place.

A.5 Inspect all traffic control devices on a daily basis, including one nighttime inspection per week. Verify that the devices and pavement markings are placed in accordance with the Traffic Control Plan, these Special Provisions, and the MN MUTCD. Immediately correct discrepancies between the actual placement and the required placement. Respond immediately to any call from the Engineer concerning any request for improving or correcting traffic control devices.

A.6 Make a daily log of required inspections. This log must indicate the date and time any changes in the stages, phases, or portions go into effect. The log must identify the location and verify that the devices and pavement markings are placed as directed or corrected in accordance with the Plan. The person making the inspection must sign the log and include the date and time of the entry. Provide copies of the inspection logs on a weekly basis and at the request of the Engineer.

B Traffic Control Signs and Devices

B.1 Roll-up signs are not allowed unless authorized by the Engineer.

B.2 Cover, modify, or remove all signs that are not consistent with traffic operations. Cover the entire sign or that part of the legend that is inappropriate. Sign covers must conform to the Typical Temporary Sign Covering Details Sheet found in the Plan or at the following link: http://www.dot.state.mn.us/trafficeng/workzone/wz-ltta/pdf/tempsigncover.pdf

B.3 Maintain Street identification signage at all times. Signs may be installed on temporary supports if the permanent sign Structures are affected by operations. This is necessary to maintain the 911 emergency system.

B.4 Post mount all signs that will remain in the same location for more than 30 consecutive days. This does not include portable signs which are set up and taken down at the beginning and end of each Work shift.

When the proper location of a sign is on pavement, do not core through the surface. If there is a conflict with underground utilities, attempt to move the sign while maintaining its visibility to traffic. If it is not possible to drive posts into the ground, mount signs on portable supports as approved by the Engineer.

When signs are removed, the sign posts and stub posts must also be removed from the Right-of-way. Posts left in place for future use or removal at a later date must be properly delineated with tubular markers, flags, or other delineation as approved by the Engineer at no additional cost.

C Traffic Safety

C.1 Do not suspend material, Equipment, tools or personnel over lanes or pedestrian facilities open to traffic.

C.2 Protect traffic and pedestrians from excavations, drop-offs, falling objects, splatter or other potential construction hazards.

C.3 Do not store Materials or Equipment in the Work zone clear zone unless approved by the Engineer. If Materials or Equipment must be stored within the Work zone clear zone, protect with temporary barrier. If the Engineer agrees that temporary barrier is not practical, delineate with Type B channelizers.

C.4 Do not park vehicles or construction Equipment in the clear zone or any location that obstructs traffic control devices. Workers are not allowed to park their private vehicles within the Project limits unless approved by the Engineer.

C.5 Do not load or unload material or Equipment on the Shoulders of any Roadway without a full Shoulder closure using signs and channelizing devices shown on Layout 8 in the Field Manual.

D High Visibility Apparel

During low light conditions, all workers must wear high visibility Class E long pants and retro-reflective headgear in addition to the ANSI Class 2 or 3 vest, shirt, or jacket.

All high visibility apparel must be worn in the manner for which it was designed. All apparel worn on the torso must be closed in the front to provide 360-degree visibility. A worker's high-visibility apparel must be removed from service and replaced if it becomes faded, worn, torn, dirty, or defaced, reducing the conspicuity of the apparel.

E Night Work

Night work is not permitted on this Project without prior approval of the Engineer.

F Vehicle Warning Light Specification

All vehicles and Equipment operating in the trunk highway Right-of-way, must have operable warning lights that are amber in color and meet the appropriate SAE Specification. The SAE Specification requirements are as follows:

(1) Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles- SAE Specification J845.

(2) Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles - SAE Specification J595.

Details on SAE Specification can be found at: http://www.dot.state.mn.us/const/wzs/lighting.html

G Lane Closure Requirements

G.1 Temporary lane closures or other traffic restrictions by the Contractor, during work hours and consistent with the time restrictions, will be permitted only during those hours and at those locations approved by the Engineer. Request temporary lane closures at least 24 hours prior to such closures.

G.2 Flaggers and Pilot Drivers must attend a training session taught by a MnDOT-Qualified Flagger Trainer. The trainer must have completed a "MnDOT Flagger Train the Trainer Session" within the last five years and be on file as a qualified Trainer with MnDOT. Provide all flaggers with the MnDOT Flagging Handbook. Flaggers must be in possession of the handbook while flagging on the Project. Furnish the signed "Checklist for Flagger Training" or "Flagger Qualification Card" to the Engineer any time a new flagger reports to work on the Project. The "Checklist for Flagger Training" and other forms and information is found at: http://www.dot.state.mn.us/const/wzs/flagger.html

Flaggers must be properly uniformed in the required high visibility apparel, including a high visibility hat. The high visibility hat can be substituted for a hard hat if the work site has a hard hat requirement.

G.3 All signs associated with the flagging operation must be removed or covered when flagging operations are not present.

G.4 Coordinate the flagging operations in a manner that causes minimum delay to the traveling public. The maximum delay time is 10 minutes. If the operation exceeds the maximum delay time, the operation must be discontinued until a new traffic control plan is developed which meets the maximum delay requirement.

G.5 Provide flaggers as directed by the Engineer for Contractors operations that create hazards to the traveling public. No additional payment will be made for flaggers required for this purpose.

H Milling, Sealcoating, and Paving Operations

H.1 Traffic will be allowed on the milled surface.

H.2 When traffic is allowed to drive on the milled and newly paved surfaces, install interim striping and provide appropriate warning signs such as "GROOVED PAVEMENT" and "BUMP" with "Advisory Speed" plaques as shown on Layouts 35 and 66 of the Field Manual.

H.3 Taper and/or chamfer any drop-off where traffic will cross from or to the inplace surface, or from or to the milled surface, so as to provide for the safe passage of traffic.

H.4 Schedule construction operations to minimize traffic exposure to uneven lanes, milled edges, and edge drop-offs. If these conditions cannot be avoided, provide and maintain the appropriate traffic control in accordance with the "LONGITUDINAL DROP OFF GUIDELINES" in the Field Manual.

H.5 Do not mill any notches for surfacing tapers until immediately prior to paving. The Engineer may allow notches if temporary bituminous is installed and maintained to provide for the safe passage of traffic until the surfacing is completed.

H.6 Maintain traffic with a minimum of delay during milling and paving operations at Intersections controlled by signals or by all-way stop signs.

H.7 Intersecting Streets, other than Intersections controlled by signals or all-way stop signs, may be closed during milling and paving operations in the Intersection if there are adequate alternate routes for the intersecting Street traffic. Do not close adjacent intersecting Streets to traffic concurrently. Notify the local Road authorities of its schedule to close intersecting Streets 48 hours in advance of the closure.

I Maintenance and Staging of Traffic Control

I.1 Pedestrian traffic must be maintained and guided through the Project at all times.

I.2 Maintain a minimum lane width of 11 feet on all Roadways. Traffic must not be allowed or forced onto the Shoulders without prior approval of the Engineer.

I.3 Parking may be banned within the construction limits. Notify the City of Lake Park (Todd Frank 218.238.5337) and Becker County (Jim Olson 218.846.7200 Ext. 4106) at least 24 hours prior to posting any parking ban within the City. Provide and install the necessary signing 24 hours prior to the parking ban. Remove signs as soon as the work in the area has been completed.

S-42.4 METHOD OF MEASUREMENT

All traffic control required to complete the Project as shown in the Plans and specified in these Special Provisions will be made as a lump sum payment under Item 2563.601 (Traffic Control). Payment includes all costs associated with furnishing, installing, maintaining, relocating and subsequently removing traffic control devices (including flaggers) as required. No additional measurement for payment will be made for individual activities and devices that constitute Traffic Control, except for other traffic control Bid items specifically listed in the Statement of Estimated Quantities.

Traffic Control layouts and devices not shown in the Plan or stated in these Special Provisions, that are necessary to facilitate traffic switches or for transitioning traffic from one stage to another, are included in the lump sum traffic control item. If the Contractor requests a change in traffic control and these changes are implemented, there will be no increase or decrease in the lump sum payment for traffic control. If the Engineer orders a change in traffic control because of a Plan error, omission, changed condition or change of Project scope, payment for such changes will be made as Extra Work.

If the Contractor fails to properly provide, install, maintain, or remove any of the required traffic control devices, the Department may correct the deficiency and to deduct the costs from any moneys due or becoming due to the Contractor in accordance with MnDOT 1512, "Unacceptable and Unauthorized Work".

S-42.5 BASIS OF PAYMENT

Partial payments for lump sum Item 2563.601 (Traffic Control) will be made as follows:

Table SP2563-2
Traffic Control Partial Payments

Percent of Original Contract Completed	Pay this Percentage of Traffic Control
5	50
10	75
50	95
All Work Completed And All Traffic Control Removed	100

A Monetary Price Adjustments

The Department must apply incentives and disincentives and may apply monetary deductions for (2563) TRAFFIC CONTROL. The amounts of these adjustments are deemed reasonable.

B Schedule

The Contract Unit Price for Traffic Control is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Traffic Control on the basis of the following schedule:

Item No.	Item	Unit
2563.601	Traffic Control	Lump Sum

S-43 (2563) ALTERNATE PEDESTRIAN ROUTE

REVISED 10/14/22

SP2020-199

S-43.1 DESCRIPTION

This Work includes furnishing, installing, maintaining, and removing all traffic control devices required to provide safe movement of pedestrians through the Project at all times from commencement of the Work until Project Acceptance in accordance with (2563) TRAFFIC CONTROL.

S-43.2 MATERIALS

Temporary Signs and Devices ..... S-X (2563) TRAFFIC CONTROL

Temporary Pedestrian Ramp ..... MnDOT Standard Plan 5-297.813

Temporary Truncated Domes ..... Detectable Warning Surfaces (Temporary) APL

Pedestrian Channelizer ..... MnDOT Standard Plan 5-297.813

Audible Message Device ..... Audible Message Devices APL

Temporary Walkway Surface ..... MnDOT Standard Plan 5-297.813

S-43.3 CONSTRUCTION REQUIREMENTS

Submit a proposed Alternate Pedestrian Route (APR) Plan to the Engineer for acceptance if an APR Plan is not present in the Plans, or if the Contractor modifies the APR Plan. Submit the proposed APR Plan at least seven days before implementation. If Field Manual layouts are used, specify layout number(s) but do not submit the layouts from the Field Manual. Do not implement the proposed APR modification until accepted by the Engineer.

Maintain pedestrian facilities undergoing improvements, or affected by construction, in a condition that accommodates public traffic. Do not close pedestrian facilities, except as authorized. The Engineer may modify these

requirements as deemed necessary. Provide tamperproof AMDs and monitor daily to verify accurate, clear, and audible messaging.

Maintain and guide pedestrian traffic through the Project at all times using continuous Alternate Pedestrian Routes (APRs) per standards set forth in the MN MUTCD Chapter 6D. Provide each APR to the same level of accessibility of each existing access and walkway prior to construction. Contractor shall only remove sidewalk on one side of the road at a time, sidewalk on other side of the roadway shall not be removed until the sidewalk is completed where originally removed.

Provide and place audible message devices (AMDs), temporary curb Ramps, pedestrian barricades, pedestrian channelizers, detectable edges, temporary walkway surfaces and other accessible design features as necessary.

Provide continuous temporary walkway surfaces that are smooth, stable and slip resistant in relevant weather conditions. Temporary walkway surfaces will allow the normal usage of wheelchairs, walkers, strollers, and other mobility devices. Concrete, bituminous, steel, rubber, wood (3/4 inch or thicker), and plastic are acceptable surface Materials for the temporary walkway surface. Gravel, millings, or other uneven surfaces are not acceptable surface Materials. Support the temporary walkway surface with a solid base.

Any portable sign or barricade placed in or adjacent to a pedestrian walkway shall have a detectable edge to guide pedestrians with visual disabilities around the sign or barricade. A maximum gap of 2" is allowed from the bottom of the device or detectable edge to the walkway to allow for drainage.

Minimize disruption to pedestrians to the maximum extent feasible by providing APRs in the following order of preference:

(1) Provide the APR on the same side of the Street as the disrupted route utilizing bypasses.

(2) Where it is not feasible to provide a same side APR, provide an APR on the other side of the Street.

(3) Where it is not feasible to provide an APR on the other side of the Street, provide an APR Detour with trailblazing signs.

(4) If existing parking spots are desired to be used for an APR route within the Project limits, contact Becker County for approval and parking banning notification procedures.

Schedule and coordinate the replacement of pedestrian access to accommodate the needs of businesses and residences 7 days prior to the replacement. Leave the existing Sidewalks inplace until such time that it is required to remove them to accommodate new construction. Pedestrian access may be provided to businesses and homes using any public access from adjacent parking lots and side Streets. Provide front door access to buildings without alternate public entrances.

Protect the pedestrian route with pedestrian barricades or pedestrian channelizing devices if it is adjacent to construction, excavation drop-offs, traffic, or other hazards. Protect the pedestrian route with portable barrier if it is on the Shoulder, in a parking lane, or in a closed lane adjacent to traffic on a multilane Road or if the speed limit is 45 mph or greater. When both sides of a pedestrian route require channelizing devices, use similar types, unless portable barrier is used to protect pedestrians from traffic.

No pedestrian curb Ramp or blended transition work shall occur concurrently at the same Intersection.

Notify the Engineer in writing at least 48 hours prior to the start of any construction operation that will necessitate a change in pedestrian access.

Notify the Engineer in writing at least 48 hours prior to the start of any construction operation that will necessitate a change in pedestrian access.

Furnish the name, address, email, and phone number of at least one individual responsible for the maintenance of the APR. This individual shall be "on call" 24 hours a day, seven days per week during the times any devices, furnished and installed by the Contractor, are in place. Submit the required information to the Engineer at the pre-construction meeting.

Answer calls immediately and begin corrective measures needed within one hour.

S-43.4 METHOD OF MEASUREMENT

The Engineer will measure Alternate Pedestrian Route as a lump sum in accordance with MnDOT 1901.12.

S-43.5 BASIS OF PAYMENT

The Contract Unit Price for Alternate Pedestrian Route is compensation in full for Equipment, Materials and labor required to complete the Work.

The Department will pay for Alternate Pedestrian Route on the basis of the following schedule:

Item No.	Item	Unit
2563.601	Alternate Pedestrian Route	lump sum

S-44 (2573) STORM WATER MANAGEMENT

REVISED 04/14/23

SP2020-215

S-44.1 Add the following to MnDOT 2573.5:

I Unit Prices

In addition to stormwater management Pay Items included in the Plan, the Engineer may require the items listed below. Payment for additional items as ordered by the Engineer will be made in accordance with the following schedule:

Wheel Wash off $5000.00/each
Flocculant Sock (250,000 gal. treatment vol.) ..... $265.00 each
Bale Barrier $8.00/foot
Silt Fence, Type HI $4.50/foot
Silt Fence, Type SD $30.00/foot
Silt Fence, Type MS $2.75/foot
Flotation Silt Curtain, Type: Moving, 1.2 m (4 foot) depth $22.50/foot
Sediment Control Log, Type Wood Fiber $4.00/foot
Sediment Control Log, Type Compost $4.00/foot
Sediment Control Log, Type Rock $12.00/foot
Sediment Trap Excavation ..... $10.00/cubic yard
Sandbag Barrier ..... $15.00/square foot
Sand Tote Bag $75.00/each
Sediment Removal, Backhoe $240.00/hour
Sediment Removal, Vacuum truck $425.00/hour
Temporary Slope Drain (18" diameter) ..... $100.00/linear foot
Water Treatment Type Sediment Tank $20,250.00/each

S-45 (2573) STORM WATER MANAGEMENT (MPCA PERMIT)

NEW 08/07/23

SP2020-215.1

S-45.1 Add the following to MnDOT 2573.3A.1, "Erosion Control Supervisor:"

Inspect and photograph dewatering operations at the beginning of dewatering and at least once every 24 hours during dewatering to ensure that the system is cleaning the water sufficient to prevent the discharge from causing nuisance conditions. Photographs must show the condition of the discharge, the discharge location, and the receiving water. Include photographs in the next stormwater inspection report.

Reduce stormwater inspection frequency to once per month in areas of the project where construction activity has been completed and the planted native vegetation has a temporary vegetation density of 70 percent.

Prior to project completion take photographs of representative locations to document that all surfaces intended for permanent vegetation have a uniform cover of perennial vegetation with a density of at least 70 percent of expected cover at maturity. Submit these photos to the Engineer to be filed with the Notice of Termination.

S-46 (2574) SOIL PREPARATION

RESTORED 06/30/23

SP2020-217

S-46.1 Add the following to MnDOT 2574.5:

C. Unit Prices

In addition to soil preparation Pay Items included in the Plan, the Engineer may require the items listed below as site conditions warrant (provided the items listed below are not already included in the Plan). Payment for additional items as ordered by the Engineer will be made in accordance with the following schedule:

Subsoiling $300.00/acre
Soil Bed Preparation $350.00/acre
Soil Tracking $2,500.00/acre

S-47 (2575) ESTABLISHING VEGETATION AND CONTROLLING EROSION

REVISED 06/28/24

SP2020-218

S-47.1 Delete and replace Table 2575.3-1 with the following:

Table 2575.3-1
Seeding Dates

Seed Mixture	Spring	Fall
Oats	May 1 – August 1	
Winter Wheat	---	August 1 – October 1

Oats and Peas	Year round	---
Two-year Cover Crop*	April 1 – July 20	July 20 – October 20
Boulevard and Turfgrass mixes, Snow Fence Ground Cover, Inslope mixes, Patch mix*	April 1 – June 1	July 20 – September 20
Roadside and Wet Ditch mixes	April 15 – July 20	September 20 – October 20
*Plant these mixes from April 15 through September 20 when working on or north of TH 2.		

S-47.2 Delete and replace the first paragraph of MnDOT 2575.3 B.2 Seeding Turf Mixes with the following:

B.2 Seeding Cover Crop and Turfgrass Mixtures

Mechanically sow or hydraulically apply Cover Crop, Boulevard, Turfgrass, Snow Fence, Inslope, and Patch mixes uniformly at the adjusted bulk application rate of each mixture. Only use hand operated mechanical spreaders on areas too small for or inaccessible by the specified equipment.

S-47.3 Delete and replace MnDOT 2575.3 B.3 with the following:

B.3 Seeding Roadside and Wet Ditch Mixtures

Seed Roadside and Wet Ditch mixes with a native seed drill, a drop type seeder, or a hydro seeder uniformly at the adjusted bulk application rate of each mixture.

Use a drill or drop seeder with separate seed boxes for fluffy seed and small flowable seed, capable of accurately metering seed of various sizes, and capable of maintaining a uniform mixture of seeds during planting.

Seed drills must have separate seed boxes for fluffy seed and small flowable seed, be capable of accurately metering seed of various sizes, and be capable of maintaining a uniform mixture of seeds during planting. They must also have disc furrow openers and a packer assembly that compacts the soil directly over the drill row. Plant seeds in rows no greater than 8 inches apart and at a depth of between 1/8 inch and 3/8 inch. Drill perpendicular to the direction of surface drainage.

Drop seeders must have separate seed boxes for fluffy seed and small flowable seed, be capable of accurately metering seed of various sizes, and be capable of maintaining a uniform mixture of seeds during planting. They must also have a packer assembly that firms the soil immediately after the seed lands on it or be followed immediately by a separate cultipacker.

Use cyclone or spinner-type seeders on areas no greater than 1 acre or on areas inaccessible to other Equipment as approved by the Engineer.

