

PROJECT MANUAL

Riverdale Drive Extension Improvements

SAP 119-115-003

SP 0202-101

City of Ramsey

Ramsey, MN



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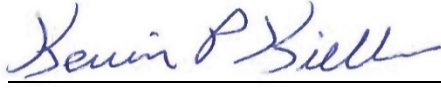
SECTION 00005 – CERTIFICATION

PROJECT MANUAL

for
Riverdale Drive Extension Improvements
SAP 119-115-003
SP 0202-101

City of Ramsey
Ramsey, MN

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By: 
Kevin P. Kielb, P.E.
License No. 23211

Date: April 5, 2017

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DRAWINGS (UNDER SEPARATE COVER):

36 sheets numbered 1 through 36 inclusive, dated April 5, 2017, and with each sheet bearing the following general title:

Riverdale Drive Extension Improvements
City of Ramsey

******END OF SECTION******

SECTION 00100 - ADVERTISEMENT FOR BIDS

Riverdale Drive Extension Improvements
SAP 119-115-003
SP 0202-101
City of Ramsey
Ramsey, MN

RECEIPT AND OPENING OF PROPOSALS: Sealed proposals for the work described below will be received at the Office of the Administrator, City of Ramsey, 7550 Sunwood Drive NW, Ramsey, MN 55303 until 1:00 p.m. on May 24, 2017 at which time the bids will be opened and publicly read.

DESCRIPTION OF WORK: The work includes the construction of approximately:

9,900 CY Common Excavation	6,000 LF Concrete Curb & Gutter
3,215 CY Pond Excavation	1,126 LF Silt Fence
58 LF Drainage Structures	4.6 Acre Seeding
2,000 LF 15"-18" Storm Pipe	8,095 SY Erosion Control Blanket
2,420 12" DIP Watermain	10,000 LF 4" Solid Line Epoxy

together with numerous related items of work, all in accordance with Plans and Specifications. This project is subject to Prevailing Wage Rates, Truck Rentals, Targeted Group Business Program Goals, and Veteran-Owned Small Business, Equal Employment Opportunity Provisions, Buy American Iron and Steel Provisions, and Responsible Contractor Certification.

PLANHOLDERS LIST, ADDENDUMS AND BID TABULATION: The planholders list, addendums and bid tabulations will be available for download on-line at www.bolton-menk.com or www.questcdn.com. Any addendums may also be distributed by mail, fax or email.

TO OBTAIN BID DOCUMENTS: Complete digital project bidding documents are available at www.bolton-menk.com or www.questcdn.com. You may view the digital plan documents for free by entering Quest project # 4949972 on the website's Project Search page. Documents may be downloaded for \$20.00. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, viewing, downloading, and working with this digital project information. An optional paper set of project documents is also available for a nonrefundable price of \$150.00 per set, which includes applicable sales tax and shipping. Please make your check to payable to Bolton & Menk, Inc. and send it to 7533 Sunwood Drive NW, Suite 206, Ramsey, MN 55303, (763) 433-2851, fax (763)427-0833

BID SECURITY: A certified check or proposal bond in the amount of not less than 5 percent of the total amount bid, drawn in favor of City of Ramsey shall accompany each bid.

OWNER'S RIGHTS RESERVED: The Owner reserves the right to reject any or all bids and to waive any irregularities and informalities therein and to award the Contract to other than the lowest bidder if, in their discretion, the interest of the Owner would be best served thereby.

Dated: _____ /s/ Kurt Ulrich
Administrator

Published:

Finance and Commerce: _____, _____, _____

QuestCDN: _____, _____, _____

_____: _____, _____, _____

******END OF SECTION******

SECTION 00200 - INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACTS

Riverdale Drive Extension Improvements
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ARTICLE 1 - DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid. Bid Documents deposit amount, if any, is stated in the advertisement or invitation to bid. Deposits shall be refundable, or not, as indicated in the advertisement or invitation to bid.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

2.04 When the advertisement indicates supplemental digital formats of all or portions of the bidding documents are available for bidding purposes, the Owner and Engineer will, upon request, provide the Bidder with such documents. The terms of use of such documents shall be as set forth in the Bidding Documents (“Document 00210 - Electronic/Digital Documents”).

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder’s qualifications to perform the Work, after submitting its Bid and within 5 days of Owner’s request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments:

3.02 A Bidder’s failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder’s qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder’s representations and certifications.

ARTICLE 4 - SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER’S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for

temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 Existing Site Conditions

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
 - 1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
 - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 Site Visit and Testing by Bidders

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners

or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 - BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;

- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 - PRE-BID CONFERENCE

6.01 No pre-bid Conference is scheduled for this project.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 - BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents or form that is equivalent in terms, duration and obligation issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 - CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 - PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

- 13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership's address for receiving notices shall be shown.
- 13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm's address for receiving notices shall be shown.
- 13.05 A Bid by an individual shall show the Bidder's name and address for receiving notices.
- 13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture's address for receiving notices shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 - BASIS OF BID

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 - SUBMITTAL OF BID

- 15.01 With each paper copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the project title "Riverdale Drive Extension Improvements", Project No. R16.111092 (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid

shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to the person indicated in the advertisement or invitation to bid.

- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.
- 15.04 The Owner does not allow electronic bid submittals.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the Bid Opening.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 - OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the bid award.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 - EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
 - A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider applicable mandatory criteria established by governing statutes and regulations, including but not limited to Minnesota Statute 16C.285, qualifications of the Bidder, and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those

portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 - BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 - SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 - SALES AND USE TAXES

- 22.01 Owner is not exempt from state sales and use taxes on materials and equipment. Said taxes shall be included in the bid.

ARTICLE 23 - CONTRACTS TO BE ASSIGNED

- 23.01 There are no material contracts for this project that will be assigned to the Contractor.

******END OF SECTION******

SECTION 00210 - ELECTRONIC/DIGITAL DOCUMENTS

PART 1 -- GENERAL

1.1 SUMMARY

- A. The Owner or Engineer may elect to provide copies of the contract documents or supplemental information to the Contractor in electronic/digital media format. This section governs the availability, use and limitations of information provided in electronic/digital format.

1.2 FORMAT OF DOCUMENTS AND CONTROLLING CRITERIA

- A. The Agreement identifies the contract documents upon which the Bidder or Contractor may rely. The General Conditions set forth the provisions governing the intent, interpretation and use of the contract documents. This section is intended to augment the Agreement and General Conditions and to clarify limitations on the use of electronic/digital documents.
- B. "Hard Copies" of the Contract Documents consist of complete sets of those documents specifically listed in the Agreement including the version of the plans and specifications that are signed and sealed with original signature (or unalterable and legally acceptable facsimile copy of said signature) denoting the designer's final intent for bidding purposes. Electronic/digital files in the "Native File Format" are saved in the default file format used by a specific software application. The native file format of an application is proprietary and these types of files are not meant to be transferred to other applications. Electronic/digital files in the native file format may be altered and may not be representative of the paper copies of the documents
- C. For bidding purposes only, Hard Copies of the Contract Documents shall be construed to include electronic/digital files of the Bidding Documents (as defined in Section 00200), prepared by Engineer and provided under direction of Engineer in a Portable Document Format (PDF) format or other file format that is intended by the Engineer and Owner to be unalterable and exactly representative of the information contained in the paper copies of the documents.
- D. The project plans graphically set forth design requirements for the project. These plans are a two-dimensional representation of three-dimensional existing conditions and proposed improvements. Because it is generally impossible to economically or graphically duplicate real world conditions on a two-dimensional plan format, certain approximations, graphical simplifications, intentional or unintentional inaccuracies must generally be used to adequately describe the existing conditions and work to be done on the plans. Because of these graphical compromises, certain dimensions and other supplementary notes and information may be added to the plans to control the specific requirements of the design. Electronic/digital versions of the plans in PDF format, native file format or other electronic file format may imply a spatial accuracy that exceeds the graphical limitations of the original plan set. This is also true of supplementary electronic/digital information developed from the plans or underlying support data (such as layers, hidden lines, survey points or topographic computational networks).
- E. In the event of a conflict between an electronic/digital version of a Contract Document and the Hard Copy of the document, the Hard Copy shall be deemed to govern. Bidders, by submitting a bid, and the Contractor by executing the contract, acknowledge these graphical limitations to the plan development process and accept the controlling nature of the Hard Copies of all project documents as set forth in the General Conditions.

1.3 AVAILABILITY AND USE OF DIGITAL/ELECTRONIC DOCUMENTS

- A. When the Advertisement for Bids or Project Manual indicate that electronic/digital copies of the Plans and Specifications are available, such documents shall be made available to the Bidder or Contractor upon

request in PDF format or other file format that is intended by the Engineer and Owner to be unalterable and exactly representative of the information contained in the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of electronic/digital documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that electronic/digital versions and reproductions prepared from those versions are identical in every manner to the paper copies.

- B. Except as otherwise advised, the Bidder may use and rely upon complete sets of the PDF or other electronic/digital version of the Bidding Documents, prepared by the Engineer and provided under direction of the Engineer, for preparation of its bid. However, Contractor assumes all risks associated with differences arising from transmission/receipt of electronic/digital versions and reproductions prepared from those versions and, further, assumes all risks, costs and responsibility associated with use of the electronic/digital versions to derive information that is not explicitly contained in the paper copies of the documents and for Bidder's reliance upon such derived information.
- C. When using PDF versions of the bidding documents, the Contractor shall prepare its Bid on a printed paper copy of the Bid Form from the PDF file; submit its bid together with all required submittals; and deliver the Bid in the manner described in the bidding documents. The printed copy of the Bid Form shall be clearly legible, printed on 8 ½ inch by 11 inch paper and as closely identical in appearance to the PDF Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the Hard Copy of the Bid Form, providing that all required information and submittals are included with the bid.
- D. After a Contract is awarded, the Owner may provide or direct the Engineer to provide for the use of the Contractor such electronic/digital copies of the contract documents or other support documents in native file formats as may have been previously developed as part of the Project design process. Release of such information, if available, shall be deemed to be solely for the convenience of the Contractor. Unless the Contract Documents explicitly identify that such information shall be available to the successful Bidder, nothing herein shall create an obligation on the part of the Owner or Engineer to provide or create such information and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital data is appropriate and adequate for the Contractor's specific purposes. In no case shall the Contractor be entitled to extra compensation or adjustment in contract time due to claims arising from any differences between the Hard Copies of the Contract Documents and electronic/digital data.
- E. Release of all electronic/digital information requested by the Contractor shall be at the sole discretion of the Owner or Engineer and a separate charge will be made to the Contractor for creation or preparation of such information.
- F. Release of electronic/digital data shall be subject to the herein accompanying form, entitled "REQUEST TO PROJECT ENGINEER FOR ELECTRONIC/DIGITAL DATA AND CONDITIONS OF USE," together with such other limitations as the Owner or Engineer may deem appropriate for the Project. In the event of questions, conflicts, inconsistencies between any the electronic/digital data, the Hard Copies of the Contract Documents shall govern unless otherwise directed in writing by the Owner and Engineer.
- G. In the event that Owner elects to provide or directs the Engineer to provide to the Contractor any Contractor-requested electronic/digital data that is not explicitly identified in the Contract Documents as being available to the successful bidder, the Engineer shall be reimbursed by the Contractor on an hourly basis (at \$120 per hour) for all engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by the Engineer.

*******END OF SECTION*******

REQUEST TO PROJECT ENGINEER (BOLTON & MENK, INC. "BMI")
FOR ELECTRONIC/DIGITAL DATA AND CONDITIONS OF USE

Project Contractor ("USER"):	_____
Project Owner	City of Ramsey
Project Name	Riverdale Drive Extension Improvements
Description of Data/Files To Be Provided	_____

A. The electronic/digital data covered by this Request was prepared by BMI as an internal working document for its purposes solely and is being provided to USER on an "AS IS" basis without any warranties of any kind, including, but not limited to implied warranties of fitness for any purpose. As such, the USER is advised and acknowledges that the information may not be suitable for the USER's application or may require substantial modification and independent verification by the USER. Information may include intentional or unintentional inaccuracies, approximations, graphical simplifications, undocumented intermediate revisions and other devices that may affect subsequent reuse.

B. The electronic/digital data may not accurately reflect the printed products (also known as Hard Copies) that are signed or sealed by BMI. In the case of conflicts between the signed or sealed documents and electronic/digital data, the Hard Copies shall control. Files in electronic/digital media format of text, data, graphics, or of other types that are provided by BMI to USER are only for convenience of USER. Any conclusion or information obtained or derived from such electronic/digital data will be at the USER's sole risk and the USER waives any claims against BMI or PROJECT OWNER arising from use of electronic/digital data.

C. USER shall indemnify and hold harmless PROJECT OWNER and BMI and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from USER's use, adaptation or distribution of any electronic/digital data provided under this Request.

D. All Documents provided in electronic/digital format are instruments of service and, unless otherwise specifically identified in the Contract between the USER and PROJECT OWNER, are not Contract Documents. BMI shall retain all ownership, copyrights and property interests therein, subject to any agreement between BMI and the PROJECT OWNER. Nothing herein shall be deemed to be

Accepted by: USER

Printed Name of "USER"

Date

Name and Title of Authorized Representative of USER

Approved: Project Engineer:
(BMI)

Signature of Authorized Representative of USER

Signature of Project Engineer's Representative

Version 04/11/07

a transfer of the ownership rights of BMI or those of the PROJECT OWNER to the USER and USER's rights regarding any information shall be limited those explicitly described in this Request.

E. Although BMI may advise the USER of known errors or required updates in electronic/digital data provided to the USER upon discovery by BMI or notice to BMI of such conditions, the USER agrees that BMI and PROJECT OWNER are under no obligation to notify USER or correct, revise, update or otherwise maintain any electronic/digital data provided to the USER, nor shall the USER be entitled to make any claim for extra compensation or other consideration on account of using such data.

F. USER agrees not to sell, copy, transfer, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of BMI, unless such distribution is specifically identified in this request and is limited to USER's subcontractors. USER warrants that subsequent use by USER'S subcontractors shall comply with all terms of this Request.

G. Provision of this information does not include any license of software or other systems necessary to read, use or reproduce the information. USER assumes all responsibility to obtain any necessary software and appropriate licenses to utilize the information in any format or application.

H. The USER shall compensate BMI in the amount of \$120.00/per hour for all labor and expenses associated with the handling, processing and delivery of the information in an "as is" form or to adapt such information into a form which BMI, in its sole discretion, deems to reasonably reflect the limits of the accuracy or usability of the information. USER acknowledges such compensation shall be deemed to be a data processing fee and is not a design fee or part of the design fees paid by the PROJECT OWNER to BMI.

SCHEDULE OF PRICES

NOTICE TO BIDDERS

Particular note should be made in regard to the clarity of numerals (figures) and to the procedure for alterations and the required certificate as directed by Section 1301.

The following abbreviations may be used in item description and unit of measure in the Schedule of Prices.

A	Arch	JA	Jacked
A-S	Antiseepage	LIN FT	Linear Feet
AB	Asbestos Bonded	LG	Long
ACT	Actuated	MAINT	Maintenance
AGG	Aggregate	MATL	Material
ALUM	Aluminum	MGM	1000 Board Feet
ASB	Asbestos	MET	Metal
ASPH	Asphaltic	MOD	Modification
ASSY	Assemblies	MPA	Metal Pipe Arch
B+B	Balled & Burlapped	MTD	Mounted
BC	Bituminous Coated	NON MET	Non Metallic
BIT	Bituminous	NON PERF	Non-Perforated
BLDG	Building	NON REINF	Non-Reinforced
BR	Bridge	OH	Overhead
CAL	Caliper	P-A	Pipe-Arch
CB	Catch Basin	PAVT	Pavement
CEM	Cement	PERF	Perofrated
C and G	Curb and Gutter	PL	Plate
CI	Cast Iron	PNEUM	Pneumatic
C-I-P	Cast-in-Place	PREC	Precast
CL	Class	PREST	Prestressed
COMM	Commercial	PVC	Poly Vinyl Chloride
CONC	Concrete	RCPA	Reinforced Concrete Pipe Arch
COND	Conductor	REINF	Reinforced
CONN	Connection	RELO	Relocation
CONST	Construct	RESTOR	Restoration
CONT	Continuously	RMC	Rigid Metallic Conduit
CP	Cattle Pass	RNMC	Rigid Non Metallic Conduit
CTD	Coated	RDWY	Roadway
CU FT	Cubic Feet	S-G	Sand & Gravel
CU YD	Cubic Yard	SIG	Signal
CULV	Culvert	SPE	Special
CWT	Hundred Weight	SQ FT	Square Feet
DES	Design	SQ YD	Square Yard
DBL	Double	STA	Station
DI	Drop Inlet	STD	Standard
DIAM	Diameter	STL	Steel
DRWY	Driveway	STKPL	Stockpile
EXC	Excavation	STR	Strength
EXP	Expansion	STRUCT	Structural
FAB	Fabric	SPPA	Structural Plate Pipe Arch
FE	Fence	SYS	System
FERT	Fertilizer	T	Traffic
F+I	Furnish & Install	TBR	Timber
FOUND	Foundation	TEMP	Temporary
FT LG	Feet Long	THERMO	Thermoplastic
FURN	Furnish	TRTD	Treated
GA	Gauge	UNDERGRD	Underground
GRAN	Granular	UNTRTD	Untreated
HI	High	VAR	Variable
INP	In Place	VM	Vehicular Measure
INST	Install	WEAR	Wearing

NOTICE TO BIDDERS

Minnesota Statutes that require prompt payment to subcontractors:

471.425 Prompt payment of local government bills.

Subd. 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.

HIST: 1985 c 136 s 5; 1995 c 31 s 1

**NOTICE TO BIDDERS
SUSPENSIONS/DEBARMENTS**

November 15, 2016
Page 1 of 4

DEPARTMENT OF TRANSPORTATION

NOTICE OF DEBARMENT

NOTICE IS HEREBY GIVEN that MnDOT has ordered that the following vendors be debarred for a period of three (3) years, effective September 17, 2014 until September 17, 2017:

- Jeffrey Plzak and his affiliates, Loretto, MN
- Laurie Plzak and her affiliates, Loretto, MN
- Honda Electric Incorporated and its affiliates, Loretto, MN
- Fibertech, Inc. and its affiliates, Loretto, MN
- Jeffrey and Laurie Plzak doing business as Honda Electric Logistics, and its affiliates, Loretto, MN

NOTICE IS HEREBY GIVEN that MnDOT has ordered that the following vendors be debarred for a period of three (3) years, effective January 12, 2015 until January 12, 2018:

- Marlin Dahl, Granada, MN
- Dahl Trucking, Elmore, MN
- Elmore Truck and Trailer, Inc., Elmore, MN

Minnesota Statute section 161.315 prohibits the Commissioner, counties, towns, or home rule or statutory cities from awarding or approving the award of a contract for goods or services to a person who is suspended or debarred, including:

- 1) any contract under which a debarred or suspended person will serve as a subcontractor or material supplier,
- 2) any business or affiliate which the debarred or suspended person exercises substantial influence or control, and
- 3) 3) any business or entity, which is sold or transferred by a debarred person to a relative or any other party over whose actions the debarred person exercises substantial influence or control, remains ineligible during the duration of the seller's or transfer's debarment.

**NOTICE TO BIDDERS
SUSPENSIONS/DEBARMENTS**

November 15, 2016
Page 2 of 4

DEPARTMENT OF ADMINISTRATION

As of the date of this notice and in accordance with Minnesota Rules 1230.1150, the Minnesota Department of Administration has debarred and disqualified the following persons and businesses from entering into or receiving a State of Minnesota contract:

NAME	DATE OF SUSPENSION
Ace Hydro Seeding, Inc. Crystal VanMuyden 909 Central Avenue North #125 Park Rapids, MN 56470-1290	August 30, 2016 through March 1, 2017
Asphalt Recycling Solutions, Inc. Donald Wesley Johnson 2068 Homestead Ave. Oakdale, MN 55128-5330	May 24, 2016 through November 24, 2016
Devos, Ltd. d/b/a Guaranteed Returns Dean Volkes, Donna Fallon & Ronald Carlino 100 Colin Drive Holbrook, NY	December 5, 2014 through December 31, 2099
Wide Open Services, LLC Steve Mittelstaedt 6938 Highway 169 Virginia, MN 55792	March 30, 2016 through September 30, 2016
NAME	DATE OF DEBARMENT
Best Electric Thomas Clifton and Earl Standafer 9909 S. Shore Drive #155 Plymouth, MN 55441	May 22, 2015 through May 21, 2018 (eligible for reinstatement on May 21, 2019)
Best Used Trucks of Minnesota, Inc. Jason W. Leas 635 Marin Avenue Crookston, MN 56716	Nov. 20, 2012 through Nov. 20, 2015 (eligible for reinstatement on Nov. 20, 2016)
C & S Electric, Inc. Thomas Clifton and Earl Standafer 9909 S. Shore Drive #155 Plymouth, MN 55441	May 22, 2015 through May 21, 2018 (eligible for reinstatement on May 21, 2019)
Dahl Trucking Marlin Dahl 305 Highway 169 South Elmore, MN 56027	Aug.19, 2014 through January 12, 2018
Elmore Truck and Trailer Repair, Inc. Marlin Dahl 305 Highway 169 South Elmore, MN 56027	Aug.19, 2014 through Jan. 12, 2018 (eligible for reinstatement on Jan. 12, 2019)
Fibertech, Inc. Jeffrey and Laurie Plzak 5075 Nielsen Circle, P.O. Box 236 Loretto, MN 55357	July 24, 2014 through July 23, 2017 (eligible for reinstatement on July 23, 2018)
Glacier, Inc. Joan Niesen 122 Summerfield Drive, PO Box 216 Waverly, MN 55390	May 24, 2016 through November 24, 2016

NOTICE TO BIDDERS
SUSPENSIONS/DEBARMENTS

November 15, 2016

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Groundscape Maintenance, Inc. Rob Sievers 1160 County Road 83 Maple Plain, MN 55359	February 19, 2015 through February 19, 2016 (eligible for reinstatement February 19, 2017)
Guaranteed Returns Ronald Carlino, Donna Fallon, Dean Volkes 100 Colin Drive Holbrook, NY 11741	December 5, 2014 through December 31, 2099
Honda Electric, Inc. Jeffrey and Laurie Plzak 5075 Nielsen Circle, P.O. Box 236 Loretto, MN 55357	July 24, 2014 through July 23, 2017 (eligible for reinstatement on July 23, 2018)
Hunt's Carpet Service, Inc. ¹ Robert and Joni Hunt 4102 46th Avenue North Robbinsdale, MN 55422	Sept. 15, 2015 through Sept. 15, 2020
McCaa, Webster & Associates, Inc. Sammie McCaa 2751 Hennepin Avenue South, #301 Minneapolis, MN 55408-1002	May 1, 2014 through April 30, 2015 (eligible for reinstatement on April 30, 2016)
MG Carlson Construction Company, Inc. Martin Gerald Carlson 701 East First Street Fort Worth, TX 76102-3276	Sept. 5, 2014 through October 5, 2015 (eligible for reinstatement on April 5, 2016)
Ocuture, LLC 11930 Camby Park Drive Houston, TX 77047	Dec. 15, 2014 through Dec. 15, 2015 (eligible for reinstatement Dec. 15, 2016)
Ramco Heating and Air Conditioning Mark and Cheryl Ramquist 605 Ash Street Downing, WI 54734	March 11, 2015 through March 11, 2016 (eligible for reinstatement March 11, 2017)
Southwest Paving, Inc. Greg Brakefield 26412 State Highway 29 Deer Creek, MN 56527	March 30, 2016 through March 30, 2017 (eligible for reinstatement March 30, 2018)
St. Cloud Lawn & Landscaping, Inc. Pat Murphy 10602 County Road 2 Brainerd, MN 56401	February 20, 2015 through February 20, 2016 (eligible for reinstatement on Feb. 20, 2017)
TAC Construction Solutions, Inc. Christina Woods 31767 Deacons Way Pequot Lakes, MN 56472	August 19, 2014 through August 19, 2016 (eligible for reinstatement on August 19, 2017)
Watab Hauling Co. Gary Francis Bauerly 9695 Deerwood Rd. NE Rice, MN 56367	Jan. 14, 2013 through Jan. 14, 2016 (eligible for reinstatement on Jan. 14, 2017)

Minnesota Administrative Rule part 1230.1150, subpart 6 requires the Materials Management Division to maintain a master list of all suspensions and debarments. The master list must retain all information concerning suspensions and debarments as a public record for at least three (3) years following the end of a suspension or debarment. Refer to the following website for the master list: <http://www.mmd.admin.state.mn.us/debarredreport.asp>.

¹ Debarred by Hennepin County from working on any Hennepin County projects as a general contractor or subcontractor at any tier. Minn. Rules Part 1230.1150, subpart 2, item B, subitem (1) provides that any vendor debarred by the federal government, the state of Minnesota, or any of its departments, commissions, agencies, or political subdivisions, is automatically debarred by the (Department of Administration, Materials Management) division under the same terms and limits of the original debarment.

NOTICE TO BIDDERS
SUSPENSIONS/DEBARMENTS

November 15, 2016
Page 4 of 4

If the project is financed in whole or in part with federal funds, refer to the following website for vendors debarred by federal government agencies: <http://sam.gov>.

This list does not include preclusion actions taken by cities, counties or local authorities. Consult local authorities to ensure that contractors, subcontractors and materials suppliers are not currently suspended or debarred.

To the Ramsey City Council:

According to the advertisement of the Ramsey City Council 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 the Ramsey City Council:

(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 Mn/DOT 1903, 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 Mn/DOT 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 Mn/DOT 1904.

(I)(We) further propose to execute the form of Contract within 10 days after receiving written notice of award, as provided in Mn/DOT 1306.

(I)(We) further propose to furnish a payment bond equal to the Contract amount, and a performance bond equal to the Contract amount, with the aggregate liability of the bond(s) equal to twice the full amount of the Contract, as security for the construction and completion of the improvement according to the Plans, Specifications and Special Provisions as provided in Mn/DOT 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 the Ramsey City Council.

(I)(We) agree to all provisions of Minnesota Statutes 1976, 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 the Ramsey City Council 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.

Items to Be Submitted With the Bid
for
Riverdale Drive Extension Improvements
SAP 119-115-003
SP 0202-101

City of Ramsey
Ramsey, MN

SECTION 00410 - BID FORM

Riverdale Drive Extension Improvements
SAP 119-115-003
SP 0202-101
City of Ramsey

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

City of Ramsey
City Hall
7550 Sunwood Drive NW
Ramsey, MN 55303

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 61 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous

Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 - BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
- E. Bidder has completed and executed the attached SECTION 00415 – RESPONSIBLE CONTRACTOR – PROPOSAL ATTACHMENT relating to Minn Statute 16C.285, "Responsible Contractor."

ARTICLE 5 - BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):
- A. Bidder will complete the work in accordance with the Contract Documents at the prices shown in the attached Bidding Schedule.
 - B. Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.
 - C. Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids. Final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security (Section 00430 – Bid Bond)
 - B. Section 00415 Responsible Contractor – Proposal Attachment (2 Pages)

ARTICLE 8 - DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SCHEDULE OF UNIT PRICES

RIVERDALE DRIVE EXTENSION IMPROVEMENTS

S.A.P. 119-115-003

CITY OF RAMSEY, MINNESOTA

BMI PROJECT NO. R16.111092

BIDDER agrees to perform all of the work described in the CONTRACT DOCUMENTS for the following unit prices:

NOTE: BIDS shall include sales tax and all applicable taxes and fees.

BIDDER must fill in unit prices in numerals, make extension for each item, and total.

CY (LV) = Cubic Yards, Loose Volume

CY (CV) = Cubic Yards, Compacted Volume (Measured in Place)

CY (EV) = Cubic Yards, Excavated Volume (Measured in Place)

(P)=Planned Quantity Basis of Measurement

ITEM NO.	ITEM	UNIT	APPROX. QUANT.	UNIT PRICE	AMOUNT
1	2021.501 MOBILIZATION	LUMP SUM	1		
2	2101.511 CLEARING AND GRUBBING	LUMP SUM	1		
3	2102.501 PAVEMENT MARKING REMOVAL	SQ FT	123		
4	2104.501 REMOVE FENCE	LIN FT	115		
5	2104.501 REMOVE CURB AND GUTTER	LIN FT	1640		
6	2104.501 REMOVE SEWER PIPE (STORM)	LIN FT	100		
7	2104.501 REMOVE PIPE CULVERTS	LIN FT	125		
8	2104.505 REMOVE BITUMINOUS PAVEMENT	SQ YD	5760		
9	2104.505 REMOVE CONCRETE PAVEMENT	SQ YD	185		
10	2104.509 REMOVE DRAINAGE STRUCTURE	EACH	3		
11	2104.509 REMOVE WOOD POST	EACH	3		
12	2104.509 REMOVE SIGN	EACH	17		
13	2104.511 SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	80		
14	2104.513 SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	940		
15	2104.601 RELOCATE MISCELLANEOUS STRUCTURE	LUMP SUM	1		
16	2105.501 COMMON EXCAVATION	(P) CU YD	9905		
17	2105.507 SUBGRADE EXCAVATION	CU YD	200		
18	2105.511 CHANNEL AND POND EXCAVATION	CU YD	3215		
19	2105.521 GRANULAR BORROW (CV)	CU YD	200		
20	2211.501 AGGREGATE BASE CLASS 5	TON	6575		
21	2360.501 TYPE SP 9.5 WEARING COURSE MIXTURE (3,A)	TON	1653		
22	2360.502 TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,B)	TON	1950		
23	2501.515 18" RC PIPE APRON	EACH	1		
24	2503.541 15" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	1709		
25	2503.541 18" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	260		
26	2503.602 CONNECT TO EXISTING STORM SEWER	EACH	2		
27	2504.602 ADJUST VALVE BOX	EACH	3		
28	2504.602 ADJUST HYDRANT AND VALVE	EACH	1		
29	2504.602 CONNECT TO EXISTING WATER MAIN	EACH	2		
30	2504.602 HYDRANT	EACH	1		
31	2504.602 6" GATE VALVE & BOX	EACH	1		
32	2504.602 12" GATE VALVE & BOX	EACH	2		
33	2504.603 6" WATERMAIN DUCTILE IRON CLASS 52	LIN FT	97		

SCHEDULE OF UNIT PRICES

RIVERDALE DRIVE EXTENSION IMPROVEMENTS

S.A.P. 119-115-003

CITY OF RAMSEY, MINNESOTA

BMI PROJECT NO. R16.111092

BIDDER agrees to perform all of the work described in the CONTRACT DOCUMENTS for the following unit prices:

NOTE: BIDS shall include sales tax and all applicable taxes and fees.

BIDDER must fill in unit prices in numerals, make extension for each item, and total.

CY (LV) = Cubic Yards, Loose Volume

CY (CV) = Cubic Yards, Compacted Volume (Measured in Place)

CY (EV) = Cubic Yards, Excavated Volume (Measured in Place)

(P)=Planned Quantity Basis of Measurement

ITEM NO.	ITEM	UNIT	APPROX. QUANT.	UNIT PRICE	AMOUNT
34	2504.603 12" WATERMAIN DUCTILE IRON CLASS 52	LIN FT	2360		
35	2504.608 WATERMAIN FITTINGS	POUND	1040		
36	2506.501 CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	5.2		
37	2506.501 CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 1	LIN FT	6.1		
38	2506.501 CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL 2	LIN FT	43.6		
39	2506.501 CONSTRUCT DRAINAGE STRUCTURE DESIGN G	LIN FT	3		
40	2506.516 CASTING ASSEMBLY	EACH	14		
41	2506.522 ADJUST FRAME AND RING CASTING	EACH	2		
42	2511.502 RANDOM RIPRAP CLASS III	TON	24		
43	2521.501 6" CONCRETE WALK	SQ FT	750		
44	2531.501 CONCRETE CURB & GUTTER DES B618	LIN FT	5900		
45	2531.501 CONCRETE CURB & GUTTER DES B624	LIN FT	20		
46	2531.507 8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	110		
47	2531.618 TRUNCATED DOMES	SQ FT	90		
48	2563.601 TRAFFIC CONTROL	LUMP SUM	1		
49	2563.601 TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1		
50	2564.531 SIGN PANELS TYPE C	SQ FT	58		
51	2573.502 SILT FENCE, TYPE MS	LIN FT	1126		
52	2573.530 STORM DRAIN INLET PROTECTION	EACH	20		
53	2573.533 SEDIMENT CONTROL LOG TYPE COMPOST	LIN FT	100		
54	2573.535 STABILIZED CONSTRUCTION EXIT	LUMP SUM	1		
55	2574.508 FERTILIZER, TYPE 3	POUND	1610		
56	2575.501 SEEDING	ACRE	4.6		
57	2575.502 SEED, MIXTURE 25-121	POUND	230		
58	2575.502 SEED, MIXTURE 33-262	POUND	26		
59	2575.502 SEED, MIXTURE 35-221	POUND	95		
60	2575.505 SODDING TYPE SALT TOLERANT	SQ YD	545		
61	2575.523 EROSION CONTROL BLANKET CATEGORY 3N	SQ YD	8095		
62	2575.560 HYDRAULIC BONDED FIBER MATRIX	POUND	13750		
63	2582.501 PAVEMENT MESSAGE EPOXY	SQ FT	60		
64	2582.502 4" SOLID LINE EPOXY	LIN FT	6800		
65	2582.502 4" DOUBLE SOLID LINE EPOXY	LIN FT	3130		
66	2582.502 24" SOLID LINE EPOXY	LIN FT	210		

TOTAL AMOUNT BID: \$ _____

ARTICLE 9 - BID SUBMITTAL

BIDDER:

By:

[Signature]

[Printed name]

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature]

[Printed name]

Title:

Submittal Date:

Address for giving notices:

Telephone Number:

Fax Number:

Contact Name and e-mail address:

Bidder's License No.:

(where applicable)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

SECTION 00415 – RESPONSIBLE CONTRACTOR – PROPOSAL ATTACHMENT

Page 1 of 2

INITIAL CONTRACTOR VERIFICATION OF COMPLIANCE

By signing this document I certify that I am an owner or officer of the company, and I swear under oath that:

My company meets each of the minimum criteria in subclauses (1) – (6) of Minn. Stat. § 16C.285, subd. 3, the Responsible Contractor statute.

The undersigned understands that a failure to meet or verify compliance with the minimum criteria established for a “responsible contractor” as defined in Minn. Stat. § 16C.285, subd. 3, renders a bidder ineligible to be awarded a construction contract for the Project or to perform work on the Project.

The undersigned understands that a false statement under oath verifying compliance with any of the minimum criteria shall make the undersigned, ineligible to be awarded a construction project and may result in termination of a contract awarded to the undersigned. 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.

The undersigned understands that, if the undersigned is the apparent low bidder, the undersigned will be required to submit a supplemental verification under oath as a condition precedent to the execution of the contract. If the undersigned fails to provide the required supplemental verification, it could forfeit its bid bond.

I have attached a list of all of my company’s first-tier subcontractors that it intends to retain for work on the project.

Initial Contractor Verification of Compliance - Riverdale Drive Extension Improvements	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

SECTION 00415 – RESPONSIBLE CONTRACTOR – PROPOSAL ATTACHMENT

Page 2 of 2

SUBCONTRACTORS LIST

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 if necessary.

Subcontractors List - Riverdale Drive Extension Improvements	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Ramsey
7550 Sunwood Drive NW
Ramsey, MN 55303

BID

Bid Due Date:

Description (*Project Name – Include Location*):

Riverdale Drive Extension Improvements

BOND

Bond Number:

Date:

Penal sum

\$

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

(Seal)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By:

Signature

By:

Signature (*Attach Power of Attorney*)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

DOCUMENT 00450 - INFORMATION REQUESTED FROM THE LOW BIDDER

(The Low Bidder May Be Requested To Provide This Information After The Bids Are Received But Prior To Issuing The Notice Of Award)

GENERAL INFORMATION

The low bidder is requested to furnish the following information. Additional sheets shall be attached as required.

The low bidder is requested to furnish the following information. Additional sheets shall be attached as required.

Contractor's name and address: _____

Number of years as a Contractor in construction work of this type _____

Names and titles of all officers of Contractor's firm: _____

SUBMIT a list of five (5) construction contracts completed by the Contractor during the last five (5) years involving work of similar type and comparable value. The list shall include the following information as a minimum:

- Name, address and telephone number of owner.
- Name of project.
- Location of project.
- Brief description of the work involved.
- Contract amount.
- Date of completion of contract.
- Name, address and telephone number of architect or engineer.
- Name of owner's project engineer.

EQUIPMENT/MATERIAL SOURCE INFORMATION

The low bidder is requested to list the name of the manufacturer of supplier and catalog numbers of the equipment or material proposed to be furnished under the bid. Awarding of a contract under this bid will not imply approval by the Owner of the manufacturers or suppliers listed by the low bidder.

- Plant Mix Bituminous
- Aggregates
- Water Appurtenances
- Precast Concrete Pipe,
- Manholes & Catch Basins
- Manhole & Catch Basin Castings

******END OF SECTION******

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)

Items to Be Executed After Bid Opening
for
Riverdale Drive Extension Improvements

SAP 119-115-003

SP 0202-101

City of Ramsey

Ramsey, MN

NOTICE OF AWARD

Date of Issuance:

Owner: City of Ramsey

Owner's Contract No.:

Engineer: Bolton & Menk, Inc.

Engineer's Project No.: R16.111092

Project:

Contract Name:

Bidder:

Bidder's Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated [_____] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[describe work, alternates, or sections of work awarded]

The Contract Price of the awarded Contract is: \$ _____ [note if subject to unit prices, or cost-plus]

[] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. [revise if multiple copies accompany the Notice of Award]

a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of this Notice of Award:

1. Deliver to Owner [____] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [e.g., performance and payment bonds] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Deliver to Owner executed SECTION – 00515 RESPONSIBLE CONTRACTOR NOTICE OF AWARD. SUPPLEMENTAL CONTRACTOR VERIFICATION OF COMPLIANCE in accordance with Minn. Stat. 16C.285 subd.3 Subclauses (1) to (7). Delivery is a condition precedent to execution of this contract and failure to submit this form shall be cause for the Owner to cancel Award of Contract and declare your Bid security forfeited.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions

Owner: City of Ramsey

Authorized Signature

By:

Title:

Copy: Engineer

SECTION 00515 - RESPONSIBLE CONTRACTOR - NOTICE OF AWARD

SUPPLEMENTAL CONTRACTOR VERIFICATION OF COMPLIANCE

PROJECT TITLE: Riverdale Drive Extension Improvements

By signing this document I certify that I am an owner or officer of the company, and I swear under oath that:

My company meets each of the minimum criteria of Minn. Stat. § 16C.285, subd. 3, the Responsible Contractor statute.

Pursuant to Stat. § 16C.285, subd. 3(7), my company has obtained from all subcontractors and 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 subcontractor or motor carrier.

The undersigned agrees that, if it retains additional subcontractors on the project after submitting its verification of compliance, it 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 Minn. Stat. § 16C.285, subd. 3(7), within 14 days of retaining the additional subcontractors.

Upon request, the undersigned shall submit to the contracting authority copies of the signed verifications of compliance from all subcontractors of any tier and all motor carriers providing for-hire transportation of materials, equipment, or supplies for a project.

The undersigned understands that a failure to meet or verify compliance with the minimum criteria established for a “responsible contractor” as defined in Minn. Stat. § 16C.285, subd. 3, renders a bidder ineligible to be awarded a construction contract for the Project or to perform work on the Project.

The undersigned understands that a false statement under oath verifying compliance with any of the minimum criteria shall make the undersigned, ineligible to be awarded a construction project and may result in termination of a contract awarded to the undersigned. 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.

Supplemental Contractor Verification of Compliance - Riverdale Drive Extension Improvements	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

SECTION 00516 - RESPONSIBLE CONTRACTOR - SUPPLEMENTAL

ADDITIONAL SUBCONTRACTORS LIST

PRIME CONTRACTOR TO SUBMIT AS SUBCONTRACTORS ARE ADDED TO THE PROJECT

PROJECT TITLE: Riverdale Drive Extension Improvements

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

Additional Subcontractors List - Riverdale Drive Extension Improvements
<p>By signing this document I certify that I am an owner or officer of the company, and I swear under oath that:</p> <p>All additional subcontractors listed on this form have been 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.</p>

Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

**SECTION 00520 - AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between _____ (“Owner”) and

_____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Riverdale Drive Extension Improvements

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

Extend Riverdale Drive NW from Traprock Street NW to Ramsey Boulevard NW.

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by Bolton & Menk, Inc.

3.02 The Owner has retained Bolton & Menk, Inc., to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Contract Times: Dates

A. The Work will be substantially completed on or before September 29, 2017, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 27, 2017.

1. Substantial Completion shall be approved once curb & gutter is in place and the first lift of bituminous pavement in place and the roadway is open to traffic.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner \$1,000.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$1,000.00 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:
- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item)
 - B. For all Work, at the prices stated in Contractor’s Bid, attached hereto as an exhibit.
 - C. The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

ARTICLE 6 – PAYMENT PROCEDURES

- 6.01 *Submittal and Processing of Payments*
- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.
- 6.02 *Progress Payments; Retainage*
- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor’s Applications for Payment on or about the First and Third Wednesday of each month day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
 - b. No payment shall be made for materials and equipment not incorporated in the Work.

- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Progress Payment to Subcontractors*

- A. For contracts within the State of Minnesota, MN Statute 471.425 Subd. 4a. shall apply. MN Statute 471.425 Subd. 4a. requires:
 - 1. The prime contractor shall pay any subcontractor within ten days of the prime contractor's receipt of payment for undisputed services provided by the subcontractor.
 - 2. The prime contractor shall 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.
 - 3. 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.
 - 4. 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."

6.04 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 1.5 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, if any, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract

Documents, if any, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

- F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to ____, inclusive).
 - 2. Performance bond (pages 1 to 3, inclusive).
 - 3. Payment bond (pages 1 to 3, inclusive).
 - 4. General Conditions (pages 1 to 65, inclusive).
 - 5. Supplementary Conditions (pages ____ to ____, inclusive).
 - 6. Specifications as listed in the table of contents of the Project Manual.
 - 7. Drawings (not attached but incorporated by reference) consisting of ____ sheets with each sheet bearing the following general title: ____ [or] the Drawings listed on the attached sheet index.
 - 8. Addenda (numbers ____ to ____, inclusive).
 - 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages ____ to ____, inclusive).
 - b. Executed Section 00415 – Responsible Contractor – Proposal Attachment
 - c. Executed Section 00515 - Responsible Contractor – Award Attachment
 - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.

- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

City of Ramsey _____

By: _____

By: _____

Title: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

License No.: _____
(where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

******END OF SECTION******

NOTICE TO PROCEED

Owner:	City of Ramsey	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Bolton & Menk, Inc.	Engineer's Project No.:	R16.111092
Project:	Riverdale Drive Extension Improvements	Contract Name:	
		Effective Date of Contract:	

TO CONTRACTOR:

[_____, 20__].

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is _____, and the date of readiness for final payment is _____] **or** [the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Owner:	City of Ramsey

	Authorized Signature
By:	_____
Title:	_____
Date Issued	_____

Copy: Engineer

PERFORMANCE BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

City of Ramsey, 7550 Sunwood Drive NW, Ramsey, MN 55303-6140

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description: Riverdale Drive Extension Improvements

BOND

Bond Number:

Date (not earlier than the Effective Date of the Agreement of the Construction Contract):

Amount:

Modifications to this Bond Form: None See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (seal)

Surety's Name and Corporate Seal (seal)

By: _____
Signature

By: _____
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint ventures. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment

bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any

person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made

including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER: City of Ramsey, 7550 Sunwood Drive NW, Ramsey, MN 55303-6140

CONSTRUCTION CONTRACT:

Effective Date of the Agreement:

Amount:

Description: Riverdale Drive Extension Improvements

BOND

Bond Number:

Date (not earlier than the Effective Date of the Agreement of the Construction Contract):

Amount:

Modifications to this Bond Form: None See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (seal)

Surety's Name and Corporate Seal (seal)

By: _____
Signature

By: _____
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or

(2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

General Conditions

for

Edition C-700 (Rev 1) EJCDC - 2013

Riverdale Drive Extension Improvements

SAP 119-115-003

SP 0202-101

City of Ramsey

Ramsey, MN

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC's Guide to the Preparation of Supplementary Conditions (EJCDC® C-800, 2013 Edition). The full EJCDC Construction series of documents is discussed in the Commentary on the 2013 EJCDC Construction Documents (EJCDC® C-001, 2013 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
 1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
 1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas:

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

- c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings*: The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 Supervision and Superintendence

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 Labor; Working Hours

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
 - C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
 - D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
 - E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
 - F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

- O. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
 7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 Communications to Contractor

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 Replacement of Engineer

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 Furnish Data

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 Pay When Due

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 Lands and Easements; Reports, Tests, and Drawings

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 Insurance

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 Change Orders

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

- C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. *Application for Payment:*
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplementary Conditions

for

Edition C-700 EJCDC® - 2013

Riverdale Drive Extension Improvements

SAP 119-115-003

SP 0202-101

City of Ramsey

Ramsey, MN

SECTION 00800 - SUPPLEMENTARY CONDITIONS

TO THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT SUPPLEMENTARY CONDITIONS - GENERAL COMMENTS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-4.03 REFERENCE POINTS

Delete Paragraph 4.03.A of the General Conditions in its entirety and insert the following Paragraph 4.03.A in its place:

4.03.A. The OWNER will provide engineering surveys to establish reference points for construction as described in Section 01720, Field Engineering, of the Specifications.

SC-5.03 SUBSURFACE AND PHYSICAL CONDITIONS

Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

5.03.A. The following reports of explorations and tests of subsurface conditions at or contiguous to the Site are known to Owner:

1. Soil borings and geotechnical reports:
 - a. Report dated January 14, 2016, prepared by Northern Technologies, Inc. entitled: Geotechnical Exploration and Engineering Review. The "technical data" contained in such report upon which Contractor may rely are those indicated in the definition of Technical Data in the General Conditions.
 - b. The subsurface conditions and ground water levels (or lack thereof) indicated in any soil boring log is only representative of the conditions present at the time the soil borings were taken and at the location of the respective soil boring. The soil conditions can be expected to vary in areas away from the soil boring locations and the ground water levels can be expected to vary in different location and seasonally

5.03B. Copies of reports and drawings identified in SC-5.03 that are not included with the Bidding Documents may be examined at 7533 Sunwood Drive NW, Suite 206, Ramsey, MN 55303, (763) 433-2851, fax (763)427-0833 during regular business hours.

SC-5.06 HAZARDOUS ENVIRONMENTAL CONDITIONS

Delete subparagraphs 5.06.A.1 and 5.06.A.2 in their entirety and insert the following:

5.06.A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

6.02.B.1. Contractor may obtain worker’s compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker’s compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker’s compensation insurance for similar projects by the state within the last 12 months.

SC-6.03 Contractor’s Insurance

Delete paragraph SC-6.03.J in its entirety and insert the following:

6.03.J. The coverage requirements for specific policies of insurance, including the requirements of SC 6.03.K.2.a, must be met by such policies, with exception that an Excess or Umbrella Liability insurance policy may be used to supplement Contractor’s policy limits on a follow-form basis to satisfy the full policy limits required by this Contract.

SC-6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

6.03.K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers’ Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

Employer’s Liability:

Bodily injury, each accident	\$	1,000,000.00
Bodily injury by disease, each employee	\$	1,000,000.00
Bodily injury/disease aggregate	\$	1,000,000.00

2. Contractor’s Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate		2,000,000.00
Products - Completed Operations Aggregate	\$	2,000,000.00
Each Occurrence (Bodily Injury and Property Damage)	\$	1,500,000.00
Personal and Advertising Injury	\$	1,500,000.00

- a. The aggregate limits under SC-6.03.K.2 (Commercial General Liability) be maintained fully available for this Contract by obtaining and maintaining a Designated Construction Project General Aggregate Limit endorsement, or equivalent

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person	\$	1,000,000.00
Each accident	\$	1,000,000.00

Property Damage:

Each accident	\$	1,000,000.00
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5. Contractor’s Pollution Liability:

Per Occurrence	\$	<u>N/A</u>
General Aggregate	\$	<u>N/A</u>

If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

SC-6.05 PROPERTY INSURANCE

Add the following to the list of requirements in Paragraph 6.05.A, after item 13, as numbered items:

- 14. include for the benefit of Owner loss of profits and soft cost coverage including, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, plus attorney's fees and engineering or other consultants' fees, if not otherwise covered;

SC-7.08 PERMITS

The following Paragraph 7.08.B shall be added immediately after Paragraph 7.08.A:

7.08.B. If the OWNER has obtained, or has applied for, the necessary construction permits from any regulatory agencies, they will be addressed in Section 01410, Regulatory Requirements, of the Specifications. CONTRACTOR shall obtain and pay for all construction permits, licenses and bonds, not specifically highlighted as previously obtained, or applied for, in the referenced Section.

SC-7.11 RECORD DOCUMENTS

The following Paragraphs 7.11.B through 7.11.C shall be added immediately after Paragraph 7.11.A:

7.11.B. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the work, both concealed and visible, to enable future modification of the work to proceed without lengthy and expensive site measurement, investigation, and examination.

7.11.C. Prior to submitting a request for final payment, submit the final Project Record Documents to the Engineer and/or Owner for approval. Approval of the Record Documents shall not constitute final acceptance of the completed project.

SC-7.12 SAFETY AND PROTECTION

The following Paragraph 7.12.A.4 shall be added immediately after Paragraph 7.12.A.3:

7.12.A.4. The OWNER, ENGINEER or their representatives may indicate potential safety hazards noticed at the construction site. However, the CONTRACTOR shall remain the only party liable for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work.

SC-7.20 PROGRESS PAYMENTS TO SUBCONTRACTORS

Add the following Paragraph 7.20 immediately after Paragraph 7.19

7.20 Progress Payments to Subcontractors

- A. For contracts involving payment with public funds within the State of Minnesota, including but not limited to cities, counties, towns, school districts, political subdivisions or agencies of local government, within ten days after receipt of payment has been made to the Prime Contractor, the Prime Contractor shall make payment to all Subcontractors for undisputed services provided by the Subcontractor. The Prime Contractor shall pay interest of 1.5% per month or for 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 \$100.00 or more is \$10.00 for an unpaid balance of less than \$100.00, 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.

SC-8.02 **COORDINATION**

Delete Paragraph 8.02.A and 8.02.B in its entirety and replace with the following:

8.02.A. Owner does not intend to contract with others for the performance of other work on the Project at the Site.

SC-8.04 **CLAIMS BETWEEN CONTRACTORS**

Add the following new paragraphs immediately after paragraph 8.03:

8.04 Claims Between Contractors

8.04.A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or the construction coordinator, then Contractor (without involving Owner, Engineer, or construction coordinator) shall either (1) remedy the damage, (2) agree to compensate the other contractor for remedy of the damage, or (3) remedy the damage and attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law.

8.04.B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or Claim.

8.04.C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and construction coordinator for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner, Engineer, or construction coordinator for activities that are their respective responsibilities.

SC-10.03 **PROJECT REPRESENTATIVE**

Add the following new paragraphs immediately after Paragraph 10.03.A:

10.03.B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.

1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
4. Liaison:
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. Inspections, Tests, and System Start-ups:

- a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. Records:
- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
 - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
11. Reports:
- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
 - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
 - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
14. Completion:
- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
 - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
 - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

10.03.C. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

SC-13.03. UNIT PRICE WORK

Delete Paragraph 13.03.E. in its entirety and insert the following in its place:

13.03.E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. if the original bid amount of a particular item of Unit Price Work amounts to five (5) percent or more of the total Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than twenty (20) percent from the estimated quantity of such item indicated in the Agreement; and
2. if there is no corresponding adjustment with respect to any other item of Work; and
3. if Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

SC-15.01.B.4 APPLICATIONS FOR PAYMENT

Add the following Paragraph 15.01.B.4 immediately after Paragraph 15.01.B.3.

15.01.B.4. All out-of-state contractors shall comply with all State of Minnesota surety deposit requirements. The OWNER may withhold an additional sum of 8 percent of the amount due the CONTRACTOR from each payment and forward it to the Department of Revenue until the CONTRACTOR's state tax obligations are considered fulfilled unless the CONTRACTOR can show reason for exemption. Exemption will be granted provided the out-of-state CONTRACTOR meets the exemption guidelines established for the Minnesota Department of Revenue. All necessary forms may be obtained from the Minnesota Department of Revenue, Mail Station 4450, St. Paul, Minnesota 55146-4450, or phone 1-800-657-3777 or online at: <http://www.revenue.state.mn.us/businesses/withholding/Pages/Forms.aspx> .

SC-15.01.C. REVIEW OF APPLICATIONS

Delete Paragraph 15.01.C.1.

SC-15.01.D.1 PAYMENT BECOMES DUE

Delete Paragraph 15.01.D.1 in its entirety and replace with the following:

15.01.D.1 The time period for payment shall be in accordance with the Agreement.

SC-15.04 PARTIAL UTILIZATION

Add the following Paragraph 15.04.B immediately after Paragraph 15.04.A.4 of the General Conditions. Paragraph 15.04.B modifies Paragraph 15.04.A of the General Conditions and reference is made thereto.

15.04.B. Nothing in Paragraph 15.04.A shall obligate the CONTRACTOR to apply for a Certificate of Substantial Completion for any part of this Project. The provisions for partial utilization of the Project, if any, are established by the Specifications and no Certificate of Substantial Completion will be issued for partial utilization occurring within the terms of the Specifications. Partial utilization of the Project not covered by the Specifications shall be in accordance with Paragraph 15.04.A and its sub-paragraphs. If a Certificate of Substantial Completion is not issued, Substantial Completion shall be when final payment is due in accordance with Paragraph 15.06.D.

SC-15.06.A.4. WITHHOLDING OF INCOME TAX AT SOURCE

Add the following Paragraph 15.06.A.4. Immediately following Paragraph 15.06.A.3 of the General Conditions and immediately before 15.06.B:

15.06.A.4. "Final payment will not be made to the CONTRACTOR until a certificate showing that the CONTRACTOR has complied with the provisions of M.S.A. 290.92 requiring withholding of income tax on wages at the source. Said certificate shall be executed by the Commissioner of Revenue. Forms for certification may be obtained from the Commissioner of Revenue, Centennial Building, St. Paul, Minnesota 55145."

SC-15.08 CORRECTION PERIOD

Modify Paragraphs 15.08.A of the General Conditions to change all references for the correction period length from one year to two years, except for luminaries, which is five years.

Add the following Paragraph 15.08.F immediately after Paragraph 15.08.E:

15.08.F. For purposes of this Paragraph 15.08, the date of Substantial Completion shall be interpreted as the date when final payment is due in accordance with Paragraph 15.06.B and 15.06.C, and the two year correction period shall commence on the date when final payment is due in accordance with Paragraph 15.06.B and 15.06.C, unless otherwise modified by the Specifications or by Written Agreement.

******END OF SECTION******

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 and Federal Regulations Govern.** This Contract is subject to the Minnesota Prevailing Wage Act², Minnesota Fair Labor Standards Act³, Minnesota Rules⁴, Minnesota Department of Labor and Industry (MnDLI) Wage Decision(s), MnDLI Truck Rental Rate Schedule and the Federal Fair Labor Standards Act.⁵
- 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,⁶ 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.⁷
- B. **Bona Fide.** Made or carried out in good faith; authentic.⁸
- C. **Certified Payroll Report (CPR).** A report comprised of two components; (1) a payroll report, and (2) a statement of compliance report.⁹
- 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.¹⁰
- E. **Employer.** An individual, partnership, association, corporation, business trust, or other business entity that hires a Worker.¹¹
- F. **Fringe Benefit.** An employment benefit given in addition to a Worker's wages or salary.¹²
- 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.¹³

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 29 U.S.C. 201, et seq.