S-47.4 Delete and replace the second paragraph of MnDOT 2575.3L "Turf Establishment" with the following:

Unless otherwise shown on the Plans, establish vegetative cover by sodding or by seeding and mulching. Fertilize the areas with a slow release fertilizer in accordance with 3881.2B.3 "Type 3 – Slow Release Fertilizer" at a rate derived from a topsoil fertility test result. If seeding, provide and place Mesic Inslope seed mixture as specified in 3876 "Seed." Stabilize seeded areas with Type 3 Mulch in accordance with 3882 "Mulch Material" and disc anchoring. Stabilize slopes steeper than or equal to 3h:1v, ditch bottoms, and other areas of concentrated flow with category 25 Rolled Erosion Prevention Product.

S-47.5 Delete and replace the first sentence of MnDOT 2575.3 L.1 Subsurface Drain Outlets with the following:

As per 2502 "Subsurface Drains," plant the area around subsurface drain outlets with the seed mixture shown in the Plans. Plant Mesic Inslope Seed Mixture in accordance with 3876 "Seed" if no seed mixture is shown in the Plans.

S-47.6 Delete Table 2575.3-3 Rapid Stabilization and replace it with the following:

Table 2575.3-3
Rapid Stabilization

Method	Materials
1	2 tons per acre of Type 1 mulch followed by disc anchoring
2	1.5 tons per acre of Type 3 mulch 750 pounds per acre of Stabilized Fiber Matrix (3884.2 B.3)
3	A slurry consisting of the following and applied at a rate of 6,000 gallons per acre: • 330 pounds of Stabilized Fiber Matrix (3884.2 B.3) per 1,000 gallons of slurry • 10 pounds of Two-year Cover Crop Seed Mixture per 1,000 gallons of slurry • 50 pounds of 10-10-10 Type 3 slow release fertilizer per 1,000 gallons of slurry • 875 gallons of water per 1,000 gallons of slurry
4	Category 25 Rolled Erosion Prevention Product 2 pounds per 100 square yards of Two-year Cover Crop Seed Mixture 8 pounds per 100 square yards of 10-10-10 Type 3 slow release fertilizer
5	Riprap, Class II Geotextile, Type 3

S-47.1 Add the following to MnDOT 2575.4:

The Engineer will measure Seed Mixture Special in accordance with 2575.4B "Seed".

S-47.2 Add the following to MnDOT 2575.5K:

Item No.	Item	Unit
2575.608	Seed _____	pound

S-47.3 Add the following to MnDOT 2575.5:

L Unit Prices

In addition to the erosion control Pay Items included in the Plan, the Engineer may require the items listed below as site conditions warrant (provided the items below are not already included in the Plan). Payment for additional items as ordered by the Engineer will be made in accordance with the following schedule:

Disc Anchoring $100.00/acre
Mulch Material, Type 1 ..... $250.00/ton

Seed Mixtures (for temporary use)

21-111 or 21-112 ..... $1.90/pound
21-113 ..... $2.25/pound
22-111 ..... $4.50/pound
32-241 ..... $36.00/pound
34-171 ..... $65.00/pound

Erosion Control Blanket

Category 25 ..... $2.40/square yard
Category 30 ..... $2.25/square yard
Category 72 ..... $11.00/square yard

Rapid Stabilization

Method 1	$1,000.00/acre
Method 2	$1,300.00/acre
Method 3	$600.00/M Gallon
Method 4	$1.75/square yard
Hydraulic Stabilized Fiber Matrix	$1.00/pound
Hydraulic Reinforced Fiber Matrix	$2.00/pound
Temporary Poly (Fiber Reinforced) Covering	$5.00/square yard
Temporary Geotextile Covering	$7.00/square yard
Water	$31.00/M Gallon
Mowing (Hand Whip)	$100.00/hour
Mowing (Machine)	$300.00/acre
Weed Spraying	$150.00/acre

M Sod

The Contract Unit Price for sod includes maintenance as described in 2575.3 K.1 during the 30 day maintenance period and during any extension to the maintenance period due to sod replacements. The Contract Unit Price for sod does not include additional watering or maintenance ordered by the Engineer after the 30 day maintenance period or after any extension in the maintenance period due to sod replacements, whichever is longer.

S-48 (2575) SITE RESTORATION (ADA)

REVISED 03/29/24

SP2020-220

S-48.1 DESCRIPTION

This Work consists of site grading and establishment of a perennial vegetative cover in accordance with MnDOT 2575, MnDOT 1717, MnDOT 2574, MnDOT 3876, MnDOT 3877, MnDOT 3878, MnDOT 3881, MnDOT 3882 and (1804) PROSECUTION OF WORK (ADA). Site restoration pertains to grading, topsoil placement and turf establishment in areas where pedestrian ramps, sidewalks, shared use paths, driveways, and curb & gutter, are being constructed, and in Boulevard Drainage Restoration areas required to restore positive sidewalk drainage to the roadway as designated in the Plan.

S-48.2 MATERIALS – See Standard Specifications for Construction

S-48.3 CONSTRUCTION REQUIREMENTS

A Site Grading

Grade disturbed areas flush with the top of walk, top of curb, driveways or utilities while maintaining positive drainage. Exclude areas where damage to tree roots may occur and protect trees from Contractor operations.

Place stockpiled topsoil within the same area where it was stripped. Supplement the stockpiled topsoil with Sandy Clay Loam Topsoil Borrow in accordance with 3877.2C to provide the required minimum depth of topsoil.

Grade cut section side slopes flush from the top of concrete surface at a maximum 1:6 slope up to 5 feet from the edge of walk. If 1:6 slope does not daylight within 5 feet from edge of walk, straight line grade topsoil surface up to a 1:3 slope. With Engineer's approval, Concrete Curb Design V may be utilized along with the above stated grading techniques to reduce excessive ground slopes and better match adjacent surface terrain within the 5-foot grading area.

Provide a 4-inch minimum topsoil depth and grade boulevard drainage restoration areas with a straight-line grade from top of walk to top back of curb.

Restore sites to a condition similar or better to the preconstruction condition, to the satisfaction of the Engineer.

B Turf Establishment

Establish vegetation, provide fertilizer, and mulch for disturbed areas in accordance with the Plans. Stabilize each site in accordance with MnDOT 1717. Prepare seed bed in accordance with MnDOT 2574.

S-48.4 METHOD OF MEASUREMENT

The Engineer will measure the surface area of restored turf.

S-48.5 BASIS OF PAYMENT

The Contract Unit Price for Site Restoration is compensation in full for Equipment, Materials and labor required to complete the Work.

Schedule

The Department will pay for Site Restoration on the basis of the following schedule:

Item No.	Item	Unit
2575.618	Site Restoration	square foot

S-49 (2582) PAVEMENT MARKINGS

REVISED 09/29/23

SP2020-224

S-49.1 Add the following to MnDOT 2582.2:

For pavement marking installations between the dates of October 15 and April 1, provide and use pavement marking Materials listed on the "Late Season Pavement Marking Materials" APL.

S-49.2 Delete and replace the fourth paragraph of MnDOT 2582.3B.7.b with :

For Pref Tape Gr In provide a recess depth between 150 mil to 200 mil. For Pref Thermo Gr In provide a recess depth of 110 mil ± 10 mil.

S-49.3 Delete and replace MnDOT 2582.3C.3 with :

C.3 Retroreflectivity

Initial pavement marking retroreflectivity is defined as the pavement marking dry and wet retroreflectivity when measured between 14 Calendar Days and 44 Calendar Days after pavement marking installation, prior to snow and ice maintenance operations.

C.3.1 Dry Retroreflectivity

Provide pavement markings meeting the following minimum initial pavement marking dry retroreflectivity when tested using 30-meter geometry in accordance with *ASTM E1710, Standard Test Method for Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer.*

Table 2582.3-2
Minimum Initial Pavement Marking Dry Retroreflectivity

	White	Yellow
Pref Tape	600 millicandela/square meter/lux	500 millicandela/square meter/lux
Pref Thermo	300 millicandela/square meter/lux	200 millicandela/square meter/lux
Pref Thermo, ESR (Enhanced Skid Resistance)	250 millicandela/square meter/lux	150 millicandela/square meter/lux
Multi Comp	300 millicandela/square meter/lux	200 millicandela/square meter/lux
Paint	275 millicandela/square meter/lux	180 millicandela/square meter/lux

C.3.2 Wet Retroreflectivity

When recessed, provide linear pavement markings in the field meeting minimum initial pavement marking wet retroreflectivity as listed in Table 2582.3-2A in accordance with ASTM E 2832, *Standard Test Method for Measuring the Coefficient of Retroreflected Luminance of Pavement Markings in a Standard Condition of Continuous Wetting.*

Table 2582.3-2A
Minimum Initial Pavement Marking Wet Retroreflectivity

	White	Yellow
All Materials	200 millicandela/square meter/lux	200 millicandela/square meter/lux

S-50 (2582) PAVEMENT MARKINGS (SPOTTING METHOD AND WR)

REVISED 06/30/23

SP2020-224.1

S-50.1 Add the following to MnDOT 2582.3B:

Obtain acceptance from the Engineer prior to using longitudinal joints, pavement edges and existing marking as horizontal control. Provide marking related lane closures and traffic control. Locate points to provide horizontal control for permanent and temporary pavement markings. Prior to placing pavement markings, obtain acceptance of proposed locations from the Engineer.

S-50.2 Delete and replace the third paragraph of MnDOT 2582.3B.8 with:

For WR markings, apply wet reflective media per manufacturer's specifications and apply the Utah Blend beads specified in 3592.B.2 "Utah Blend" Gradation as the second drop glass bead.

S-51 (3107) MASONRY MORTAR

RESTORED 06/30/23

SP2020-225.1

S-51.1 Delete and replace MnDOT 3107 with the following:

3107.1 SCOPE
Provide masonry mortar for use in utility/sewer and other applications.

3107.2 REQUIREMENTS

A. Utility/Sewer Application

Provide a preblended, dry, air-entrained, bagged mortar mix designed for utility/sewer applications from the approved source listed on the *Approved/Qualified Products List*, meeting the requirements of *ASTM C270, Standard Specification for Mortar for Unit Masonry, and ASTM C1714, Standard Specification for Preblended Dry Mortar Mix.*

Mix the preblended bagged mortar mixture onsite for the minimum time stated by the manufacturer. Do not exceed the manufacturer allowable mixing water. If the manufacturer does not recommend a minimum mixing time, mix the preblended bagged mortar mixture for a minimum of 5 minutes. The Engineer will not allow retempering the mortar mixture and will reject mortar mixtures not placed within 60 minutes of mixing.

B. Applications Other Than Utility/Sewer

For applications other than for utility/sewer, provide masonry mortar in accordance with *ASTM C270, Standard Specification for Mortar for Unit Masonry*, based on the type of mortar required by the Contract. Mix in accordance with the manufacturer's recommendations.

For site mixed masonry mortar using bagged masonry cement, submit to the Engineer a statement of compliance meeting the requirements of *ASTM C91, Standard Specification for Masonry Cement*. Label the type of masonry cement, either Type S or Type M, on each bag.

3107.3 SAMPLING AND TESTING
Provide samples for site mixed masonry mortar as required by the Contract.

S-52 (3113) ADMIXTURES FOR CONCRETE

RESTORED 06/30/23

SP2020-226

S-52.1 Delete and replace MnDOT 3113.2A with the following:

A Materials
Provide Class I admixtures from the Approved Products List meeting the requirements of *ASTM C494, Standard Specification for Chemical Admixtures for Concrete*.

Department identifies the following as Class I admixtures:

(1) Type A — Water reducing
(2) Type B — Retarding
(3) Type C — Accelerating
(4) 7Type D — Water reducing and retarding

(5) Type E — Water reducing and accelerating
(6) Type F — Water reducing, high range
(7) Type G — Water reducing, high range and retarding
(8) Type S — Specific performance admixtures

Provide Class II air-entraining admixtures from the Approved Products List meeting the requirements of *AASHTO M 154, Standard Specification for Air-Entraining Admixtures for Concrete,* except the tests for bleeding, bond strength, and volume change are not required.

Provide Class III corrosion inhibiting chloride admixtures from the Approved Products List meeting the requirements of *ASTM C1582, Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete*.

S-53 (3131) INTERMEDIATE AGGREGATE FOR PORTLAND CEMENT CONCRETE

NEW 09/29/23

SP2020-226.3

S-53.1 Add the following to the first paragraph of MnDOT 3131.2D:

If the CIA is <15 percent of the total aggregate in the mix, Table 3137.2-3(b) is modified to a maximum of 50.0 percent by weight of Carbonate in Class C aggregate.

S-54 (3137) COARSE AGGREGATE FOR PORTLAND CEMENT CONCRETE

NEW 03/29/24

SP2020-226.4

S-54.1 Delete MnDOT 3137.2C and replace with the following:

C Washing

Wash Class B, Class C, Class D, and Class R coarse Aggregate to comply with the requirements of Table 3137.2-1(i). Wash Class A aggregate as needed to comply with the requirements of Table 3137.2-1(i), except always wash Class A aggregate for use in Concrete Pavement.

S-54.2 In Table 3137.2-1, delete the "#" footnote and replace with the following:

Each individual fraction at the point of placement consists of dust from fracture and free of soil (eg., clay and silt) and shale.

S-55 (3138) AGGREGATE FOR SURFACE AND BASE COURSES

REVISED 03/29/24

SP2020-227

S-55.1 Add the following to MnDOT 3138.2C:

(3) When mixing recycled Aggregate with virgin Aggregate, the minimum Los Angeles Rattler of Carbonate virgin Aggregate is 40 percent. Meet all other virgin Aggregate requirements in 3138.2B, "Virgin Materials".

S-55.2 Add the following note under Table 3138.2-3 of MnDOT 3138.2E:

For 100 percent crushed quarried class 5 aggregate, the required passing the number 4 sieve is 30 – 80, the required passing the number 10 sieve is 15 – 65, the required passing the number 40 sieve is 7 – 35, and the required passing the Number 200 sieve is 3.0 – 12.0. The 1-1/2 inch, 3/4 inch, and 3/8 inch requirements for crushed quarried class 5 aggregate are the same as in Table 3138.2-3.

S-55.3 Delete and replace MnDOT 3138.2D(5) with the following:

(5) Provide Aggregate with a minimum clay content of 3 percent and a Plasticity Index (PI) of 5 - 12. In lieu of meeting the minimum clay content and PI, the requirements are fulfilled if one of the following are met:

(a) the Aggregate is composed of at least 25 percent recycled Materials.
(b) the Aggregate is composed of at least 25 percent crushed quarry Aggregate.
(c) If using glacial or fluvial Aggregate, a minimum of 5 percent 3/8 minus crushed limestone is added.

S-56 (3149) GRANULAR MATERIAL

NEW 06/28/24

SP2020-228.1

S-56.1 Replace 3149.2D.2 with the following:

D.2 Structural Backfill

Provide 100 percent virgin structural backfill meeting the requirements of Table 3149.2-3, and the following.

Table 3149.2-3
Structural Backfill Requirements

Requirement	Percent
3/4 inch Sieve	100 passing
Percent Passing Ratio # 40/# 10	0 – 65
No.200 Sieve	0 – 5.0 passing
Clay Percentage as Determined by MnDOT Test Method 1302	1.5 maximum

(1) Provide screened Material meeting the requirements of 3137.2B, "Classification," for Class C.

S-57 (3236) REINFORCED CONCRETE PIPE

RESTORED 06/30/23

SP2020-229

S-57.1 Delete and replace MnDOT 3236.2A with the following:

A Materials

A.1 Aggregate Quality ..... 3126, 3131 and 3137

A.2 Form Release Agents 3902

A.3 Portland Cement 3101

The Department will allow admixtures in accordance with 2462, "Precast Concrete."

A.4 Blended Hydraulic Cement 3103

A.5 Fly Ash for Use in Portland cement concrete 3115

A.6 Ground Granulated Blast Furnace Slag Cement 3102

A.7 Precast Concrete 2462

A.8 Metal Reinforcement 2472

A.9 Preformed Gasket Seals for Concrete Pipe 3726

A.10 Precast Concrete Manufacturing 3240

S-57.2 Add the following to MnDOT 3236.2D:

Manufacturers of reinforced concrete pipe may produce an alternate "offset joint" on the spigot end of the pipe. This type of offset joint is to be used with the profile or pre-lubricated pipe seal systems. See MnDOT Standard Plate 3006.

S-57.3 Delete and replace Table 3236.3-1 of MnDOT 3236.3C.2 with the following:

Table 3236.3-1 1
Minimum Three Edge Bearing Testing Rates

Size Range, inch	Class Range	Test Rates
12 – 15	≤ 5	1 per 1000 pieces
18 – 36	≤ 4	1 per 800 pieces
18 – 36	5	1 per 400 pieces
42 – 60	≤ 3	1 per 400 pieces
42 – 60	4 & 5	1 per 200 pieces
66 – 96	≤ 5	1 per 200 pieces
NOTE: Testing rates for sizes not shown are as required by the Project Specifications. Begin a new schedule of testing after changing the mix design, after shutting down the system for major repairs and renovations, when beginning a new production run, and when beginning a new season. These rates are for testing to the 0.01 in D-load. Testing to failure is required on each combination of pipe size, wall thickness, and class manufactured once per production year. For arch pipe smaller than 88-inches nominal span, one piece per year of each size and class manufactured is required to be		

Size Range, inch	Class Range	Test Rates
tested to 0.01 in D-load. Besides, testing to failure is required for arch pipe smaller than 88-inches nominal span on each combination of pipe size and class manufactured once per production year.		

S-58 (3302) DOWEL BARS

REVISED 06/28/24

SP2020-230

S-58.1 Delete and replace the second paragraph of MnDOT 3302.2A with the following:

Epoxy coat the steel dowel bars in accordance with ASTM A1078, *Standard Specification for Epoxy Coated Steel Dowels for Concrete Pavement*, Type 1 coating, and as modified:

(1) Apply epoxy coating in a fusion bonded epoxy coating plant certified by the CRSI or another organization as approved by the Materials Engineer.
(2) Apply a minimum of 7 mils epoxy coating thickness. Epoxy coating of the entire dowel bar assembly is not required.
(3) Do not epoxy coat the ends of the dowel bars unless required by the Manufacturer.

S-58.2 Delete and replace MnDOT 3302.2B with the following:

B Tubular Dowel Bars

Provide welded carbon and alloy steel tubular dowel bar meeting the requirements of ASTM A513, *Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing*, and Table 3302.2-1.

Table 3302.2-1
Tubular Dowel Bar Requirements

Specified Dowel Bar Diameter	Required Tubular Dowel Bar Outside Diameter	Required Tubular Dowel Bar Wall Thickness
1.25 inches	1.375 inches	0.120 inches
1.50 inches	1.625 inches	0.120 inches

Cap the ends of the tubular dowel bar in a way to prevent intrusion of concrete or other Materials.

Galvanize the exterior and interior of the tubular steel dowel bars using G90 coverage zinc galvanized coating.

Epoxy coat the exterior of the galvanized tubular dowel bars in accordance with ASTM A1078, *Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement*, Type 2 coating and as modified in 3302.2A (1), (2), and (3).

S-59 (3721) PREFORMED ELASTOMERIC COMPRESSION JOINT SEALERS FOR CONCRETE

NEW 06/28/24

SP2020-232.2

S-59.1 Delete and replace MnDOT 3721.2C with the following:

Provide joint sealers meeting the requirements of ASTM D2628, *Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements*.