⁶ MnDOT Standard Specifications for Construction, Section 1103

⁷ Minn. Stat. 178.011, Subdivision 2

⁸ The American Heritage College Dictionary, Third Edition, 2000

⁹ Minn. R. 5200.1106, Subpart 10

¹⁰ Minn. R. 5200.1106, Subpart 2(D)

¹¹ Minn. Stat. 177.42, Subdivision 7

¹² The American Heritage College Dictionary, Third Edition, 2000

¹³ 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.¹⁴
- I. **Prime Contractor.** An individual or business entity that enters into a Contract with the Department.¹⁵
- J. **Subcontract.** A Contract that assigns some obligations of a prior Contract to another party.¹⁶
- 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.¹⁷
- 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 (Contractor) of such services, contracting to obtain such services from providers (ITO/MTO) of trucking services, dispatching the providers (ITO/MTO) of the services to do Work as required by the users (Contractor) of the services, receiving payment from the users (Contractor) in consideration of the trucking services provided, and making payment to the providers (ITO/MTO) for the services.¹⁸
- 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.¹⁹ A MTO also includes: (1) a legal business entity that is not primarily owned by the operator of the truck; and (2) a legal business entity that owns one truck that is operated by two or more individuals.
- 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.²⁰
- 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.²¹
- 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.²²
- 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.²³

¹⁴ Minn. Stat. 178.011, Subdivision 9

¹⁵ Minn. R. 5200.1106, Subpart 2(C)

¹⁶ The American Heritage College Dictionary, Third Edition, 2000

¹⁷ Minn. R. 5200.1106, Subpart 5(C)

¹⁸ Minn. R. 5200.1106, Subpart 7(C)

¹⁹ Minn. R. 5200.1106, Subpart 7(B)

²⁰ Minn. R. 5200.1105

²¹ Minn. R. 5200.1020 to 5200.1060

²² Minn. R. 5200.1106, Subpart 2(A)

²³ Minn. R. 5200.1106, Subpart 5(A)

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.²⁴
- 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.²⁵
- 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.²⁶
- 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.²⁷
- 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 form²⁸ to the MnDOT LCU²⁹, 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.³⁰ 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.³¹
- B. **Labor Classification Clarification & Disputes.** A Contractor needing assistance in determining a labor classification must submit a Classification Clarification Request³² 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.³³

²⁴ Minn. Stat. 177.44, Subdivision 1

²⁵ Minn. Stat. 177.44, Subdivision 3

²⁶ MnDOT Standard Specifications for Construction, Section 1801

²⁷ MnDOT Standard Specifications for Construction, Section 1701

²⁸ www.dot.state.mn.us/const/labor/documents/forms/contractorform2016.pdf or www.dot.state.mn.us/const/labor/documents/forms/truckvendorform2016.pdf

²⁹ lcusupport.dot@state.mn.us

³⁰ Minn. Stat. 177.44, Subdivision 1

³¹ Minn. R. 5200.1101 and 1102 and US DOL Dictionary of Occupational Titles

³² <http://www.dot.state.mn.us/const/labor/documents/forms/classification-clarification-request.pdf>

³³ Minn. Stat. 177.44, Subdivision 1

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, power plant, dam or utility³⁴ 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.³⁵ 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 greatest³⁶ 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).³⁷
- 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.³⁸
1. **Wage Rate Request.** A Contractor must complete a Request for Rate Assignment form³⁹ and submit it to the MnDOT LCU⁴⁰ 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.⁴¹ A salaried Worker must be included on a CPR.

³⁴ Minn. R. 5200.1010, Subdivision 3

³⁵ United States Department of Labor All Agency Memorandum #130

³⁶ Minn. Stat. 177.44, Subdivision 4

³⁷ Minn. Stat. 177.44, Subdivision 1

³⁸ Minn. R. 5200.1030, Subpart 2a(C)

³⁹ <http://www.dot.state.mn.us/const/labor/documents/forms/request-for-rate-assignment.doc>

⁴⁰ lcu.support.dot@state.mn.us

⁴¹ Refer to Appendix A

- 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.⁴²
- 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.⁴³
- I. **Prohibited Deductions.** Direct or indirect deductions from a Worker's wages will not be allowed for:⁴⁴
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.
 2. **Equipment.** Purchased or rented equipment used in 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 purchase of the equipment.
 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.
- J. **Permissible Payroll Deductions.** Deduction(s) voluntarily consented to, or authorized, by the Worker in writing, and in advance of the period in which work is done, is allowable, along as the deduction(s) is bona fide and in the best interested of the Worker.⁴⁵

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 Contract⁴⁶, unless the Worker is exempt under state law.⁴⁷
- 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.⁴⁸
- C. **On-Call Time Subject to Prevailing Wage.** A Contractor that requires a Worker to remain on the project (or so close to the project that the Worker cannot use the time effectively for the Worker's own purposes) the Worker is considered "on-call."⁴⁹ On-call time is paid time, unless the Worker is completely relieved of duty and free to leave the project for a defined period of time.⁵⁰
- D. **Travel Time (Compensable).** The following examples are considered hours worked and the Employer must compensate the Worker under the Fair Labor Standards Act:
1. **Travel all in a Day's Work.** Time a Worker spends traveling from place-of-work to Project Site, Project Site to place-of-work, or between project sites, during working hours.⁵¹
 2. **Travel Away from Home Community (One Day).** Time a Worker spends traveling to - and returning from - the other city. The Employer is allowed to subtract the time the Worker would normally spend traveling from home to work.⁵² (see Subpart E(1) of this section)

⁴² Minn. Stat. 181.03, Subdivision 1(2)

⁴³ Minn. R. 5200.1106, Subpart 6

⁴⁴ Minn. Stat. 177.24, Subdivision 4(1-4); Minn. R. 5200.1106, subpart 4

⁴⁵ United States Department of Labor Field Operation Handbook, Section 15f07(b)

⁴⁶ Minn. Stat. 177.44, Subdivision 1

⁴⁷ Minn. Stat. 177.44, Subdivision 2 or Minn. R. 5200.1106, Subpart 4

⁴⁸ United States Department of Labor Fact Sheet #22

⁴⁹ Minn. R. 5200.0120, Subpart 2

⁵⁰ Minn. R. 5200.0120, Subpart 3

⁵¹ United States Department of Labor Fact Sheet #22

⁵² United States Department of Labor Fact Sheet #22

3. **Travel Away from Home Community (Overnight).** Time a Worker spends traveling away from - and back to - their home community. The Employer is allowed to subtract the time the Worker would normally spend traveling from home to work.⁵³ (**see Subpart E(1) of this section**)
- E. **Travel Time (Non-Compensable).** The following examples are not considered hours worked and the Employer does not need to compensate the Worker:
1. **Travel from Home to Work.** Time a Worker spends traveling from home-to-work, or work-to-home, before the workday begins, or after the workday ends.⁵⁴
 2. **Passenger in a Vehicle.** Time a Worker spends as a passenger in a vehicle traveling away from home community, outside of regular working hours, on any day of the week. This exemption only applies to a Worker that is not performing any work-related duties during the time as a passenger.⁵⁵

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:⁵⁶
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:⁵⁷
1. reasonably anticipated to provide a benefit;
 2. a commitment that can be legally enforced;
 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 quarterly⁵⁸, for all hours worked,⁵⁹ 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**).⁶⁰

⁵³ United States Department of Labor Fact Sheet #22

⁵⁴ United States Department of Labor Fact Sheet #22

⁵⁵ United States Department of Labor Fact Sheet #22

⁵⁶ Minn. Stat. 177.42, Subdivision 6

⁵⁷ Minn. Stat. 177.42, Subdivision 6

⁵⁸ 29 CRF, Part 5.5(a)(1)(i)

⁵⁹ Government and non-government Work

⁶⁰ United States Department of Labor Field Operation Handbook, Section 15f14(f)(1)

- D. **Hourly Fringe Benefit Credit.** An hourly Fringe Benefit credit toward the Total Prevailing Wage Rate must be determined separately for each Worker⁶¹ 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 cost⁶² 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.⁶³ 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.⁶⁴
- 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).⁶⁵ 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.⁶⁶
- 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.⁶⁷
- 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.⁶⁸
- H. **Transportation, Board and Lodging Costs Not Fringe Benefits.** Payments for the cost of transportation, board and lodging are not Fringe Benefits.⁶⁹ A Contractor that sends a Worker away from home to perform work outside the Worker's normal commuting distance so that, as a practical matter, the Worker can return home on the weekend only, must incur the cost of transportation, meals and lodging.⁷⁰

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.⁷¹ The prevailing hours of labor is defined as not more than 8 hours per day and more than 40 hours per week.⁷²

⁶¹ United States Department of Labor Field Operation Handbook, Section 15f11(c)

⁶² United States Department of Labor Field Operation Handbook, Section 15f12(a-d)

⁶³ Refer to Appendix B

⁶⁴ United States Department of Labor Field Operation Handbook, Section 15f14(f)(1)

⁶⁵ United States Department of Labor Field Operation Handbook, Section 15f11(c)

⁶⁶ 2010 United States Department of Labor Field Operation Handbook, Section 15k06

⁶⁷ United States Department of Labor Field Operation Handbook, Section 15f18

⁶⁸ Minn. Stat. 177.42, Subdivision 6

⁶⁹ Minn. Stat. 177.44, Subdivision 4(4); Minn. R. 5200.0900, Subpart 1; Minn. R. 5200.0700, Subpart 1.

⁷⁰ 2010 United States Department of Labor Field Operation Handbook, Section 15f19

⁷¹ Minn. Stat. 177.44, Subdivision 1 and Refer to Appendix D

⁷² 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.⁷³
 - 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.⁷⁴
 - 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 period⁷⁵ to the Department. A Contractor must pay its employees at least once every 14 calendar days.⁷⁶
- C. **Payroll Report Data.** Each payroll report must include all Workers that performed Work and provide at a minimum the following information:⁷⁷
 - 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.⁷⁸
 - 9. Labor classification(s) title(s) and optional three-digit code for each Worker.

⁷³ www.dot.state.mn.us/const/labor/certifiedpayroll.html

⁷⁴ Minn. R. 5200.1106, Subpart 10

⁷⁵ Minn. Stat. 177.43, Subdivision 3

⁷⁶ Minn. Stat. 177.30 (a)(4)

⁷⁷ Minn. Stat. 177.30 (a)(1-4) and Minn. R. 5200.1106, Subpart 10

⁷⁸ 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”.⁷⁹ 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.⁸⁰
- 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.⁸¹
- 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 checks⁸² for at least three (3) years after the final payment is issued.⁸³ 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.⁸⁴
- 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.⁸⁵

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.⁸⁶
 2. Performing Work of the trade, as described in the apprenticeship agreement.⁸⁷
 3. Compensated according to the rate specified in the program for the level of progress.⁸⁸
 4. Supervised by a Journeyworker from the same company, in accordance with the program ratio requirements.⁸⁹
- 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.⁹⁰

⁷⁹ MnDOT Standard Specifications for Construction, Section 1701

⁸⁰ MnDOT Standard Specifications for Construction, Section 1801

⁸¹ Minn. Stat. 177.30 (a)(5)

⁸² Minn. R. 5200.1106, Subpart 10

⁸³ Minn. Stat. 177.30 (a)(5)

⁸⁴ Minn. Stat. 181.032

⁸⁵ Minn. Stat. 177.44, Subdivision 7; Minn. Stat. 177.33(a)(5)

⁸⁶ Minn. R. 5200.1070, Subpart 1

⁸⁷ 29 CFR, Part 29.2(j)

⁸⁸ Minn. R. 5200.1070, Subpart 1 and Refer to Appendix C

⁸⁹ Minn. Stat. 178.036, Subdivision 5

⁹⁰ 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.⁹¹
- 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"⁹² 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.⁹³ 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.⁹⁴
- 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.⁹⁵

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 material to and from a Prime Contractor's material operation that is not a separately owned commercial establishment.⁹⁶
 2. 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.⁹⁷
 3. The delivery of materials from a non-commercial establishment to the project and the return haul to the starting location either empty or loaded.⁹⁸
 4. 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.⁹⁹
 5. 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.¹⁰⁰
 6. The delivery of materials or products by trucks hired by a Contractor, subcontractor, or agent thereof, from a commercial establishment.¹⁰¹

⁹¹ Minn. R. 5200.1070, Subpart 3

⁹² Minn. Stat. 177.44, Subdivision 1

⁹³ Minn. Stat. 177.44, Subdivision 1

⁹⁴ Minn. Stat. 177.30(a)(5); Minn. Stat. 181.723; United States Department of Labor Field Operation Handbook, Section 15f08

⁹⁵ Minn. Stat. 177.44, Subdivision 1

⁹⁶ ALJ Findings of Fact, Conclusions of Law, and Recommendation, Conclusions (7), Case #12-3000-11993-2

⁹⁷ Minn. R. 5200.1106, Subpart 3B(1)

⁹⁸ Minn. R. 5200.1106, Subpart 3B(2)

⁹⁹ Minn. R. 5200.1106, Subpart 3B(3)

¹⁰⁰ Minn. R. 5200.1106, Subpart 3B(4)

¹⁰¹ Minn. R. 5200.1106, Subpart 3B(5)

7. The delivery of mineral aggregate materials by or for a commercial establishment, which is deposited “Substantially in Place”, and the return haul to the off-site facility either empty or loaded.¹⁰²

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 is considered hours worked and subject to standard compensation.

1. The delivery of processed or manufactured goods to a public works project by Workers hired by or employed directly for a commercial establishment, unless it is the delivery of mineral aggregate that is deposited Substantially in Place.¹⁰³

2. The delivery of oil offsite, to a Prime Contractor’s permanent (commercial) asphalt mixing facility that is not to, from, or on the project Work site.¹⁰⁴

C. **Repair, Maintenance & Waiting to Load Time.** An ITO and MTO must be paid the truck rental rate for time spent repairing or maintaining 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.¹⁰⁵

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.¹⁰⁶ The forms are available on the MnDOT LCU website.¹⁰⁷

E. **Broker Fee.** A Trucking Broker contracting to provide trucking services to a user (Contractor)¹⁰⁸ must receive payment from the user (Contractor) in consideration of the trucking services provided.¹⁰⁹ Broker fees must not be charged to ITOs and MTOs.¹¹⁰

F. **MTO Request to Sublet Form.** A Contractor that hires a MTO must provide a “MTO Request to Sublet Form” to the Department. The form is available on the MnDOT LCU website.¹¹¹

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.¹¹²

2. The processing or manufacturing of material at an off-site facility that is not considered a commercial establishment.¹¹³

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.¹¹⁴

¹⁰² Minn. R. 5200.1106, Subpart 3B(6)

¹⁰³ Minn. R. 5200.1106, Subpart 4(C)

¹⁰⁴ J.D. Donovan, Inc. vs. Minnesota Department of Transportation, 878 N.W.2d 1 (2016)

¹⁰⁵ Minn. R. 5200.1106, Subpart 8(A)(1)

¹⁰⁶ Minn. R. 5200.1106, Subpart 10

¹⁰⁷ <http://www.dot.state.mn.us/const/labor/forms.html>

¹⁰⁸ Minn. R. 5200.1106, Subpart 7(C)(1)

¹⁰⁹ Minn. R. 5200.1106, Subpart 7(C)(4)

¹¹⁰ Minn. R. 5200.1106, Subpart 6, Minn. R. 5200.1106, Subpart 7(A)(3)

¹¹¹ <http://www.dot.state.mn.us/const/labor/documents/Contractdocs/mtosubletform.pdf>

¹¹² ALJ Findings of Fact, Conclusions of Law, and Recommendation, Conclusions (7), Case #12-3000-11993-2

¹¹³ Minn. R. 5200.1106, Subpart 3(A)

¹¹⁴ Minn. R. 5200.1106, Subpart 4(A)

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.¹¹⁵

XV. SUBCONTRACTING PART OF THE CONTRACT

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.¹¹⁶ 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.¹¹⁷ 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.¹¹⁸
- C. **Employee Interviews.** The Contractor must permit representatives from the Department or other governmental entities¹¹⁹ to interview Workers at any time during working hours on the project.¹²⁰

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.¹²¹
- 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.¹²²
- 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.¹²³

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.¹²⁴
- 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.¹²⁵

¹¹⁵ Minn. R. 5200.1106, Subpart 4(B)

¹¹⁶ MnDOT Standard Specifications for Construction, Section 1801

¹¹⁷ Minn. Stat. 177.44, Subdivision 5

¹¹⁸ www.dot.state.mn.us/const/labor/posterboards

¹¹⁹ MnDLI, U.S. DOL, , U.S. Department of Transportation, Federal Highways Administration

¹²⁰ MnDOT Standard Specifications for Construction, Section 1511

¹²¹ Minn. R. 5200.0910, Subpart F; 29 CFR Part 570.2(a)(ii)

¹²² Minn. R. 5200.0930, Subpart 4

¹²³ Minn. Stat. 181A.06, Subdivision 4; MnDOT Standard Specifications for Construction, Section 1701

¹²⁴ See International Union of Operating Engineers, Local 49 v. MnDOT, No. C6-97-1582, 1998 WL 74281, at *2 (Minn. App. Feb. 24, 1998)

¹²⁵ MnDOT Standard Specifications for Construction, Section 1801

- 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:
1. **Withholding Payment.** The Department may withhold from the Prime Contractor payments relating to prevailing wage underpayments.¹²⁶
 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.¹²⁷
 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.¹²⁸
 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.¹²⁹
 5. **County Attorney.** The Department may refer suspected criminal violations by Contractor to the appropriate local county attorney for prosecution.¹³⁰
 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.¹³¹ A Contractor may be fined up to \$1,000 for each failure to maintain records.¹³²
 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 prosecution¹³³ and may be grounds for debarment proceedings.¹³⁴
 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.¹³⁵
 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.¹³⁶ If the Employer is found to have committed a violation, liquidated damages and other costs may be assessed against the Employer.¹³⁷
 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.¹³⁸

¹²⁶ MnDOT Standard Specifications for Construction, Section 1906

¹²⁷ Minn. Stat. 16C.285

¹²⁸ MnDOT Standard Specifications for Construction, Section 1808

¹²⁹ Minn. R. 1230.1150, Subpart 2(A)(4)

¹³⁰ Minn. Stat. 177.44, Subdivision 7

¹³¹ Minn. Stat. 177.44, Subdivision 6

¹³² Minn. Stat. 177.30(b)

¹³³ Minn. Stat. 15C.02; , Minn. Stat. 161.315; Minn. Stat. 177.32; Minn. Stat. 177.43, Subdivision 5, Minn. Stat. 609.63

¹³⁴ Minn. Stat. 161.315 and Minn. Stat. 609.63

¹³⁵ Minn. Stat. 177.43, Subdivision 6a

¹³⁶ Minn. Stat. 177.27, Subdivision 8

¹³⁷ Minn. Stat. 177.27, Subdivision 10

¹³⁸ Minn. Stat. 181.74, Subdivision 1

**THE FOLLOWING APPENDICES ARE FOR
EXPLANATORY PURPOSES ONLY.
FOR SPECIFIC QUESTIONS, PLEASE CONTACT LCU.¹³⁹**

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.¹⁴⁰

$$\text{\$800.00 (weekly salary) / 40 (total weekly hours) = \$20.00}$$

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

$$\text{\$3,200.00 (monthly salary) / 160 (total monthly hours) = \$20.00}$$

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)¹⁴¹ (see annual example below). Quarterly and monthly examples are also provided.

Annual: $(\$600.00) \times (12 \text{ months}) = \$7,200.00$
 $(\$7,200.00) / (2080 \text{ hours}) = \underline{\text{\$3.46 per hour credit}}$

Quarterly: $(\$600.00) \times (3 \text{ months}) = \$1,800.00$
 $(\$1,800.00) / (520 \text{ hours}) = \underline{\text{\$3.46 per hour credit}}$

Monthly: $(\$600.00) \times (1 \text{ month}) = \600.00
 $(\$600.00) / (173 \text{ hours}) = \underline{\text{\$3.47 per hour credit}}$

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.

$$\text{Journeyworker Wage Established in Program} = \text{\$25.00}$$

$$\underline{\text{Apprentice Level of Progress} = 60\%}$$

$$(\text{\$25.00}) * (.60) = \text{\$15.00}$$

¹³⁹ lcusupport.dot@state.mn.us or (651) 366-4238

¹⁴⁰ United States Department of Labor Field Operation Handbook, Section 15f08

¹⁴¹ United States Department of Labor Field Operation Handbook, Section 15f12

APPENDIX D**PREVAILING WAGE OVERTIME CALCULATION**

Overtime Hourly Rate of Pay. Here is the formula to calculate the required minimum overtime.¹⁴²

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

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	<u>Payment To Employee</u>	<u>Fringe Payment</u>	<u>Total Payment</u>
		$(PW * .5) + (HW) + (RF)$	+ (F)	= 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.

¹⁴² 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: 09

Counties within region:

- ANOKA-02
- CARVER-10
- CHISAGO-13
- DAKOTA-19
- HENNEPIN-27
- RAMSEY-62
- SCOTT-70
- WASHINGTON-82

Effective: 2016-11-07 Revised: 2017-03-06

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.

Violations should be reported to:

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

Refer questions concerning the prevailing wage rates 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)	2016-11-07	30.00	17.44	47.44
102 LABORER, SKILLED (ASSISTING SKILLED CRAFT JOURNEYMAN)	2016-11-07	29.95	17.49	47.44
103 LABORER, LANDSCAPING (GARDENER, SOD LAYER AND NURSERY OPERATOR)	2016-11-07	21.17	13.99	35.16
104 FLAG PERSON	2016-11-07	30.00	17.44	47.44
105 WATCH PERSON	2016-11-07	26.60	16.89	43.49
106 BLASTER	2016-11-07	22.08	6.87	28.95
107 PIPELAYER (WATER, SEWER AND GAS)	2016-11-07	32.50	17.44	49.94
108 TUNNEL MINER	2016-11-07	30.70	17.44	48.14
109 UNDERGROUND AND OPEN DITCH LABORER (EIGHT FEET BELOW STARTING GRADE LEVEL)	2016-11-07	30.70	17.44	48.14
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.	2016-11-07	30.00	17.44	47.44
111 TRAFFIC CONTROL PERSON (TEMPORARY SIGNAGE)	2016-11-07	30.00	17.44	47.44

112	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.	2016-11-07	16.28	4.07	20.35
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SPECIAL EQUIPMENT (201 - 204)

201	ARTICULATED HAULER	2016-11-07	33.54	18.90	52.44
		2017-05-01	33.74	19.70	53.44

202	BOOM TRUCK	2016-11-07	33.54	18.90	52.44
		2017-05-01	33.74	19.70	53.44

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	2016-11-07	21.17	13.99	35.16
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204	OFF-ROAD TRUCK	2016-11-07	33.54	18.90	52.44
		2017-05-01	33.74	19.70	53.44

205	PAVEMENT MARKING OR MARKING REMOVAL EQUIPMENT (ONE OR TWO PERSON OPERATORS); SELF-PROPELLED TRUCK OR TRAILER MOUNTED UNITS.	2016-11-07	31.45	17.95	49.40
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HIGHWAY/HEAVY POWER EQUIPMENT OPERATOR

GROUP 2		2016-11-07	34.39	18.90	53.29
		2017-05-01	34.59	19.70	54.29

- 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)
- 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	2016-11-07	33.84	18.90	52.74
	2017-05-01	34.04	19.70	53.74

- 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	2016-11-07	33.54	18.90	52.44
	2017-05-01	33.74	19.70	53.44

- 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)
- 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	2016-11-07	30.50	18.90	49.40
	2016-11-07	30.50	18.90	49.40
	2017-05-01	30.70	19.70	50.40

- 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	2016-11-07	29.29	18.90	48.19
	2017-05-01	29.49	19.70	49.19
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	2016-11-07	30.10	15.65	45.75
	2017-05-01	30.65	16.60	47.25
601	MECHANIC . WELDER			
602	TRACTOR TRAILER DRIVER			
603	TRUCK DRIVER (HAULING MACHINERY INCLUDING OPERATION OF HAND AND POWER OPERATED WINCHES)			
GROUP 2	2016-11-07	29.55	15.65	45.20
	2017-05-01	30.10	16.60	46.70
604	FOUR OR MORE AXLE UNIT, STRAIGHT BODY TRUCK			
GROUP 3	2016-11-07	28.95	14.80	43.75
605	BITUMINOUS DISTRIBUTOR DRIVER			
606	BITUMINOUS DISTRIBUTOR (ONE PERSON OPERATION)			
607	THREE AXLE UNITS			
GROUP 4	2016-11-07	28.95	14.80	43.75

- 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	2016-11-07	42.90	22.05	64.95
	2017-06-01	43.90	23.05	66.95
702 BOILERMAKERS	2016-11-07	35.15	27.02	62.17
703 BRICKLAYERS	2016-11-07	36.05	19.68	55.73
704 CARPENTERS	2016-11-07	36.85	18.39	55.24
705 CARPET LAYERS (LINOLEUM)	FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVVAGE@STATE.MN.US			
706 CEMENT MASONS	2016-11-07	36.65	18.07	54.72
707 ELECTRICIANS	2016-11-07	39.62	26.89	66.51
	2017-05-01	40.93	27.43	68.36
711 GROUND PERSON	2016-11-07	35.22	16.68	51.90
712 IRONWORKERS	2016-11-07	36.00	24.90	60.90
713 LINEMAN	2016-11-07	42.18	17.82	60.00
714 MILLWRIGHT	2016-11-07	35.13	21.03	56.16

		2017-05-01	37.08	21.03	58.11
715	PAINTERS (INCLUDING HAND BRUSHED, HAND SPRAYED, AND THE TAPING OF PAVEMENT MARKINGS)	2016-11-07	38.25	19.39	57.64
		2017-05-01	40.05	19.39	59.44
716	PILEDRIIVER (INCLUDING VIBRATORY DRIVER OR EXTRACTOR FOR PILING AND SHEETING OPERATIONS)	2016-11-07	36.85	18.39	55.24
717	PIPEFITTERS . STEAMFITTERS	2016-11-07	43.35	25.54	68.89
		2017-05-01	45.45	25.54	70.99
719	PLUMBERS	2016-11-07	44.01	21.94	65.95
		2017-05-01	46.01	21.94	67.95
721	SHEET METAL WORKERS	2016-11-07	40.88	25.10	65.98
723	TERRAZZO WORKERS	FOR RATE CALL 651-284-5091 OR EMAIL <u>DLI.PRE VWAGE@STATE.MN.US</u>			
724	TILE SETTERS	2016-11-07	29.65	22.44	52.09
725	TILE FINISHERS	FOR RATE CALL 651-284-5091 OR EMAIL <u>DLI.PRE VWAGE@STATE.MN.US</u>			
727	WIRING SYSTEM TECHNICIAN	2016-11-07	10.00	0.00	10.00
728	WIRING SYSTEMS INSTALLER	2016-11-07	25.84	12.40	38.24
		2017-07-01	26.49	12.40	38.89
729	ASBESTOS ABATEMENT WORKER	2016-11-07	30.08	16.46	46.54
730	SIGN ERECTOR	FOR RATE CALL 651-284-5091 OR EMAIL <u>DLI.PRE VWAGE@STATE.MN.US</u>			

NOTICE OF CERTIFICATION OF TRUCK RENTAL RATES AND EFFECTIVE DATE PURSUANT TO MINNESOTA RULES, PART 5200.1105

From April 6, 2015, to June 5, 2015, the Department of Labor and Industry (DLI) conducted a truck operational cost survey. On January 25, 2016, the Commissioner of DLI certified the minimum truck rental rates for highway projects in the state's ten highway and heavy construction areas for trucks and drivers operating "four or more axle units, straight body trucks," "three axle units," "tractor only" and "tractor trailers." The certification followed publication of the Notice of Determination of Truck Rental Rates in the *State Register* on November 16, 2015, and the informal conference held pursuant to Minnesota Rules, part 5200.1105 on December 3, 2015.

According to Minnesota Rules, part 5200.1105, the purpose of the informal conference is for DLI to obtain further input regarding the proposed rates before the rates are certified. Approximately 8 individuals attended the informal conference. None of the attendees at the informal conference commented on the Determination of the Construction Truck Rental Rates or contacted the department with comments regarding the rates prior to the date of this Certification.