S-60 (3733) GEOSYNTHETIC MATERIALS

RESTORED AND REVISED 06/30/23

SP2020-233

S-60.1 Delete and replace MnDOT 3733.2B with the following:

Provide geotextiles made from woven, nonwoven, or knit fabric of polymeric filaments or yarns, such as polypropylene, polyethylene, polyester, or polyamide. Except for Type 1b (knit sock), provide geotextiles in compliance with the National Transportation Product Evaluation Program (NTPEP).

For Types 1, 3-13 meet the applicable requirements in Table 3733.2-1 through Table 3733.2-4.

Table 3733.2-1
Geotextile Properties for Types 1, 3, 4, 5, 6, 7

Geotextile Property	ASTM Test Method Units	Type *						
		1		3	4	5	6	7 †
		Fabric	Knit sock ‖					
B1 Grab Tensile Strength minimum, each principal direction	*D4632* Pounds	100	—	100	200	200	‡	300
B2 Elongation minimum, each principal direction	*D4632* Percent	—	—	50	50	—	‡	50
B3 Seam Breaking Strength minimum #	*D4632* Pounds	90	—	90	180	180	‡	270
B4 Apparent Opening Size (AOS) §	*D4751* U.S. Sieve	40	40 as applied	50	50	30	20	50
B5 Permittivity minimum**	*D4491* sec^{-1}	0.7	2.75 relaxed	0.5	0.5	0.05	0.05	0.5
B6 Puncture strength minimum	*D6241* Pounds	—	180	—	—	—	—	—
B7 Wide Width Strip Tensile Strength minimum each principal direction	*D4595* pounds/feet	—	—	—	—	—	‡	—

* Minimum Average Roll Values (MARV) based on an average of at least three tests per swatch.

‖ Provide socks made of knit polymeric Materials and meeting the requirements of *ASTM D6707-06, Standard Specification for Circular-Knit Geotextile for Use in Subsurface Drainage Applications*, for Type H as given for properties B4, B5, and B6 fabric. Ensure the sock exhibits minimum snag or run potential, is factory-applied to maintain uniform installed mass, and conforms to the outside diameter of the tubing with a snug fit.

† Needle-punched nonwoven. Do not use thermally bonded (heat-set) fabric.

‡ Requirements are site-specific and will be as specified in the Contract. The property values for B1 and B3 may not be less than shown for Type 5. If the Contract does not specify either B1 or B7, use a default value of 300 pounds for B1. If the Contract does not specify seam strength, use a default value of 270 pounds for B3.

Adhere to this requirement if the Contract requires or allows seams. Strength Specifications apply to factory and field seams. Use thread for sewing that has the strength of at least 25 pounds. Sew seams with a Federal Type 401 stitch (*ASTM D6193-16, Standard Practices for Stiches and Seams*) using a two-spool sewing machine and install seams facing upward. For seaming with adhesives, see the *Approved/Qualified Products List* available on the Department's website.

§ For U.S. Sieve sizes, the AOS Number must be equal to or greater than the Sieve size specified.

** Permittivity: P = K/L, where K = fabric permeability and L = fabric thickness.

Table 3733.2-2
Type 8 Geotextile Properties

Property	Requirements	Test Procedure
Geotextile type	Nonwoven, needle-punched geotextile, no thermal treatment (calendaring or IR)	Manufacturer Certificate of Compliance
Color	Uniform/Nominally same-color fibers	Visual Inspection
Mass per unit area	≥ 14.7 ounce/square yard	*ASTM D5261**
Thickness under load (pressure)	At 0.29 psi: ≥ 0.12 inches At 2.9 psi: ≥ 0.10 inches At 29 psi: ≥ 0.04 inches	*ASTM D5199*‖
Wide-width tensile strength	≥ 685 pounds/feet	*ASTM D4595*†
Wide-width maximum elongation	≤ 130 percent	*ASTM D4595*†
Water permeability in normal direction under load (pressure)	At 2.9 psi: ≥ 3.3×10^{-4} feet/second	*ASTM D5493* MnDOT Modified‡ or *ASTM D4491*#
In-plane water permeability (transmissivity) under load (pressure)	At 2.9 psi: ≥ 1.6×10^{-3} feet/second At 29 psi: ≥ 6.6×10^{-4} feet/second	*ASTM D6574* MnDOT Modified§ or *ASTM D4716***
Weather resistance	Retained strength ≥ 60 percent	*ASTM D4355*‖‖ at 500 hours exposure
Alkali resistance	≥ 96 percent polypropylene/polyethylene	Manufacturer certification of polymer

Table 3733.2-3
Types 9, 10, 11, and 12 Geotextile Properties

Properties	Test Method	Unit	Type 9		Type 11		Type 12	
			Minimum Average Roll Value					
			MD	CD	MD	CD	MD	CD
Tensile Strength at Ultimate	*ASTM D4595*	lbs/ft	3,500	3,200				
Tensile Strength @ 2% Strain	ASTM D4595	lbs/ft			600	1,000	480	1,800
Tensile Strength @ 5% Strain	ASTM D4595	lbs/ft			1,800	2,200	1,400	4,300
Cyclic Tensile Modulus @ 2% Strain	ASTM D7556 "Method C"	lbs/ft			50,000	70,000	50,000	120,000
Interaction Coefficient: Ci*	ASTM D6706				0.89		0.90	
Properties	Test Method	Unit	Maximum Roll Value					
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve	30		40		40	
Properties	Test Method	Unit	Minimum Average Roll Value					
Permittivity	ASTM D4491	sec^{-1}	0.5		0.90		1.0	
Flow Rate	ASTM D4491	$gal/min/ft^2$	40		75		75	
Properties	Test Method	Unit	Minimum Roll Value					
UV Resistance (at 500 hours exposure)	ASTM D4355	% Strength Retained	70		90		90	
Seam Breaking Strength	*ASTM D4884*	Pounds/ inch	200‖					
For Type 10, meet the requirements of AASHTO M288 Class 4A – Geotextile.								
* Perform test with a normal pressure of 1.0 psi. Use material in the mold consisting of GW or SP with a maximum internal angle of friction of 34 degrees. ‖ If required, use thread with a minimum strength of 25 pounds. Sew seams with a *ASTM D6193* Federal Type 401 stitch using a two-spool sewing machine, and install seams facing upward.								

Table 3733.2-4
Type 13 Geotextile Properties

Properties	Test Method	Unit	Minimum Average Roll Value
			MD and CD
Wide Width Max Elongation	ASTM D4595	%	20
Permittivity	ASTM D4491	Sec^{-1}	0.4
Minimum wet front movement in vertical direction	ASTM 1559 (modified for geotextiles)	Inches	4
Minimum wet front movement in horizontal direction:	ASTM 1559 (modified for geotextiles)	Inches	70
Wide Width Tensile Strength	ASTM D4595	lbs/Ft	5000

Properties	Test Method	Unit	Minimum Average Roll Value MD and CD
Wide Width Tensile Strength @2% Strain	ASTM D4595	lbs/Ft	450 MD and 1000 CD
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve	40 Maximum Opening Size
Flow Rate	D4491	Gal/Min/ft^2	30 MARV

S-60.2 Renumber Table 3733.2-4, "Geogrid Properties" of MnDOT 3733.2C to Table 3733.2-5, "Geogrid Properties".

S-61 (3876) SEED

NEW 06/28/24

SP2020-233.1

S-61.1 Delete and replace Table 3876.2-1 with the following:

Table 3876.2-1
MnDOT Seed Mixes

Seed Mixture	Application Rate (PLS pounds per acre)
Oats	100
Winter Wheat	100
Oats and Peas	110
Two-year Cover Crop	25
Patch Mix	30
Northern Boulevard	150
Southern Boulevard	160
Turfgrass	200
Snow Fence Ground Cover	84
Mesic Inslope	65
High-traffic Inslope	60
Sandy Inslope	65
Wet Ditch	20
Northeast Roadside	26
Northwest Shortgrass Roadside	26
Northwest Tallgrass Roadside	26
Southern Shortgrass Roadside	26
Southern Tallgrass Roadside	26

S-61.2 Delete and replace MnDOT 3876.2 B with the following:

B Blending

Provide Uniformly blended seed mixtures as required by the Contract and meeting the requirements of the Seeding Manual. Blend mixtures according to the requirements of the Department's Approved Seed Vendor Agreement.

B.1 Cover crop and turfgrass mixtures

Combine all components of cover crop, patch, boulevard, turfgrass, ground cover, and inslope mixtures.

B.2 Roadside and Wet Ditch mixtures

Blend and package components of these mixtures according to size to allow installation from the appropriate seed box of native seeding Equipment and in the following groups:

(1) Combine seeds of sedges, rushes, and forbs with small or medium seeds for installation with the small seeds box.

(2) Combine the seeds of grasses and large-seeded forbs for installation with the fluffy seed box.

(3) Keep the seeds of grain cover crops such as oats and winter wheat separate for installation with the grain box.

S-62 (3885) ROLLED EROSION PREVENTION PRODUCTS

RESTORED AND REVISED 06/30/23

SP2020-234

S-62.1 Delete and replace Tables 3885.2-1, 3885.2-2, and 3885.2-5 of MnDOT 3885.2A with the following:

SAP 003-607-027
SAP 003-680-005

Table 3885.2-1
Temporary, Straw-based Products

Criteria	Category 10	Category 20	Category 30
Net Number (upper/lower)	1	2	2
Fiber Fill Material	100 percent Straw	100 percent Straw	70 percent Straw, 30 percent Coconut/hemp
Mass, minimum*‡ (pound per square yard)	0.43	0.43	0.42
Reported Fiber Length, 80 percent greater than (inch)	3	3	3
Reported Functional Longevity, 75 percent remaining (month)	3	4.5	9
Reported Target Service Life (month)	4	9	12
Permissible shear, unvegetated# (pound per square foot)	1.50	1.75	2.00
Flow, probable maximum# (feet per second)	4.5	6	8
Machine Direction (MD) Tensile Strength, minimum§ (pounds per foot)	70	160	160
TD Tensile Strength, minimum§ (pounds per foot)	50	110	150
Permissible Anchor Type	Wood or biodegradable ‖ plant-based plastic barbed, glue, U, or round head metal, 11-13 gage	U or round head metal, 11-13 gage, Washer/60D (6 inches) Nail†	Helical twist pin, Washer/60D (6 inches) Nail†
Minimum anchor embedment length	4 inches	6 inches	8 inches

* Dry mass at the time of manufacture following ASTM protocols.
‖ Biodegradable means the product will decompose under ambient soil conditions into carbon dioxide, water, and other naturally occurring materials within one year of installation.
† Winter Utilization.
‡ *ASTM D6475, Mass per Unit Area of Erosion Control Blankets.*
\# *ASTM D6460, Performance in Protecting Earthen Channels from Stormwater-Induced Erosion.*
§ *ASTM D6818, Ultimate Tensile Properties of Rolled Erosion Control Products.*

SAP 003-607-027
SAP 003-680-005

SAP 003-607-027
SAP 003-680-005

Table 3885.2-2
Temporary, Wood Fiber Based Products

Criteria	Category 15	Category 25	Category 35	Category 45
Net Number (upper/lower)	Netless	2	2	2
Fiber Fill Material	100 percent Cellulose, Agricultural products, hemp, wood	100 percent Wood* Fiber	100 percent Wood* Fiber	100 percent Wood* Fiber
Mass, minimum ‖# (pound per square yard)	0.40	0.57	0.76	1.25
Reported Fiber Length, 80 percent greater than (inch)	Varies, 0.5 to 6	6	6	6
Reported Functional Longevity, 75 percent remaining (month)	1.5	6	12	24
Reported Target Service Life (month)	3	12	24	36
Permissible shear, unvegetated§ (pound per square foot)	1.00	2.10	2.50	3.25
Flow, probable maximum§ (feet per second)	2	7	8	11
MD Tensile Strength, minimum** (pounds per foot)	4	160	160	160
TD Tensile Strength, minimum** (pounds per foot)	4	110	110	110

Criteria	Category 15	Category 25	Category 35	Category 45
Permissible Anchor Type	Wood or biodegradable† plant-based plastic barbed, glue U or round head metal 11-13 gage	U or round head metal, 11-13 gage, Washer/60D (6 inches) Nail‡	Helical twist pin, Washer/60D (6 inches) Nail‡	Helical twist pin, Washer/60D (6 inches) Nail‡
Minimum anchor embedment length	4 inches	6 inches	8 inches	10 inches

* Derived from hardwood (Aspen spp.) or softwoods (pine).
‖ Dry mass at the time of manufacture following ASTM protocols.
† Biodegradable means the product will decompose under ambient soil conditions into carbon dioxide, water, and other naturally occurring materials within one year of installation.
‡ Winter Utilization.
 # ASTM D6475, Mass per Unit Area of Erosion Control Blankets.
§ ASTM D6460, Performance in Protecting Earthen Channels from Stormwater-Induced Erosion.
*** ASTM D6818, Ultimate Tensile Properties of Rolled Erosion Control Products.*

Table 3885.2-5
Permanent, Synthetic-based, Soil or Organic Fiber Media Filled Products

Criteria	Category 70	Category 72	Category 74	Category 76
Net Number* (upper/lower)	TRM	TRM	TRM	TRM
Fill Material ‖	3877.2C "Sandy Clay Loam Topsoil Borrow," 3890.2B "Grade 2 Compost" 3884.2B.1 "Organic Fiber Matrix (OFM)"			
Mass, minimum † (pound per square yard)	0.5	0.5	0.5	1.2
80 percent test chamber strength retained ‡ (hours)	500	1000	3000	3000
Target Service Life ‡	Permanent	Permanent	Permanent	Permanent
Shear, unvegetated, minimum # (pound per square foot)	2.00	2.25	2.50	2.75
Shear, vegetated, minimum # (pound per square foot)	6	8	10	12
MD Tensile Strength, minimum § (pounds per foot)	150	240	1400	3000
TD Tensile Strength, minimum § (pounds per foot)	130	200	1100	3000
Permissible Anchor Type	Helical twist metal hooks, Hooked No. 4 rebar, tension cable	Helical twist metal hooks, Hooked No. 4 rebar, tension cable	Tension cable per manufacturer specification	Tension cable per manufacturer specification
Minimum anchor embedment length ##	18 inches	18 inches	18 inches	18 inches

*Provide mats with cells at least 3/8 – 3/4 inch in depth to allow soil filling and retention, composed of nylon, polypropylene, polyolefin, polyester, or rust inhibited metal.
‖ See 2575 "Establishing Vegetation and Controlling Erosion" for approximate fill quantities to achieve a 0.5 – 1 inch layer filling all voids within product surface.
† *ASTM D6566 Mass Per Unit Area of Turf Reinforcement Mats*
‡ *ASTM D4355 Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc-Type Apparatus*
# *ASTM D6460 Performance in Protecting Earthen Channels from Stormwater-Induced Erosion.* Provide either vegetated or un-vegetated test results showing product meets the minimum criteria for that test. Some data may be extrapolated to show the upper value for vegetation establishment.
Minimum anchor embedment length may be reduced for anchors that are an alternative to straight pins or to account for site specific soil conditions.
§ *ASTM D6818 Ultimate Tensile Properties of Rolled Erosion Control Products*
TRM products must have an average opening size sufficient for allowing introduction of soil or organic growth medium fill and to allow plant roots and shoots to grow through. Product texture must be rough enough to prevent soil from sliding off.

2024

SALT Schedule of Materials Control

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Introduction

This Schedule of Materials Control (SMC) outlines the **MINIMUM** testing requirements for State Aid Funded and/or Federal Aid Projects **OFF** the National Highway and Trunk Highway System. Optional to this SMC is the MnDOT Materials Control Schedule. Usage of either schedule must be defined in the project proposal.

The SMC – LGA serves as a guide for material testing with allowable acceptance "as directed by the Engineer" detailed in Specification 1501.1(1) – Authority of the Engineer. These testing rates are a minimum and additional test may be taken at the Engineer's discretion. A minimal testing rate does not always ensure a quality product; field observations and attention to detail is crucial. Materials not listed on an approved products list may be sampled and tested as directed by the Engineer. Materials listed on a Qualified Products list may be accepted or tested at the discretion of the Engineer.

Federal Aid projects require Independent Assurance Inspection. Contact the MnDOT District IA Inspector when the job starts to provide the proper servicing of your project.

*****Agencies using MnDOT Metro Inspection Services will be sampled at the current MnDOT Schedule of Materials Control rates and will be billed accordingly.**

*****Contact the MnDOT District IA Inspector to provide servicing for your federal aid project.**

Definitions

Schedule of Materials Control

Schedule of Materials Control (SMC) are inserted into project proposals to direct how materials are to be sampled and tested. The SMC is updated yearly. Each SMC is project specific. Therefore, one needs to refer to their specific proposal.

Approved/ Qualified Products List

Products are "approved" when they have been found to routinely meet all applicable standards and specifications. The product is placed on the list based upon established successful manufacturer's quality control and warranties, but the listing may expire or require periodic renewal to verify the product has not changed over time. The approval process for the individual product should specify any expiration requirement. Testing may still be on at the Engineers discretion.

Certified Sources

Certified Sources must comply with each individual product's defined "certification procedure". Acceptance of products from certified sources follows the same sampling and testing as "approved/ qualified" products.

Quality control (QC): The activities performed by the **Contractor/Producer** that have to do with making sure the quality of a product or process meets the relevant contract requirements. All testing shall be performed by a certified tester.

Quality assurance (QA): The activities performed by the **Department/Agency** that have to do with making sure the quality of a product or process meets the relevant contract requirements. All testing shall be performed by a certified tester.

Verification Testing: Sampling and testing performed as called out herein to validate the quality of the product(s). **Part of QA.**

Material Acceptance Summary Instructions

STATE AID FOR LOCAL TRANSPORTATION
MATERIAL ACCEPTANCE SUMMARY

Rev. February 2019

SP/SAP(s)

Bid Item/ Spec No.	Item Description	Approved/ Qualified Product List (date checked)	Certificate of Compliance (date rec'd)	Accepted by Engineer* (date)
2105.604	Geotextile Fabric	5/26/18	5/26/18	6/6/18
2105.604	Soil Stabilized Geogrid	5/30/18	5/30/18	6/6/18
2357.506	Bituminous Material for Tack Coat	6/6/18	6/6/18	6/6/18
2573.503	Silt Fence, Type MS	5/14/18	5/14/18	6/6/18
2582.503	Epoxy Pavement Marking	7/30/18	7/30/18	7/31/18
3592	Drop-on Glass Beads	7/30/18	7/30/18	7/31/18
2574.508	Fertilizer Type 3	---	8/6/18	8/6/18
2575.508	Seed Mixture 22-111	8/6/18	8/6/18	8/6/18

Example Project

Date checked the Approved/Qualified product list. Print and file copy of approved list on acceptance date.

Date the certification was received. See specification 1603.3

Date accepted by the engineer.

* This item is hereby accepted by the Engineer as materially compliant for use on this project per the terms of specification 1501.1, subset (1).

Approved by Project Engineer: _____ Date: _____

Print Name: _____

Material Acceptance Summary

STATE AID FOR LOCAL TRANSPORTATION
MATERIAL ACCEPTANCE SUMMARY

Rev. February 2019

SP/SAP(s)

Bid Item/ Spec No.	Item Description	Approved/ Qualified Product List (date checked)	Certificate of Compliance (date rec'd)	Accepted by Engineer* (date)

* This item is hereby accepted by the Engineer as materially compliant for use on this project per the terms of specification 1501.1, subset (1).

Approved by Project Engineer: _____ Date: _____
Print Name: _____ Phone: _____

For an electronic Word version of this form, please visit the State Aid Construction webpage at:
https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=19623193

Bituminous Quality Management

The Contractor shall provide and maintain a quality control program as detailed in Specification 2360.2.G. The Engineer shall review the quality control program for compliance. This shall be provided at the precon.

	Type of Test	Spec Section (1)	Contractor / Producer – QC Testing Rates	Agency – QA Testing Rates
Start-Up Testing Rates for the 1st 2000 tons (2)	Bulk Specific Gravity	2360.2.G.7.b	1 test per 500 tons 55 lb. sample 3 full cylinder molds **(7)**	**(3) (10)** 1 Verification Mixture Sample test per day, all Verification samples are from a split (QC/QA) sample.
	Maximum Specific Gravity	2360.2.G.7.c		
	Air Voids (calculated)	2360.2.G.7.d		
	Asphalt Content	2360.2.G.7.a		
	Adj. Asphalt Film Thickness (AFT)	2360.2.E.7.e		
	Gradation	2360.2.G.7.f		
	Fines to Effective Asphalt Ratio (calculated)	2360.2.G.7.a/f		
	Coarse Aggregate Angularity (CAA)	2360.2.G.7.g	1 test per 1000 tons **(4) (5) (6) (7)**	
	Fine Aggregate Angularity (FAA)	2360.2.G.7.h		
	Added AC/Total AC Ratio (calculated)	2360.2.G.7.a		
Production Testing Rates	Bulk Specific Gravity	2360.2.G.7.b	1 test per 1000 tons 55 lb. sample 3 full cylinder molds **(7)**	**(3) (10)** Verification Mixture Sample test per day/ mix type, submit companion to the QC – CAA & FAA test results.
	Maximum Specific Gravity	2360.2.G.7.c		
	Air Voids (calculated)	2360.2.G.7.d		
	Asphalt Content	2360.2.G.7.a		
	Adj. Asphalt Film Thickness (AFT)	2360.2.E.7.e		
	Gradation (minimum of 1 per day)	2360.2.G.7.f		
	Added AC/Total AC Ratio (calculated)	2360.2.G.7.a		
	Coarse Aggregate Angularity (CAA)	2360.2.G.7.g	**(4) (5) (7)**	
	Fine Aggregate Angularity (FAA)	2360.2.G.7.h	**(4) (6) (7)**	
	TSR	2360.2.G.7.i	When directed by the Engineer	
	Aggregate Specific Gravity	2360.2.G.7.j		
	Mixture Moisture Content	2360.2.G.7.k	As directed by the Engineer	
	Asphalt Binder (QA ONLY)	2360	**(8)** 1 qt. steel container for asphalt binder	
	Asphalt Emulsion (QA ONLY)	2357	**(9)** ½ gal plastic container for asphalt emulsion. (Tack)	
	Compaction / Density Requirements	2360.3.D	Review special provisions	
	Small Quantity Requirements	< 500 tons per project may be accepted by the Engineer without testing.		

NOTES: Testing rates are minimum rates; additional testing is encouraged to ensure a quality product.

(1) Review Special Provisions & 2360.2G Mixture Quality Management.

(2) The testing rates apply only to mixtures that have not been tested on previous projects in the current year.

(3) The Agency shall witness a minimum of 1 (one) complete QC mixture sampling, splitting and test per day. The Agency shall take possession of all split QA samples immediately. The Agency shall randomly submit one QA split sample to the District Lab for Verification testing and inform with contractor the following day of test number. Additional verification samples can be taken at any time or location. When additional verification samples are taken, the contractor must test the Verification Companion split of this sample and include the results in the QC program.

(4) The Contractor will retain the extracted gradation samples in containers with field identification numbers for a period of 10 calendar days. The Engineer will identify which extracted gradation sample is the Verification Companion Sample and whether it is to be tested for coarse and fine aggregate angularity.

(5) **At start-up or new Mix Design**: 2 tests/ day for a minimum of 2 days, then 1/day if CAA is met. If CAA > 8% of requirement, 1 sample/ day but test 1/ week. No testing required for Class A and B Aggregates.

(6) **At start-up or new Mix Design**: 2 tests per day for a minimum of 2 days, then 1/day if FAA is met. If FAA > 5% of requirement, 1 sample/ day but test 1/week.

(7) Random number generation and determination of random sample location shall be consistent with Section 5 of ASTM D3665. The Engineer may approve alternate methods of random number generation.

(8) **During Asphalt Mixture Production (Field Verification):** Shall be from a certified supplier. Obtain asphalt binder samples from a sampling valve located between the pump and the drum. Contractor personnel shall obtain samples, under the observation of a department representative, by random selection from shipments of material at the project site. The samples shall be taken from the first load and subsequently 1 per 1000 tons of liquid asphalt binder for each supplier and grade of asphalt binder per contract. For contracts with less than approximately 25 tons (one truck transport) of asphalt binder, sampling may be waived. A minimum of 1 gallon of binder must be drawn and wasted from the sampling valve before the actual sample is drawn. Sample shall be sent in for verification testing.

(9) **During Mixture Production (Field Verification):** Shall be from a certified supplier. The Contractor shall sample first shipment, then submit 1 per 50,000 gallons. Sample emulsified asphalt in clean ½ gallon plastic container with wide screw top and send to MnDOT Chemical Lab within 7 days of sampling. Sample all emulsified asphalt from the distributor. Sample shall be sent in for verification testing. No Samples required unless directed by the Engineer.

(10) Conduct random belt samples and test for aggregate quality as directed by the Engineer.

Bituminous Specialty Items

Type of Test	Spec	Contractor/Producer – QC Testing Rates	Agency- QA Testing Rates
Gradation	2363	1 per 1,000 Ton with a minimum 1 per day.	1 per day. 35 lbs.
PASSRC & PASB	3139.3		
Micro-Surfacing	2354 3139.5	Stockpile: 1/1,500 Tons (min 1/day) Machine Hopper: 1/500 Ton (min 1/day)	Machine Hopper: 1/day, 30 lbs.
Seal Coat, Underseal & Otta Seal	2356 3137.2B	Stockpile: 1/1,500 Tons (min 1/day) Chip Spreader Hopper: 1/day	1/day from Hopper. 30 lbs.
% Crushing – CAA	2363	1 per 1,000 Ton with a minimum 1 per day.	1 per day from gradation test. 35 lbs.
PASSRC & PASB	3139.3		
Moisture / Aggregate	2354	Machine Hopper: 1/500 Tons (min 3/day)	1/day 2lbs
Micro-Surfacing	3139.5		
Sand Equivalence	2354	1/day	Test at Engineer discretion, 25 lbs.
Micro-Surfacing			
Flakiness Index	2356	Sample taken from first load on first day, submit to Agency: 30 lbs.	Agency will test at their discretion, see Lab Manual 1223
Bituminous Seal Coat & Bituminous Underseal			
Bituminous Mixture	2353	1/500 Tons, min 1/day. %AC, Gradation, Max SpG, Adj.AFT	1/day, 20 lbs. 1 cylinder from truck box.
UTBWC	3151.2G		
PASSRC & PASB	3151 2363	Asphalt spot check: min 1/day	-
Stone Matrix Asphalt – SMA Lab Manual 1203, 1204, 1205, 1211, 1214, 1806, 1807, 1808, 1813, 1853, 1854, 1855, AI SP-2 AASHTO T305	2365	**Tests**, %AC,gradation, Gmm, Gmb, Voids, VMA, CAA, Draindown, VCA, fines/effective asphalt. Rate, (1/1000 tons, min.1/day) Agg SpG, mix moisture, TSR to be tested as directed by Engineer. Submit companion 1 per day to agency: 3 full 6" by 12" cylinders	Tests: %AC, Gradation, Gmm, Gmb, Voids, VMA, CAA, VCA, fines/effective asphalt. Agency is not required to do drain down. Copy MDR to Project Engineer and Grading & Base Engineer.
Asphalt Binder Tests		**Asphalt Emulsion List**	**Asphalt Binder List**
UTBWC	2353 3151	**Asphalt Binder:** Sample first load, then 1/250,000 gallons. Sample size of 1 quart metal container. **Emulsified Asphalt:** Sample first load, then 1/50,000 gallons. Sample size of ½ gallon wide screw top plastic container.	
Micro-Surfacing	2354		
Seal Coat, Underseal & Otta Seal	2356		
Tack Coat	2357		
PASSRC & PASB	3151		
Asphalt Binder Rate	2354	Verify Application Rate 3/day	Verify Application Rate 1/day
Micro-Surfacing			
Fog Seal	2355	Verify Application Rate 1/day	Verify Application Rate 1/day
Seal Coat, Underseal & Otta Seal	2356		
Bit Tack Coat	2357		

Specification 2215 – Cold Inplace Recycling (CIR), Stabilized Full Depth Reclamation (SFDR) and Cold Central Plant Recycling Bituminous (CCPR)

Test Type	Contractor/Producer QC Testing Rates	Agency QA Testing Rates	Grading & Base Manual/Form
Gradation SFDR (Simple) Pre-ground un-stabilized material	1 per mile – report sieves 2" & 3"	Run gradation at the discretion of the Engineer	.215 / 101 report sieve 2" & 3"
Gradation (Entire) (Material to be stabilized)	One per day, give split sample to the Engineer	Run gradation at the discretion of the Engineer	.215 / 101 report sieve 2", 1.5", 1.25", 1", ¾", 3/8",#4, #10, #30.
Gradation (Simple) (Material to be stabilized)	1 per mile for SFDR & CIR. 1 per 2,000 ton for CCPR.	Run gradation at the discretion of the Engineer	.215 & .293 / 101 report sieve 2" & 1.5" for SFDR, 1.5" and 1.25" for CIR
CIR & SFDR Depth Check – Unstabilized and Stabilized	None	1 per day	.284 / 401
SFDR & CCPR Moisture – before injecting with bituminous.	1 per mile of anticipated daily production and after rain. 1 per mile for SFDR after mechanical drying.	Run moisture at the discretion of the Engineer	.245 Speedy tester not allowed.
Penetration Index (DCP) – SFDR only Unstabilized.	2 per mile	1 per mile	.255 / 205
Calibrate: mineral stabilizing agent application rate.	Once using design rate per vane feeder.	Observe contractor calibration	.286 or .287
Moisture: before injecting liquid bituminous material	1 per mile of daily anticipated SFDR & one after rain or mechanical drying out (disking, etc.).	none	.281 / 105
Yield: Mineral Stabilizing Agent and/or Liquid Bituminous Material	1 per transport load each type	1 per day each type	.286 & .287 / 402 & 403
Compaction: Nuclear density for SFDR stabilized and CIR	10 per lane mile, (**see note below**).	Observe the Contractor.	.282
Control Strip: SFDR Stabilized and CIR	Minimum of once per project	Observe the Contractor.	
Bituminous Material Samples		. 1 per 50,000 gallons; sample first load	1 quart each sample
Mineral Stabilizing Agent Samples	None	1 sample	none
Foaming asphalt checks expansion ratio & half life	1 per load	Observe the Contractor.	.285
Moisture (stabilized) – before placement of next layer during curing.	2 per day until moisture stabilizes & placement of HMA.	None	Grading & Base Manual

Note: The Engineer may require a Contractor to perform additional nuclear density tests in areas that the Engineer believes are failing density requirements.

Grading and Base Construction Items (1 of 4)

	Material Type	Spec.	Contractor / Producer QC Testing Rates	Minimum Required Agency QA Testing Rates	Verification Testing Sample
Gradation Testing (2) (3)	Aggregate Surfacing	3138	1 / 1,000 CY (CV) stockpile gradation only required for material on hand.	> 250 yd^3 (CV) or 500 Tons and < 2000 yd^3 (CV) or 4000 tons. Material is a minimum of one lot **(5)**. Test two random samples from each lot and average. > 2000 yd^3 (CV) or 4000 Tons. Divide into lots with lot size **(5)** no greater than 2000 yd^3 (CV) or 4000 Tons. Test two random samples from each lot and average.	1/source 30 lb.
	Aggregate Base	3138			
	Shoulder Base Aggregate	3138			
	Drainable Aggregate Base (OGAB & DSB)	3136			
	Granular and Select Granular Material (borrow/embankment)	3149.2B	1/10,000 CY (CV) only required for material on hand.	1/40,000 yd^3 (CV)	1/source 30 lb.
	Stabilizing Aggregate	3149.2C			
	Reclamation FDR	3135.2B	None	Test at Engineer's discretion. Inspect for oversize chunks (+3"), after the motor grader has overturned the material	None
	Granular Filter	3601.2B	1/source – before delivery on the project. Only required for materials on hand. Spec 1906.2	1/ source	1/source 30 lb.
	Backfill Materials	3149.2D			
	Granular Bedding	3149.2F			
	Aggregate Bedding	3149.2G			
	Coarse Filter Agg.	3149.2H			
	Filter Aggregate	3149.2J			
	Sand Cover	3149.2K			
Proctor	Non-Granular Material Used to determine optimum moisture & maximum density.	2106 3149	None	1 per major soil, subgrade prep specified density requires 100% of proctor density.	1 sample 25 lb.
Sand Cone, Nuclear Density or LWD / Specified Density *	Non-Granular Material For non-granular material, i.e., material that does not meet 3149.2B.1		**AGENCY TESTING**: **Roadway Embankment**: One test per 4,000 yd3 (CV) or if test rolled, One test per 10,000 yd3 (CV) **Transverse culverts & abutments:** 1 test per every 2 feet of fill. **Structures and Longitudinal Trenches:** One test per 300 feet of each structure per 2 feet per fill. **Sidewalks and Trails:** 1 per 500 feet. **Subgrade Preparation:** One per 25 road stations.		

Grading and Base Construction Items (2 of 4)

	Material Type	Spec.	Contractor / Producer QC Testing Rates	Minimum Required Agency QA Testing Rates	Verification Testing Sample
Penetration Index Method (DCP) or LWD *	Aggregate Base	3138 2211.3C	None	1 DCP tests per 500 yd^3 (CV) or 1 per 1000 Tons. If test rolled, 1 test / 1,500 yd3 (CV) or 3000 Tons.	None
	Shoulder Base Aggregate				
	Reclamation FDR	3135.2B 2215.2C		1 DCP test per 3,000 yd^2. If test rolled, 1 test / 10,000 yd^2	
	Walks & Trails	2521		1 per 500 feet of Sidewalk or Trail	
	Granular Materials Subgrade Preparation (for materials meeting 3149.2B1)	3149.2B	**AGENCY TESTING:** **Roadway Embankment:** One test per 2,000 yd3 (CV) or if test rolled, One test per 6,000 yd3 (CV) **Transverse culverts & abutments:** 1 test per every 2 feet of fill. **Structures and Longitudinal Trenches:** One test per 300 feet of each structure per 2 feet per fill. **Sidewalks and Trails:** 1 per 500 feet. **Subgrade Preparation:** One per 25 road stations.		
Moisture Content Test During All Compaction Methods (4)	Aggregate Base, Shoulder, Surfacing & Walks	3138	None	**For 2118, 2211,2221, and 2521:** 1 / 1,000 yd3 up to 10 Maximum **For 2451:** 1 per structure, for multiple adjacent structures, may test once, use judgement **For Quality Compaction:** Test as directed by Engineer.	None
	Drainable Aggregate Base (OGAB & DSB)				
	Reclamation FDR	3135.2B	None	1 / 20,000 yd^2	
	All Embankment Materials	2106 3149	None	1/10,000 yd3 up to 10 Maximum **For Quality Compaction:** Test as directed by Engineer.	
	Subgrade Preparation	2106 3149		1 per 25 road stations **For Quality Compaction:** Test as directed by Engineer.	
Percent Crushing	Particle Count **(1)**	1906.2	1 required for Material on hand	1/source unless directed by Engineer, (required for 3138.2B & C, 3149.2C & G1, 3136.2B).	1 / source
Quality	Aggregate Quality Tests	3138 3149 3601	1 required for material on hand, Spec 1906.2	1/ source unless directed by Engineer	1 / source 30lb
Depth Check	Reclamation FDR	3135.2B	1/Mile.	1 per day unless directed by Engineer	

Material Type		Spec.	Contractor / Producer QC Testing Rates	Minimum Required Agency QA Testing Rates	Verification Testing Sample
Test Rolling	Test Rolling (6)	2111	The contractor shall perform test rolling at the top of all: • Non-granular subgrade (2106) • Granular subgrade that does not meet 3149.2.B.2 (2106) • Base (2211) and shoulder base (2221) • Non-Stabilized Full Depth Reclamation (FDR) (2215) • Minimum 12' width and 300' length. Agency to observe test rolling.		

Verification Testing Samples are companion split samples to the QA sample:

- Companion gradation, proctor, QA crushing, aggregate quality samples not required 1,000 tons or less.
- Include the laboratory companion with the first field sample.
- Include the field sample results with the laboratory sample.
- Laboratories with AMRL Accreditation are not required to submit laboratory companion samples.
- Carbonate aggregate materials require 50 lb. samples for the laboratory testing.

NOTES:

(1) Percent crushing test is not required when the material is crushed from a quarry or contains 25% or greater recycled materials.

(2) Submit a laboratory companion to the first Acceptance Gradation sample for a bituminous extraction, see 3138.2C. Full Depth Reclamation samples are not required.

(3) The Certification of Aggregates and Granular Materials procedure and documentation of testing locations is at the discretion of the Engineer.

(4) For quality compaction per spec 2106.3G.2, test at Engineer's discretion.

(5) Lot sizes may be adjusted by the Engineer. This may be good practice if parts of the project are taking place in separate areas or at separate times, such as many turn lane or excavation areas or separate project stages.

(6) The Engineer may elect, with the concurrence of the Contractor, to have the Contractor test roll per 2111, "Test Rolling", material meeting the requirements of 3149.2.B, "Select Granular Material", in lieu of spot compaction testing. If this method is adapted, the Contractor would be required to first place 3" of base on top of the Select Granular prior to test rolling. For areas failing test rolling the Contractor is required to remove the base and recompact the material, then place the base back, and retest roll. There is no additional compensation to the Contractor if this method is adapted. Additionally, the Select Granular is not accepted until passing test rolling has occurred.

* Review the Special Provisions. The Grading and Base Manual allows the nuclear density gauge, see pages 60 and 65.

NOTES:

Conversions: 1 ton = 0.55 yd3 (CV), 1 ton = 0.7 yd3 (LV), 1 yd3 (CV) = 1.8 tons.

Less than 500 tons (250 CY) may be accepted by the Engineer without testing.

Grading and Base Construction Items (4 of 4)

Guidelines for Required Crushing & Aggregate Quality Tests

	3149 Granular Materials	**3138** Aggregate for Surface and Base	**3136** Drainable Bases
Crushing	Yes, for Stabilizing Aggregate, Fine Aggregate Bedding and Medium Filter Aggregate. Test waived if material contains recycled at twice the minimum crushing requirement. Not required for quarried sources.	**Yes**, for Class 5, 5Q & 6. Test waived if material contains recycled at twice the minimum crushing requirement. Not required for quarried sources. Class 2 must contain 100% crushed quarry rock.	**Yes.** Not required for quarried sources.
Bitumen Content	**At the discretion of the Engineer**	**At the discretion of the Engineer**	Not applicable
LAR	Not applicable	**Yes**, if source is carbonate quarry and does not contain bitumen.	**Yes**
Insoluble Residue	**Yes**, if source is carbonate quarry and does not contain bitumen.	**Yes**, if source is carbonate quarry and does not contain bitumen.	**Yes**, if source is carbonate quarry.
Litho Exam & Shale Float Test	**Yes**, for Medium Filter Aggregate	**Yes**, for Class 3, 4, 5, 5Q & 6, when not from quarried rock, and does not contain bitumen.	**Yes**, when not from a quarried source.