Truck rental rates are determined by adding the certified prevailing wage driver rate in each region to the statewide operating cost survey data. The minimum hourly truck rental rate for the four types of trucks in each area is certified to be as follows:

3 Axle Units				
	Effective Date	Certified 607 Driver Rate	Surveyed Operating Cost	Determined Truck Rental Rate
Region 1	Certification date	\$40.60	\$37.35	\$77.95
Region 2	Certification date	\$34.26	\$37.35	\$71.61
Region 3	Certification date	\$36.91	\$37.35	\$74.26
	May 1, 2016	\$38.36	\$37.35	\$75.71
Region 4	Certification date	\$40.63	\$37.35	\$77.98
Region 5	Certification date	\$43.65	\$37.35	\$81.00
	May 1, 2016	\$44.85	\$37.35	\$82.20
Region 6	Certification date	\$41.45	\$37.35	\$78.80
	May 1, 2016	\$42.90	\$37.35	\$80.25
Region 7	Certification date	\$36.91	\$37.35	\$74.26
	May 1, 2016	\$38.36	\$37.35	\$75.71
Region 8	Certification date	\$13.77	\$37.35	\$51.12
Region 9	Certification date	\$43.65	\$37.35	\$81.00

	May 1, 2016	\$45.10	\$37.35	\$82.45
Region 10	Certification date	\$13.77	\$37.35	\$51.12
4 or More Axle Units				
	Effective Date	Certified 604 Driver Rate	Surveyed Operating Cost	Determined Truck Rental Rate
Region 1	Certification date	\$40.70	\$50.82	\$91.52
Region 2	Certification date	\$37.06	\$50.82	\$87.88
	May 1, 2016	\$38.51	\$50.82	\$89.33
Region 3	Certification date	\$37.06	\$50.82	\$87.88
	May 1, 2016	\$38.51	\$50.82	\$89.33
Region 4	Certification date	\$23.88	\$50.82	\$74.70
Region 5	Certification date	\$28.17	\$50.82	\$78.99
Region 6	Certification date	\$41.55	\$50.82	\$92.37
	May 1, 2016	\$43.00	\$50.82	\$93.82
Region 7	Certification date	\$37.40	\$50.82	\$88.22
Region 8	Certification date	\$16.32	\$50.82	\$67.14
Region 9	Certification date	\$43.75	\$50.82	\$94.57
	May 1, 2016	\$45.20	\$50.82	\$96.02
Region 10	Certification date	\$16.02	\$50.82	\$66.84

Tractor						
	Effective Date	Certified 602 Driver Rate	Surveyed Operating Cost	Determined Tractor Only Truck Rental Rate	Plus Trailer Operating Cost	Determined Tractor Trailer Rental Rate
Region 1	Certification date	\$43.90	\$49.17	\$93.07	\$11.46	\$104.53
	May 1, 2016	\$45.35	\$49.17	\$94.52	\$11.46	\$105.98
Region 2	Certification date	\$37.57	\$49.17	\$86.74	\$11.46	\$98.20
	May 1, 2016	\$39.02	\$49.17	\$88.19	\$11.46	\$99.65
Region 3	Certification date	\$27.10	\$49.17	\$76.27	\$11.46	\$87.73
Region 4	Certification date	\$24.45	\$49.17	\$73.62	\$11.46	\$85.08
Region 5	Certification date	\$26.27	\$49.17	\$75.44	\$11.46	\$86.90
Region 6	Certification date	\$39.45	\$49.17	\$88.62	\$11.46	\$100.08

Region 7	Certification date	\$27.55	\$49.17	\$76.72	\$11.46	\$88.18
Region 8	Certification date	\$37.57	\$49.17	\$86.74	\$11.46	\$98.20
	May 1, 2016	\$39.02	\$49.17	\$88.19	\$11.46	\$99.65
Region 9	Certification date	\$44.30	\$49.17	\$93.47	\$11.46	\$104.93
	May 1, 2016	\$45.75	\$49.17	\$94.92	\$11.46	\$106.38
Region 10	Certification date	\$24.50	\$49.17	\$73.67	\$11.46	\$85.13

The minimum truck rental rate for these four types of trucks in the state's ten 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*.

Ken B. Peterson,

COMMISSIONER

(1910) FUEL ESCALATION CLAUSE

The provisions set forth in Mn/DOT 1910 are hereby supplemented with the following:

These provisions provide for compensation adjustments in the cost of motor fuels (diesel and gasoline) consumed in prosecuting the Contract work. The Engineer will calculate the Fuel Cost Adjustments. Payments or credits will be applied to partial and final payments for work items set forth herein.

For this purpose, the Department will establish a Base Fuel Index (BFI) for fuel to be used on the Project. The Base Fuel Index will be the average of the high and low rack prices shown for No. 2 ultra low sulfur fuel oil in the "OPIS Energy Group" tabulation titled "RackFax, Minneapolis, MN, OPIS Direct Gross No. 2 Distillate Fuels" *for the day of the Contract letting*.

A Current Fuel Index (CFI) in cents per gallon will be established for each month. The CFI will be the average of the high and low rack prices shown for No. 2 ultra low sulfur fuel oil in the "OPIS Energy Group" tabulation titled "RackFax, Minneapolis, MN, OPIS Direct Gross No. 2 Distillate Fuels" averaged for the beginning and ending dates of the monthly period being adjusted.

The Engineer will compute the ratio of the Current Fuel Index to the Base Fuel Index (CFI/BFI) each month. If that ratio falls between 0.85 and 1.15, no fuel adjustment will be made that month. If the ratio is less than 0.85, a credit to the Department will be computed. If the ratio is greater than 1.15, additional payment to the Contractor will be computed.

Credit or additional payment will be computed as follows:

- (1) The Engineer will estimate the quantity of work done in that month under each of the Contract items listed below.
- (2) The Engineer will compute the gallons of fuel used in that month for each of the Contract items listed below by applying the unit fuel usage factors shown.
- (3) The Engineer will summarize the total gallons (Q) of fuel used in that month for the applicable items.
- (4) The Engineer will determine the Fuel Cost Adjustment (FCA) from the following formulas:

If the Current Fuel Index (CFI) is greater than the Base Fuel Index (BFI), the following formula shall be used to determine the amount of Fuel Cost Adjustment to be paid to the Contractor.

$$FCA = [(CFI/BFI) - 1.15] \times Q \times BFI$$

If the Current Fuel Index (CFI) is less than the Base Fuel Index (BFI), the following formula shall be used to determine the amount of Fuel Cost Adjustment to be credited to the Department.

$$FCA = [(CFI/BFI) - 0.85] \times Q \times BFI$$

Where FCA = Fuel Cost Adjustment (cents)
 CFI = Current Fuel Index (cents per gallon)
 BFI = Base Fuel Index (cents per gallon)
 Q = Monthly total gallons of fuel

Basis of Payment

A Fuel Cost Adjustment payment to the Contractor will be made as a lump sum each payment period based on the last published CFI. A Fuel Cost Adjustment credit to the Department will be deducted as a lump sum each payment period from any monies due the Contractor. Upon completion of the work under the Contract, any difference between the estimated quantities previously paid and the final quantities will be determined. The CFI in effect on the day of completion of the Contract will be applied to the quantity differences in accordance with the procedures set forth above.

Schedule of Work Items

(Only items shown will be considered for compensation adjustments.)

Item	Unit	Gallons of Fuel per Unit	Unit	Gallons of Fuel per Unit
(1) Earthwork:				
2105.501	Common Excavation	Cu. Yd	0.17	m ³ 0.22
2105.503	Rock Excavation	Cu. Yd	0.27	m ³ 0.35
2105.505	Muck Excavation	Cu. Yd	0.17	m ³ 0.22
2105.507	Subgrade Excavation	Cu. Yd	0.17	m ³ 0.22
2105.515	Unclassified Excavation	Cu. Yd	0.23	m ³ 0.30
2105.521	Granular Borrow (EV)	Cu. Yd	0.17	m ³ 0.22
	Granular Borrow (CV)	Cu. Yd	0.19	m ³ 0.25
	Granular Borrow (LV)	Cu. Yd	0.14	m ³ 0.18
2105.522	Select Granular Borrow (EV)	Cu. Yd	0.17	m ³ 0.22
	Select Granular Borrow (CV)	Cu. Yd	0.19	m ³ 0.25
	Select Granular Borrow (LV)	Cu. Yd	0.14	m ³ 0.18
2105.523	Common Borrow (EV)	Cu. Yd	0.17	m ³ 0.22
	Common Borrow (CV)	Cu. Yd	0.19	m ³ 0.25
	Common Borrow (LV)	Cu. Yd	0.14	m ³ 0.18
2105.535	Topsoil Borrow (EV)	Cu. Yd	0.17	m ³ 0.22
	Topsoil Borrow (CV)	Cu. Yd	0.19	m ³ 0.25
	Topsoil Borrow (LV)	Cu. Yd	0.14	m ³ 0.18
2106.607	Common Embankment (CV)	Cu. Yd	0.19	m ³ 0.25
2106.607	Granular Embankment (CV)	Cu. Yd	0.19	m ³ 0.25
2106.607	Select Granular Embankment(CV)	Cu. Yd	0.19	m ³ 0.25
2106.607	Select Granular Embankment Modified (___ %) (CV)	Cu. Yd	0.19	m ³ 0.25
2106.607	Excavation – Rock	Cu. Yd	0.27	m ³ 0.35
2106.607	Excavation – Muck	Cu. Yd	0.17	m ³ 0.22

	Item	Unit	Gallons of Fuel per Unit	Unit	Gallons of Fuel per Unit
(2) Aggregate Base:					
2211.501	Aggregate Base	Ton	0.55	t	0.61
2211.502	Aggregate Base (LV)	Cu. Yd	0.77	m ³	1.01
2211.503	Aggregate Base (CV)	Cu. Yd	0.99	m ³	1.29
2211.607	Open Graded Aggregate Base (CV)	Cu. Yd	0.99	m ³	1.29
(3) Aggregate Shouldering:					
2221.501	Aggregate Shouldering	Ton	0.55	t	0.61
2221.502	Aggregate Shouldering (LV)	Cu. Yd	0.77	m ³	1.01
2221.503	Aggregate Shouldering (CV)	Cu. Yd	0.99	m ³	1.29
(4) Concrete Pavements:					
2301.511	Structural Concrete	Cu. Yd	0.98	m ³	1.28
2301.513	Structural Concrete HE	Cu. Yd	0.98	m ³	1.28
2301.604	Structural Concrete	Sq. Yd.	0.027*t	m ²	0.00128*t
(5) Bituminous Pavements:					
2350.501	Type () Wearing Course Mixture ()	Ton	0.90	t	0.99
2350.502	Type () Non-Wearing Course Mixture ()	Ton	0.90	t	0.99
2350.503	Type () () Course (,) (t)" Thick	Sq. Yd	0.051*t		
2350.503	Type () () Course (,) (t) mm Thick			m ²	0.0024*t
2360.501	Type SP () Wearing Course Mixture ()	Ton	0.90	t	0.99
2360.502	Type SP () Non-Wearing Course Mixture (,)	Ton	0.90	t	0.99
2360.503	Type SP () () Course (,) (t)" thick	Sq. Yd	0.051*t		
2360.503	Type SP () () Course (,) (t) mm thick			m ²	0.0024*t
(6) Pipe: ***					
2501.511	___ ___ Pipe Culvert ___	Lin. Ft.	0.70	m	2.30
2501.521	___ ___ Pipe Arch Culvert ___	Lin. Ft.	0.70	m	2.30
2501.561	___ ___ Pipe Culvert Des 3006 ___	Lin. Ft.	0.70	m	2.30
2501.603	___ Pipe Culvert	Lin. Ft.	0.70	m	2.30
2503.511	___ ___ Pipe Sewer ___	Lin. Ft.	0.70	m	2.30
2503.521	___ ___ Pipe Arch Sewer ___	Lin. Ft.	0.70	m	2.30
2503.541	___ ___ Pipe Sewer Des 3006 ___	Lin. Ft.	0.70	m	2.30
2503.603	___ ___ Pipe Sewer	Lin. Ft.	0.70	m	2.30

t = thickness (in inches or mm)

NOTE: No price adjustments will be made on fuel used for drying and heating aggregates.

*** No price adjustment will be made for pipes less than 12" in diameter or jacked pipes.

CONDITIONS OF THE CONTRACT

for

Riverdale Drive Extension Improvements

SAP 119-115-003

SP 0202-101

City of Ramsey

Ramsey, MN

SECTION 01110 - SUMMARY OF WORK

PART 1 -- GENERAL

1.1 PROJECT LOCATION

- A. The project is located in Ramsey, MN. The project location is shown on the vicinity map in the design drawing set.

1.2 PROJECT DESCRIPTION

- A. The project involves but is not limited to the complete construction of public improvements for the reconstruction of several streets. Individual elements of work shall include, but are not limited to:
 - 1. Removal of bituminous pavement, concrete curb and gutter, sidewalk and driveways, pipe and other miscellaneous items.
 - 2. Clearing and grubbing.
 - 3. Street excavation.
 - 4. Watermain construction.
 - 5. Storm sewer construction.
 - 6. Concrete walk construction.
 - 7. Concrete curbing and driveway pavement construction.
 - 8. Bituminous street construction
 - 9. Turf restoration and erosion control construction
 - 10. Traffic Control.
 - 11. Other miscellaneous work shown on the plans or specified herein.

1.3 CONTRACTOR USE OF PROJECT SITE

- A. The Contractor's use of the project site shall be limited to its construction operations, including on-site storage of materials and field offices. No materials shall be stored in a location as to limit access to the affected public. Any damage caused by Contractor operations to private property, including but not limited to, parking lots, trees, shrubs, material spatter, etc. shall promptly be corrected at the Contractor's expense.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.1 OPERATIONAL LIMITATIONS AND REQUIREMENTS

- A. The Contractor shall confine its work within the limits of the easements, public rights-of-way, and/or construction limits as shown on the plans. If the Contractor desires additional space, it shall be the Contractor's responsibility to acquire easements and/or permission, as desired.

3.2 BARRICADES

- A. The Contractor shall furnish and install any necessary barricades to protect the public or workers during the project. Barricades to keep public out of construction areas shall be left in place until removed by

Contractor after they are no longer required for protection. The Contractor is responsible to secure the site at all times during the demolition.

- B. The Contractor shall furnish names, addresses, and phone numbers of at least two (2) local individuals capable of immediate response who will be responsible for the site security and traffic control devices to:

The Engineer
The Owner
Local Law Enforcement Agencies

- C. The Contractor shall respond with sufficient personnel, equipment and/or materials and conduct the required work or be subject to a **\$ 100 per hour deduction from the time of notification for non-attention to project security and safety.**

3.3 SAFETY HAZARDS

- A. The Owner, Engineer or their representatives may indicate potential safety hazards noticed at the Construction site. However, the Contractor shall remain the only party liable for the maintenance of safe construction practices.

3.4 INTERFERENCE WITH TREES

- A. The Contractor may be required to trim tree branches that overhang the work zone as specifically identified during construction by the Engineer, where branches are likely to be broken or excessively damaged by construction equipment and activities. Branches which are accidentally damaged during construction shall be trimmed immediately. All trimmed ends shall be coated with an appropriate coating material.
- B. The Contractor shall protect existing trees within close proximity of the construction from stripping and root damage. Roots extending into excavations shall be cut before excavating in their vicinity. Roots cut or otherwise damaged shall be coated with an appropriate protective dressing prior to backfilling.
- C. No direct compensation for tree protection and interference shall be made, unless specifically identified in the Schedule of Unit Prices.

******END OF SECTION******

SECTION 01270 - MEASUREMENT & PAYMENT

PART 1 -- GENERAL

1.1 SUMMARY

- A. Methods of measurement and payment for all items not individually specified shall be according to the appropriate referenced specification standard.

1.2 MEASUREMENT & PAYMENT

- A. **Payment for Hauled Materials:** No compensation will be paid for any weigh ticket received after the date shown on the ticket unless prior arrangements are made with the Engineer.
- B. **Payment for Stored Materials:** No compensation will be paid for materials delivered to the site and not incorporated into the project.
- C. **Payment for Major Lump Sum Items:** The Contractor shall submit a schedule of values for major items of construction that are bid as lump sum. The schedule shall identify major sections of work and the percentage of the bid price applied to each. Payment shall be made according to the percentage complete of each major section of work.

1.3 SUBMITTALS

- A. The Contractor shall submit to the Engineer a "Certificate of Conformance" statement stating that the scale used to weigh hauled materials has been tested and calibrated for the current construction season. This Certificate shall be from MnDOT or other reliable scale servicing company. Providing a certified scale and obtaining such "Certificate of Conformance" is the sole responsibility of the Contractor and all costs associated are considered incidental to the materials being supplied.
- B. **Hauled Materials:** The Contractor shall furnish numbered weigh tickets which list the Date, Project, Type of Material, Gross Weight, Tare Weight, Material Weight in tons, and Truck Number for each load brought to the construction site. If the individual pay items are identified on a unit weight basis, the Contractor shall provide the Engineer with a summary type spreadsheet which provides accumulative job totals of all aggregate and bituminous materials hauled to the project. This spreadsheet shall be submitted to the Engineer on a weekly basis.
- C. **Procured Materials:** The Contractor shall furnish an insurance bond showing the type of material, the amount of material, the valuation of the material, the stored location, the project, the date, the name and address of the surety.
- D. **Compacted Volume Materials:** When measurement is specified by the CUBIC YARD, (CY) COMPACTED VOLUME (CV), will be determined by length, width and depth measurements of the material in its placed and compacted position, according to the placement dimensions as shown in the Contract or as designated by the Engineer.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01310 – COORDINATION

PART 1 -- GENERAL

1.1 SEQUENCE OF CONSTRUCTION

- A. A written project management scheduling tool (i.e., critical path (CPM), detailed bar chart, etc.) shall be employed by the Contractor for cost value reporting, planning and scheduling of all work required under the Contract Documents. This schedule shall show the order in which the Contractor proposes to execute the work with dates on which it proposes to start the various phases of the work and the estimated completion date of each phase. The Contractor shall submit a preliminary version of its intended schedule within 10 working days following the *Notice of Award* on the attached form or on a form of its own choosing. **The Contractor is required to show the initial critical path (CPM) of tasks to be performed.**
- B. Unless otherwise approved by the Engineer, the schedule shall also include an anticipated payment schedule for the volume of work to be completed each month. This schedule shall indicate the Contractor's intention and ability to complete the work within the contract times, as specified in Article 4 of the Agreement.
- C. The Preconstruction Conference as outlined in Section 01315 will not be conducted until the schedule is submitted. In addition, no construction staking shall be provided until the schedule is submitted by the Contractor and reviewed by the Engineer.

1.2 WORKING HOURS

- A. Except in connection with safety or emergency situations, all work at the site shall be performed during daylight hours.
- B. The Contractor shall notify the Owner and Engineer of any work planned on Saturday, Sunday, or any legal holidays at least 48 hours prior to such work.
- C. The Contractor shall coordinate any construction or hauling activity in the vicinity of churches, schools, medical facilities, and funeral homes. The Contractor shall be cognizant of the disruptive effects of continued construction during funerals. The Owner reserves the right to temporarily stop construction within one block of, and during the time of, any funeral procession. No compensation shall be granted to the Contractor due to temporary delays caused by funerals.

1.3 TRAFFIC CONTROL

- A. See reference S-12 – Maintenance and Control of Traffic.

1.4 COORDINATION WITH BUSINESSES AND PRIVATE PROPERTY OWNERS ADJACENT TO THE PROJECT

- A. The Contractor shall notify all property owners and occupants adjacent to the project 2 days in advance to allow moving machinery and/or vehicles or other items that may be blocked in or damaged due to the upcoming construction in the area. Access to the properties shall be restored as soon as possible after each phase of construction.

1.5 COORDINATION WITH UTILITY COMPANIES

- A. The Contractor is responsible for working with public and private utility companies in protecting and/or relocating existing or new utility lines located near and affected by this construction.

1. Coordination with the utility companies is very important and should be considered in planning the work and the associated extra costs involved.
 2. Private utility companies are responsible for their own lines and are so obligated under City Code Agreements to protect and/or relocate their utilities, if required to install new City owned utilities in a given area.
- B. The Contractor shall consult with the City's maintenance personnel when working around or performing the required sanitary sewer installations.
- C. The Contractor shall also work with the City's maintenance personnel to provide for scheduled water shut-downs in a given area and to provide for continued water service to the properties along the project throughout the duration of the project.
- D. The Contractor shall work with all utility companies, as necessary, to allow for installation and for maintenance of service of gas, power, lighting, telephone, cable TV, etc. in the boulevards or across the streets prior to final shaping of aggregate base and/or topsoil. This coordination with the utility companies is the responsibility of the Contractor and is considered incidental to the construction and no additional compensation shall be granted.

1.6 COOPERATION WITH FIRE & EMERGENCY DEPARTMENTS

- A. The Contractor shall coordinate all work requiring shutting down water service or limiting access to buildings by emergency equipment with the fire & emergency departments. This shall include notification of the daily construction schedule by the Contractor.

1.7 COOPERATION WITH OTHER CONTRACTORS

- A. The Contractor shall cooperate with other contractors performing construction on other projects in the vicinity of this Project, including but not limited to allowing access for the delivery of equipment and materials.

1.8 COORDINATION WITH SERVICE PROVIDERS

- A. The Contractor shall coordinate with the postal service, recycling service, garbage collection service, school bus service, etc. to maintain continual uninterrupted service to all residences and businesses throughout the duration of the project.
- B. The Contractor shall temporarily relocate mailboxes, haul recycling and garbage for residents to a designated pick up location, etc., as required by the subject service provider. All equipment materials and labor required to coordinate with service providers and maintain services shall be incidental to the Contract.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01315 - PROJECT MEETINGS

PART 1 -- GENERAL

1.1 SUMMARY

A. Pre-construction Conference

1. Prior to the start of the work, a joint meeting will be held with representatives of the Contractor, the Owner, the Engineer, and any other interested parties. This meeting is intended to introduce the various key personnel from each organization and to discuss the start of the work, order of work, labor and legal requirements, insurance requirements, method of payment, shop drawing requirements, protection of existing facilities, location of disposal and stockpile areas, and other pertinent items associated with the project.
2. The Contractor shall be prepared to discuss his proposed detailed construction progress schedule. The construction schedule shall be subject to the review of the Owner, Engineer and applicable agencies.

B. Construction Progress Meetings

1. These meetings will require the attendance of the Contractor's Project Manager or other designated staff authorized by the Contractor to discuss project status and negotiate agreements between the Contractor and Owner. Failure of the Contractor to attend scheduled project meetings as required may result in project delays expensed by the Contractor.
2. Meetings will be held between the Owner, Contractor and Engineer for the purpose of reviewing the project schedule or the status of the project. These meetings will be arranged by the Owner, and/or Engineer, as deemed necessary.

C. Safety Meetings

1. The Owner, Engineer or their representatives shall be allowed to attend Contractor's onsite safety meetings. The Contractor shall be responsible for meeting content and coordination and shall inform the Owner, Engineer or their representatives of the time and location of the meeting a minimum of two business days prior to the meeting.
2. The Contractor shall make additional copies of any safety related handouts or materials for distribution to the Owner, Engineer or their representatives. However, the Contractor shall remain the only party responsible for the maintenance of project safety materials.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01330 – SUBMITTALS

PART 1 -- GENERAL

1.1 SUMMARY

- A. The Contractor shall submit three (3) copies of all required submittals and sample items as noted below. The Engineer will review them with reasonable promptness. The Contractor shall make all required corrections and file with the Engineer three (3) corrected sets for final review. If the Contractor requires more than two (2) reviewed copies, the Contractor shall submit additional sets.
- B. The responsibility for completeness of submittals lies with the Contractor. If the Engineer and/or Owner sign the submittal with no exception taken, such action shall not absolve the responsibilities of the Contractor in any way.
- C. Emailed submittals to the Engineer in pdf format will be accepted.

1.2 ITEMS TO BE SUBMITTED

- 1. Written Progress Management Schedule Tool (as defined in Section 01310) - to be reviewed at the Preconstruction Conference. See Article 4 of 00520 Agreement for contractual time requirements.
- 2. Minnesota Pollution Control Agency (MPCA) - General Storm Water Permit for Construction Activity (MN R10001) – Reference Section 02370 – Erosion & Sediment Control.
- 3. Concrete Mix Design
- 4. Bituminous Mix Design (wear and non-wear)
- 5. Gradation Test Results from 2 separate tests, as required in Source Quality Control provisions of individual sections contained herein, from material stockpiles of aggregates to be used on this project. These tests may be run by the Contractor or its supplier during aggregate production.
- 6. Geotextile Fabrics - Certificates of Compliance.
- 7. Storm Sewer
 - (a) Manhole and catch basin structure - shop drawings.
 - (b) Manhole and catch basin casting - shop drawings.
 - (c) Piping and fittings - Certificates of Compliance.
- 8. Watermain and Water Service Lines
 - (a) Hydrants - Certificates of Compliance.
 - (b) Valves & boxes - Certificates of Compliance.
 - (c) Pipe & fittings - Certificates of Compliance.
- 9. Seeding - Certificates of Compliance for seed mixture.

1.3 MATERIAL SAFETY DATA SHEETS

- A. The Contractor shall submit two copies of Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) for each material on site to the OWNER.
- B. The Contractor shall maintain an orderly file of material safety data sheets at the job site.

1.4 RECORD DRAWINGS

- A. The CONTRACTOR shall maintain at the construction site one complete set of drawings suitably marked to show all deviations from the original set of drawings and other information as specified. Supplementary sketches shall be included, if necessary, to clearly indicate all work as constructed. Sanitary and water service tie-in or stub-out locations shall show station and distances left or right of the survey control centerline. Existing sanitary and water service piping material type and size at the tie-in locations shall be noted also.
- B. All manholes, watermain bends and valves shall be located with tie-off dimensions to known items on the plans or in the field to enable the Contractor or City personnel to locate these structures for adjustment.
- C. All work shall be clearly shown and the record drawings shall be satisfactory to the OWNER in order to insure that adequate information is indicated to show the actual construction. The complete set of the record drawings shall be submitted to the ENGINEER prior to submittal of the final Application for Payment. Failure of the CONTRACTOR to maintain an up-to-date set of record drawings on the project site shall be reason to withhold payments. All underground lines shall be determined from the record drawings.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.1 SUBMITTAL ROUTING

- A. All submittals shall be approved by the Contractor prior to submission to the Engineer.
- B. A Letter of Transmittal that identifies the submitted item and the review action required shall accompany all submittals.
 - 1. The Contractor shall be responsible for filling in the following information on the Letter of Transmittal:
 - (a) Date.
 - (b) Submittal No.
 - (c) Identify what is being sent checking the appropriate box.
 - (d) No. Copies Submitted.
 - (e) Identify the Specification Section the attached information relates to.
 - (f) Subject of Shop Drawing or Other Submittal.
 - (g) Check whether the Shop Drawings are or are not in compliance.
 - (1) If not in compliance, list the features which are not.
 - (h) Sign and Date.

3.2 RESPONSIBILITY

- A. The Engineer's review of a submittal shall not relieve the Contractor from the responsibility for deviation from the drawings and specifications unless the Contractor has, in writing, called the Engineer's attention to the deviations at the time of submission; nor shall it relieve the Contractor from the responsibility of errors in the submittals.
- B. All submittals shall be reviewed by the Engineer prior to their incorporation into the project. If materials are installed without prior review, they will be subject to removal, at the Contractor's expense, if the material is found to be non-conforming to the Specifications.

****** END OF SECTION ******

SECTION 01410 - REGULATORY REQUIREMENTS

PART 1 -- GENERAL

1.1 SUMMARY

- A. Applicable codes and standards referred to in these specifications shall establish minimum requirements for equipment, materials, construction and shall be superseded by more stringent requirements of drawings and specifications when and where they occur.
- B. All equipment furnished and installed under the contract shall be designed, fabricated, assembled, installed, and placed into service. The equipment will conform to the applicable provisions of the Federal and State Safety and Health Standards, including but not limited to Federal Occupational Safety and Health Regulations for Construction; the Division of Environmental Health, Minnesota Department of Health; the Minnesota Pollution Control Agency; the Department of Natural Resources; the Minnesota Department of Transportation, Division of Highways; the Minnesota Industrial Commission and ordinances of the City that apply to this work.
- C. All construction methods and tools shall comply with commonly accepted standards for safety and health of personnel engaged on construction, including but not limited to Federal Occupational Safety and Health Regulations for Construction; the Division of Environmental Health, Minnesota Department of Health; the Minnesota Pollution Control Agency; the Department of Natural Resources; the Minnesota Department of Transportation, Division of Highways; the Minnesota Industrial Commission and ordinances of the City that apply to this work.
- D. Any conflicts between specifications and applicable codes and standards shall be referred to the Engineer.