Testing procedures in the Grading & Base Manual.

Forms and worksheets at the Grading & Base website.

Gradation worksheets at the SALT Construction website.

****MAKE SURE TO FILL OUT THE REQUIRED PRELIMINARY AND FINAL GRADING AND BASE REPORTS AND SUBMIT TO PROJECT ENGINEER.****

http://www.dot.state.mn.us/materials/gradingandbasedocs/Forms/form001_08_043019.xlsx

Certified Ready-Mix Concrete (1 of 3)

The Prime Contractor is responsible to assure that all ready-mix concrete used is produced by an annually Certified Ready-Mix plant as detailed in Specification 2461.3F.

Material Spec.	Concrete Plant Production Testing Rates *	Test Type (Concrete Manual)	Contractor / Producer QC Testing Rates				Form
bridge 2406.2 2411.2 2461.2 2461.3 general 2301** 2452.2 2461.2 2461.3 2506.2 2511.2 2514.2 2520.2 2521.2 2531.2 2533.2 2545.2 2554.2 2557.2 2564.2 2565.2		Gradation (5-694.145) (5-694.148) 3126, 3131, 3137	**For all JMF's & Bridge Deck Mix Designs** **Daily Concrete Quantity**: 1 per fraction per source per day between **20 – 400 yd³**. If over 400 yd3 per day, take a second gradation after the **DAILY** total exceeds 400 yd3. **Bridge Deck Concrete** must have passing gradations prior to mixing.				Concrete Agg. Work sheet, Agg. Grad. Control Charts, R-M Plant QC workbook. R-M Plant QA Workbook
			For all other mix designs, **Weekly Concrete Quantity**: 1 per fraction per source per week between **20 – 400 yd³**. If over 400 yd3 produced per week, take a second gradation after the **WEEKLY** total exceeds 400yd3.				
			Department Plant Monitor Testing Rates: Verification only **Verification Sample:** When weekly concrete quantity is ≥ 20 yd³: 1 per fraction per source per week, split and tested by both Agency and Contractor				
		Moisture Content (5-694.142)	**QC rates:**	1 every 4 hours When Daily Concrete Quantity ≥ 20 yd³	**QA rates:**	None	
		Test Type	**Agency QA Testing Rates (1)**				
		Aggregate Quality (5-694.146)	Minimum of 1 per each fraction - use of MnDOT test results for the same 30-day time period is acceptable. For all bridge deck concrete poured during the month: Test monthly quality to 3137.2D2 for each coarse aggregate fraction. Designate 3137.2D2 on the sample card. Gradation results will be included with the monthly quality tests.				
		Coarse Aggregate (% Passing 200) (5-694.146)					
		Minimum Aggregate Sample Size All Aggregate Gradation and Quality samples require companions, double sample size					2410 Sample ID Card
		Aggregate Size	Gradation	Quality	Moisture	% -200 Course.Agg.	
		3/4" Plus, #4	30 lb.	50 lb.	2000 g	5000 g	
		3/4" Minus, #67	10 lb.	30 lb.	2000 g	2500 g	
		#7, CA-70	6 lb.	20 lb.	2000 g	2500 g	
		CIA to meet #67	6 lb.	20 lb.	500 g	500 g	
		CIA to meet JMF, FIA, CS, FS	500 g	20 lb.	500 g	500 g	
		CA-80, #89	1.1 lb. (500 g)	20 lb.	500 g	500 g	
		Fine Aggregate	1.1 lb. (500 g)	20 lb.	500 g	-	

Certified Ready-Mix Concrete (2 of 3)

Spec.		Test Type	Agency QA Testing Rates (1)	Form
bridge 2406.2 2411.2 2461.2 2461.3 general 2301** 2452.2 2461.2 2461.3 2506.2 2511.2 2514.2 2520.2 2521.2 2531.2 2533.2 2545.2 2554.2 2557.2 2564.2 2565.2	Concrete Field-Testing Rates	Sampling Locations for Air, Slump (when required), Temperature and Cylinder Testing First load each day per mix - Take sample after discharging approximately 1/4 yd3, stop further discharge until both slump and air content test are completed. The first load of concrete must have passing air content and slump prior to placement. Cast strength specimens from the same load as the air content and slump test. Test whenever adjustments are made to the mix. Take all tests at the point of placement. Subsequent tests - Sample from the middle portion of the load.		
		Air Content - Type 3 Concrete (5-694.541)	1 test per 100 yd3. Test first load each day per mix. Test when adjustments are made to the mix.	
		Slump (5-694.531)	Test first load each day per mix, then as necessary to verify passing slump. For Bridge Concrete: 1 test per 100 yd3. No testing required for slip form placement.	
		Air and Concrete Temperature (5-694.550)	Record temperature each time air content, slump or compressive strength specimen is performed/fabricated.	
		Compressive Strength (5-694.511) Standard cylinder size is 4 x 8, use 6 x 12 with aggregate greater than 1 1/4". Review 2461.3G.5 Test Methods and Specimens.	General Concrete Grades F, G, M, P, and R: 1 set of 3 cylinders per 300 yd3 per mix per day.	**2409** Concrete Cylinder ID Card
			Bridge Concrete Grades B, S, and Y: 1 set of 3 cylinders per 100 yd3, then 1 set of 3 cylinders per 300 yd3 per mix per day	
			Agency will break 1 set of 3 cylinders at 28 days. Agency will cast up to 3 control cylinders, any additional control cylinders are the responsibility of the Contractor.	
			Cellular Concrete: 1 set of 4 cylinders (28 days) per day, fill in 2 equal lifts, *do not rod*, lightly tap the sides, cover and move to area with no vibration. Do not disturb for 24 hours.	

NOTES:

(1) Review the requirements of 2461.3F Certified Ready-Mix Concrete, 2461.3G Concrete Placement and 5-694.010 Inspector's Checklist in the Concrete Manual.

***Small Quantity Requirements** are for less than 20 yd3 per day, Plant Monitoring is not required but **Concrete Field Testing is required**.

****Concrete Pavement:** Use Certified Ready-Mix Concrete testing rates when: a) The entire concrete paving project is less than 3,500 cu. yd. b) When a secondary plant is used to provide minor work.

Certified Ready-Mix Concrete (3 of 3)

The Prime Contractor is responsible to assure that all ready-mix concrete used is produced by an annually Certified Ready-Mix plant as detailed in Specification 2461.3F.

Guidelines

- The testing rates shown in this Schedule of Materials Control are minimums. Take as many tests as necessary to ensure quality concrete. Should circumstances arise on a project which makes the testing rate impractical, contact the Concrete Engineering Unit.
- All samples shall be taken in a random manner using an appropriate number generator.
- The first load of concrete for any pour must have passing air content and slump results, prior to placing.
- If batching or field adjustments are made, test the adjusted load for air content and if suspect, slump, before it gets into the work. The Engineer will determine if additional testing is required after each water adjustment made during slip form placement. Continue to test for air content and slump, if suspect, when test results are inconsistent or marginal.
- If any field test fails, reject the concrete or if the Producer adjusts the load to meet requirements, record the adjustments on the Certificate of Compliance. Retest the air content of the load, slump if required, and record the adjusted test results. Test the next load for air content and slump, if required, before it gets into the work.
- Material not meeting requirements shall not knowingly be placed in the work. If failing concrete inadvertently gets placed in the work, review either the MnDOT Standard Specifications for Construction or contact the Concrete Engineering Unit for monetary deduction recommendations.

Best practices

- It is recommended that the Agency Plant Monitor be present during critical pours, such as superstructure or paving concrete (i.e., 3A21, S mixes, JMF mixes).
- It is recommended that the Agency representative continually monitor the progress of all concrete pours in the field and review Certificate of Compliances. It is not a recommended practice to only perform minimum testing requirements and leave the pour.
- It is recommended to make standard strength cylinders after the first load of concrete unless that is the only load of concrete for that mix that day.
- The Agency is responsible for verification sampling. For safety and consistency in sampling and splitting of the sample, it is recommended that the agency and the producer/contractor obtain the verification sample in tandem. This will allow the producer/contractor to witness the sampling process and take possession of the verification companion.

Concrete Plant and Field Materials

All materials must come from certified or qualified sources. All certified sources must state so on the delivery invoices. The most current list of certified/approved sources can be found at MnDOT Material website. Materials listed on the Approved/Certified Products List are not required to be sampled but need to be listed on the Material Acceptance Summary detailed in the SALT SMC. Samples can be submitted as directed by the Engineer.

	Material	Spec. No.	Agency QA Field Sampling Rate	Form No.
Concrete Plant Batching Materials	Portland Cement	3101	Shall be a Certified Supplier - For certified ready-mix and concrete paving sample rates: 1 sample when the plant is certified. Take additional samples f the plant changes sources or as the contract requires. The producer obtains a 5 lb. sample and stores the sample in a sealed container provided by the Agency and includes the supplier's delivery invoice from which the sample is obtained.	24300 ID Card Cement Samples
	Slag	3102		
	Blended Cement	3103		
	Fly Ash	3115		24308 Fly Ash
	Admixtures (Acceleration, Retarding, Water-Reducing, Air-Entraining, etc.)	3113	For all concrete: 1 sample of Air Entrainment and Type A Water Reducer in a 1/2-pint plastic container provided by the Agency when the plant is certified. Take additional samples if the plant changes sources or as the contract requires. The Producer should agitate the admixture tank prior to obtaining samples form dispensing tubes and store the samples in sealed plastic containers provided by the Agency.	2410 Sample ID Card
	Water	3906	1 Non-Potable Water sample in a 1-gallon clean glass or plastic container from a questionable source. Clarified Water: 1 per month during Department production	
Concrete Field Materials	Preformed Joint Filler	3702	Visual Inspection	2410 Sample ID Card
	Preformed Elastomeric Type	3721	1 per lot. Only materials from a qualified source. Link to Approved Products List.	
	Silicone Joint Sealer	3722		
	Hot Poured Elastomeric Type	3723 3725		
	Burlap	3751	Visual Inspection	
	Colored Concrete Membrane Curing Compound	3752	Visual Inspection - Use only from qualified source.	
	Membrane Curing Compound	3753 3754 3755	Visual Inspection - Use only pre-approved curing compounds.	
	Plastic	3756	Visual Inspection - Must be white opaque and free from holes.	
	Refer to the "Metals" schedule for sampling requirements for concrete reinforcement.			

Concrete Pavement – Agency (1 of 2)

Test Type (concrete manual)	Spec.	Concrete Paving Batch Plant Agency QA Testing	Certified Ready-Mix Plant Agency QA Testing	Form
Gradation (1) (5-694.145) (5-694.148)	3126 3131 3137	Daily Concrete Quantity ≥ 500 **Agency QA Testing Rates: Verification only** **Verification Sample**: -, *1 per fraction per source per day, split and tested by both Agency and Contractor	Daily Concrete Quantity ≥ 100 yd3 **Agency QA Testing Rates: Verification only** **Verification Sample**: -, *1 per fraction per source per week, split and tested by both Agency and Contractor	JMF Concrete Aggregate Workbook
Aggregate Moisture - QC Verification **(2)** (5-694.142)	2301	If w/c incentives apply: 1 per 1000 yd3 or every 4 hours, whichever is greater. Take initial sample within the first 250 yd3.	If w/c incentives apply: 1 per 200 yd^3 or every 4 hours, whichever is greater. Take initial sample within the first 100 yd^3.	Concrete W/C Ratio Work sheet
Water Content, Microwave Oven Verification **(3)** (5-694.532)	2301	Take initial sample within the first 250 yd^3. At least one additional verification test should be taken if more than 1000 yd^3 is produced in a day.	Take initial sample within the first 100 yd^3. At least one additional verification test should be taken if more than 400 yd^3 is produced in a day.	
Coarse Aggregate, -200 sieve (5-694.146)	3131 3137	Test Verification sample on the first day of production and each time the Contractor mobilizes the plant, changes the aggregate sources, or the cleanliness of the coarse aggregate is in question, then 1 per week randomly thereafter. -200 test may be performed at the lab instead at the plant at the discretion of the Engineer.		JMF Concrete Aggregate Workbook
Coarse and Fine Aggregate Quality **(4)**	3126 3131 3137	During concrete production: 1 randomly selected test each fraction every 20,000 yd^3 of production. Split the Quality sample 4 ways: 1) Provide 2 quarters of the sample to the producer/contractor. 2) Submit the remaining sample to the lab for quality testing including testing the -200 sieve on the coarse aggregate.		2410 Sample ID Card
Alkali Silica Reactivity (ASR) Testing	2301	1 per paving project per sand source. Provide one 5 lb. sample of: cement, supplementary cementitious material (fly ash or slag), and sand. Write "Project Specific ASR Testing" on all 3 sample cards. **ASR Testing is not required if the entire project is less than 3,500 cubic yards.**		2410 24300 24308
Coarse Aggregate Quality Testing of Incentive / Disincentive	3137	**If coarse aggregate quality incentives apply:** Test the Class B aggregates for % absorption and Class C aggregates for % carbonate including any other test necessary to make those determinations. Sample the 2 largest fractions in accordance with the following table and 2301:		Coarse Agg Quality Incentive / Disincentive Work sheet 2410 Sample ID Card
		Coarse Aggregate Quality Incentive/Disincentive Sampling Rates		
		Plan Concrete Cubic Yards	Samples per fraction	
		3,500 - 7,500	3	
		7,501 - 10,000	5	
		10,001 - 25,000	10	
		25,001 - 50,000	15	
		50,001 +	20	

*Use Certified Ready-Mix Concrete testing rates when: a) The entire concrete paving project is less than 3,500 cu. yd. b) When a secondary plant is used to provide minor work.

Concrete Pavement – Agency (2 of 2)

Test Type	Spec.	Concrete Field Testing - Agency QA Testing	Form
Air Content before consolidation	Review Concrete Manual Website	1 correlation air test per day	
Concrete Temperature		Record temperature each time air content, slump or strength test specimen is performed/fabricated by the Agency.	
Flexural Strength		Supply beam boxes or cylinder molds. Cure and test beams and cylinders MnDOT standard beam box size is 6" x 6" x 20" unless others are approved by the Concrete Engineer.	2162 Test Beam Data
Opening to Traffic Strength		Supply beam boxes or cylinder molds for field control testing. Cure and test beams and cylinders.	
Concrete Pavement Texture		Determine texture testing locations using random numbers. Observe Contractor Testing when possible.	Probing, Coring, Texture and MIT-Scan T2 Report
Thickness		**Determine probing and coring locations using random numbers. Initial pavement at core locations and re-initial the sides of specimens after coring to clearly verify their authenticity.** Field measure cores to the nearest 1/8". Transport to the MnDOT Office of Materials and Road Research for final thickness determination	
Surface Smoothness/ Dowel and Tie Bar Steel Location		Observe Contractor Testing when possible	

NOTES:

(1) All gradation samples shall be taken in the presence of the Agency, unless otherwise authorized by the Engineer. All samples shall be taken off the belt leading to the weigh hopper unless otherwise approved by the Engineer. **All gradations and quality tests require companion samples.** If Coarse Aggregate Quality Incentive / Disincentives apply: The Agency may also use the QA samples for incentive / disincentive testing. Notify the Contractor/Producer to double the QC/QA sample size. If well-graded aggregate incentives apply: Use the Contractor's gradation results for well-graded aggregate incentive calculations as verified by Agency testing. Use the Well-graded Concrete Agg. Worksheet.

(2) If w/c incentives apply: Use aggregate moisture results for determining the water content to calculate the w/c incentive/disincentive. Use the Concrete W/C Ratio Calculation Worksheet and do not leave sample unattended. Microwave oven verification testing to verify the w/c ratio is completed in conjunction with Agency aggregate moisture testing. Do not leave samples unattended.

(3) If w/c incentives apply: Microwave oven verification testing to verify the w/c ratio is completed in conjunction with Agency aggregate moisture testing. Do not leave samples unattended.

(4) Prior to concrete production: Obtain pre-production samples for quality testing at least 16 hours prior to concrete production. Samples may be taken from the stockpile and -200 test may be performed at the lab instead at the plant at the discretion of the Engineer. If the entire project is <3,500 yd3, pre-production sampling is not required.

Minimum Aggregate Sample Size *companion required, double sample				
Aggregate Size	**Gradation***	**Quality***	**Moisture**	**% -200 C.Agg**
3/4" Plus, #4	30 lb.	50 lb.	2000 g	5000 g
3/4" Minus, #67	10 lb.	30 lb.	2000 g	2500 g
#7, CA-70	6 lb.	20 lb.	2000 g	2500 g
CIA to meet #67	6 lb.	20 lb.	500 g	500 g
CIA to meet JMF	500 g	20 lb.	500 g	500 g
FIA, CS, FS	500 g	20 lb.	500 g	-
CA-80, #89	500 g	20 lb.	500 g	500 g
Fine Aggregate	500 g	20 lb.	500 g	-

Concrete Pavement – Producer/Contractor (1 of 2)

Test Type (concrete manual)	**Spec.**	**Concrete Paving Batch Plant Contractor/Producer QC Testing**	**Certified Ready-Mix Plant Contractor/Producer QC Testing**
Gradation **(1)** (5-694.145) (5-694.148)	3126 3131 3137	When > 250 yd^3 produced/ day: 1 per 2500 yd^3 per fraction per source. Take initial samples for aggregate gradation testing within the first 500 yd3. Test the verification companion sample on the day the sample was taken.	When 20-400yd^3 produced/ day: 1 per fraction per source. If over 400 yd3 per day, take a second gradation after the total exceeds 400 yd3. Test the verification companion sample on the day the sample was taken.
Coarse Aggregate -200 sieve (5-694.146)	3131 3137	Test the verification companion sample. Test these samples at the plant.	
Aggregate Moisture QC Verification **(2)** (5-694.142)	2301	If w/c incentives do not apply: 1 per 1000 yd^3, or 1 completed every 4 hours, whichever is the higher sampling rate.	If w/c incentives do not apply: 1 completed every 4 hours.
Water Content, Microwave Oven Verification	Review Concrete Manual 2301	If w/c incentives apply: Obtain the plastic concrete sample at the plant. See Concrete Manual (5-694.532)	
Unit Weight QC		Test one load of concrete per day at the plant. See Concrete Manual (5-694.542)	
Air Content QC (5-694.541)		Test the first load of concrete at the plant	
Coarse Aggregate Quality	3126 3131 3137	Test at Producer/Contractor Discretion	
Unit Weight		Test 1 load of concrete per day at the plant.	
Air Content for Type 3 Concrete (QC)		Test the first load of concrete at the plant.	
Coarse Aggregate Quality Testing for Incentive / Disincentive	3137	Test at the Contractor's discretion.	

* Use Certified Ready-Mix Concrete testing rates when: a) The entire concrete paving project is less than 3,500 cu. yd. b) When a secondary plant is used to provide minor work.

Concrete Pavement – Producer/Contractor (2 of 2)

NOTES:

(1) Performing testing on representative material at the end of the most recent day of production is allowed. If well-graded aggregate incentives apply: Use the Contractor's gradation results for well-graded aggregate incentive calculations as verified by Agency testing. Washing the fine aggregate gradation (QC) sample is not required when the result on the -#200 sieve of the unwashed sample is less than 1.0%. Wash all fine aggregate Verification Companion samples.