1.2 PERMITS OBTAINED BY OWNER

- A. The Owner has applied for the following permits from appropriate authorities. Permission to proceed will be required prior to execution of Contract. The Contractor shall perform all work and conduct itself in full accordance with the requirements of the applicable permit:
 - 1. Minnesota Pollution Control Agency (MPCA) - General Storm Water Permit for Construction Activity (MN R100001)
 - 2. Minnesota Health Department - Extension of water mains.
 - 3. Minnesota Department of Transportation (MnDOT) - Work within right-of-way.
- B. The Contractor shall be responsible for meeting any bonding or insurance requirements which may be required as a condition to any permit, listed above.

1.3 PERMITS OBTAINED BY CONTRACTOR

- A. The Contractor shall secure and pay the cost of any other permits not mentioned above, which may be required including but not limited to:
 - 1. Work within City right-of-way permit.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01420 - SPECIFICATION REFERENCE AND WORKS CONSULTED

PART 1 -- GENERAL

The references listed in this section are not all inclusive. There may be other references in individual specification sections that are not listed in this Section.

Portions of referenced specifications not specifically affected by the supplemented information of modification shall remain in effect as originally written.

It is the Contractor's responsibility to have these and all other referenced specifications listed in individual Sections available onsite and to be familiar with them.

1.1 ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE (EJCDC)

- A. Documents with the EJCDC copyright notice in the footer are used in this Project Manual under a licensing agreement with EJCDC. The text of these documents has not been changed or modified by Bolton & Menk, Inc.
- B. EJCDC documents were consulted in the creation of the Project Manual Sections listed below. These documents have been altered from the original EJCDC text and the EJCDC footer has been removed in compliance with the EJCDC license agreement. Those portions of the text that originated in copyrighted EJCDC documents remain subject to the EJCDC copyright.

- 1. 00100 – Advertisement for Bids
- 2. 00200 – Instructions to Bidders
- 3. 00410 – Bid Form
- 4. 00520 – Agreement
- 5. 00800 – Supplemental Conditions
- 6. 00941 – Change Order

1.2 SOIL DISTURBING ACTIVITIES

- A. Minnesota Pollution Control Agency (MPCA) - General Storm Water Permit for Construction Activity (MN R100001) available at: <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html>

1.3 WATERMAIN, SANITARY SEWER AND STORM SEWER CONSTRUCTION

- A. "Standard Specifications" as published by the City Engineers Association of Minnesota, (CEAM) 2013 Edition available at: <http://www.ceam.org>
- B. American Water Works Association (AWWA) Standards: <http://www.awwa.org/>
- C. THREADED ITEMS - All threaded items furnished under this contract, including but not limited to mechanical joint connectors, flanged joint connectors, mainline valves, saddles, corporation stops, curb stops, hydrants, and air release valves shall be furnished to the nominal size as specified with ENGLISH threads.

1.4 GRADING, STREET AND SURFACE IMPROVEMENTS

- A. All of Divisions II and III, and any specifically referenced Division I sections of the Minnesota Department of Transportation (MnDOT), "Standard Specifications for Construction", 2016 Edition, together with all the Supplemental Specifications: <http://www.dot.state.mn.us/pre-letting/spec/>

- B. MnDOT Technical Memoranda in force 30 calendar days prior to bid date and referencing the use of English units of measure: <http://www.dot.state.mn.us/design/tools/index.html>
- C. MnDOT Standard Plans: <http://standardplans.dot.state.mn.us/>
- D. MnDOT Standard Details: <http://standardplates.dot.state.mn.us/>
- E. Whenever the word "Contracting Authority," "Department" or "Owner" is used in the sense of ownership as part of any of the MnDOT Documents, it shall mean Owner as defined in the Agreement.

1.5 STATE AID FOR LOCAL TRANSPORTATION (SALT) SCHEDULE OF MATERIALS CONTROL

- A. This contract requires strict adherence to 2017 Schedule of Materials Control (SALT): A copy of the Schedule of Materials Control is available at: <http://www.dot.state.mn.us/stateaid/construction.html>

1.6 MINNESOTA CONCRETE FLATWORK SPECIFICATIONS

- A. LRRB Minnesota Concrete Flatwork Specifications: <http://www.dot.state.mn.us/stateaid/plans-specs.html>

1.7 TRAFFIC CONTROL

- A. The Minnesota Manual of Uniform Traffic Control Devices (MMUTCD) shall apply to this project and is available at: <http://www.dot.state.mn.us/trafficeng/publ/mutcd/>.
- B. The MnDOT's Temporary Traffic Control Zone Layouts Field available at: <http://www.dot.state.mn.us/trafficeng/publ/fieldmanual/>.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

- A. The Contractor shall have access to the reference documents at the site at all times during the construction either in paper or digital format:

*******END OF SECTION*******

SECTION 01425 – ABBREVIATIONS

PART 1 -- GENERAL

1.1 WHEREVER THE FOLLOWING ABBREVIATIONS ARE USED, THEY SHALL HAVE THE MEANINGS INDICATED:

- A. AASHTO American Association of the State Highway and Transportation Officials
- B. ACI American Concrete Institute
- C. AI The Asphalt Institute
- D. ASTM American Society for Testing and Materials
- E. AWWA American Water Works Association
- F. CEAM City Engineer's Association of Minnesota
- G. CLFMI Chain Link Fence Manufacturers Institute
- H. MnDOT Minnesota Department of Transportation
- I. OSHA Occupational Safety and Health Administration
- J. PCA Portland Cement Association or Minnesota Pollution Control Agency (context obvious)
- K. SWPPP Storm Water Pollution Prevention Plan

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01450 - QUALITY CONTROL

PART 1 -- GENERAL

1.1 SCOPE OF TESTS

- A. All materials, equipment, installation, and workmanship included in this contract, if so required by the Engineer, shall be tested and inspected to prove compliance with the contract requirements.
- B. All tests and inspections shall be completed under the direct supervision of a licensed professional engineer. All tests and inspections shall be the responsibility as identified in the individual sections of these specifications and shall be reported directly to the Owner and Engineer.
- C. No tests specified herein shall be applied until the item to be tested has been inspected and approval given for the application of such tests.
- D. Tests and inspections shall include all those specified in the individual sections and shall be compensated in accordance with the individual sections.
- E. Tests and inspection, unless otherwise specified or accepted, shall be in accordance with the recognized standards of the industry.
- F. Soil compaction testing performed by the Owner is deemed to be for the convenience of the Owner for documentation of the progress and performance of the work. Soil compaction testing results will be made available to the Contractor. However, the Owner and Engineer make no representations that the number of tests taken will be sufficient to accurately characterize the condition of any trench, and the Contractor shall take any supplemental test it deems necessary to monitor its own performance. The Owner may, at its discretion, eliminate soil and compaction testing on any part or the entire project. The presence or absence of soil and compaction testing or the approval of the results thereof shall in no way reduce the Contractor's obligation to correct trench settlement as described in these Special Provisions.

1.2 FINAL TESTING AND START-UP

- A. If, under test, any portion of the work fails to fulfill the contract requirements and is altered, renewed or replaced, tests on that portion so altered, removed, replaced, together with all other portions of the work as are affected thereby, shall, if so required by the Engineer, be repeated within reasonable time and in accordance with the specified conditions and the Contractor shall pay to the Owner all reasonable expenses incurred by the Owner as a result of the carrying out of such tests.

1.3 TESTING AND LABORATORY SERVICES

- A. Independent Testing Laboratory
 - 1. Where in the individual sections of this Specification, tests or inspections are required to be furnished by the Contractor by an independent testing laboratory, the Contractor shall employ and arrange for, at its expense, the services of an approved independent testing laboratory satisfactory to the Engineer to perform the testing utilizing recognized standard procedures and criteria.
- B. Reports and Certificates
 - 1. The Contractor shall submit reports and certificates of all inspections and test to the Engineer in duplicate. The reports and certificates become the property of the Owner.
- C. Sample Materials

1. The Contractor shall furnish all sample materials required for these tests and shall deliver the same without charge to the testing laboratory or other designated agency when and where directed by them.

D. Additional Tests

1. In addition to those tests required by the individual technical specifications and/or referenced specifications:
 - (a) Additional tests required beyond those required under this specification may be ordered by the Engineer to settle disagreements with the Contractor regarding quality of work done. If the work is defective, the Contractor shall pay all costs of the additional tests and shall correct the work. If the work is satisfactory, the Owner will pay for the additional tests.
 - (b) The Owner may perform televised inspection of any and/or all under construction included in this project, at its own expense, at any time prior to final payment. All deficiencies discovered in the course of such investigation shall be corrected at the Contractor's expense and, to the Owner's satisfaction, prior to final payment.

1.4 ENGINEER'S REPRESENTATIVES AND TESTING

- A. The Engineer may provide a Resident Project Representative (RPR) to ascertain that the work is accomplished properly and in accordance with the plans and specifications. The RPR shall have full access to the work and shall be given full cooperation. The RPR shall have the authority, subject to the final decision of the Engineer, to reject any defective work or material. The RPR shall have no authority to permit any deviation from the plans and specifications except on written order from the Engineer.
- B. The presence of the Engineer or any RPRs, however, shall not relieve the Contractor of the responsibility for the proper execution of the work in accordance with all requirements of the Contract Documents. Compliance is a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the Engineer or any RPRs.

1.5 SITE INVESTIGATION AND CONTROL

- A. The Contractor shall verify all dimensions in the field and shall check field conditions continuously during construction. The Contractor shall be solely responsible for any inaccuracies built into the work due to his failure to comply with this requirement.
- B. The Contractor shall inspect related and appurtenant work and shall report in writing to the Engineer any conditions, which will prevent proper completion of the work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair or replacement caused by unsuitable conditions shall be performed by the Contractor at his sole cost and expense.

1.6 RIGHT OF REJECTION

- A. The Engineer, acting for the Owner, shall have the right, at all time and places, to reject any articles or materials to be furnished hereunder which in any respect, fail to meet the requirements of these specifications, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the Engineer or RPR, through an oversight or otherwise, has accepted materials or work which is defective or which is contrary to the specifications, such material, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected by the Engineer for the Owner.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

******END OF SECTION******

SECTION 01500 – MOBILIZATION

PART 1 -- GENERAL

1.1 SUMMARY

- A. This section covers the mobilization of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to construct the project, including but not limited to, the demobilization associated with closing the project, removing all equipment, removing excess materials, and general clean-up.

1.2 METHOD OF MEASUREMENT AND PAYMENT

- A. Mobilization shall be measured by the LUMP SUM and paid in accordance with the following schedule.
 - 1. On the first partial estimate that shows work performed on at least one major contract item, 25 percent of the amount bid for Mobilization will be paid, but not more than 3 percent of the original Contract amount.
 - 2. On subsequent partial estimates, payment shall be made at the same percentage as the value of work completed to date relative to the original Contract amount, except that payment shall not be reduced from the original 25 percent. Materials on hand shall be excluded from the payment ratio computation.
 - 3. At such time that 95 percent of the original Contract amount is earned, full payment for Mobilization shall be made.

1.3 SPECIFICATION REFERENCES

- A. MnDOT Specification Section 2021 shall apply to mobilization.
- B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01562 - AIR, LAND AND WATER POLLUTION

PART 1 -- GENERAL

1.1 SUMMARY

- A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary for the prevention of air, land and water pollution as indicated on the plans or as specified herein or as directed by the Engineer.

1.2 METHOD OF MEASUREMENT AND PAYMENT

- A. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:
1. Payment for the prevention of air and land pollution shall be incidental to the project and no separate compensation will be granted
 2. Payment for all work associated with the prevention of water pollution and erosion control shall be incidental to the project and no separate compensation will be granted, unless payment for such work is specifically identified in Section 02370 of these Specifications.
- B. SPECIFICATION REFERENCES
1. MnDOT Specification Section 1717 shall apply to the prevention of air, land and water pollution.
 2. MnDOT Specification Section 2573 shall apply to storm water management.
 3. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.1 GENERAL

- A. The Contractor shall provide and maintain all sanitary accommodations for use by employees.
- B. All solid waste material shall be disposed by the Contractor in accordance with the local and State solid waste disposal regulations.

3.2 DUST CONTROL

- A. The Contractor shall perform dust control operations necessary to proactively prevent the production of dust in amounts to cause nuisance or damage to property, vegetation, animals, or persons in the vicinity of the construction.
- B. The Contractor shall keep the surface of construction work areas and unpaved haul roads moist by spraying with uncontaminated water so as to prevent, not just reduce, airborne dust.
- C. The Contractor shall suspend construction or haul traffic when the Contractor cannot prevent airborne dust until such time as dust control can be re-established to the required levels.
- D. The Contractor shall be responsible for any damage resulting from dust originating from the construction. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility under these Contract provisions.

- E. Requests by the Owner or Engineer for additional water to be placed for dust control shall be accomplished within 4 hours of notification and shall also include evenings and weekends as required or deemed necessary by the Owner or the Engineer. **Failure to perform the work requested within the 4 hours may result in the Owner or Engineer arranging for dust control by others. A contract deduction shall be made equal to the total of all costs to perform dust control so arranged, including not limited to labor, materials, equipment and administrative costs.**

3.3 USE OF CHEMICALS

- A. Reference Storm Water Pollution Prevention Plan (SWPPP).

******END OF SECTION******

SECTION 01720 - FIELD ENGINEERING

PART 1 -- -- GENERAL

1.1 STAKING

- A. Unless otherwise specified in the specific sections, Owner shall provide engineering surveys to establish reference points for construction as follows:
1. Storm Sewer: Staking will be furnished and set by the Engineer at 50 foot spacing (usually offset for construction) for the control of the underground construction herein described. Cuts to the proposed pipeline grade will be furnished by the Engineer. Manholes and catch basins will be staked with an offset and a witness with a cut to the lowest structure invert.
 2. Watermain: The staking interval for watermain shall be 50 feet. Cuts to the proposed pipeline grade will be furnished by the Engineer. Location staking shall be provided for valves and fittings. Hydrants will be staked with an offset and a witness with a cut to the ground elevation at the hydrant.
 3. Street Grading and Top of Curb: A control line (usually offset from the curb line) with cuts and fills to proposed grade at 50 foot spacing on tangents, and 25 foot spacing on horizontal or vertical curves, shall be furnished and set on both sides for control of the construction herein described.
 4. Site Grading: Centerline stakes, with cut or fill to finished grade will be provided at 50 foot spacing. Stakes with cut or fill to finished grade will be provided for; contours representing grade breaks at 100 foot spacing along the contour, contours representing the top and bottom of ponds at 100 foot spacing along the contour, and for building pad corners (usually offset from the actual corner).
 5. The Contractor shall give the Engineer sufficient notice, normally two working days, to provide staking for the orderly progress of the work and shall provide clear line of sight for all staking.
 6. The stakes are an integral part of the project and the Contractor shall protect and preserve all such stakes and marks, and may be charged with the expense of resetting all such stakes and marks destroyed or disturbed due to the Contractor's carelessness or negligence. Stakes that are destroyed due to vandalism, erosion or other incidents shall be re-staked by the Engineer, at the Contractor's expense.
 7. In the event of apparent or questionable errors or inconsistencies in such stakes set for control of line and/or grade, the Contractor shall promptly notify the Engineer of such error or inconsistency and shall not proceed with the work until such stake, grade, or mark shall have been verified or corrected by the Engineer.
 8. All other line and grade staking shall be the responsibility of the Contractor. The Contractor shall furnish sufficient equipment and personnel for determination of plan grades, cross sections, course thicknesses, etc. The survey cost of establishing stakes requested by the Contractor for the convenience of the Contractor, beyond those cited as basic project control, will be charged to the Contractor or withheld from the amounts due to the Contractor.
- B. Unless otherwise stated in the applicable section of the Specifications or waived by the Engineer, the Contractor shall provide Blue Tops prior to final paving for subgrade and aggregate base construction.

1.2 SPECIFICATION

- A. Water Distribution System - See CEAM 2600.3 (A2).
- B. Pipe Sewers - See CEAM 2621.3 (A2).

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01770 - PROJECT CLOSEOUT

PART 1 -- GENERAL

1.1 FINAL INSPECTION

- A. After the cleaning up of the work, premises, and all other areas and structures connected with the performance of the contract, the work as a whole, shall be examined by the Engineer and Owner; and, any workmanship or materials found not meeting the requirements of the specifications shall be identified and included on a punch list given to the Contractor.
- B. The Contractor shall, at its own expense, promptly remove, replace, repair, or otherwise correct the deficiencies with good and satisfactory workmanship and material to the satisfaction of the Owner and Engineer.
- C. In the event that the Contractor does not satisfactorily remove, replace, repair, or otherwise correct the deficiencies within thirty (30) calendar days after receipt of the punch list, the Owner reserves the right to employ the services of other contractors and/or service organizations to conduct the necessary work and deduct any and all associated costs from final payment to the Contractor. The entry of such other agents on the project to perform this work will not relieve the Contractor from any of its warranty, maintenance or start-up obligations.

1.2 PROJECT ACCEPTANCE

- A. The project shall be accepted after the final examination has been conducted and all settlement, defects, damages, etc., discovered during the previous examination have been remedied.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 02510 - DOMESTIC WATER SYSTEM

PART 1 -- GENERAL

1.1 SUMMARY

- A. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to watermain and service line construction as indicated on the drawings or as specified herein.

1.2 METHOD OF MEASUREMENT AND PAYMENT

- A. Measurement and compensation for the following items shall be paid according to the referenced specification or as modified below:
 - 1. Water main
 - (a) No exception to the referenced specification is made.
 - 2. Hydrants
 - (a) No exception to the referenced specification is made.
 - 3. Valves and Valve Boxes
 - (a) No exception to the referenced specification is made.
 - 4. Fittings
 - (a) Unless otherwise noted on the plans, watermain fittings will be measured by the pound without joint accessories. The standard weight of watermain fittings, for payment purposes, shall be as published in AWWA C-153, as follows:

Bends, Caps, Plugs & Sleeves							
Size	Fitting Weights, lbs. (AWWA C153)						
	Bends – MJ x MJ, (degrees)				Caps MJ x MJ	Plugs MJ x MJ	Sleeves¹ MJ x MJ
	90	45	22.5	11.25			
3	19	16	15	14	8	8	18
4	25	22	18	16	9	10	20
6	39	32	31	30	15	16	33
8	57	46	46	42	22	26	46
10	89	70	64	58	32	36	62
12	108	86	80	67	42	46	76
14	210	160	136	93	66	75	140
16	264	202	172	148	92	95	170
18	335	250	255	205	114	121	200
20	400	305	310	245	125	135	255
24	565	405	412	315	166	175	335

¹Weights are based on the use of long sleeves.

Tees, Crosses & Reducers									
		Fitting Weights, lbs. (AWWA C153)					Fitting Weights, lbs. (AWWA C153)		
Run	Branch	Tee	Cross	Reducers	Run	Branch	Tee	Cross	Reducers
Large	Small	MJ x MJ	MJ x MJ	MJ x MJ	Large	Small	MJ x MJ	MJ x MJ	MJ x MJ
4	4	32	40	-	18	6	275	-	-
6	4	46	62	24	18	8	295	-	190
6	6	56	75	-	18	10	315	-	195
8	4	60	84	32	18	12	335	-	180
8	6	72	98	36	18	14	380	-	190
8	8	86	105	-	18	16	405	-	195
10	4	78	98	46	18	18	435	-	-
10	6	90	121	47	20	6	315	-	-
10	8	105	135	50	20	8	345	-	-
10	10	120	145	-	20	10	370	-	220
12	4	94	119	58	20	12	395	-	205
12	6	110	138	58	20	14	440	-	200
12	8	125	149	57	20	16	465	-	200
12	10	140	187	61	20	18	505	-	225
12	12	160	213	-	20	20	535	-	-
14	4	172		-	24	6	415	-	-
14	6	182	210	100	24	8	445	-	-
14	8	206	231	100	24	10	470	-	-
14	10	228	255	100	24	12	500	-	305
14	12	234	269	100	24	14	550	-	310
14	14	280	299		24	16	580	-	320
16	6	228	250	124	24	18	625	-	305
16	8	248	264	124	24	20	660	-	300
16	10	264	286	124	24	24	720	-	-
16	12	280	312	112					
16	14	316	-	140					
16	16	322	385	-					

(b) The weight for fittings not listed in the tables above shall be in accordance with AWWA C153. The weight for fittings not listed in the tables above or in AWWA C153 shall be the actual weight of the fitting(s) furnished and installed based on acceptable documentation provided by the Contractor.

- B. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid in the absence of a specific bid item for the work. The costs shall be included in the unit price bid for the water system items, as indicated. Such items of work include but are not limited to:
1. The furnishing and installing polyethylene encasement material, include in the price bid for water main.
 2. Concrete blocking or metal ties, include in the price bid for water main.
 3. Valve umbrella anchorage assembly, include in the unit price bid for valves.
 4. Locating and connecting to an existing water main or a hydrant, include in the price bid for water main.
 5. Locating and connecting to an existing water service line, include in the price bid for water main.

6. Compaction, hydrostatic, leakage, disinfecting, coliform bacteria and conductivity testing, include in the price bid for water main.
7. Furnishing and installing thrust block, tie rods, joint restraints and sacrificial zinc anode caps as shown on the plans and as specified.
8. Turning hydrant heads to a location as directed by the Engineer, include in the price bid for hydrants.
9. If a separate bid item for temporary water service is NOT included in the Schedule of Unit Prices, providing continuous temporary water service to affected users, include in the price bid for water main.
10. The wood and/or metal parts necessary to identify the ends of the unattached service lines and curb stops are included in the price bid for water services.
11. If a separate bid item for bypass pumping is NOT included in the Schedule of Unit Prices, providing temporary bypass pumping / control of storm water flows around the construction zone, include in the price bid for watermain.
12. The painting or re-painting of hydrants with scratches and/or abrasions, include in the price bid for hydrants.
13. Providing temporary corporations, copper pipe, plugs, etc. for hydrostatic watermain testing, include in the unit price bid for watermain.
14. The cost to furnish and install copper water service couplings, include in the unit price bid for water service pipe.
15. If the watermain is to be installed inside a casing pipe, furnishing and placing the carrier pipe, carrier pipe support materials, sand fill and grout seals, include in the unit price bid for watermain.

1.3 SPECIFICATION REFERENCES

- A. Reference CEAM Specification No. 2611 shall apply to the water main and service line construction, except as modified herein.
- B. Unless noted otherwise, the provisions in this section are in addition to the referenced specification.

1.4 SUBMITTALS

- A. Work plan for temporary service.

PART 2 -- PRODUCTS

2.1 OPEN CUT WATERMAIN MATERIAL

- A. The following water pipe materials will be allowed for use on this project:
 1. All watermain under 8" diameter shall be ductile iron pipe, Class 53. Watermain 8" and larger shall be ductile iron pipe, class 52. The ductile iron pipe watermain shall be in accordance with the provisions of CEAM 2611.2A1.
 2. All trenches shall be excavated so that the pipe may be laid accurately to grade with a minimum of 7-1/2 feet of earth cover over the top of the pipe, unless noted otherwise on the drawings.
 3. All rubber gasket joints shall be in accordance with A.W.W.A Specification C111. All joints shall be push on or mechanical joint type.
 4. All joints shall be provided with copper straps for the purpose of conducting electric current. Lead tip gasket alone is not an acceptable method of conductivity. Straps shall be capable of carrying 600 amps.
 5. Water service shall not be interrupted before 9:00 a.m. on any day. If water service interruption seriously interferes with the day-to-day operations of a commercial-industrial business, the Contractor

will be required to conduct his operations at a time that has the least impact on the business. No additional compensation will be due the Contractor for working after hours to complete this work.

2.2 WATERMAIN FITTING MATERIALS

- A. The following pressure pipe fitting materials will be allowed for use on this project:
1. Mechanical Class 350 ductile iron fittings shall be used.
 2. All fittings shall be coated with a 6-8 mil nominal thickness fusion bonded epoxy conforming to the requirements of ANSI/AWWA C550 and C116/A21.16.
 3. All fittings, valves, hydrants and restraining rods shall be protected by using sacrificial zinc anode caps, ASTM B418 6 oz. Large Zinc Anode Caps as manufactured by Trumbull Industries Inc., or an approved equal. Contractors shall supply 2 anode caps per mechanical joint gland installed.
 4. All fittings, valves, hydrants, etc., shall be secured utilizing COR-BLUE T-BOLTS as manufactured by NSS Industries or approved equal.
 5. All Restraining devices (megalugs) shall be coated with a 6-8 mil nominal thickness, fusion bonded epoxy conforming to the requirements of ANSI/ AWWA C550 and C116/A21.16.
 6. Adaptors, back-up rings and oversize sleeves shall be provided for transitions and connections to dissimilar types of pipe materials. All sleeve fittings shall be long mechanical joint.
 7. All fittings shall have been manufactured in the year of construction or prior calendar year.
 8. Quality control of all fitting manufacturers shall conform to the requirements of International Organization for Standardization (ISO).

2.3 FIRE HYDRANTS

- A. Hydrants shall be Waterous Pacer model WB-67-250, UL, 250psi rating, traffic flange with break off section as shown on the detail drawings, and conforming to the provisions of CEAM 2611.2B. All hydrants shall have flex-stake markers 4-feet in length or as approved by the owner. The top nut of the hydrant shall be 2.5 ft above adjacent grade.
- B. The drain holes shall be securely plugged where the static groundwater table is higher than the drain hole location on the hydrant. Plugged hydrants shall be marked by painting the 5" cap yellow.
- C. All hydrants shall have been manufactured in the year of construction or prior two calendar years.
1. All hydrant extensions shall be manufactured by the same manufacturer as the hydrant.
 2. The local fire department shall be contacted before ordering hydrants to obtain the correct nozzle threads and type of operating nut and cap bolts.

2.4 VALVE AND VALVE HOUSING

- A. All water valves shall have been manufactured in the year of construction or prior two calendar years.
- B. All nuts and bolts shall be 304 stainless steel.
- C. Valve Housing
1. Valve boxes shall be three piece adjustable screw type boxes 60"-90" extension, with a 5 ¼" shaft size. The word "water" shall be imprinted on each lid. One (1) valve wrench shall be supplied to the utility department for each five (5) valves required on the Project.
 2. Valves shall have a valve nut extension installed. The extension shall terminate with in one-foot (1') of the finished grade.
 3. All valve box assemblies shall be furnished with a valve umbrella anchorage assembly. The valve umbrella anchorage assembly shall be manufactured by Adaptor, Inc., Oak Crest, WI, or equivalent.

4. High Density Polyethylene valve housings will not be allowed on this project.

D. Gate Valves

1. Valve twelve inches (12") in size and smaller shall be resilient wedge valves by Kennedy, Clow, Mueller or approved equal. Valves shall conform to AWWA C509-80 standards and shall be installed on line with accompanying valve boxes. All valves shall be of mechanical ends with underground operator. The operator shall close the valve in a clockwise direction.

E. Valve Markers

1. All valves not located in the streets shall be marked with a 5' tall Blue Carsonite marker as approved by the City.

2.5 RESTRAINED JOINT RETAINER GLANDS

A. Where stainless steel is not used restrained joint retainer glands shall be coated with a 6-8 mil nominal thickness fusion bonded epoxy conforming to the requirements of ANSI/AWWA C550 and C116/A21.16 or approved equal.

2.6 POLYETHYLENE ENCASEMENT

A. The Contractor shall furnish and install polyethylene encasement for the entire main and all appurtenances in accordance with the referenced specification.

PART 3 -- EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. Temporary Service

1. Before proceeding with the project, the Contractor shall establish a work plan and submit the plan to the utility personnel and Engineer for review and comment. The plan shall outline the method to be used to maintain service to the affected consumers and estimate the duration of any anticipated interruptions of service. The plan shall include provisions to fully disinfect all temporary piping, valves and fittings in accordance with CEAM Specification No. 2611. The Contractor is the sole party responsible to notify the Utility and consumers who may be affected by limitations and/or interruption of water service. Planned service interruptions shall not exceed six (6) hours in any 72 hour period unless previously approved by the Utility.
2. The Contractor shall coordinate watermain shut-downs with the water utility at least 24 hours prior to the requested shut-down.
3. If the Contractor fails to provide water service to affected residents within the constraints specified above, an amount equal to \$ 500.00 may be deducted from the amount due the Contractor for each occurrence.

3.2 INSTALLATION OF PIPE AND FITTINGS

A. Aligning and Fitting of Pipes

1. The Contractor, together with the utility's personnel, shall jointly examine and operate all curb stops and mainline valves prior to final acceptance.
2. Anchoring of Pipe
 - (a) A thrust block of cast-in-place concrete, which covers the installed fitting, is not permitted. Restrained joint retainer glands shall be provided at all bends, tees, hydrants, valves and plugged crosses or wherever the watermain changes direction or dead ends

B. Polystyrene Insulation

1. The Contractor shall install polystyrene insulation in those areas where the watermain or services may be susceptible to frost or freezing, or as directed by the Engineer.
 2. Rigid foam insulation shall be placed between the watermain and storm or sanitary sewer where adequate vertical clearance cannot be maintained. The insulation shall be placed on a bed of sand and sand shall be placed above the insulation to isolate the insulation from rocks and other sharp objects. The ultimate thickness of insulation required shall be achieved by using 2 layers of insulation, the second layer shall be placed perpendicular to first layer and the joints shall be offset.
- C. Water Service Installation
1. The Contractor shall imprint the concrete face of curb at the locations of the utility service locations in accordance with City standards.
 2. The Contractor shall keep accurate records as to the location of the service connections, as specified in the referenced specification. Final payment for the project will not be made until the information is in the possession of the Owner.
 3. No warranty is expressed or implied as to the location, size or material type of existing service lines. The Contractor shall furnish and install all fittings required to make the connections.
 4. The Contractor shall install new service pipe, at 7.5 foot bury depth, from the tee to the property line, or as shown on the plans, or as directed by the Engineer.
 5. The water services shall be hydrostatically tested and disinfected
- D. Polyethylene Encasement
1. The Contractor shall furnish and install polyethylene encasement for the entire main and all appurtenances in accordance with the referenced specification.

3.3 FIELD QUALITY CONTROL

- A. Electrical Conductivity Test
1. Conductive Pipe Materials
 - (a) See the referenced Specification CEAM 2611.3.F
 2. Non-conductive Pipe Materials
 - (a) The conductivity requirements shall be to demonstrate the electrical continuity of the tracer wire.

3.4 HYDROSTATIC TESTING AND DISINFECTION

- A. Hydrostatic tests shall be conducted in accordance with the referenced specification. Individual tests from valve to valve are required. These tests shall be conducted prior to the bacteriological tests required with the disinfection of the main. No drop in pressure will be allowed during the last two hours of the pressure test.
- B. The Contractor shall disinfect the watermain in accordance with the provisions of AWWA Standard Specification C-651, Disinfecting Watermains. After performing and obtaining passing hydrostatic test results, two samples of the water, taken 24 hours apart, shall be taken from each section of the new pipe and sent to an approved testing laboratory to establish the bacteriological conditions prior to placing the line in service. In the event unsatisfactory results are obtained, the Contractor shall take whatever steps are necessary to correct the sanitary conditions. The Contractor shall then re-take the bacteriological tests until satisfactory results are obtained.

*****END OF SECTION*****

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DIVISION S

S-1 CONTACT INFORMATION

Direct questions about this Project, including pre-bid questions, to Kevin Kielb, P.E., Bolton & Menk, Inc. at 651-968-7760.

S-2 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 at Minnesota Statutes Section 363A.44 or at this website:

http://mn.gov/mdhr/compliance/equal_pay.html

S-3 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 must verify it meets the minimum criteria detailed in the law. A bidder must submit its verification electronically by completing the “Responsible Contractor” section in the “Officers and Acknowledgements” Folder within the Electronic Bid File. A company officer must certify statements in that section. Bidders only need to complete the electronic verification; DO NOT email, fax, or send paper forms to the Department. The Department will not accept emailed, faxed or other paper submissions and will only accept electronic verifications.

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-4 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 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 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's website at: www.revenue.state.mn.us/businesses/withholding/Pages/EducationandOutreach.aspx.

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. 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.

S-5 EMERALD ASH BORER COMPLIANCE

REVISED 01/08/16

All or part of this Project is located in a county which the Minnesota Department of Agriculture (MDA) has placed under an Emerald Ash Borer Quarantine. Contractor may contact MDA at 1-888-545-6684 or visit the Emerald Ash Borer website at <http://www.mda.state.mn.us/plants/pestmanagement/eab.aspx> to find more information. The Contractor must comply with the following requirements.

S-5.1 The Contractor **will not:**

- (1) Offer any part of an Ash tree (*Fraxinus* spp.) from a quarantined area to any industry or individual without an Emerald Ash Borer Compliance Agreement with MDA; or
- (2) Make available any part of an ash tree or any non-coniferous (hardwood) species with bark from the quarantined area for use as firewood; or
- (3) Transport any part of an ash trees, in any form, outside of a quarantined county without complying with an Emerald Ash Borer Compliance Agreement with MDA; or
- (4) Transport any part of ash trees, in any form, outside the state of MN without contacting John.o.haanstad@aphis.usda.gov to obtain the United States Department of Agriculture's and the MDA's joint approval of the Emerald Ash Borer Compliance Agreement.

S-5.2 The Contractor **will:**

- (1) Dispose of ash trees according to the Emerald Ash Borer Compliance Agreement; and
- (2) Use the ash wood chips within the construction limits for erosion control, construction exit pads, or other project related needs.

S-5.3 The Department will not directly compensate the Contractor for compliance with these requirements.

S-6 USE OF ADHESIVE ANCHORS

Do not use adhesive anchors in sustained tension. Contractor may use adhesive anchors, in a non-direct tensile application, such as metal rail attachment.

S-7 (1203) ACCESS TO PROPOSAL PACKAGE

MnDOT 1203 is hereby deleted from the MnDOT Standard Specifications.

S-8 (1206) PREPARATION OF PROPOSAL

The provisions of MnDOT 1206 are supplemented and/or modified with the following:
S-8.1 MnDOT 1206.1 is hereby deleted from the MnDOT Standard Specifications.

S-8.2 MnDOT 1206.2 is hereby deleted from the MnDOT Standard Specifications and replaced with the following:

1206.2 ALLOWABLE SUBSTITUTIONS

For all Proposals the Bidder shall use the following method:

- (1) Submit a Proposal on the Bid Schedule forms provided by the Department. The Bidder shall:
 - (1.1) Submit a Unit Price in numeric figures for each Pay Item for which a quantity is shown. Assume a numeric quantity of "1" for each "Lump Sum" Pay Item, except as not required in the case of alternate Pay Items,
 - (1.2) Show the extensions resulting from Unit Prices multiplied by the shown quantities in the specified column, and
 - (1.3) Add the extended Pay Item amounts to show the total amount of the Proposal.

The Bidder shall write the figures in ink or provide typed or computer printed figures. In the case of a discrepancy between a Unit Price and extension in a Proposal, the Unit Price will govern.

If a Bidder fails to provide a Unit Price for any Pay Item on the Bid Schedule, except for "Lump Sum" Pay Items, the Department will reject the Proposal.

If a Pay Item in the Proposal requires the Bidder to choose an alternate Pay Item, the Bidder shall indicate its choice in accordance with the Specifications for that Pay Item.

An authorized representative of the Bidder must sign the Proposal.

S-9 (1209) DELIVERY OF PROPOSALS

The provisions of MnDOT 1209 are modified with the following:

When submitting a Proposal in accordance with 1206.2, "Allowable Substitutions," of these Special Provisions, the Bidder shall deliver the Proposal and the Proposal Guaranty in a sealed envelope. The Bidder shall mark the sealed envelope with the name of the Bidder, the Project number, and the letting date. The Bidder shall deliver the sealed envelope to the Department as specified in the Advertisement for Bids as follows:

- (1) To the address specified,
- (2) In care of the official receiving the Proposals, and
- (3) By the date and time for opening Proposals.

The Bidder shall return paper copies of the following with the submitted Proposal:

- (1) Proposal title sheet;
- (2) The complete "Schedule of Prices," with all changes made in ink and initialed;
- (3) Form 21126D, "Proposal Signature Page" attached to the back of the Proposal, with signatures and all Addenda acknowledged;
- (4) Form CM 32-34, "EEO Clause;"
- (5) Non-collusion affidavit; and
- (6) Any other forms included in the Proposal Package.

If the Department receives a Proposal after the date and time for opening Proposals, the Department will return the Proposal to the Bidder unopened.

S-10 (1210) REVISION OF PROPOSAL PACKAGE OR WITHDRAWAL OF PROPOSALS

The provisions of MnDOT 1210 are deleted and replaced with the following:

When submitting a Proposal in accordance with 1206.2, "Allowable Substitutions," of these Special Provisions, the Bidder may revise or withdraw its Proposal after delivery to the Department if the Department receives the Bidder's written request for withdrawal or revision before the date and time for opening Proposals.

The Department reserves the right to revise the Proposal Package at any time before the date and time for opening Proposals. The Department will issue a numbered and dated Addendum for any revision of the Proposal Package. The Department will post each Addendum as announced in an e-mail or other method of notification to each Bidder on the Department's list of Bidders.

The Department will include each Addendum with all Proposal Forms issued to the Bidder after the date of the Addendum.

If revisions made by an Addendum require change to Proposals or reconsideration by the Bidder, the Department may postpone opening Proposals. If the Department postpones opening Proposals, the Department will specify the new date and time for opening Proposals in the Addendum.

The Bidder shall acknowledge receipt of each Addendum in the proposal.

S-11 (1212) OPENING OF PROPOSALS

The provisions of MnDOT 1212 are modified with the following:

S-11.1 MnDOT 1212 is hereby deleted from the MnDOT Standard Specifications and replaced with the following:

1212 OPENING OF PROPOSALS

The Department will open Proposals at the time, date, and place defined in the Proposal Package and the Advertisement for Bids.

S-12 (1404) MAINTENANCE OF TRAFFIC AND (2563) TRAFFIC CONTROL **REVISED 02/07/17**

All traffic control devices shall conform and be installed in accordance to:

- the "Minnesota Manual on Uniform Traffic Control Devices" (MN MUTCD);
- Part 6, "Field Manual for Temporary Traffic Control Zone Layouts" (Field Manual);
- the Speed Limits in Work Zones Guideline
- the Minnesota Flagging Handbook;
- the MnDOT Standard Signs and Markings Manual;

And the provisions of MnDOT 1404 and 1710, the Plan, and these Special Provisions.

The Contractor shall furnish, install, maintain, and remove all traffic control devices required to provide safe movement of vehicular traffic through the Project during the life of the Contract from the start of Contract operations to the completion thereof. The Engineer will have the right to modify the requirements for traffic control as deemed necessary due to existing field conditions. The highways shall be kept open to traffic at all times, except as modified below.

Traffic control devices include, but are not limited to, barricades, warning signs, trailers, flashers, cones, and drums, as required and sufficient barricade ballasts to maintain barricade stability.

S-12.1 TRAFFIC CONTROL

(A) If traffic control layouts are not present in the Plan, or if the Contractor modifies the layout or sequence from the Plan, the Contractor shall submit the proposed traffic control layout to the Engineer, for approval, at least seven (7) days prior to the start of construction. The Contractor does not need to submit layouts that can be found in the Field Manual. All other layouts that are not found in the plan or Field Manual shall be submitted. At least 24 hours prior to placement, all traffic control devices shall be available on the Project for inspection by the Engineer. The Contractor shall modify his/her proposed traffic control layout and/or devices as deemed necessary by the Engineer.

(B) The Contractor shall be responsible for the immediate repair or replacement of all traffic control devices that become damaged, moved or destroyed, of all lights that cease to function properly, and of all barricade ballasts that are damaged, destroyed, or otherwise fail to stabilize the barricades. The Contractor shall further provide sufficient surveillance of all traffic control devices at least once every 24 hours.

The Contractor shall furnish names, addresses, and phone numbers of at least three (3) individuals responsible for the placement and maintenance of traffic control devices. These individuals shall be "on call" 24 hours per day, seven days per week during the times any traffic control devices, furnished and installed by the Contractor, are in place. The required information shall be submitted to the Engineer at the Pre-construction Conference.

The Contractor shall also furnish the names, addresses, and phone numbers of those individuals to the following:

- | | | |
|----|--|--------------|
| 1. | City of Ramsey/Public Works Department | 763-427-8254 |
| 2. | Local Police Department | 763-427-6812 |
| 3. | Local Fire Department | 763-427-4452 |
| 4. | City of Ramsey Clerk | 763-427-1410 |

The Contractor shall, at the pre-construction conference, designate a Work Zone Safety Coordinator who shall be responsible for safety and traffic control management in the Project work zone. The Work Zone Safety Coordinator, shall be either an employee of the Contractor such as a superintendent or a foreman, or an employee of a firm which has a subcontract for overall work zone safety and traffic control management for the Project. The responsibilities of the Work Zone Safety Coordinator shall include, but not be limited to:

- Coordinating all work zone traffic control operations of the Project, including those of the Contractor, subcontractors and suppliers.
- Establishing contact with local school district, government, law enforcement, and emergency response agencies affected by construction before work begins.
- Maintaining a record of all known crashes within a work zone. This record should include all available information, such as: time of day, probable cause, location, pictures, sketches, weather conditions, interferences to traffic, etc. These records shall be made available to the Engineer upon request.

(C) The Contractor shall inspect, on a daily basis, all traffic control devices, which the Contractor has furnished and installed, and verify that the devices are placed in accordance with **the Traffic Control Layouts**, these Special Provisions, and/or the MN MUTCD. Any discrepancy between the placement and the required placement shall be immediately corrected.

The Contractor shall be required to respond immediately to any call from the Engineer or his designated representative concerning any request for improving or correcting traffic control devices. **If the Contractor is negligent in correcting the deficiency within one hour of notification the Contractor shall be subject to an hourly charge assessed at a rate of \$250.00 per hour for each hour or any portion thereof with which the Engineer determines that the Contractor has not complied.**

The Contractor is required to meet the traffic control device quality standards as determined in the Field Manual. The Contractor shall immediately replace traffic control devices that are deemed unacceptable. Signs that are dirty and result in a noticeable loss of reflectivity at night are also considered unacceptable and shall be cleaned or replaced. The Contractor shall be required to respond immediately to any call from the Engineer or his designated representative concerning the notification of unacceptable traffic control devices. **If the Contractor is negligent in correcting the deficiency within one day of notification the Contractor shall be subject to a daily charge assessed at a rate of \$500 for each day or any portion thereof with which the Engineer determines that the Contractor has not complied.**

(D) The person performing the inspection in paragraph (C) above shall be required to make a daily log. This log shall also include the date and time any changes in the stages, phases, or portions thereof go into effect. The log shall identify the location and verify that the devices are placed as directed or corrected in accordance with the Plan. All entries in the log shall include the date and time of the entry and be signed by the person making the inspection. The Engineer reserves the right to request copies of the inspection logs, as he deems necessary.

The Contractor shall provide copies of the inspection logs on a weekly basis on a day of the week determined by the Engineer. Additionally the Engineer may request copies of the logs at any time he deems necessary. **If the Contractor is negligent in providing the inspection logs on the predetermined weekly date or at the Engineer's request, the Contractor shall be subject to a daily charge assessed at a rate of \$250.00 per day for each day or any portion thereof with which the Engineer determines that the Contractor has not complied.**

(E) If, at any time, the Contractor fails to, in a timely manner, properly furnish, install, maintain or remove any of the required traffic control devices, the Department reserves the right to correct the deficiency. **Each time the Department takes such corrective action, the costs thereof, including mobilization, plus \$5,000 will be deducted from monies due or coming due the Contractor.**

S-12.2 GENERAL REQUIREMENTS

(A) All portable sign assemblies shall be perpendicular to the ground. No roll-up signs will be allowed unless authorized by the Engineer. No traffic control device (signs, channelizing devices, arrowboards, etc.) shall be weighted so they become hazardous to motorists and workers. The approved ballast system for devices mounted on temporary portable supports is sandbags, unless it is designed, crash tested, and approved for the specific device. During freezing conditions, the sand for bags shall be mixed with a de-icer to prevent the sand from freezing. The sandbags shall be placed and maintained at the base of the traffic control device to the satisfaction of the Engineer.

When signs will remain in the same location for more than 30 consecutive days the signs shall be post mounted. This would not include portable signs, which are set up and taken down at the beginning and end of each work shift. The signs must be post mounted according to the Typical Temporary Sign Framing and Installation Detail Sheet found in the Plan or in these Special Provisions.

(B) When signs are installed, they shall be mounted on posts driven into the ground at the proper height and lateral offset as detailed in the MN MUTCD. **When signs are removed, the sign posts and stub posts shall also be removed from the Right of Way within two (2) weeks or the Contractor shall be subject to a daily charge assessed at a rate of \$100.00 per day for each day or portion thereof with which the Engineer determines that the Contractor has not complied.**

(C) All temporary rigid signs shall be fabricated with an approved retroreflective sheeting material of the appropriate color, and be listed under the Approved/Qualified Products List (APL/QPL) 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)". Signs remaining in place that still apply during temporary operations need no change in sign sheeting.

Signs shall have an easily identifiable marking on the face to make the identification of approved retroreflective sign sheeting on temporary rigid signs in the field easier. This marking verifies that the sign sheeting has been approved for temporary rigid signs. Temporary rigid signs 4 sq. feet and under in size and all barricades and route markers will be exempt from this marking. The appropriate marking shall be used for each type of the approved sheeting types. Refer to the instructions for the marking of temporary signs that are on the APL or directly at the following link: <http://www.dot.state.mn.us/products/signing/pdf/typelabel.pdf>

The sheeting materials APL/QPL, including the retroreflective sheeting types, is located at <http://www.dot.state.mn.us/products/signing/sheeting.html>

(D) At the beginning of the Project, the Contractor shall store at least 10 extra Type III barricades and 10 extra retroreflective drums, at a convenient location within the Project limits, to be used at the discretion of the Engineer. Furnishing and erecting these traffic control devices shall be incidental.

(E) **In Place Signing**

All in place signs and delineators that interfere with the Contractor's normal operation shall be relocated outside of the work area or removed by the Contractor at the direction of the Engineer. **This includes any other sign that interfere with the Contractor's operation.** Signs that are removed and will be reused are to be stored in such a manner as to protect the sign from scratching, fading, or other harmful affects until said signs are reinstalled. Upon completion of work at each sign location, or at the direction of the Engineer, the signs shall be replaced as near to their original locations as possible or to a location designated by the Engineer. **Signs and structures damaged by the Contractor shall be replaced by him at his own expense.**

The reinstalled sign posts shall be plumb and the sign panels shall be level. The minimum mounting height shall be 7 feet above the elevation of the traveled roadway. The minimum embedment length of the stub posts shall be 3.5 feet. The splice between the stub post and the riser post shall be a minimum of 12 inches. **The Contractor will be assessed a \$100 charge for each sign that does not comply with the In Place Signing requirements. In addition the Contractor will be required to correct the deficiency at his own cost within 2 weeks of being notified by MnDOT. If the deficiency has not been corrected within 2 weeks, the Contractor will be charged \$50 per sign per day until the deficiency has been corrected.**

All costs incurred to relocate, salvage, and reinstall in place signing shall be incidental.

(F) Open excavation adjacent to the existing pavement will not be permitted on opposite sides of the roadway at the same time.

(G) **The Contractor shall provide protective devices necessary to protect traffic from excavations, drop-offs, falling objects, splatter or other hazards that may exist during construction. This work shall be incidental.** The Contractor will not be allowed to suspend material, equipment, tools and personnel over traffic unless a lane closure is established below. All costs associated with the lane closure will be considered incidental.

(H) The Contractor will not be permitted to park vehicles or construction equipment in a location that obstructs any traffic control device. The parking of workers' private vehicles will not be allowed within the Project limits unless so approved by the Engineer.

Note 1 of Layout 2 of the Field Manual is hereby deleted. The Contractor will not be allowed to load or unload material or equipment on the shoulders of the roadway without a full shoulder closure using appropriate signs, barricades and channelizing devices as directed by the Engineer.

(I) The Contractor will not be allowed to store materials or equipment within 30 feet of through traffic unless approved by the Engineer. If materials or equipment must be stored within 30 feet of through traffic, the Contractor shall provide Type B channelizers, barricades or barriers, placed near the object to warn and protect traffic.

(J) **High Visibility Apparel**

All workers within the road Right-of-Way who are exposed to either traffic or to construction equipment shall wear reflectorized high-visibility safety apparel.

High-visibility safety apparel means personal protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and meets the minimum performance Class 2 requirements of the ANSI/ISEA 107 – 2004 publication entitled “American National Standard for High-Visibility Safety Apparel and Headwear”.

Additional Requirements: ANSI/ISEA 107-2004 Class 3 Requirements (Class 2 Vest with Class E

Long Pants)

- Flaggers– In addition to an ANSI Class 2 vest, shirt, or jacket, flagger shall wear high visibility Class E long pants and a hat.
- Nighttime and Low Light Conditions – All workers working at night or in low light conditions shall wear high visibility Class E long pants in addition to an ANSI Class 2 vest, shirt, or jacket and retro-reflective headgear.

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 contiguous 360 degree visibility. If a worker’s high-visibility apparel becomes faded, worn, torn, dirty, or defaced, reducing the conspicuity of the apparel, the apparel shall be removed from service and replaced with new apparel.

The Contractor will be subject to a non-compliant charge for failure to adhere to the clothing requirements as listed above. Non-compliance charges, for each incident, will **assessed at a rate of \$500.00 per incident** that the Engineer determines that the Contractor has not complied.

(K) **Night Work**

When work will be performed between the official hours of sunset and sunrise, all appropriate practices for night work will apply.

The Contractor shall provide sufficient numbers of light plants to illuminate the work area as determined by the Engineer. All costs incurred to provide such light plants shall be incidental.

The Contractor shall provide a sufficient amount of 2 inch wide highly reflective vehicle marking tape to be applied to Contractor vehicles and equipment. This tape shall be considered incidental and shall be on the Approved Products List for “Conspicuity Vehicle Sheeting (Type VII)” as found at: <http://www.dot.state.mn.us/products/signing/sheeting.html>. Vehicle examples to be marked with tape are Contractor rollers, paver, millers and other equipment normally found in the lane closure.

The State will **assess monetary deductions in the amount of \$1000.00 for each Calendar Day** or portion thereof, that the Contractor fails to provide sufficient numbers of light plants as described in this Section

S-13. As light plants may be dedicated or otherwise made available to the Project, this assessment will be chargeable even if reasons beyond the control of the Contractor such as breakdowns, late delivery of materials, weather delays, or other unanticipated problems cause the work to be accomplished in non-daylight hours.

All costs incurred to provide workers present speed limits shall be incidental.

(L) The Contractor shall provide a Traffic Control Supervisor. Payment and measurement will be made as provided in Section S-46 (TRAFFIC CONTROL SUPERVISOR) of these Special Provisions.

(M) In temporary traffic control zones only, a 12" x 18" black on white "Keep Right" sign, may be used in lieu of the sizes stated in the MnDOT Standard Signs and Markings Manual.

S-12.3 VEHICLE WARNING LIGHT SPECIFICATION

All Contractors, subcontractors' and suppliers' mobile equipment, operating within the limits of the Project with potential exposure to passing traffic, shall be equipped with operable warning lights that meet the appropriate requirements of the SAE specifications. This would include closed roads that are open to local traffic only. This also includes any vehicle that enters the traveled roadway at any time. The SAE specification requirements are as follows:

Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles- SAE Specification J845.

Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles - SAE Specification J595.

Lights shall be mounted so that at least one light is visible at all times from a height of 3.5 feet and from a 60 foot radius about the equipment. In order to meet the 360 degree at 60 foot radius requirements supplemental lighting may be used. All supplemental lights must be SAE Class 1 certified. This specification is to be used for both day and night time operations. All costs incurred to provide warning lights shall be at no cost to the Department. These warning lights shall also be operating and visible when a vehicle decelerates to enter a construction work zone and again when a vehicle leaves the work zone and enters the traveled traffic lane.

Non-compliance with the above requirements will be **assessed a rate of \$100.00 per incident** that the Engineer determines that the Contractor has not complied.

S-12.4 LANE CLOSURE REQUIREMENTS

(A) 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. **Requests for temporary lane closures shall be made at least 2 business days prior to the closure.** When a temporary lane closure is used by the Contractor, the closure shall be incidental work.

1. Both accesses to Holiday Gas Station shall be open at all times. Two way traffic at the intersection of Ramsey Blvd and Riverdale Drive shall be maintained at all times.

The Contractor shall contact the Regional Transportation Management Center (RTMC) at 651-234-7093 at the time when a freeway lane or ramp closure begins and again at the time when the freeway lane or ramp closure ends. The Contractor shall also contact the RTMC at the beginning and end times of full freeway roadway closures.

(B) Work that will restrict or interfere with traffic will not be permitted between the hours of 5 A.M. and 9 A.M. and between the hours of 3 P.M. and 6 P.M. **Work that will restrict or interfere with traffic shall not be performed between 12:00 noon on the day preceding and 9:00 A.M. on the day following any consecutive combination of a Saturday, Sunday and legal holiday.** The Engineer will have the right to lengthen, shorten, or

otherwise modify the foregoing periods of restrictions as actual traffic conditions may warrant. **If the Contractor is negligent in adhering to the established time schedules, he shall be subject to an hourly charge assessed at a rate of \$500.00 per hour for each hour or any portion thereof with which the Engineer determines that the Contractor has not complied**

(C) Unless otherwise approved by the Engineer, any temporary lane closure that is adjacent to traffic, and is extending to or beyond 1000 feet shall have a minimum of one Type III barricade, or three drums, placed in the closed lane for every 1000 feet of extension. Any lane closure that is adjacent to traffic and in place 3 days or more, shall use the Type III barricade only.

(D) All lane closures shall have Drum (Type B) Channelizers with florescent reflectorized sheeting in the lane closure taper and in any shifts in traffic alignment.

(E) Short Term Duration lane closures will not be permitted during inclement weather, nor any other time when, in the opinion of the Engineer, the lane closure will be a greater than normal hazard to traffic.

When working on the shoulder or median the Contractor shall install the traffic control according to Layout 2 (Work on Shoulder) of the Field Manual. Notes 1 and 2 are deleted on Layout 2.

(G) Temporary lane restrictions and/or closures for removing and/or erecting overhead structures are permitted between the hours of 9 A.M. and P.M. as approved by the Engineer. If the Contractor requests to close the road and the Engineer approves that it is necessary to temporarily detour traffic in order to remove or set the structures, the Contractor shall furnish the detour as directed by the Engineer. The temporary detour shall be incidental work. **If the Contractor is negligent in adhering to the established time schedules, he shall be subject to an hourly charge assessed at a rate of \$1500.00 per hour for each hour or any portion thereof with which the Engineer determines that the Contractor has not complied.**

The Contractor may stop all traffic on any road open to traffic to erect or remove overhead structures for periods not to exceed fifteen minutes only from 1:30 A.M. to 5:00 A.M. The Contractor shall allow sufficient clearance time between stopped periods to minimize the delay to traffic. **If the Contractor is negligent in adhering to the established time schedules, he shall be subject to an hourly charge assessed at a rate of \$1500.00 per hour for each hour or any portion thereof with which the Engineer determines that the Contractor has not complied.**

(H) No center lane closures will be permitted. Only double lane closures as shown in the Field Manual will be allowed at the times as directed by the Engineer. This may require night lane closures if traffic volumes warrant.

(I) The Contractor shall maintain a minimum of 1.25 miles [two km] between temporary lane closures, except if allowed by the Engineer.

(J) **Flashing Arrow Boards**

The Contractor shall provide one vehicle or trailer mounted flashing arrow board for each lane of each work area where traffic is restricted. The arrow board shall meet the requirements of the MN MUTCD, and be on the Temporary Traffic Control Electronic Equipment Approved/Qualified Products List for "Flashing Arrow Boards" found at: <http://www.dot.state.mn.us/products/temporarytrafficcontrol/tccelectronicquipment.html>. The flashing arrow board shall be equipped with a light that is visible to personnel in the work area to indicate that the unit is in operation. All costs incurred to provide the flashing arrow board shall be incidental.

It is imperative that the Contractor continually operate each Flashing Arrow Board at maximum legibility. Many factors, such as mechanical problems, insufficient charging, incorrect intensity settings, or other factors can degrade performance.