(2) Complete the initial moisture content and adjust the batch water prior to the start of concrete production each day. If weather conditions allow, performing moisture testing on representative material at the end of production the prior evening is allowed. Enter results into the batching system in real time.

Test Type	Spec.	Concrete Field Testing - Contractor QC Testing
Air Content before consolidation for Type 3 concrete	Review Concrete Manual Website	1 per 300 yd^3 or 1 per hour, whichever is less. Test first load each day per mix.
Slump		Test slump if concrete is suspected to be outside of required slump range as directed by the Engineer.
Concrete Temperature		Record temperature each time air content, slump or strength test specimen is performed/fabricated by the Contractor.
Flexural Strength		For information only: 1 beam (28-day) per week per mix. 1 cylinder (28-day) per week per mix may be substituted at the discretion of the Engineer. Provide moist curing environments, fabricate beams or cylinders, deliver to curing site, and clean beam boxes
Opening to Traffic		For opening to traffic: Make field control beams within the last hour of concrete poured each day. Substitute field control cylinders for field control beams at the discretion of the Engineer. Maturity testing is allowed in lieu of field control cylinders or beams. Fabricate beams or cylinders, deliver to curing site, and clean beam boxes.
Concrete Pavement Texture		Perform texture testing at locations determined by the Engineer in accordance with the Contract
Thickness		Probe, scan and core at locations determined by the Engineer in accordance with the Contract
Surface Smoothness		Measure smoothness of the final concrete as required by the Contract. Perform all profiling in the presence of the Engineer unless otherwise approved by the Engineer.
Dowel Bar and Tie Bar Steel Location		For Concrete projects greater than 3500 yd3. On the first day and each day of slip form pavement: (1) Verify the adequacy of the dowel bar anchoring by scanning seven random doweled contraction joints in each sublot. (2) Verify the presence and alignment of tie bar steel by scanning 75 lin. Ft. in each sublot. If the Engineer determines the first day's dowel bar anchoring and tie bar placement processes are acceptable, the Engineer may allow a reduction in scanned joints in each sublot as follows: (1) Verify the adequacy of the dowel bar anchoring by scanning four random doweled contraction joints per sublot. (2) Verify the presence and alignment of tie bar steel by scanning 25 lin. ft. out of every sublot.

Concrete Wearing Course for Bridges

Test Type (Concrete Manual)	**Spec.**	**Contractor/Producer QC Testing**	**Agency QA Testing**	**Form**
Gradation, Quality, Coarse Agg -200 QC/Verification (5-694.145) (5-694.146) (5-694.148)	3126 3137	**Prior to production**: The Contractor shall provide the Agency with: Aggregate pit numbers, 1 passing gradation result per fraction per source. Test Agency companion samples are Contractor's discretion. No quality tests are required.	Prior to production and each time aggregate is delivered to site: 1 gradation and quality per fraction prior to concrete production and each time aggregate is delivered to the site. Identify quality samples with a "Q" on the Sample ID Card and the Quality companion sample.	2410 Sample ID Card
Air Content - Type 3 Concrete (Verification) (5-694.541)	2431	None	1 per 15 yd^3, Test at beginning of pour each day.	Weekly Report of Low Slump Concrete
Slump (Verification) (5-694.531)		None	1 per 15 yd^3 Test at beginning of pour each day. For concrete from a concrete mobil, allow mix to hydrate 5 minutes before slump test to assure all cement is saturated.	
Compressive Strength (5-694.511)		None	1 cylinder (28 day) per 30 yd^3, standard cylinder mold size is 4 x 8 inch.	2409 Cyl. ID Card
Cement	3101	None	Each time cement is delivered to site. Obtain a 5 lb. sample. Store sample in a sealed container and include the supplier's delivery invoice from which the sample is obtained.	2430 Sample ID Card
Admixtures	3113	None	Each time new lot/batch admixture is delivered to site: Obtain a ½ pint sample. Store the sample in a sealed plastic container.	2410 Sample ID Card

Test	**Minimum Sample Size** **All gradation and aggregate quality tests require companion samples, double sample size. Samples taken at location identified on Contact Report located at plant.**	
Gradation	6 lb. for # 7, 500 g for CA-80	500 g for Sand
Quality	30 lb. for Coarse Aggregate	20 lb. Fine Aggregate

Concrete Pavement Repair – CPR for 3U18

Test Type	Spec.	Contractor/Producer QC Testing	Agency QA Testing For volumetric batching only.	Forms
Gradation, Quality, Coarse Agg -200	3126 3137	**Prior to production:** The Contractor shall provide the Agency with: Aggregate pit numbers, 1 passing gradation result per fraction per source. No quality test results are required. Test companion samples at Contractor's discretion.	**Gradation:** Prior to concrete production and each time aggregate is delivered to the site. 1 per aggregate fraction prior to production and each time aggregate is delivered to the site. **Quality Testing & Coarse Agg -200:** 1 test per aggregate fraction per source. The Agency may use the gradation results for the Quality Samples as a substitute for 1 required field gradation. Identify quality samples with a "Q" on the Sample ID Card and the Quality companion sample.	2410 Sample ID Card
Air Content - Type 3 Concrete (Verification)	Review Concrete Manual Website	None	1 per 15 yd^3or 1 per 4 hours whichever results in the highest sampling rate. Test at beginning of pour each day.	21412 Weekly Report of Low Slump Concrete
Slump (Verification)		None	1 per 15 yd^3, Test at beginning of pour each day. Allow mix to hydrate 5 minutes before slump test to assure all cement is saturated. Test slump if concrete is suspected to be outside of required slump range.	
Compressive Strength		None	1 set of 3 cylinders (28 day) per 30 yd^3. The Agency will cast up to three (3) field control cylinders, standard cylinder mold size is 4 x 8 inch.	2409 Cyl. ID Card
Type 1 Cement	3101	None	**For Volumetric batching only:** Each time cement is delivered to site. Obtain a 5 lb. sample. Store sample in a sealed container and include the supplier's delivery invoice from which the sample is obtained.	2430 Sample ID Card
Admixtures	3113	None	Each time new lot/batch admixture is delivered to site: Obtain a ½ pint sample. Store the sample in a sealed plastic container.	2430 Sample ID Card

Test	**Minimum Sample Size** **All gradation and aggregate quality tests require companion samples, double sample size. Samples taken at location identified on Contact Report located at plant.**	
Gradation	6 lb. for # 7, 500 g for CA-80	500 g for Sand
Quality	30 lb. for Coarse Aggregate	20 lb. Fine Aggregate

Dowel Bar Retrofit – (DBR)

Test Type	Spec.	Contractor/Producer QC Testing	Agency QA Testing	Form
Gradation Testing (Verification), Quality Testing including, Coarse Agg -200	3137	**Prior to production:** The Contractor shall provide the Agency with: Aggregate pit numbers, 1 passing gradation result per fraction per source. No quality test results are required. Test companion samples are Contractor's discretion.	**Gradation:** Prior to concrete production and each time aggregate is delivered to the site. 1 per aggregate fraction prior to production and each time aggregate is delivered to the site. **Quality Testing & Coarse Agg -200:** 1 test per aggregate fraction per source. The Agency may use the gradation results for the Quality Samples as a substitute for 1 required field gradation. Identify quality samples with a "Q" on the Sample ID Card and the Quality companion sample.	2410 Sample ID Card

Test Type	Spec.	Agency QA Testing	Form
DBR Material Compressive Strength	Review Concrete Manual	**Contractor Testing: Any additional field control cylinders are the responsibility of the Contractor.** **Agency Testing:** 1 set of 3 cylinders (28 day) The Agency will cast up to three (3) field control cylinders, standard cylinder mold size is 4 x 8 inch.	2409 Cylinder ID Card

Test	Minimum Sample Size **All gradation and quality tests require companion samples, double sample size. Samples taken at location identified on Contact Report locates at plant.**	
Gradation	500 g for # 89 & Sand	
Quality	30 lb. Coarse Aggregate	20 lb. Fine Aggregate

Landscaping and Erosion Control Items

Kind of Material	Spec. #	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Manufactured Topsoil Borrow, Salvaged Topsoil (stockpiled)	3877.2	As directed by the Engineer
Plant Stock & Landscape Materials	3861 and 2571.2A1	Materials must be in accordance with the Inspection and Contract Administration Guidelines for MnDOT Landscape Projects of which determines the minimum and maximum criteria thresholds. Certificate of Compliance, Nursery stock certificate registered with MN Dept. of Agriculture. Out of state products subject to pest quarantines must accompanied by documentation certifying all products are free of regulated pests.
Erosion Control Blanket	3885	Visual Inspection and Check approved products or approved vendors list - As directed by the Engineer.
Erosion Control Netting	3885	
Silt Fence	3886	
Erosion Stabilization Mat	3885	
Flotation Silt Curtain	3887	Accepted, based on manufacturers certification of compliance. Check weight of fabric.
Filter Logs	3897	Visual Inspection
Flocculants	3898	Obtain copy of Certificate of Compliance and MSDS
Fertilizer	3881	Obtain copy of invoice of blended material stating analysis.
Agricultural Lime	3879	Contractor must supply amount of ENP (Equivalent Neutralizing Power) for each shipment.
Mulch - Type 3	3882	Certified Weed Free (Certified sources only) Check for Certified Vendor tag from Minnesota Crop Improvement Association (MCIA).
Mulch - Type 6 - Woodchips		All wood chips supplied by a supplier outside the Emerald Ash Borer quarantine area or have an Emerald Ash Borer Compliance Agreement with the MDA
Seeds	3876	(Certified Vendors Only) (Mixes 100-299) Check for Certified Vendor tag from Minnesota Crop Improvement Association (MCIA).
Native Seed		(Mixes 300-399) certified seed only. Check for Certified Vendor tag from Minnesota Crop Improvement Association (MCIA).
Sod	3878	Visual Inspection - Check approved products list - As directed by the Engineer. Check for Certified Vendor tag from Minnesota Crop Improvement Association (MCIA) for salt tolerant sod.
Compost (from Certified Source)	3890	
Compost (from Non-Certified Source)		Visual Inspection - As directed by the Engineer.
Hydraulic Soil Stabilizer	3884	Check Approved/Qualified Products List - As directed by the Engineer.

Chemical Items

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Asphalt Plank	3204	Visual Inspection - As directed by the Engineer.
Calcium Chloride	3911	Review the percentage required as per specification. Check for listing on Qualified Products website.
Magnesium Chloride	3912	
Hot-Pour Crack Sealant (for Crack Sealing/Filling)	3719 3723 3725	Retain Certification of Compliance. Check for listing on Qualified Products website.
Pavement Joint Adhesive	Special Provisions	Retain Certification of Compliance
Waterproofing Materials		
Membrane Waterproofing System	3757	Visual Inspection - Check qualified products list.
Waterproofing Materials - Three Ply System		
Asphalt Primer	3165	Verify supplied material meets ASTM D 41
Waterproofing Asphalt	3166	Verify supplied material meets ASTM D 449
Fabric	3201	Verify supplied material meets ASTM D 41
Paints		
Waterborne Latex - Traffic Paint	3591	Visual Inspection - Check qualified products list - retain Certificate of Compliance.
Epoxy Traffic Paint	3590	
Traffic Marking Paint	Special Provisions	
Non-Traffic Striping Paints	3500 Series	Retain Certification of Compliance
Bridge Structural Steel Paint	3520	Visual Inspection - Check approved products list - retain Certificate of Compliance.
Exterior Masonry Paint	3584	
Noise Wall Stain	Special Provisions	
Drop-on Glass Beads	3592	Visual Inspection - Check qualified products list. Retain Certificate of Compliance.
Pavement Marking Tape	3354	Visual Inspection - Check qualified products list. Retain Certificate of Compliance.
	3355	
	Special Provisions	
Signs and Markers	3352	Visual Inspection - Check qualified products list.

Metals (1 of 2)

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate) *
Guard Rail		
Fittings - Splicers, Bolts, Posts etc.	3381	Visual Inspection - Materials shall be approved before use. Call MnDOT inspector at 218-846-3613 to see if material has been approved.
Structural Plate Beam	3382	
Non-High Tension Guard Rail Cable	3381	
High Tension Guard Rail Cable	Special Provisions	
Steel Posts		
Steel Signposts	3401	Visual Inspection - As directed by the Engineer. Retain Certificate of Compliance in Project file.
Fence Posts, Brace Bars, Rails and others	3403	Visual Inspection - As directed by the Engineer. Retain Certificate of Compliance and certified mill analysis in project file.
	3406	
	3379	
Fence		
Barbed Wire	3376	Visual Inspection Retain Certification of Compliance, As directed by the Engineer.
Woven Wire		
Chain Link Fabric		
Components: cup, cap, nut, bolt, end clamp, tension band, truss rod tightener, hog ring, tie wire, tension stretcher bar, truss rod, clamp & tension wire		
Gates	3379	
Pipe		
Water Pipe and other Piping Materials	3364, 3365, 3366 & Special Provisions	Visual Inspection - As directed by the Engineer.
Reinforcing Steel - Inspected by MnDOT & will be charged back to the Local Agency.		
Uncoated Bars	3301	Retain Certificate of Compliance & Certified Mill Analysis
Epoxy Coated Bars	3301	For Epoxy-Coated bars, steel will be tagged "Inspected" when it has been sampled and tested by Mn/DOT prior to shipment, & it will be tagged "Sampled" when testing has not been completed prior to shipment. If the Epoxy-Coated bars are not tagged "Sampled" or "Inspected", submit samples (1 bar 3ft long for each size for each day's coating production), Certificate of Compliance, & Certified Mill Analysis for testing. Maintain original Cert. of Compliance & Certified Mill Analysis in project file.
Spirals	3305	
Stainless Steel Bars	Special Provisions	Visual Inspection Testing as directed by the Engineer (2 bars 3 ft. long per heat per bar size). Certified Mill Test Reports to be filed.

Metals (2 of 2)

<table>
<tr><th>Kind of Material</th><th>Spec. No.</th><th colspan="2">Minimum Required Agency QA Acceptance Testing
(Field Testing Rate) *</th></tr>
<tr><td colspan="4">Reinforcing Steel - Inspected by MnDOT & will be charged back to the Local Agency.</td></tr>
<tr><td>Steel Fabric</td><td>3303</td><td>2 sq. ft. if epoxy coated.</td><td rowspan="3">Visual Inspection - Retain Certificate of Compliance.</td></tr>
<tr><td>Dowel Bars</td><td>3302</td><td>One dowel bar and basket from each shipment.</td></tr>
<tr><td>Prestress/Post Tension Strands</td><td>3348 Spec Prov</td><td>One sample of 2 strands by 6 ft. from each heat/production lot.</td></tr>
<tr><td colspan="4">Castings</td></tr>
<tr><td rowspan="2">Drainage Castings</td><td>3321</td><td colspan="2" rowspan="3">Visual Inspection - Check approved / qualified list.</td></tr>
<tr><td>2471</td></tr>
<tr><td>Electrical</td><td>2565</td></tr>
<tr><td>Anchor Rods (Cast in Place) and Structural Fasteners</td><td>3385
3391</td><td colspan="2">Visual Inspection - Check approved / qualified list. Testing as directed by the Engineer (see notes below)</td></tr>
<tr><td colspan="4">Notes: Manufacturer must have one yearly passing test from the Department for each anchor rod or bolt type. Prior to installation, obtain copy of MnDOT passing test report from supplier. Specs 3385.2 A, B, & C require anchor rod markings per ASTM F 1554 S3. The end of each anchor bolt intended to project from the concrete must be die stamped with the grade identification as follows: Grade 36 = AB36, Grade 55 = AB55, Grade 105 = AB105.</td></tr>
<tr><td>Anchorages (Drilled In)</td><td>Special Provisions</td><td colspan="2">Visual Inspection - Check qualified products list.</td></tr>
<tr><td>Structural Steel</td><td colspan="3">Inspected by MnDOT & will be charged back to the Local Agency.</td></tr>
<tr><td>Steel Bridge - Beams, Girders, Diaphragms, etc.</td><td rowspan="8">2471</td><td colspan="2" rowspan="10">Structural Metals Inspection Tag and field inspection for damage/defects, check dimensions for contract compliance.
Review approved products list as directed by the Engineer.

Note: Structural metals products will be inspected at the plant and will be shipped with a Structural Metals Inspection Tag. An inspection confirmation report will be completed by Structural Metals Inspection staff and sent to the field personnel. Only approved suppliers are allowed to supply Structural Metals products. A list of approved suppliers can be found on the Bridge Office website.</td></tr>
<tr><td>Concrete Girders-Diaphragms and sole plates</td></tr>
<tr><td>Expansion Joints</td></tr>
<tr><td>Steel Bearings</td></tr>
<tr><td>Railing-Structural tube and ornamental</td></tr>
<tr><td>Drainage Systems</td></tr>
<tr><td>Protection Angles</td></tr>
<tr><td>Overhead Sign structures</td><td>2564
2471</td></tr>
<tr><td>High Mast Lighting Structures</td><td>2545
2471</td></tr>
<tr><td>Monotube Signal Structures</td><td>2565
2471</td></tr>
</table>

*Check domestic steel requirement under 1601 Special Provision.

Geosynthetics, Pipe, Tile, Precast/ Prestressed Concrete

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Corrugated Metal Products		
Culvert Pipe Under Drains Erosion Control Structures	3225 thru 3229, 3351, 3399	Make certain pipe is Certified on Invoice, retain certificate of compliance and certified mill analysis in project file.
Structural Plate	3231	
Aluminum Structural Plate	3233	Retain the Certificate of Compliance and mill analysis in project file.
Pipe		
Clay Pipe	3251	Visual Inspection
Reinforced Concrete Pipe and Arches, Precast Cattle Pass Units, Sectional Manhole Units	3236	Field Inspection: Check for damage and defects. Check dimensions and class as required.
Non-Reinforced Concrete Pipe	3253	
Drain Tile (Clay or Concrete)	3276	Visual Inspection - Acceptance as directed by the Engineer.
Thermoplastic (TP) Pipe ABS and PVC	3245	Obtain Certificate of compliance. Check for approved marking printed on pipe. Field Inspect for damage or defects.
Corrugated Polyethylene Pipe	3278	Check for markings (AASHTO M 252) Certificate of Compliance. Field Inspect for damage or defects.
Corrugated Polyethylene Pipe - Dual Wall 12"-48"	3247	Visual Inspection - Check approved products list. Obtain Certificate of Compliance.
Precast/Prestressed Concrete Structures - Inspected by MnDOT & will be charged back to the Local Agency.		
Reinforced Precast Box Culvert	3238	Field Inspection: Check for damage and defects. Check dimensions as required. Check for the "MnDOT" stamp and signature on the certification document.
Precast/Prestressed Concrete Structure (beams, posts, etc.)	2405	
Manholes and Catch Basins	2506 3622	
Sewer Joint Sealing Compound	3724	Visual Inspection - Acceptance as directed by the Engineer.
Preformed Plastic Sealer for Pipe	3726 Type b	Visual Inspection - Acceptance as directed by the Engineer.
Bituminous Mastic Joint Sealer for Pipe	3728	
EPS Geofoam	Special Provisions	Visual Inspection - Acceptance as directed by the Engineer. Check for yellow aged material, uniformity and dimensions.
Geotextile Fabric and Geogrid Reinforcement	3733 and Special Provisions	Obtain Certificate of Compliance stating minimum average roll values (MARV). MARV must meet Project requirements. Fabric must be listed on Geotextile Small Quantity Acceptance List.
Geotextile Small Quantity Acceptance List		
Silt Fence	3886	Visual Inspection - Check approved products list.

Electrical and Signal Equipment Items (1 of 2)

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Lighting Standards (Aluminum or Steel)	3811	Visual Inspection - Obtain Certificate of Compliance. The Fabricator will submit "Certificate of Compliance," on a per project basis, to the Project Engineer.
Hand Holes (Precast, PVC, and LLDPE)	2545 2550 2565	Visual Inspection - Check approved/qualified products list. Traffic signal and street lighting projects require hand holes to be listed on the MnDOT Signals Approved Products List (APL). For cast iron frame and cover: see Metals - Drainage and Electrical Castings
Foundation	2545	Slump as needed, 1 cylinder per 25 cu. yds. Rebar is required in concrete foundations as specified in the Contract documents for all traffic control signals and roadway lighting projects.
Steel Screw In Foundations	2545 2565	See Approved/Qualified Products List for Roadway Lighting and Signals.
Conduit and Fittings		
Metallic	3801 3802	Visual Inspection - Conduit shall be labeled as being listed by a National Recognized Testing Laboratory (NRTL). For traffic signal and street lighting projects, specific requirements are contained in the Special Provisions for each project.
Non-Metallic (Rigid and HDPE)	3803 Special Provisions	
Anchor Rods and Bolts (Cast in Place)	3385	Visual Inspection - Manufacturer must have one yearly passing test from the Department for each anchor rod or bolt type. Prior to installation, obtain copy of Mn/DOT passing test report from supplier. Specs 3385.2 A, B, & C require anchor rod markings per ASTM F 1554 S3. The end of each anchor bolt intended to project from the concrete must be die stamped with the grade identification as follows: Grade 36 = AB36, Grade 55 = AB55, Grade 105 = AB105.
Anchorages (Drilled In)	Special Provision	Visual Inspection - Check qualified products list.
Miscellaneous Hardware	2545 2565	Visual Inspection - Check approved products list. Will carry "Inspected" tag if sampled and tested prior to shipment. No sample necessary if "Inspected". Do not use if not tested. Field sample at sampling rate for laboratory testing. For traffic signal and street light lighting projects, various miscellaneous hardware is required to be listed on the MnDOT Signals and Lighting Approved Products Lists (APL). The Contract documents indicate, which items must be on the Signals and/or Lighting APL.

Electrical and Signal Equipment Items (2 of 2)

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Cable and Conductors		
Power Conductors	3815.2B1	Visual Inspection - Make certain the conductors are the type specified. Submit Field Inspection report showing type and quantities used. Shall be labeled as being listed by a National Recognized Testing Laboratory (NRTL) and type where applicable.
Loop Detector Conductors (No Tubing)	3815.2B2 (a)	
Electrical Cables and Single Conductors with Jacket	3815.2B2(b) 3815.2B3	Visual Inspection - Usually inspected at the distributor. Documentation showing project number, reel number(s), & MnDOT test number(s) will be included with each project shipment. If such documentation is not received from Contractor, submit sample for testing along with material certification from manufacturer. Do not use if not tested. Pre-inspected materials will not be tagged; an inspection report will be sent by the MnDOT inspector for each shipment. Project inspectors should verify that the shipping documents agree with this inspection report. Call Steve Grover at 651-366-5540 or Cindy Schellack at 651-366-5543 with questions. For traffic signal and street lighting projects, the Special Provisions for each project contain electrical cable and conductor specifications.
	3815.2B5	
	3815.2C1 thru .2C8	
	3815.2C14	
	Special Provisions	
Fiber Optic Cables	3815.2C13	Visual Inspection - Check approved products list for Traffic Management Systems.
Ground Rods	2545	Visual Inspection - Check approved products list. Shall be labeled as being listed by a National Recognized Testing Laboratory (NRTL). Detail materials on Materials Acceptance Summary.
	2565	
Luminaires and Lamps	3810	Visual Inspection - Check approved products list. Traffic signal and street lighting projects require luminaries and lamps to be listed on the MnDOT Lighting Approved/Qualified Products List (APL). The conductors shall be labeled as being listed by a National Recognized Testing Laboratory (NRTL) and type, where applicable.
Electrical Systems	2565	Electrical Systems are to be reported as a "System" using the LIGHTING, SIGNAL AND TRAFFIC RECORDER INSPECTION REPORT. To be certified by the Project Engineer.
Traffic Signal Systems	2565	Traffic Signal Systems are to be reported as a "System" using the LIGHTING, SIGNAL AND TRAFFIC RECORDER INSPECTION REPORT. To be certified by the Project Engineer.

Brick, Stone, and Masonry Units

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Brick		
Sewer (clay) and Building	3612 to 3615	Visual Inspection - Acceptance as directed by the Engineer.
Sewer (Concrete)	3616	Visual Inspection - Acceptance as directed by the Engineer. Air entrainment required. Obtain air content statement from supplier.
Concrete Masonry Units		
Sewer Construction	3621	Visual Inspection - Acceptance as directed by the Engineer. Air entrainment required. Obtain air content statement from supplier.
Modular Block Retaining Walls	Review Current Special Provisions	Visual Inspection - Note: All lots of blocks upon delivery shall have Manufacturer or Independent laboratory test results to verify passing both compression and freeze-thaw requirements. * Wall units and cap units are considered separate block types.
Reinforced Concrete Cribbing	3661	Visual Inspection - Acceptance as directed by the Engineer. Will be stamped when inspected prior to shipment.
Stone for Masonry or Rip-Rap	2511, 3601 and Special Provisions	Visual Inspection - Acceptance as directed by the Engineer.

Remarks: each source shall be approved by Project Engineer or supervisor for quality, prior to use. For questions on quality, contact District Materials or Geology Unit.

Miscellaneous Materials

Kind of Material	Spec. No.	Minimum Required Agency QA Acceptance Testing (Field Testing Rate)
Timber, Lumber Piling & Posts	3412 to 3471 & 3491	Visual Inspection - Acceptance as directed by the Engineer. Untreated materials shall be inspected in the field. Treated materials shall be Certified on the Invoice or Shipping Ticket. Material is inspected and stamped by an Independent Agency as per Specification 3491. Contact Laboratory for additional information.
Miscellaneous pieces and Hardware (Galvanized)	3392 3394	Visual Inspection - Acceptance as directed by the Engineer.
Insulation Board	3760	
Elastomeric Bearing Pads - Plain or Laminated	3741 and Special Provisions	Check dimensions. Check repair of tested pad. Obtain copy of Certificate of Compliance. DO NOT USE ANY PADS THAT ARE NOT CERTIFIED.
Cotton Duck Bearing Pads		

Approved/Qualified Products & Resources

Approved/Qualified Products

- Asphalt Products
- Bridge Products
- Concrete Products
- Crack and Joint Material Products
- Drainage
- Erosion Control and Landscaping Products
- Geosynthetic
- Maintenance Shop Supplies
- Paint/Stain/Coating Systems (Non-Pavement)
- Pavement Markings
- Precast Concrete
- Roadside Barriers
- Roadway Lighting Products
- Signals Products
- Signing Products
- Snow and Ice Chemical Products
- Temporary Traffic Control Devices
- Traffic Management Systems/ITS
- Truncated Domes
- Vehicle Safety Lighting
- Walls (Retaining/Noise)

Additional Resources

- SALT Construction webpage
- Bituminous Engineering
    - Asphalt Binder Certified Supplier
    - Asphalt Emulsion Certified Supplier
- Concrete Engineering
    - MnDOT Concrete Manual
    - QC & QA RM Plant Workbooks
    - MnDOT Certified Ready-Mix Program
- Grading & Base Engineering
    - **Testing procedures in the Grading & Base Manual**
    - **Forms and worksheets at the Grading & Base website**
    - **Gradation worksheets on the SALT Construction website**

Contacts

MnDOT Construction and Materials State Aid Contacts

Districts 1, 2, 3, 4
Ross Hendrickson, State Aid Construction Specialist
ross.hendrickson@state.mn.us
218-766-3745

Districts 6, 7, 8
Rollin Larson, State Aid Construction Specialist
rollin.larson@state.mn.us
507-205-6403

Metro

Michael Pretel, State Aid Construction Engineer
michael.pretel@state.mn.us
651-755-3346

MnDOT Specialty Offices Contacts

Grading & Base

Terry Beaudry terry.beaudry@state.mn.us	Grading & Base Engineer	651-366-5456
John Bormann john.bormann@state.mn.us	Grading & Base Specialist	651-366-5596

*Bituminous**

John Garrity john.garriy@state.mn.us	Bituminous Engineer	651-366-5577
Greg Johnson Greg.johnson@state.mn.us	Asst. Bituminous Engineer	651-366-5464
Chelsea Bennett chelsea.bennett@state.mn.us	Asst. Bituminous Engineer	651-366-5482
Joel Ulring joel.ulring@state.mn.us	Pavement Preservation	651-366-5432
Mike Skurdalsvold	Bituminous Mix Design Specialist	612-499-2998
Ray Betts ray.betts@state.mn.us	Bituminous Trial Mix Lab Tech	651-366-5469
Rich Kane richard.kane@state.mn.us	Bituminous Plant & Lab Testing	612-437-3005

***See website for the contact list by topic**

*Concrete**

Maria Masten maria.masten@state.mn.us	Concrete Engineer	651-334-4015
Jacob Gave jacob.gave@state.mn.us	Asst. Concrete Engineer	612-554-9289
Rob Golish robert.golish@sate.mn.us	Asst. Concrete Engineer	651-216-0516
Matt Herbst	Concrete Engineering Specialist	651-283-7127

Matt.herbst@state.mn.us		
Brad Swenson brad.swenson@state.mn.us	Concrete Engineering Specialist	218-232-1012
Gordy Bruhn gordon.bruhn@state.mn.us	Concrete Field Engineering Specialist	651-398-9597
Mike Daniels michael.daniels@state.mn.us	Concrete Engineering Specialist	320-293-9421

*See website for the contact list by topic

Contacts for other materials can be found on the Materials and Road Research Contacts webpage.

Contacts for Approved Products can be found at the Approved/Qualified Products Contact webpage.

Materials Lab. Contacts	Independent Assurance
District 1, Duluth Leila DeLuca Phone: 218-725-2738 D1.duluth.lab.dot@state.mn.us	Kris Westerbur Phone: 218-725-2737 Cell: 218-348-6297 kristopfer.westerbur@state.mn.us
District 2, Bemidji Jason Kissel Phone: 218-755-6542 jason.kissel@state.mn.us Mike Murphy (Concrete & Aggregates) Phone: 218-755-6593 mike.murphy@state.mn.us Dustin Reese (Bituminous) Phone: 218-755-6593 dustin.reese@state.mn.us	Ray Wesley Cell: 218-766-6949 raymond.wesley@state.mn.us
District 3A, Baxter Tom Boser Phone: 218-828-5755 tom.boser@state.mn.us	Matt Miles Cell: 218-232-6748 matt.miles@state.mn.us
District 3B, Saint Cloud Nick Fisher Phone: 320-2236500 nicholas.fisher@state.mn.us Andy Kostreba Phone: 320-223-6554 andy.kostreba@state.mn.us	Travis Erickson Cell: 320-291-3582 travis.erickson@state.mn.us
District 4, Detroit Lakes Bruce Bryngelson Phone: 218-846-3614 bruce.bryngelson@state.mn.us Wayne Koons	Casey Clarke Cell: 218-849-7393

Phone: 218-846-3617 wayne.koons@state.mn.us	casey.clarke@state.mn.us
Metro District, Maplewood Lab Brent Sculley Phone 651-366-5409 brent.scolley@state.mn.us	**Waters Edge** Phone: 651-234-7356 West Zachary Lyrek-Hanks Phone: 651-775-1018 zachary.Lyrek-Hanks@state.mn.us Karl Sinclair Phone: 651-775-0998 karl.sinclair@state.mn.us East Kris Westerbur Phone: 651-755-1151 kristopher.westerbur@state.mn.us Kaleb Kollmann Phone: 651-478-0339 kaleb.kollmann@state.mn.us
District 6, Rochester Scott Swanson Phone: 507-286-7580 scott.a.swanson@state.mn.us Jeff Bale (Aggregates) Phone: 507-286-7586 jeff.bale@state.mn.us Joe Drees (Bituminous) Phone: 507-286-7582 joe.drees@state.mn.us Gary Vinge Phone: 507-286-7585 gary.vinge@sate.mn.us	Dennis Hayes Cell: 507-251-0138 dennis.hayes@state.mn.us
District 7, Mankato Lee McLaughlin Phone: 507-304-6189 lee.mclaughlin@state.mn.us	Mitch Jordahl Cell:507-380-9619 mitch.jordahl@state.mn.us
District 8, Willmar and Marshall Jon Vlaminck Phone: 320-214-6348 Cell: 320-894-7409 jon.vlaminck@state.mn.us **District 8B, Marshall** Matt Steinbronn Phone: 507-537-2068 matthew.steinbronn@state.mn.us	Paul Janke Cell: 320-212-5739 paul.janke@state.mn.us

Sample Sizes

	Lbs.	
Bituminous	35	Aggregate for Gradation QC/QA
	80	for each plus #4 Aggregate Type for Quality Testing
	35	for each minus #4 Aggregate Type for Quality Testing
	80	for each RAP material for Quality Testing
	10	RAS (shingles) for Processed Gradation and Quality Testing
	65	for Mix Properties (QC/QA) 3 full 6" by 12"-cylinder molds for QA
	90	for TSR (QC/QA) 4 full 6" by 12"-cylinder molds for QA
	90	for Aggregate Specific Gravity QC/QA
	-	1 quart of Asphalt Binder QA
	-	1/2 gallon for Asphalt Emulsion QA
Grading & Base	30	Aggregate for Gradation (Companion sample from 60 lb. split).
	25	Moisture Density Test – Proctor (Companion from 50 lb. split).
	30	Aggregate Quality/Percent Crushing Test - 1 per source
Ready-Mix Concrete	25	Gradation 3/4" plus
	10	Gradation 3/4" minus
	6	Gradation CA 70 & #7
	1	Gradation - Sand (500 g), CA 80, #89.
	4.4	Moisture Test Coarse Aggregate (2000 g)
	1.1	Moisture Test Fine Aggregate (500 g)
	50	Quality 3/4" plus - lab sample
	30	Quality 3/4" minus - lab sample
	30	Fine Aggregate - lab sample
	10	3/4" Plus for the -200 Coarse Aggregate Test (5000 grams)
	6	3/4" Minus for the -200 Coarse Aggregate Test (2500 grams)
	5	Cement, Blended Cement, Fly Ash
	-	1/2-pint plastic container for admixtures.

CERTIFICATION OF AGGREGATES AND GRANULAR MATERIALS

Project No:	Contractor's Tester Name:	Tester Certification No (If Required):
Submitted By: (Prime Contractor)	Submitted To: (Project Engineer)	
Source or Stockpile Location:	Pit #:	

I certify that these materials to be delivered to this project conform to the appropriate specification requirements. (Type/Print Name)

Certified by: (Contractor's Authorized Representative Signature)	Date:

Item Number	Class or Type of Aggregate	Quantity	Gradation Tests (If required)	
			Required	Attached

Tests (If Required)	
Required	Attached

Quality Tests (If Requied) (LAR, Shale, Bitumen, IR, etc.)	
Required	Attached

Note:

NOTE: Attach Required test results (gradations, crushing, bitumen content, qualities, etc.), per the Schedule of Materials Control, plan or proposal, etc. Send copy to Project Engineer.

Complete below if salvaged/recycled materials are being used:

Type or Class of Aggregate _____ **Bitumen content of the composite mixture:** _____ %

Bituminous (RAP) _____ % **Concrete** _____ % **Glass** _____ %

Specification Gradation Table for 3138.2

Based upon the percentage of recycled material specified above _____

DEPARTMENT OF REVENUE

IC134

Contractor Affidavit

This Contractor Affidavit must be certified by the Minnesota Department of Revenue before the state of Minnesota or any of its subdivisions can make final payment to contractors. For more detailed information, see the instructions on the back of this form.

Please type or print clearly. This information will be used for returning the completed form.

Company name

Address

City State ZIP code

Daytime phone

Minnesota tax ID number

Total contract amount

$

Month/year work began

Amount still due

$

Month/year work ended

Project number

Project location

Project owner Address City State ZIP code

Did you have employees work on this project? ☐ Yes ☐ No. If no, who did the work?

Check the box that describes your involvement in the project and fill in all information requested.

☐ **Sole contractor**

☐ **Subcontractor**

Name of contractor who hired you

Address

☐ **Prime contractor**—If you subcontracted out any work on this project, all of your subcontractors must submit their own Contractor Affidavits and have them certified by the Department of Revenue *before* you can submit your Contractor Affidavit. For each subcontractor you had, fill in the information below and attach a copy of each subcontractor's certified Contractor Affidavit. If you need more space, attach a separate sheet.

Business name Address Owner/Officer

I declare that all information I have filled in on this form is true and complete to the best of my knowledge and belief. I authorize the Department of Revenue to disclose pertinent information relating to this project, including sending copies of this form, to the prime contractor if I am a subcontractor, and to any subcontractors if I am a prime contractor, and to the contracting agency.

Contractor's signature Title Date

Mail to: Minnesota Revenue, Mail Station 6610, St. Paul, MN 55146-6610
Phone: 651-282-9999 or 1-800-657-3594

Certificate of Compliance

Based on records of the Minnesota Department of Revenue, I certify that the contractor who has signed this Contractor Affidavit has fulfilled all the requirements of Minnesota Statutes 290.92 and 270C.66 concerning the withholding of Minnesota income tax from wages paid to employees relating to contract services with the state of Minnesota and/or its subdivisions.

Department of Revenue approval *Date*

(Rev. 12/17)

DEPARTMENT OF REVENUE

Form IC134 Instructions

Contractor Affidavit

No state agency or local unit of government can make final payment to a contractor until the Department of Revenue has certified that the contractor and any subcontractor have fulfilled the requirements of Minnesota withholding tax laws.

If you are a prime contractor, a contractor or a subcontractor who did work on a project for the state of Minnesota or any of its local government subdivisions — such as a county, city or school district — you must submit a Contractor Affidavit to the Department of Revenue to receive a certificate of compliance.

Use of Information

The Department of Revenue needs **all** the requested information to determine if you have met the state income tax withholding requirements. If all required information is not provided, Form IC134 will be returned to you for completion.

All information on this Contractor Affidavit is private by state law. It cannot be given to others without your permission, except to the Internal Revenue Service, other states that guarantee the same privacy and certain government agencies as provided by law.

Minnesota Tax ID Number

You must have a Minnesota tax ID number if you have employees who work in Minnesota. You must enter your Minnesota tax ID number on Form IC134.

If you don't have a Minnesota tax ID number, apply online at www.revenue.state.mn.us or by calling our Business Registration Office at 651-282-5225 or 1-800-657-3605.

If you have no employees and did all the work yourself, you do not need a Minnesota tax ID number. Instead, enter your Social Security number in the space for Minnesota tax ID number and explain who did the work.

Submit Contractor Affidavit

Form IC134 cannot be processed by the Department of Revenue until you finish the work. If you submit the form before the project is completed, it will be returned to you unprocessed.

If any withholding payments are due to the state, Minnesota law requires certified payments before we approve your Form IC134.