The Flashing Arrow Board shall be stored off the shoulder when not in use, except if allowed by the Engineer. In the event the Engineer allows the arrow board to remain on the shoulder, the arrow board shall be delineated according to Layout 4 (Partial Shoulder Closure) in the Field Manual, as determined by the Engineer.

When not being actively used as a traffic control device, the Flashing Arrow Board shall be stored beyond the clear zone distance. **Non-compliant charges, for each incident, will be assessed at a rate of \$500.00 per incident that the Engineer determines that the Contractor has not complied.**

(K) **Truck/Trailer Mounted Attenuators (TMAs) For Mobile Operations**

If the Contractor establishes any temporary traffic control zone defined as "Mobile" by the Field Manual; Truck/Trailer Mounted Attenuators (TMA) **SHALL** be used on all work vehicles or equipment operating totally or partially in the traffic lane. All references to "should" in the Field Manual in regards TMA use for Mobile layouts are hereby changed to "shall". The truck mounted attenuator shall meet the requirements of NCHRP 350 or AASHTO's Manual for Assessing Safety Hardware (MASH). If on a high- speed roadway, the TMA shall meet Test Level 3 requirements.

- (1) If any work vehicle, equipment or manual work zone is not equipped with a TMA, a shadow vehicle equipped with a TMA shall be utilized in lieu thereof. The TMA mounted shadow vehicle shall maintain a minimum distance as per manufactures specifications from any operation that is otherwise unprotected by a TMA.
- (2) This requirement shall apply to all operations utilizing a Mobile work zone; including, but not limited to interim and permanent traffic striping and marking, stripe removal, rumble strip grinding, bituminous core cutting, running of the profilograph, and any other operations meeting the criteria for Mobile operations, as shown in the Field Manual.

Any Truck/Trailer Mounted Attenuators used shall be on the Mobile Crash Attenuator Approved/Qualified Products List for "Truck/Trailer Mounted Attenuators" found at:
<http://www.dot.state.mn.us/products/temporarytrafficcontrol/mobilecrashattenuators.html>

If any work vehicle, equipment or manual work zone is not equipped with a TMA, a shadow vehicle equipped with a TMA shall be utilized in lieu thereof. The TMA mounted shadow vehicle shall maintain a minimum distance of 200 and maximum distance of 300 feet from any operation that is otherwise unprotected by a TMA.

This requirement shall apply to all operations utilizing a Mobile work zone; including, but not limited to interim and permanent traffic striping and marking, stripe removal, rumble strip grinding, bituminous core cutting, running of the profilograph, and any other operations meeting the criteria for Mobile operations, as shown in the Field Manual.

Truck Mounted Attenuators (TMA's) will be considered incidental to Traffic Control.

S-12.5 **FLAGGER TRAINING AND REQUIREMENTS**

(A) Any person acting as a flagger on this Project shall have attended a training session taught by a Contractor's qualified trainer. The Contractor's qualified trainer shall have completed a "MnDOT Flagger Train the Trainer Session" in the five years before the start date of this Contract and shall be on file as a qualified flagger trainer with the Department. The Flagger Trainer's name and Qualification Number shall be furnished by the Contractor at the pre-construction meeting. The Contractor shall provide all flaggers with the MnDOT Flagger Handbook and shall observe the rules and regulations contained therein. This handbook shall be in the possession of all flaggers while flagging on the Project. The Contractor shall obtain handbooks from the Department. Flaggers shall not be assigned other duties while working as authorized flaggers. The "Checklist for Flagger training" form shall be furnished to the Engineer any time a new flagger reports to work on the Project. The "Checklist for Flagger Training" form is found at: <http://www.dot.state.mn.us/const/wzs/documents/flaggertrainingchecklist.pdf>.

(B) The Contractor shall furnish Flaggers as required to adequately control traffic. Flaggers shall conform to the requirements set forth in the MN MUTCD. All costs incurred to provide such Flaggers shall be incidental.

(C) The Contractor shall provide two-way radios for Flaggers.

Flaggers shall wear high visibility retroreflective safety vests, pants and hats at all times while actively flagging on the Project. High visibility apparel shall also comply with current Minnesota OSHA Rules 5207.0100 and 5207.1000. The Flaggers clothing shall be considered incidental.

The Contractor shall keep the separation distance between the last sign in the "flagger ahead" signing sequence and the actual flagger to the amount shown in the Field Manual, whenever it is practical. The maximum separation distance allowed from the signs to the flagger shall be ½ mile. The Contractor shall use multiple flagger signing set-ups or continuously move the signing for moving flagging operations to keep within the distance limit. The "flagger ahead" signing sequence shall not be in place when flagging operations are not in effect.

The maximum distance between flaggers shall be ½ mile unless otherwise authorized by the Engineer. In the event a distance longer than one mile is authorized, the Engineer may order the Contractor to provide two pilot cars at no additional cost to MnDOT.

All signs associated with the flagging operation must be removed or covered when flagging operations are not present.

The Contractor will be subject to a non-compliant charge for failure to adhere to the requirements listed in this Section. These requirements include: providing two-way radios for flaggers, properly attired flaggers, flagging operation length requirements, and distance limit between the flagger and the last sign in the flagger sequence, and removing or covering flagger signs when flagging operations are not present. **Non-compliance charges, for each incident will be assessed at a rate of \$500 per incident that the Engineer determines that the Contractor has not complied.** The charges may be assessed equally, separately, and may be assessed concurrently.

The Contractor shall coordinate the flagging operations in a manner that causes as little delay to the traveling public as possible, and at no time shall the delay exceed 10 minutes. In the event that the Contractor is unable to meet the maximum delay requirements, operations shall shut down until such time a new traffic control plan is developed which does meet the maximum delay requirement.

If hauling operations create hazards for the traveling public, the Contractor will be required to provide additional flaggers, as directed by the Engineer. All costs incurred to provide the additional flaggers shall be incidental.

S-12.6 MILLING, SEALCOATING, AND PAVING OPERATIONS

(A) Milling and paving operations shall be completed over the full width of all traffic carrying lanes, including turn lanes, bypass, etc., under construction on each day's run.

(B) Any drop-off where traffic will cross from or to the in place surface, or from or to the milled surface, shall be tapered and/or chamfered so as to provide for the safe passage of traffic.

(C) The Contractor shall schedule construction operations to minimize traffic exposure to uneven lanes, milled edges, and edge drop-offs. Only after every attempt has been made to avoid these conditions and one or more of them are deemed necessary, the Contractor shall provide and maintain the appropriate traffic control in accordance with the "DROP OFF GUIDELINES" in the Field Manual.

(D) The Contractor shall not mill any notches for surfacing tapers until immediately prior to paving, except that with the Engineer's permission, the Contractor may mill the notches, and install and maintain temporary bituminous tapers to provide for the safe passage of traffic until the surfacing taper is installed.

(E) Constructing and milling tapers and/or chamfers shall be incidental.

(F) The Contractor shall maintain traffic with a minimum of delay during milling and paving operations at intersections controlled by signals or by all-way stop signs. The Contractor shall provide off-duty police officers, at no expense to the Department, to direct and control traffic around and through milling and paving operations at those intersections. "Police officer" means every officer authorized to direct or regulate traffic or to make arrests for violations of traffic rules.

(G) The Contractor may close intersecting streets to traffic, other than at intersections controlled by signals or "All Way Stop" signs during milling and paving operations in the intersection, but only if there are adequate alternate routes for the intersecting street traffic. The Contractor shall not close adjacent intersecting streets to traffic concurrently. The Contractor shall notify the local road authorities of its schedule to close intersecting streets 48 hours in advance of the closure.

S-12.7 MAINTENANCE AND STAGING OF TRAFFIC CONTROL

(A) The Contractor shall maintain, at all times, the existing traffic movements.

1. Both accesses to Holiday Gas Station shall be open at all times. Two way traffic at the intersection of Ramsey Blvd and Riverdale Drive shall be maintained at all times.

(B) Pedestrian traffic shall be maintained and guided through the Project at all times. See Section

(C) The Contractor shall furnish, install, and maintain 2 "ROAD WORK AHEAD" and 2 "END ROAD WORK" signs in advance of and beyond each end of the construction limits as directed by the Engineer. The Contractor shall also furnish, install, and maintain 2 "ROAD WORK AHEAD" signs in advance of the construction limits on all intersecting roads and streets as directed by the Engineer. The signs shall conform to the standards shown in the MN MUTCD. Furnishing and erecting these signs shall be incidental. The signs shall remain the property of the Contractor.

(D) The Contractor shall cover all signs that are not consistent with traffic operations. The cover should be a plate of solid material covering the entire legend or all of that part of the legend that is inappropriate. Bolt the cover to the sign and place a minimum of 1/8 inch spacers (such as plastic or rubber) between the sign face and the cover. See the Typical Temporary Sign Framing and Installation Details Sheet found in the Plan or at <http://www.dot.state.mn.us/trafficeng/workzone/wz-templates/pdf/layout%2020.pdf> for details. This work will be done as required by the Engineer.

(E) Street identification signage shall be maintained at all times. Where the only existing signs are small city or county signs located at the intersection, street names and address numbers shall be maintained by temporary installations as required by the Engineer. This is necessary to maintain the 911 emergency system.

(F) The Contractor shall maintain a lane width of not less than 11 feet in each direction. In no case shall traffic be allowed or forced onto the shoulders as a result of the Contractors operations without prior approval of the Engineer.

During the time of lane, speed, and pilot car restrictions, the Contractor's equipment shall follow in line and use the roadway in a manner similar to all other through traffic.

(G) The Contractor may ban parking within the construction limits. All necessary signing is the responsibility of the Contractor and shall be installed, as directed by the Engineer, 24 hours prior to the parking ban. The Contractor shall remove that signing as soon as the work in the area has been completed.

The Contractor shall notify the City of Ramsey at least 24 hours prior to posting any parking ban within the City.

(H) The Contractor shall keep the Right-of-Way fence closed up, except during work hours, by means of the in place fence, newly constructed fence, temporary fence (at the Contractor's expense), or a combination thereof.

(I) No access to or from any public road will be permitted for the Contractor's equipment, material deliveries, the hauling of excavated materials of any kind, or employees' private vehicles, except at in place public road intersections, or at locations and in such manner as approved by the Engineer.

(J) As each road is completed, the Contractor shall install the final signing and pavement markings required to safely open that road to traffic. This work shall be completed on or before the date of opening as approved by the Engineer. Overhead signs may be temporarily ground mounted at the Contractor's expense.

S-12.8 **MEASUREMENT AND PAYMENT**

Traffic Control will be measured and paid for as follows:

Payment for furnishing, installing, maintaining, relocating and subsequently removing traffic control devices (including flaggers) as required will be made as a lump sum under Item 2563.601 (Traffic Control) and according to the following schedule:

- (1) When 5 percent of the Contract amount is earned, 50 percent of the amount bid for traffic control will be paid.
- (2) When 10 percent, or more, of the Contract amount is earned, an additional 25 percent of the amount bid for traffic control will be paid.
- (3) When 50 percent, or more, of the Contract amount is earned, an additional 20 percent of the amount bid for traffic control will be paid.
- (4) The remaining 5 percent bid for traffic control will be paid when all work has been completed and accepted.
- (5) In all items above, the original Contract amount shall be the total value of all Contract Items including the traffic control item, but the percentage earned in each case shall be exclusive of the traffic control item.

S-13 **(1514) MAINTENANCE DURING CONSTRUCTION**

The provisions of MnDOT 1514 are supplemented with the following:

In addition to the requirements under MnDOT 2051 (Maintenance and Restoration of Haul Roads), the Engineer may require additional sweeping of roads adjacent to the construction site to ensure safety for the traveling public, protect the environment, uphold local requirements, or as otherwise directed by the Engineer.

Payment for additional sweeping ordered by the Engineer is specified below. (This price represents a shared cost.)

Pick Up Broom W/Operator.....	\$55.00 per hour
Self Propelled Pavement Broom W/Operator	\$30.00 per hour

S-14 **(1701) LAWS TO BE OBSERVED (WET LANDS)**

The provisions of MnDOT 1701 are modified and/or supplemented with the following:

S-14.1 If the Contractor operations involve the excavation and/or disposal of material off MnDOT Right of Way, the Contractor is advised of the following:

MN Statutes Sections 103G.2212 and 103G.241 stipulate that an agent or employee of another may not:

- 1) drain, excavate, or fill a wetland, wholly or partially; or
- 2) construct, reconstruct, remove, or make any change in any reservoir, dam, or the course, current, or cross-section of any public water

unless a signed statement from the property owner is obtained stating that any permit or wetland replacement plan required for the work is in place, or that a permit or replacement plan is not required; **AND** this statement is mailed to the appropriate office with jurisdiction over the wetland or public water prior to initiating the work.

The "Landowner Statement and Contractor Responsibility For Work in Wetlands or Public Waters" can be found at http://www.bwsr.state.mn.us/wetlands/forms/Contractor_Responsibility.doc . The Contractor shall provide the Engineer with a copy of the completed "Landowner Statement and Contractor Responsibility for Work in Wetlands or Public Waters" for the excavation and/or disposal site prior to initiating the work.

S-15 (1714) RESPONSIBILITY FOR DAMAGE CLAIMS

The provisions of 1714 are supplemented as follows:

The Contractor must have the State of Minnesota named as an additional insured on any insurance coverage the contractor is required to provide.

S-16 (1716) CONTRACTORS RESPONSIBILITY FOR WORK

The provisions of 1716 are supplemented as follows:

All warranties provided by Contractor, for the work performed on the trunk highway, will flow to, and be enforceable by, the State as the owner of such improvements.

S-17 (1717) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

REVISED 04/26/16

Pollution of natural resources of air, land and water by operations under this Contract must be prevented, controlled, and abated in accordance with the rules, regulations, and standards adopted and established by the Minnesota Pollution Control Agency (M.P.C.A.), and in accordance with the provisions of MnDOT 1717, these Special Provisions, and the following:

S-17.1 By signing the MPCA/NPDES Declaration and completing the electronic online NPDES CSW permit, the Contractor is a co-permittee with the Department to ensure compliance with the terms and conditions of the Construction General Storm Water Permit (MN R100001) and is responsible for those portions of the permit where the operator is referenced. This Permit establishes conditions for discharging storm water to waters of the State from construction activities that disturb 1 acre [0.4 hectares] or more of total land area. A copy of the permit is available at <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html> or by calling 651-296-3890.

(B) The Department will apply and pay for the MPCA/NPDES General Construction Stormwater Permit as Owner and Contractor on this project. The Department will provide the Contractor with the Notice of Termination/Permit Modification Form with the Existing Permit Identification, Option 2, Current Owners Authorization Signature, and Current Contractor Authorization signature completed, as part of the Contract

document package. The Contractor shall complete New Contractors Authorized Signature section, send the form to the MPCA and post the transfer document, the Permit and MPCA's letter of coverage on the project site.

A MPCA/NPDES Permit Affidavit form will be sent to the Contractor with the Contract award packet. A copy of the signed permit Transfer form and a signed Permit Affidavit form must be returned with the Contract and Bond. Submittal of the copy of the signed Transfer Form and Permit Affidavit is mandatory for Contract approval. No work which disturbs soil and/or work in waters of the state will be allowed on this Project until the Department has received the required documentation.

S-17.2 The Contractor shall be solely responsible for complying with the requirements listed in Part II.B and Part IV of the General Permit.

The Contractor shall be responsible for providing all inspections, documentation, record keeping, maintenance, remedial actions, and repairs required by the permit. All inspections, maintenance, and records required in the General Permit Paragraphs IV.E, shall be the sole responsibility of the Contractor. The word "Permittee" in these referenced paragraphs shall mean "Contractor". Standard forms for logging all required inspection and maintenance activities shall be used by the Contractor. All inspection and maintenance forms used on this Project shall be turned over to the Engineer every two weeks for retention in accordance with the permit.

The Contractor shall have all logs, documentation, inspection reports on site for the Engineer's review and shall post the permit and MPCA's letter of coverage on site. The Contractor shall immediately rectify any shortcomings noted by the Engineer. All meetings with the MPCA, Watershed District, WMO, or any local authority shall be attended by both the Engineer and the Contractor or their representatives. No work required by said entities, and for which the Contractor would request additional compensation from MnDOT, shall be started without approval from the Engineer. No work required by said entities and for which the changes will impact the design or requirements of the Contract documents or impact traffic shall be started without approval from the Engineer.

The Contractor shall immediately notify the Engineer of any site visits by Local Permitting Authorities performed in accordance with Part V.H.

S-17.3 Emergency Best Management Practices must be enacted to help minimize turbidity of surface waters and relieve runoff from extreme weather events. It is required to notify the MPCA Regional Contact Person within 2 days of an uncontrolled storm water release. The names and phone numbers of the MPCA Regional Contract personnel can be found at: <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html>. The Contractor is reminded that during emergency situations involving uncontrolled storm water releases that the State Duty Officer must be contacted immediately at 1-800-422-0798 or 1-651-649-5451.

S-17.4 The Contractor shall review and abide by the instructions contained in the permit package. The Contractor shall hold MnDOT harmless for any fines or sanctions caused by the Contractor's actions or inactions regarding compliance with the permit or erosion control provisions of the Contract Documents.

S-17.5 The Contractor is advised that the MPCA/NPDES Permit makes reference to a Storm Water Pollution Prevention Plan (SWPPP). This Project's SWPPP is addressed throughout MnDOT's Standard Specifications for Construction, as well as this Project's Plan and these Special Provisions. The following table identifies NPDES permit requirements and cross-references where this Contract addresses each requirement.

NPDES Permit Requirements	Cross-Reference within this Contract
Obtain NPDES Permit; Permit Compliance; Submit Notice of Termination	MnDOT 1701, 1702; and 1717 Special Provisions: 1717 (National Pollutant Discharge Elimination System (NPDES) Permit)
Certified Personnel in Erosion / Sediment Control Site Management Develop a Chain of Command	MnDOT 1506, 1717, and 2573; Special Provisions: 1717 (National Pollutant Discharge Elimination System (NPDES) Permit)
Project / Weekly Schedule (for Erosion / Sediment Control) Completing Inspection / Maintenance Log / Records	MnDOT 1717 and 2573; Special Provisions: 1717 (National Pollutant Discharge Elimination System (NPDES) Permit); and
Project Specific Construction Staging	The Plans; MnDOT 1717; Special Provisions: 1717 (National Pollutant Discharge Elimination System (NPDES) 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 or Tracked Sediment Removal of Devices	The Plans; MnDOT 1717 and 2573; Special Provisions: 1514 (Maintenance During Construction), and 1717 (National Pollutant Discharge Elimination System (NPDES) Permit)
Dewatering	MnDOT 2105.3C and 2451.3C; May also require DNR Permit
Temporary work not shown in the Plans Grading areas (unfinished acres exposed to erosion)	MnDOT 1717, 2573, and 2575; Special Provisions: 1717 (National Pollutant Discharge Elimination System (NPDES) Permit)
Permanent Erosion / Sediment Control and Turf Establishment	The Plans; MnDOT 1717, 2573,2574, and 2575; Special Provisions: 1717 (National Pollutant Discharge Elimination System (NPDES) Permit)

S-18 (1718) FURNISHING RIGHT-OF-WAY

The provisions of 1718 are supplemented as follows:

The State of Minnesota, acting through its Commissioner of Transportation is an intended third party beneficiary of the contract with respect to the portion of the work performed on the State’s right-of-way.

S-19 (1802) TRAINING FOR CONSTRUCTION TRUCK OPERATORS

REVISED 02/03/17

Construction truck operators that haul construction materials such as borrow, aggregate base, asphalt mixtures and concrete paving mixtures are encouraged to become trained in Construction Truck Operator Training (CTOT).

The CTOT course covers the Federal and State construction truck and driver requirements and regulations. The course also covers safe driving techniques. The course includes presenters from the Minnesota State Patrol, Minnesota Department of Transportation, and Hennepin Technical College.

For additional information, contact:

Hennepin Technical College
Email: ctsregistration@hennepintech.edu
Phone: 763-488-2721
Website: HennepinTech.edu/CTOT

Call 952-995-1330 to register and/or get location information for upcoming CTOT Classes.

S-20 **PROSECUTION OF WORK (ADA)**
REVISED 01/12/17

The provisions of MnDOT 1803 are supplemented and/or modified with the following:

1. **SPECIAL PROJECT ADA REQUIREMENTS**

All pedestrian facilities and shared use paths on this Project must be constructed according to Public Rights-of-Way Accessibility Guidelines (PROWAG) which can be found at: <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 the PROWAG guidelines as the need arises and field conditions dictate.

(A) The Contractor must designate a responsible person competent in all aspects PROWAG to assess proposed sidewalk layouts at each site before work begins. Any time work the Contractor is performing concerns pedestrian facilities, the Contractor's responsible person shall be on site.

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

- (1) Pedestrian Access Routes (PAR) must be constructed to meet the following:
 - Minimum 4 feet width.
 - A maximum cross slope of 2.0%.
 - Vertical discontinuities must be less than 0.25 inches.
 - Must provide positive drainage without allowing any ponding and maintain existing drainage flow patterns unless indicated otherwise in the Plan.
 - All grade breaks shall be constructed perpendicular to the path of travel.
- (2) Landings are part of the PAR and must be constructed to meet the following:
 - 4 feet by 4 feet minimum width or match the adjacent sidewalk or trail widths.
 - Maximum slope of 2.0% in all directions.
 - Required at all locations where the PAR changes directions or inverse grades that are >2%.
 - Must be connected to the PAR.
 - 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:
 - Longitudinal slopes less than 5% in the direction of travel requires no landing at the top of the ramp (unless the PAR changes direction).
 - Longitudinal slopes between 5 - 8.3% in the direction of travel require a landing at the top of the ramp.

If the Contractor constructs any pedestrian or shared-use trail facilities that are not per Plan, do not meet the above requirements, or do not follow the agreed upon resolution, the Contractor will be responsible for

correcting the deficient facilities with no compensation paid for the corrective work. To ensure that the pedestrian facilities are constructed in compliance with PROWAG, the Contractor shall follow the following three steps:

- (1) The Contractor shall use the appropriate ramp, sidewalk, and driveway details, in the Plan and identify the removal limits for the sidewalk and curb and gutter. If Contractor determines the removal limits are not adequate to meet PROWAG, the Contractor shall stop work immediately and consult the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may finish the removals.
- (2) **Curb Ramps at Quadrants:** Prior to pouring curb ramps at quadrants the Contractor must verify the 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 sheet no. 5-297.250 (sheet 4 of 5). Verify curb tapers are constructed at correct heights so that positive boulevard slopes and drainage is maintained away from landings and sidewalks, to newly constructed curb and gutter sections. Check to ensure all top back of curb elevations will allow for matching into all required (sidewalk landing areas, doorways, steps, bus stops, and outwalks). The Contractor shall also verify the proposed curb flow lines will provide positive drainage as well as 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 no vertical discontinuities. For required flow line corrections including curb line raises and curb ramp cross slope “tabling” see Standard Plans (Sheet 6 of 6). Curb shall be poured at 3% inflow around the radius or at a minimum distance of 10 feet from any zero height curb section when machine place. 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.
- (3) **Roadway sections with Pedestrian Facilities:** Prior to pouring curb and gutter at roadway section the contractor must verify proposed curb and gutter heights will work with existing roadway and shoulder slopes. The contractor shall also check to ensure all top back of curb elevations will allow for adequate boulevard slopes and PAR slopes and widths while and maintaining all match points required at (sidewalk landing areas, doorways, steps, bus stops, and outwalks). The contractor shall check all driveway locations and widths and follow driveway details and plans for all driveway layout including curb heights, and curb tapers. Driveway curbs sections and aprons shall be constructed to minimize any changes in the sidewalk widths and elevation to avoid the “roller coaster” affect. 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.
- (4) After the curb has been correctly poured, and the Contractor has set the sidewalk forms. The Contractor shall verify prior to placing the concrete curb ramps/sidewalks that positive drainage is maintained within public R/W, as well as maintaining existing off R/W drainage, and that all the requirements in S-21.1(B) will be achieved.

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

Steep (S) = 7%
Flat (F) = 4%
Landing = 1.5%
Sidewalk Cross Slope = 1.5%

Fan ramp = 4%

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 agreement on how to proceed, the Contractor may proceed with the curb ramp/sidewalk pour.

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 (>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.

Wet casting or drill and grouting of dowel bars will be required in accordance with the details shown in Standard Plan 5-297.250 Sheet 5 of 5. These bars may be either smooth or deformed and shall be installed with 2 inch minimum concrete cover. When not accounted for in the Plan, payment for these bars will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of \$10.00 per bar furnished and installed. 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.

(C) It shall be the responsibility of the Contractor, or Contractor's Surveyor if applicable, to layout 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 layout this work properly to achieve the construction of a compliant pedestrian facility. The owner'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 in S-21.1(B). This layout work shall be incidental.

(D) 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 operations will be repaired at the Contractor's expense to the satisfaction of the Engineer.

(E) The Contractor will round all joints and edges of the walk with a 1/4 inch radius edging tool, contraction joints shall extend to at least 30 percent of walk thickness and shall be approximately 1/8 inch wide as per MnDOT 2521. The Contractor shall also have the option of providing saw cuts to construct the sidewalk joints and the gutter joints within the PAR. When greater than 50 feet of continuous sidewalk runs are constructed the contractor shall saw cut all joints. This work shall be considered incidental and no extra compensation paid.

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 2521.3C, except the depth requirement is reduced to 1/4 inch.

In sections where concrete boulevard is placed between the back of curb and the sidewalk the 1/2 inch preformed joint filler material shall be placed at back of curb, and between outside edge of sidewalk and existing building or structures. The 1/2 inch wide preformed joint filler shall not be placed in the longitudinal joint between the sidewalk and boulevard, unless it is necessary to provide expansion at fixed structures. At locations where sidewalk is adjacent to existing buildings, whenever possible extend walk up to the edge of building and place 1/2 inch preformed joint filler 1/2 inch lower than top of walk. Furnish and install Backer Rod of appropriate diameter when joints are 1/4 inch wide or greater, clean surfaces and apply approved silicon joint filler 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.

(F) 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 trail shall not exceed 2%, and shall be measured perpendicular to the path of travel across the entire surface width of the sidewalk or trail. Curb ramps should match proposed sidewalk PAR width and shall match full trail 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.

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

S-21 (1806) DETERMINATION AND EXTENSION OF CONTRACT TIME
REVISED 12/02/16

The Department will determine Contract Time in accordance with the provisions of MnDOT 1806 and the following:

S-21.1 Contractor must complete all work required under this Contract, except maintenance work and Final Clean Up, on or before the completion date stated in the Agreement.

S-21.2 Unless authorized in writing by the Engineer, the Contractor must not begin construction operations that impact, restrict, or interfere with traffic, before receiving NTP2. The Engineer will determine whether operations impact, restrict, or interfere with traffic in the Engineer's sole discretion.

S-21.3 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 legal holiday. The Contractor may request exceptions to this requirement. Exceptions must be approved in writing by the Engineer.

S-21.4 The Department based Contract Time (Completion Date) on an anticipated five day work week, Monday through Friday.

S-22 (1910) COST ESCALATION

The provisions of MnDOT 1910 are hereby supplemented with the attached Fuel Escalation Clause.

S-23 (2051) MAINTENANCE AND RESTORATION OF HAUL ROADS
REVISED 11/20/15

The provisions of MnDOT 2051 are supplemented by the following:

S-23.1 The Owner agrees to reimburse the Contractor at the predetermined unit prices set forth below for materials ordered by the Engineer. All materials ordered by the Engineer for the Maintenance and Restoration of haul roads will be measured as set forth in the applicable section of the Standard Specifications.

Each of the following materials measured as provided above, will be paid for at the following predetermined unit prices:

2118.501	Aggregate Surfacing Class 1	\$7.00/ton [\$7.72/t]
2130.501	Water	\$10.00/1000 gal. [\$2.50/m ³]
2131.502	Calcium Chloride Solution	\$0.50/gal. [\$0.14/liter]
2211.501	Aggregate Base Class 5	\$7.00/ton [\$7.72/t]
2360.501	Type SP 12.5 Wearing Course Mixture (4, B)	\$27.95/ton [\$30.81/t]
2231.501	Bituminous Patching Mixture	\$47.00/ton [\$51.70/t]

Crushing will not be required in the production of Class 1 material.