If you are a subcontractor or sole contractor, submit the form when you have completed your part of the project.

If you are a prime contractor, submit the form when the entire project is completed and you have received certified Contractor Affidavits from all of your subcontractors.

If you're a prime contractor and a subcontractor on the same project

If you were hired as a subcontractor to do work on a project, and you subcontracted all or a part of your portion of the project to another contractor, you are a prime contractor as well. Complete both the subcontractor and prime contractor areas on a single Form IC134.

You may submit your Contractor Affidavit either electronically **or** by mail. This affidavit must be certified and returned before the state or any of its subdivisions can make final payment for your work.

For an immediate response: Complete and submit your Contractor Affidavit electronically. Go to www.revenue.state.mn.us and choose **Withholding Tax**. Under the File and Pay tab, click on Contractor Affidavit Information for Government Projects.

You may complete and mail Form IC134 to: Minnesota Revenue, Mail Station 6610, St. Paul, MN, 55146-6610. If you have fulfilled the requirements of Minnesota withholding tax laws, the department will sign your Form IC134 and return it to you.

To receive your final payment, submit the certified Contractor Affidavit to the government unit for which the work was done. If you are a subcontractor, submit the certified Contractor Affidavit to your prime contractor to receive your final payment.

Information and Assistance

Additional forms and information, including fact sheets and frequently asked questions, are available on our website.

Website: www.revenue.state.mn.us

Email: withholding.tax@state.mn.us

Phone: 651-282-9999 or 1-800-657-3594

This information is available in alternate formats.

ATTACHMENT A
PRIME CONTRACTOR RESPONSE

RESPONSIBLE CONTRACTOR VERIFICATION AND CERTIFICATION OF COMPLIANCE

STATE PROJECT NUMBER: _____

This form includes changes by statutory references from the Laws of Minnesota 2015, chapter 64, sections 1-9. This form must be submitted with the response to this solicitation. A response received without this form, will be rejected.

Minn. Stat. § 16C.285, Subd. 7. **IMPLEMENTATION.** … any prime contractor or subcontractor or motor carrier that does not meet the minimum criteria in subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded a construction contract for the project or to perform work on the project…

Minn. Stat. § 16C.285, Subd. 3. **RESPONSIBLE CONTRACTOR, MINIMUM CRITERIA.** "Responsible contractor" means a contractor that conforms to the responsibility requirements in the solicitation document for its portion of the work on the project and verifies that it meets the following minimum criteria:

(1)	The Contractor: (i) is in compliance with workers' compensation and unemployment insurance requirements; (ii) is in compliance with Department of Revenue and Department of Employment and Economic Development registration requirements if it has employees; (iii) has a valid federal tax identification number or a valid Social Security number if an individual; and (iv) has filed a certificate of authority to transact business in Minnesota with the Secretary of State if a foreign corporation or cooperative.
(2)	The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 177.24, 177.25, 177.41 to 177.44, 181.03, 181.101, 181.13, 181.14, or 181.722, and has not violated United States Code, title 29, sections 201 to 219, or United States Code, title 40, sections 3141 to 3148. For purposes of this clause, a violation occurs when a contractor or related entity: (i) repeatedly fails to pay statutorily required wages or penalties on one or more separate projects for a total underpayment of $25,000 or more within the three-year period, provided that a failure to pay is "repeated" only if it involves two or more separate and distinct occurrences of underpayment during the three-year period; (ii) has been issued an order to comply by the commissioner of Labor and Industry that has become final; (iii) has been issued at least two determination letters within the three-year period by the Department of Transportation finding an underpayment by the contractor or related entity to its own employees; (iv) has been found by the commissioner of Labor and Industry to have repeatedly or willfully violated any of the sections referenced in this clause pursuant to section 177.27; (v) has been issued a ruling or findings of underpayment by the administrator of the Wage and Hour Division of the United States Department of Labor that have become final or have been upheld by an administrative law judge or the Administrative Review Board; or (vi) has been found liable for underpayment of wages or penalties or misrepresenting a construction worker as an independent contractor in an action brought in a court having jurisdiction. Provided that, if the contractor or related entity contests a determination of underpayment by the Department of Transportation in a contested case proceeding, a violation does not occur until the contested case proceeding has concluded with a determination that the contractor or related entity underpaid wages or penalties;*

(3)	The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 181.723 or chapter 326B. For purposes of this clause, a violation occurs when a contractor or related entity has been issued a final administrative or licensing order;*
(4)	The contractor or related entity has not, more than twice during the three-year period before submitting the verification, had a certificate of compliance under section 363A.36 revoked or suspended based on the provisions of section 363A.36, with the revocation or suspension becoming final because it was upheld by the Office of Administrative Hearings or was not appealed to the office;*
(5)	The contractor or related entity has not received a final determination assessing a monetary sanction from the Department of Administration or Transportation for failure to meet targeted group business, disadvantaged business enterprise, or veteran-owned business goals, due to a lack of good faith effort, more than once during the three-year period before submitting the verification;*
	* Any violations, suspensions, revocations, or sanctions, as defined in clauses (2) to (5), occurring prior to July 1, 2014, shall not be considered in determining whether a contractor or related entity meets the minimum criteria.
(6)	The contractor or related entity is not currently suspended or debarred by the federal government or the state of Minnesota or any of its departments, commissions, agencies, or political subdivisions that have authority to debar a contractor; and
(7)	All subcontractors and motor carriers that the contractor intends to use to perform project work have verified to the contractor through a signed statement under oath by an owner or officer that they meet the minimum criteria listed in clauses (1) to (6).

Minn. Stat. § 16C.285, Subd. 5. **SUBCONTRACTOR VERIFICATION.**

A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors.

A prime contractor shall submit to the contracting authority upon request copies of the signed verifications of compliance from all subcontractors of any tier pursuant to subdivision 3, clause (7). A prime contractor and subcontractors shall not be responsible for the false statements of any subcontractor with which they do not have a direct contractual relationship. A prime contractor and subcontractors shall be responsible for false statements by their first-tier subcontractors with which they have a direct contractual relationship only if they accept the verification of compliance with actual knowledge that it contains a false statement.

Subd. 5a. **Motor carrier verification.** A prime contractor or subcontractor shall obtain annually from all motor carriers with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each motor carrier. A prime contractor or subcontractor shall require each such motor carrier to provide it with immediate written notification in the event that the motor carrier no longer meets one or more of the minimum criteria in subdivision 3 after submitting its annual verification. A motor carrier shall be ineligible to perform work on a project covered by this section if it does not meet all the minimum criteria in subdivision 3. Upon request, a prime contractor or subcontractor shall submit to the contracting authority the signed verifications of compliance from all motor carriers providing for-hire transportation of materials, equipment, or supplies for a project.

Minn. Stat. § 16C.285, Subd. 4. **VERIFICATION OF COMPLIANCE.**

A contractor responding to a solicitation document of a contracting authority shall submit to the contracting authority a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria in subdivision 3, with the exception of clause (7), at the time that it responds to the solicitation document.

A contracting authority may accept a signed statement under oath as sufficient to demonstrate that a contractor is a responsible contractor and shall not be held liable for awarding a contract in reasonable reliance on that statement. A prime contractor, subcontractor, or motor carrier that fails to verify compliance with any one of the required minimum criteria or makes a false statement under oath in a verification of compliance shall be ineligible to be awarded a construction contract on the project for which the verification was submitted.

A false statement under oath verifying compliance with any of the minimum criteria may result in termination of a construction contract that has already been awarded to a prime contractor or subcontractor or motor carrier that submits a false statement. A contracting authority shall not be liable for declining to award a contract or terminating a contract based on a reasonable determination that the contractor failed to verify compliance with the minimum criteria or falsely stated that it meets the minimum criteria. A verification of compliance need not be notarized. An electronic verification of compliance made and submitted as part of an electronic bid shall be an acceptable verification of compliance under this section provided that it contains an electronic signature as defined in section 325L.02, paragraph (h).

CERTIFICATION

By signing this document I certify that I am an owner or officer of the company, and I certify under oath that:

1) My company meets each of the Minimum Criteria to be a responsible contractor as defined herein and is in compliance with Minn. Stat. § 16C.285, and

2) if my company is awarded a contract, I will submit Attachment A-1 prior to contract execution, and

3) if my company is awarded a contract, I will also submit Attachment A-2 as required.

Authorized Signature of Owner or Officer:	**Printed Name:**
Title:	**Date:**
Company Name:	

NOTE: Minn. Stat. § 16C.285, Subd. 2, (c) If only one prime contractor responds to a solicitation document, a contracting authority may award a construction contract to the responding prime contractor even if the minimum criteria in subdivision 3 are not met.

ATTACHMENT A-1

FIRST-TIER SUBCONTRACTORS LIST

SUBMIT PRIOR TO EXECUTION OF A CONSTRUCTION CONTRACT

STATE PROJECT NUMBER: _____

Minn. Stat. § 16C.285, Subd. 5. A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

FIRST TIER SUBCONTRACTOR NAMES* (Legal name of company as registered with the Secretary of State)	**Name of city where company home office is located**

*Attach additional sheets as needed for submission of all first-tier subcontractors.

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-1	
By signing this document I certify that I am an owner or officer of the company, and I certify under oath that: **All first-tier subcontractors listed on attachment A-1 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.**	
Authorized Signature of Owner or Officer:	**Printed Name:**
Title:	**Date:**
Company Name:	

ATTACHMENT A-2

ADDITIONAL SUBCONTRACTORS LIST

PRIME CONTRACTOR TO SUBMIT AS SUBCONTRACTORS ARE ADDED TO THE PROJECT

STATE PROJECT NUMBER: _____

This form must be submitted to the Project Manager or individual as identified in the solicitation document.

Minn. Stat. § 16C.285, Subd. 5. ... If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors. ...

ADDITIONAL SUBCONTRACTOR NAMES* (Legal name of company as registered with the Secretary of State)	**Name of city where company home office is located**

*Attach additional sheets as needed for submission of all additional subcontractors.

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-2	
By signing this document I certify that I am an owner or officer of the company, and I certify under oath that: **All additional subcontractors listed on Attachment A-2 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.**	
Authorized Signature of Owner or Officer:	**Printed Name:**
Title:	**Date:**
Company Name:	

NON-COLLUSION AFFIDAVIT

The following Non-Collusion Affidavit shall be executed by the bidder:

State Project No. _____

Federal Project No. _____

State of Minnesota _____)

) ss

County of _____)

I, _____, do state under penalty of
(name of person signing this affidavit)

perjury under 28 U.S.C. 1746 of the laws of the United States:

(1) that I am the authorized representative of _____

_____
(name of person, partnership or corporation submitting this proposal)

and that I have the authority to make this affidavit for and on behalf of said bidder;

(2) that, in connection with this proposal, the said bidder has not either directly or indirectly entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding;

(3) that, to the best of my knowledge and belief, the contents of this proposal have not been communicated by the bidder or by any of his/her employees or agents to any person who is not an employee or agent of the bidder or of the surety on any bond furnished with the proposal and will not be communicated to any person who is not an employee or agent of the bidder or of said surety prior to the official opening of the proposal, and

(4) that I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed: _____
(bidder or his authorized representative)

SAP 003-607-027
Schedule of Bid Prices

Line	Spec. Number	Description	Unit	Quantity	Unit Price	Bid Total
1	2021.501	MOBILIZATION	LS	0.66		
2	2104.502	SALVAGE SIGN PANEL	EACH	13		
3	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	L F	1,381		
4	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	L F	2,425		
5	2104.503	REMOVE CURB AND GUTTER	L F	1,722		
6	2104.504	REMOVE CONCRETE PAVEMENT	S Y	662		
7	2104.518	REMOVE CONCRETE WALK	S F	30,852		
8	2104.518	REMOVE BITUMINOUS PAVEMENT	S F	12,320		
9	2118.507	AGGREGATE SURFACING (CV) CLASS 1	C Y	13		
10	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	16		
11	2211.507	AGGREGATE BASE (CV) CLASS 5	C Y	1,007		
12	2232.504	MILL BITUMINOUS SURFACE (2.0") (P)	S Y	21,187		
13	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B)	TON	2,984		
14	2504.602	ADJUST VALVE BOX	EACH	21		
15	2506.502	CASTING ASSEMBLY	EACH	9		
16	2506.502	ADJUST FRAME AND RING CASTING	EACH	12		
17	2506.602	CASTING ASSEMBLY SPECIAL	EACH	19		
18	2521.518	4" CONCRETE WALK	S F	13,340		
19	2521.518	6" CONCRETE WALK	S F	13,294		
20	2521.602	DRILL AND GROUT REINF BAR (EPOXY COATED)	EACH	1,394		
21	2531.503	CONCRETE CURB AND GUTTER DESIGN B418	L F	16		
22	2531.503	CONCRETE CURB AND GUTTER DESIGN B424	L F	25		

23	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	L F	736		
24	2531.503	CONCRETE CURB AND GUTTER DESIGN B624	L F	912		
25	2531.503	CONCRETE CURB DESIGN V4	L F	42		
26	2531.503	CONCRETE CURB DESIGN V6	L F	38		
27	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	S Y	1,219		
28	2531.504	8" CONCRETE DRIVEWAY PAVEMENT	S Y	355		
29	2531.603	CONCRETE SILL	L F	871		
30	2531.604	8" CONCRETE VALLEY GUTTER	S Y	59		
31	2531.618	TRUNCATED DOMES	S F	428		
32	2563.601	TRAFFIC CONTROL	LS	0.66		
33	2563.601	ALTERNATE PEDESTRIAN ROUTE	LS	0.66		
34	2564.502	INSTALL SIGN PANEL	EACH	13		
35	2564.618	SIGN	S F	55.5		
36	2573.502	STORM DRAIN INLET PROTECTION	EACH	19		
37	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	L F	1,048		
38	2575.618	SITE RESTORATION	S F	30,504		
39	2582.503	4" BROKEN LINE PAINT	L F	1,320		
40	2582.503	4" SOLID LINE PAINT	L F	53		
41	2582.503	6" SOLID LINE PAINT	L F	10,969		
42	2582.518	PAVEMENT MESSAGE MULTI-COMPONENT GROUND IN (WR)	S F	525		
43	2582.518	CROSSWALK PREFORM TAPE GROUND IN (WR)	S F	990		

Project Total = _____

SAP 003-680-005
Schedule of Bid Prices

Line	Spec. Number	Description	Unit	Quantity	Unit Price	Bid Total
1	2021.501	MOBILIZATION	LS	0.34		
2	2104.502	REMOVE BOLLARDS	EACH	1		
3	2104.502	REMOVE GATE VALVE AND BOX	EACH	1		
4	2104.502	REMOVE HYDRANT	EACH	1		
5	2104.502	REMOVE DRAINAGE STRUCTURE	EACH	2		
6	2104.502	SALVAGE CATCH BASIN	EACH	1		
7	2104.502	SALVAGE SIGN PANEL	EACH	6		
8	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	L F	145		
9	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	L F	1,801		
10	2104.503	REMOVE WATER MAIN	L F	10		
11	2104.503	REMOVE PIPE SEWERS	L F	428		
12	2104.503	REMOVE CURB AND GUTTER	L F	1,162		
13	2104.504	REMOVE CONCRETE PAVEMENT	S Y	25		
14	2104.518	REMOVE CONCRETE WALK	S F	12,281		
15	2104.518	REMOVE BITUMINOUS PAVEMENT	S F	25,844		
16	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	4		
17	2211.507	AGGREGATE BASE (CV) CLASS 5	C Y	1,153		
18	2232.504	MILL BITUMINOUS SURFACE (2.0") (P)	S Y	4,148		
19	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B)	TON	1,213		
20	2503.503	15" RC PIPE SEWER	L F	379		
21	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	5		
22	2503.603	6" PVC PIPE SEWER	L F	5		

23	2503.603	8" PVC PIPE SEWER	L F	10		
24	2503.603	10" PVC PIPE SEWER	L F	59		
25	2504.602	CONNECT TO EXISTING WATER MAIN	EACH	1		
26	2504.602	HYDRANT	EACH	1		
27	2504.602	ADJUST VALVE BOX	EACH	5		
28	2504.602	6" GATE VALVE AND BOX	EACH	1		
29	2504.603	6" PVC WATERMAIN	L F	19		
30	2506.502	CASTING ASSEMBLY	EACH	6		
31	2506.502	ADJUST FRAME AND RING CASTING	EACH	8		
32	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	L F	4.4		
33	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	L F	16.1		
34	2506.602	CASTING ASSEMBLY SPECIAL	EACH	7		
35	2521.518	4" CONCRETE WALK	S F	1,576		
36	2521.518	6" CONCRETE WALK	S F	7,708		
37	2521.602	DRILL AND GROUT REINF BAR (EPOXY COATED)	EACH	445		
38	2531.503	CONCRETE CURB AND GUTTER DESIGN B418	L F	237		
39	2531.503	CONCRETE CURB AND GUTTER DESIGN B424	L F	6		
40	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	L F	724		
41	2531.503	CONCRETE CURB AND GUTTER DESIGN B624	L F	227		
42	2531.503	CONCRETE CURB DESIGN V4	L F	21		
43	2531.504	8" CONCRETE DRIVEWAY PAVEMENT	S Y	374		
44	2531.603	CONCRETE SILL	L F	831		
45	2531.604	8" CONCRETE VALLEY GUTTER	S Y	175		
46	2531.618	TRUNCATED DOMES	S F	129		
47	2563.601	TRAFFIC CONTROL	LS	0.34		

48	2563.601	ALTERNATE PEDESTRIAN ROUTE	LS	0.34		
49	2564.502	INSTALL SIGN PANEL	EACH	6		
50	2573.502	STORM DRAIN INLET PROTECTION	EACH	5		
51	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	L F	120		
52	2575.618	SITE RESTORATION	S F	4,120		

Project Total = _____

Contract Total = _____

Form 21126D (FF Rev. 1-09)
State Aid Project No. SAP 003-607-027 and SAP 003-680-005

GRAND TOTAL $_____

The undersigned hereby acknowledges that all requirements included in the hard copy proposal, addenda, amendments, plans, standard specifications, and supplemental specifications are a part of this bid and contract.

Signed: _____

PROPOSAL GUARANTY required by 1208 of the Specifications: "A (certified check) (bond), prepared as required by 1208 of the Specifications and payable to the Becker County Treasurer, in an amount equal to at least 5% of the total amount of the bid is submitted herewith as a proposal guaranty.

NON-COLLUSION AFFIDAVIT: A Non-Collusion Affidavit is found in this proposal which must be signed by each bidder.

RECEIPT OF ADDENDA as required by 1210 of the Specifications:

The undersigned hereby acknowledges receipt of and has considered:

Addendum No. ____ Dated _____ Addendum No. ____ Dated _____

Addendum No. ____ Dated _____ Addendum No. ____ Dated _____

Signed: _____

EXECUTION OF PROPOSAL as required by 1206 of the Specifications:

This proposal dated the ____ day of _____, 20

Signed: _____, P.O. Address _____ as an individual.

Signed: _____, P.O. Address _____ as an individual.

doing business under the name and style of

Signed: _____, for _____ a partnership.

NAME BUSINESS ADDRESS

_____

Signed: _____, for _____ a corporation,

incorporated under the laws of the State of Minnesota

Name of President _____ Business Address _____

Name of Vice-President _____ Business Address _____

Name of Secretary _____ Business Address _____

Name of Treasurer _____ Business Address _____

(NOTE: Signatures shall comply with 1206 of the Specifications.)