The above prices will be considered to be compensation in full for furnishing and providing the materials complete in place, including, but not limited to, royalty, waste, equipment rental, labor, overhead, profit, and incidentals. When materials other than those listed above are ordered by the Engineer, they will be paid for as extra work in accordance with MnDOT 1402.5, with **the Contractor and the Department sharing equally in the costs**. Separate payment will not be made for costs of blading and reshaping necessary for the maintenance and restoration of haul roads. The cost of such work shall be incidental.

The above shall be performed to restore visible damage.

S-24 (2101) CLEARING AND GRUBBING

REVISED 08/04/16

Clearing and grubbing operations shall be performed in accordance with the provisions of MnDOT 2101 and the following:

2. The Contractor shall remove only those trees marked for removal by the Engineer. All other trees shall be protected from damage during construction.

S-25 (2102) PAVEMENT MARKING REMOVAL

REVISED 08/28/15

The provisions of MnDOT 2102 are modified and/or supplemented with the following:

S-25.1 MnDOT 2102.3 is hereby deleted and replaced with the following:

Before making a change in traffic pattern, remove conflicting pavement markings as required by the contract and as directed by the Engineer without damaging the pavement structure or surface texture. If determined by the Engineer, repair damaged areas as directed by the Engineer at no additional cost to the Department.

Remove pavement markings on the basis of nominal widths and actual lengths as originally applied and still visible at the time of pavement marking removal. Remove irregularly shaped markings by enclosing them within rectangular boundaries of least dimension as determined by the Engineer.

Control or restrict operations to avoid exposing traffic to hazardous conditions in accordance with 1701, "Laws to be Observed," 1707, "Public Convenience and Safety," and 1717, "Air, Land, and Water Pollution." Remove expended materials or agents used in the pavement marking removal process from the pavement surface as the work progresses. Dispose of removed marking material in accordance with 1701, "Laws to be Observed," and 1717, "Air, Land, and Water Pollution."

Removed pavement marking material shall become the property of the Contractor.

All Pavement marking removal shall be done utilizing either grinding, water-blasting, or sandblasting equipment.

S-26 (2104) REMOVING PAVEMENT AND MISCELLANEOUS STRUCTURES

Abandoned structures and other obstructions shall be removed from the Right of Way and disposed of in accordance with the provisions of MnDOT 2104, except as modified below:

S-26.1 Measurement and payment for the removal and disposal of materials will be made only for those Items of removal work specifically included for payment as such in the Proposal and as listed in the Plans. The removal of any unforeseen obstruction requiring in the opinion of the Engineer equipment or handling substantially different from that employed in excavation operations, will be paid for as Extra Work as provided in MnDOT 1402.5.

S-26.2 All removals shall be disposed of by the Contractor outside the Right of Way in accordance with MnDOT 2104.3D3 to the satisfaction of the Engineer.

S-26.3 Sawing of sidewalks needed for removal shall be incidental.

S-27 (2104) RELOCATE MISCELLANEOUS STRUCTURE

Payment for Relocate Miscellaneous Structure at the unit price bid per LUMP SUM shall be considered full compensation for all work related to salvaging the existing trail gate and posts and relocating them to the new trail location as directed by the Engineer and shown on the plans.

Any damage to the relocated materials shall be repaired or replaced at the Contractors expense and shall only be accepted by the Engineer in equal or better condition than prior to construction activity.

S-28 (2105) EXCAVATION AND EMBANKMENT

S-28.1 Compaction shall be achieved by the "Quality Compaction Method" described in MnDOT 2105.3F2.

S-29 (2211) AGGREGATE BASE

Aggregate base courses shall be constructed in accordance with the provisions of MnDOT 2211 except as modified below:

S-29.1 Compaction shall be achieved by the "Specified Density Method" described in MnDOT 2211.3D2.

S-29.2 Aggregate Base Class 5 shall be salvaged from the City stockpile located at the end of the Jasper Street NW cul-de-sac and shown on the title page of the plan set.

- a) The stockpile shall be restored to a safe condition once salvaging is complete.

S-29.3 Payment for Aggregate Base C15 shall include all labor and equipment required to salvage material from the stockpile , haul the material and place the material as specified.

- a) The aggregate material shall be provided by the City at no cost to the Contractor.

S-30 (2357) BITUMINOUS TACK COAT

REVISED 04/08/16

MnDOT 2357 is hereby modified as follows:

S-30.1 Delete MnDOT 2357.3H Acceptance of Tack Material and replace with:

H Acceptance of Tack Material

The Engineer will address failures related to 3151, “Bituminous Material,” or deficiencies related to workmanship or application, in accordance with 1512, “Unacceptable and Unauthorized Work.” The basis of measurement for tack failures or deficiencies is the full width of the lane by station. The Engineer may require removal and replacement of deficient work or application.

S-30.2 Delete MnDOT 2357.5 Basis of Payment and replace with:

2357.5 BASIS OF PAYMENT

All costs of furnishing and applying bituminous tack coat material will be incidental.

S-31 (2360) PLANT MIXED ASPHALT PAVEMENT (LOCAL AGENCY)

REVISED 08/04/16

SP2016-138.1

MnDOT 2360 is modified and/or supplemented with the following:

S-31.1 Delete MnDOT Table 2360-2 and replace with:

Table 2360-2 PG Asphalt Grades MSCR	
Letter	PG Grade MSCR
A	PG 52S – 34
B	PG 58S – 28
C	PG 58H – 34
E	PG 58H – 28
F	PG 58V – 34
H	PG 58V – 28
I	PG 58E – 34
L	PG 64S – 22
M	PG 49S – 34

S-31.2 Delete MnDOT 2360.2.E.7 and replace with:

E.7 Minimum Ratio of Added Asphalt Binder to Total Asphalt Binder

Control recycled materials used in mixture by evaluating the ratio of new added asphalt binder to total asphalt binder as show in Table 2360-8.

Table 2360-8 Requirements for Ratio of Added New Asphalt Binder to Total Asphalt Binder¹ min%:			
Specified Asphalt Grade²	Recycled Material		
	RAS Only	RAS + RAP	RAP Only
PG 58X ³ -28, PG 52S-34, PG 49-34, PG 64S-22	70	70	70
Wear	70	70	65
Non-Wear			

Table 2360-8			
Requirements for Ratio of Added New Asphalt Binder to Total Asphalt Binder¹			
min%:			
PG 58X ³ -34 Wear & Non-Wear	80	80	80
¹ The ratio of added new asphalt binder to total asphalt binder is calculated as (added binder/total binder) x 100 ² The Contractor can elect to use a blending chart to verify compliance with the specified binder grade. The Department may take production samples to ensure the asphalt binder material meets the requirements. The blending chart is on the Bituminous Office Website. ³ X=S,H,V,E			

S-31.3 Mix Designation Numbers for the bituminous mixtures on this Project are as follows:

Type SP 9.5 Wearing Course	SPWEA340B
Type SP 12.5 Non-Wearing Course	SPNWB340B

S-31.4 Asphalt binder meeting AASHTO M332 (MSCR) is required. See Section S-3151 (BITUMINOUS MATERIAL (MSCR)) of these Special Provisions.

S-31.5 The sentence “In addition to the list the above the pavement surface must meet requirements of 2399 (Pavement Surface Smoothness) requirements.” is deleted from MnDOT 2360.3.E Surface Requirements. The requirements of MnDOT 2360.3.E Surface Requirements **will** apply.

S-31.6 The first paragraph of MnDOT 2360.2.G.4.b Sampling and Testing is revised as shown below:

Take QC samples at random tonnage or locations, quartered from a larger sample of mixture. Sample randomly and in accordance with the Schedule of Materials Control. Determine random numbers and tonnage or locations using the Bituminous Manual; Section 5-693.7 Table A or ASTM D 3665, Section 5, or, an Engineer approved alternate method of random number generation. ~~Sample either behind the paver or from the truck box at the plant site. Other sampling locations can be approved by the Engineer. The Contractor must decide and notify the Engineer where samples will be taken before production begins. The Contractor and Engineer must both agree to a change of sampling location once production has begun.~~ **Sample mixture from behind the paver. Sampling from the truck box at the plant site is not allowed unless approved by the Engineer. In addition to the QC sample, the Contractor will also bring an additional split of the mixture sample to the plant site and store for the Department for 10 calendar days.** The procedure for truck box sampling is on the Bituminous Office website. The Contractor will obtain at least a 130 pound [60 kg] sample. Split the sample in the presence of the Inspector. The Inspector will retain possession of the Agency portion of each split sample and randomly submit a minimum of one sample, on a daily basis, to the District Laboratory for Verification testing (see 2360.2.G.3). Store compacted mixture specimens and loose mixture companion samples for 10 calendar days. Label these split companion samples with companion numbers.

S-31.7 **The first paragraph of MnDOT 2360.3.D.1** is hereby deleted and replaced with the following:

D.1 Maximum Density

Compact the pavement to at least the minimum required maximum density values in accordance with Table 2360-19, “Required Minimum Lot Density (Mat)”.

S-31.8 **MnDOT Table 2360-20 Longitudinal Joint Density Requirement** is hereby deleted.

S-31.9 **MnDOT 2360.3.D.1.h Mat Density Cores** is hereby deleted and replaced with the following:

D.1.h Mat Density Cores

Obtain four cores in each lot. Take two cores from random locations as directed by the Engineer. Take the third and fourth cores, the companion cores, within 1 foot [0.3 m] longitudinally from the first two cores. Submit the companion cores to the Engineer immediately after coring and sawing. If the random core location falls on an unsupported joint, at the time of compaction, (the edge of the mat being placed does not butt up against another mat, pavement surface, etc.) cut the core with the outer edge of the core barrel 1 foot [0.3 meters] away (laterally) from the edge of the top of the mat (joint). If the random core location falls on a confined joint (edge of the mat being placed butts up against another mat, pavement surface, curb and gutter, or fixed face), cut with the outer edge of the core barrel 6 inches \pm 0.5 inch [150 mm \pm 12.5 mm] from the edge of the top of the mat (ex. center of 4 inch [100 mm] core barrel 8 \pm 0.5 inches [200 mm \pm 12.5 mm] from the edge of the top of the mat). Cores will not be taken within 1 foot [300 mm] of any unsupported edge. The Contractor is responsible for maintaining traffic, coring, patching the core holes, and sawing the cores to the paved lift thickness before density testing.

The Engineer may require additional density lots to isolate areas affected by equipment malfunction, heavy rain, or other factors affecting normal compaction operations.

S-31.10 **MnDOT 2360.3.D.1.j Companion Core Testing** is hereby deleted and replaced with the following:

The Department will select at least one of the two companion cores per lot to test for verification.

S-31.11 **MnDOT 2360.3.D.1.n Longitudinal Joint Density** is hereby deleted.

S-31.12 **MnDOT 2360.3.D.1.p Shoulders** is hereby deleted.

S-31.13 **MnDOT Table 2360-24 Payment Schedule for Longitudinal Joint Density (SP Non-Wear and SP Shoulders, 4% Void)** is hereby deleted.

S-31.14 **MnDOT Table 2360-25 Payment Schedule for Longitudinal Joint Density (SP Non-wear and SP Shoulders, 3% Void)** is hereby deleted.

S-31.15 **MnDOT 2360.3.D.1.r Pay Factor Determination** is hereby deleted.

S-32 (2461) STRUCTURAL CONCRETE

REVISED 02/07/17

MnDOT 2461 is hereby modified as follows:

S-32.1 MnDOT 2461.2.A.5 shall be added:

A.5 Ternary Mixes

Ternary mixes are defined as portland cement or Type II and two other supplementary cementitious materials, or blended cement and one other supplementary cementitious material with a maximum replacement of 40% by weight.

S-32.2 MnDOT 2461.2.B shall be deleted and replaced with the following:

B Aggregates

Provide aggregates from sources listed on the MnDOT Concrete Aggregate Properties list.

B.1 Fine Aggregate3126

B.2 Intermediate Aggregate3131

B.3 Coarse Aggregate3137

S-32.3 MnDOT 2461.2.C shall be deleted.

S-32.4 MnDOT 2461.2.D shall be modified to include the following:

Provide water from potable sources.

The Concrete Engineer will allow clarified water as a substitution for potable water in accordance with the following:

- (1) From the Approved/Qualified Products list,
- (2) In any concrete defined as MnDOT Grades B, F, G, M, P, and R,
- (3) Up to a maximum of 50.0% of total mix water by weight,
- (4) Provided the clarified water is identified separately on the Certificate of Compliance.

S-32.5 MnDOT 2461.2.E shall be deleted and replaced with the following:

E Concrete Admixtures3113

Provide admixtures from the Approved/Qualified Products list for all concrete grades shown in Table 2461-6 and Table 2461-7.

Use of any of the following admixtures are at the Contractor’s discretion:

- (1.1) Type A, Water Reducing Admixture
- (1.2) Type B, Retarding Admixture
- (1.3) Type D, Water Reducing and Retarding Admixture
- (1.4) Type F, High Range Water Reducing Admixture
- (1.5) Type G, High Range Water Reducing and Retarding Admixture
- (1.6) Type S, Specific Performance Based Admixture

Use of the following accelerating admixtures require approval of the Concrete Engineer, in conjunction with the Engineer, unless otherwise allowed in the Contract:

- (2.1) Type C, Accelerating Admixture
- (2.2) Type E, Water Reducing and Accelerating Admixture

The Engineer will permit the use of Type C or Type E accelerating admixtures when all of the following conditions exist:

- (3.1) The ambient temperature is below 36 °F,
- (3.2) An Engineer approved cold weather protection plan is in-place, and
- (3.3) Cold weather protection materials are on-site and ready for use.

S-32.6 Table 2461-1 of MnDOT 2461.2.F.1 shall be deleted and replaced with the following:

Table 2461-1				
Mix Number Identification				
First Digit	Second Digit	Third Digit	Fourth Digit	Additional Digits
Type Designation	Grade Designation	Maximum Slump	Coarse Aggregate Gradation Designation	Additional Digits Allowed or as Specified

S-32.7 MnDOT 2461.2.F.1.b shall be deleted and replaced with the following:

F.1.b Grade Designation

The Department will designate concrete grade in accordance with Table 2461-6 and Table 2461-7 using a letter designating the following:

- (1) Intended Use
- (2) Maximum water/cement (w/c) ratio
- (3) Maximum Cementitious Content
- (4) Maximum Supplementary Cementitious Substitution (SCM)
- (5) Slump range
- (6) Minimum 28-day compressive strength, f'c
- (7) Coarse Aggregate Quality in accordance with 3137

S-32.8 MnDOT 2461.2.F.1.d shall be deleted and replaced with the following:

F.1.d Coarse Aggregate Gradation Designation

Select the appropriate coarse aggregate gradation designation in accordance with Table 2461-3 based on the intended use and the gradation requirements in 3137, "Coarse Aggregate for Portland Cement Concrete."

Table 2461-3 Coarse Aggregate Designation for Concrete	
Designation	Coarse Aggregate Gradation
0	Job Mix Formula (JMF) combination of fine and coarse aggregate
Table 3137-4, "Coarse Aggregate Designation for Concrete"	
1	ASTM #467
2	ASTM #67
3	ASTM #7
4	ASTM #89
7	CA-70
8	CA-80

S-32.9 MnDOT 2461.2.F.1.e shall be deleted and replaced with the following:

F.1.e Additional Concrete Mix Designation Digits

Specialty concrete mixes require additional concrete digits in accordance with Table 2461-6. Use "EX" for exposed aggregate mixes and "CO" for colored concrete mixes. The Contractor may add additional digits to the right of the required digits in the concrete mix number.

S-32.10 MnDOT 2461.2.F.2, 2461.2.F.2.a, and 2461.2.F.2.b shall be deleted and replaced with the following:

F.2 Concrete Mix Design Requirements

The Engineer determines final acceptance of the concrete for payment based on test results, satisfactory field placement and performance.

F.2.a Department Designed Concrete Mixes

The Department will provide mix designs for the concrete defined in Table 2461-4 and Table 2461-5.

F.2.a(1) Department Designed Concrete Requirements

No additional submittal is required for Table 2461-4 mix designs.

Table 2461-4			
Department Designed Concrete Mixes			
Type of Concrete	Mix Number	Specification	Mix Design Location
Field Batched Patching Mix	3U18	2302	Table 2302-1
Low Slump Concrete	3U17A	2404	Weekly Report of Low Slump Concrete
Bagged Patching Mix	3U18 and 3U58M	3105	Table 3105-1

F.2.a(2) Grout and Lean Mix Backfill

Submit final mix design proportions on the *General Concrete Mix Design Submittal* for Grout and Lean Mix Backfill in accordance with Table 2461-5.

Table 2461-5									
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)	% Air Content	Slump Range	Minimum 28-day Compressive Strength, f'c
1AGROUT *	0.50	379	758	0	100% †	0	3.0%	As needed	4000 psi
3AGROUT *	0.44	379	865	0	100% †	0	10.0 %	As needed	4000 psi
Lean Mix I	1.00	375	125	250	50% †	50% † ‡	N/A	10 in ± 1 in	75 – 400 #

* Do not provide grout containing coarse aggregate or fly ash.
 † Coarse Aggregate Quality meets requirements of 3137.2.D.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 of 27.00 – 27.27 cu. ft.
 † Meeting ASTM #67 gradation as shown in Table 3137-4.
 # Unconfined compressive strength range.

F.2.b Contractor Designed Concrete Mixes

The Contractor will provide concrete mix designs for concrete defined in Table 2461-6 and Table 2461-7 and elsewhere as specified in the Contract.

The Contractor assumes full responsibility for the mix design and performance of the concrete.

F.2.b(1) General Concrete Mix Design Requirements

The Department defines the concrete mix design requirements for Contractor Designed Mixes in accordance with Table 2461-6.

Table 2461-6 Concrete Mix Design Requirements (Not applicable to Mass Concrete)									
Concrete Grade	OLD Mix Number	NEW Mix Number	Intended Use *	Maximum w/c ratio †	Maximum Cementitious Content (lbs/yd ³)	Maximum %SCM (Fly Ash/Slag/Ternary)	Slump Range	Minimum 28-day Compressive Strength, f'c	3137 Spec.
B Bridge Substructure	3Y43	3B52 ‡	Abutment, stems, wingwalls, paving brackets, pier columns and caps, pier struts	0.45	750	30/35/40	2 - 5"	4000 psi	2.D.1
F Flatwork	3A22 3Y22	3F32 ‡	Slipform curb and gutter	0.42	750	30/35/0	½ - 3" #	4500 psi	2.D.1
	3A32 3Y32 3A34	3F52 ‡ 3F52EX 3F53EX 3F52CO	Sidewalk, curb and gutter, slope paving, median sidewalk, driveway entrances, ADA pedestrian sidewalk	0.45	750	25/30/0	2 - 5"	4500 psi	2.D.1
	1A43	1G52 ‡	Footings and pilecap	0.55	750	30/35/40	2 - 5"	4500 psi	2.D.1
G General Concrete	3A43 3B42 3Y43	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	2.D.1
	3Y12	3M12	Slipform barrier, Median barrier, non-bridge	0.42	750	30/35/40	½ - 1" #	4500 psi	2.D.1
M Median Barrier	3Y32	3M52	Barrier, Median barrier, non-bridge	0.45	750	30/35/40	2 - 5"	4500 psi	2.D.1
	P Piling	1C62	1P62 ‡	Piling, spread footing leveling pad	0.60	750	30/35/40	3 - 6"	3000 psi
R Pavement Rehabilitation	3A32 3B42	3R52 ‡	CPR - Full depth concrete repairs, concrete base	0.45	750	30/35/40	2 - 5"	4000 psi	2.D.3
S Bridge Superstructure	3Y16	3S12	Slipform bridge barrier, parapets, end post	0.42	750	30/35/40	½ - 1" #	4000 psi	2.D.2
	3A32 3A42 3Y43 3Y46 3Y46A	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	2.D.2
	X Miscellaneous Bridge	1X62 1X46	1X62	Cofferdam seals, rock sockets, drilled shafts	0.45	750	30/35/40	3 - 6"	5000 psi
3X46		3X62	Drilled shafts above frost line	0.45	750	30/35/40	3 - 6"	5000 psi	2.D.1
Y Bridge Deck §	3Y33 3Y33A 3Y36 3Y36A	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	2.D.2
	3A37 3Y37	3Y47 **	Deck patching mix	0.45	750	30/35/40	2 - 4"	4000 psi	2.D.2

* If the intended use is not included elsewhere in the Specification or Special Provisions, use mix 3G52, unless otherwise directed by the Engineer.

|| Identify specific color used on the certificate of compliance. Colored concrete is only allowed when specified in the plans or the Contract.

† The minimum water/cement (w/c) ratio is 0.30.

‡ The Contractor may choose to use the Coarse Aggregate Designation "1" for the 4th digit in accordance with Table 2461-3.

Adjust slump in accordance with 2461.3.G.7.a for slipform 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 2461-3.

F.2.b(2) High-Early Concrete Mix Design Requirements

The Department defines High-Early (HE) concrete as concrete designed to achieve the minimum strength of 3000 psi for opening at 48 hours. Unless otherwise included in the plans, all HE concrete requires approval of the Engineer prior to incorporation into the work.

The Engineer will allow one of the following methods to determine minimum time to opening:

- (1) Field control cylinders in accordance with 2461.3.G.5.c, "Field Control Strength Cylinders."
- (2) Maturity method in accordance with 2461.3.G.6, "Estimating Concrete Strength by the Maturity Method."

The Department defines the concrete mix design requirements for High-Early concrete in accordance with Table 2461-7.

Mix Number	Concrete Grades Allowed	Minimum Time to Opening	Maximum w/c ratio	Maximum Cementitious Content (lbs/ yd ³) *	Slump Range	Minimum Strength to Opening	Minimum 28-day Compressive Strength, f'c	3137 Spec.
3HE32	F	48 hrs	0.42	750	1 – 3" 	3000 psi	4500 psi	2.D.1
3HE52	B, F, G	48 hrs	0.42	750	2 – 5"	3000 psi	4500 psi	2.D.1
3YHE52	Y (Repairs Only)	48 hrs	0.42	750	2 – 5"	3000 psi	4000 psi	2.D.2
3RHE52	R (Repairs Only)	48 hrs	0.42	750	2 – 5"	3000 psi	4000 psi	2.D.3

* Supplementary Cementitious Materials allowed.
 || Adjust slump in accordance with 2461.3.G.7.a, "Concrete Placed by the Slip-form Method."

F.2.b(3) Project Specific Mix Design Requirements

Submit project specific contractor designed mixes on the *Project Specific Mix Design Submittal* forms in accordance with Table 2461-8 and the Contract.

Concrete Grade	Intended Use	Specification	3137 Spec.
A	Concrete Pavement	2301	2.D.3
W and Y	Precast Concrete	2462	Varies
HPC	High Performance Concrete	Special Provision 2401	2.D.2
MC	Mass Concrete	Special Provision 2401	Varies
CLSM	Cellular Concrete Grout	2519	None

S-32.11 MnDOT 2461.2.F.3 shall be deleted and replaced with the following:

F.3 Submittal Requirements

At least 21 calendar days before initial placement of the concrete, submit the appropriate *General Concrete Mix Design Submittal* form to the Concrete Engineer for approval. The Contractor Mix Design Forms are available from the MnDOT Concrete Engineering Website.

Design the concrete mix to an absolute volume of 27.00 – 27.27 cu. ft.

The Concrete Engineer will:

- (1) Provide specific gravity and absorption data using oven dry (OD) weights for mix design calculations.
- (2) Review the mix design submittal and approve the materials and mix design for compliance with the Specifications.

Table 2461-8 defines the mix design submittal requirements for Level 1 and Level 2 Mixes.

Table 2461-9					
Mix Design Submittal Requirements					
	SCM Substitution Limits	Fine Aggregate Limit	Gradation Requirements	Preliminary Test Data Requirements	Submittal Package
Level 1 Mixes *	Fly Ash: 0 – 15% Slag: 0 – 35%	40 – 45% of total aggregate by volume	3126 and 3137	None	General Concrete Mix Design
Level 2 Mixes	Fly Ash: > 15% Ternary: Any	None	Use Either: • 3126 and 3137 • Job Mix Formula (JMF)	2461.2.F.3.a	Use Either: • General Concrete Mix Design • General Concrete Mix Design (JMF)
* High Early concrete in accordance with Table 2461-7 is defined as a Level 1 Mix.					

S-32.12 MnDOT 2461.2.F.3.a, 2461.2.F.3.a(1) and 2461.2.F.3.a(2) shall be deleted and replaced with the following:

F.3.a Preliminary Test Data Requirements for Level 2 Mixes

For Level 2 Mixes, submit the proposed Mix Design Proportions on the *General Concrete Mix Design Submittal* based upon either a suitable experience record or conventional trial mixtures not to exceed the limits specified in Table 2461-6 or 2461-7.

F.3.a(1) Suitable Experience Record

A suitable experience record consists of at least 30 consecutive tests, or two groups of consecutive tests totaling at least 30 tests, within the previous 18 months. If the Contractor does not have 30 tests, the Concrete Engineer will consider a minimum of 10 test results representing a time period of at least 45 days.

The Concrete Engineer considers a suitable experience record to have the following characteristics as compared to the proposed mix:

- (1) Average compressive strength (f'cr) meeting the required 28-day compressive strength and no greater than 1000 psi above the required 28-day compressive strength,
- (2) Same type or grade of cementitious materials,
- (3) Same class of coarse aggregate,
- (4) Aggregate weights within 10% of the proposed,
- (5) Water/Cement ratio no greater than the maximum allowed,
- (6) Cementitious or SCM material weights within 5% of proposed, and

- (7) Batching conditions and testing procedures similar to those expected for the proposed work.

Submit all test results on the *Strength Test Data* sheet as part of the *Contractor Mix Design Submittal*.

The Concrete Engineer reserves the right to request batching data representing the suitable experience record submittal.

F.3.a(2) Conventional Trial Mixtures

If the Contractor does not have a suitable experience record as required in 2461.2.F.3.a(1) above, establish concrete proportions from trial mixtures, utilizing an AMRL accredited laboratory in accordance with the following:

- (a) Use proportions and consistencies required for proposed work at the w/c ratios or cementitious materials content that will produce a strength meeting or exceeding the required 28-day compressive strength ($f'c$) in accordance with Table 2461-6 or 2461-7;
- (b) Design trial mixtures to produce slump within ± 0.75 in. of maximum permitted;
- (c) For air-entrained concrete, design trial mixtures to produce air content within ± 0.5 percent of maximum allowable air content;
- (d) For each w/c ratio or cementitious materials content, make and cure at least three test cylinders for 28-day breaks in accordance with ASTM C 192. For HE concrete mixes, in addition to the 28-day cylinders, make a set of three test cylinders for 48-hour breaks in accordance with ASTM C 192.

Submit all test results for the trial mixtures, certified by the AMRL accredited laboratory, in addition to the *Contractor Mix Design Submittal*.

S-32.13 Table 2461-11 of MnDOT 2461.2.F.4 shall be deleted and replaced with the following:

Table 2461-11		
Mix Design Adjustments Requirements		
	Type of Change or Adjustment	Mix Design Resubmittal Requirements
Level 1 Mixes	<ul style="list-style-type: none"> • Cementitious Sources • Admixture Sources • Admixture Dosage Rate 	No resubmittal required
	<ul style="list-style-type: none"> • Aggregate Sources • Aggregate Proportions • Any cementitious or SCM proportion ($\leq 15\%$ max fly ash) 	Resubmittal of Mix Design
	<ul style="list-style-type: none"> • Any cementitious or SCM proportion ($> 15\%$ max fly ash) 	Resubmittal in accordance with 2461.2.F.3.a
Level 2 Mixes	<ul style="list-style-type: none"> • Admixture Dosage Rate • Cement or SCM sources 	No resubmittal required
	<ul style="list-style-type: none"> • Aggregate Source, no change in Aggregate Class • $\leq 5\%$ in any cementitious or SCM proportion* • $\leq 10\%$ in Aggregate Proportions 	Resubmittal of Mix Design
	<ul style="list-style-type: none"> • Aggregate source and Class of Coarse Aggregate • $> 5\%$ in any cementitious or SCM proportion • $> 10\%$ Aggregate Proportions • Admixture Sources 	Resubmittal in accordance with 2461.2.F.3.a

* Only one (1) increase in cementitious or SCM allowed per mix design, next adjustment requires resubmittal in accordance with 2461.2.F.3.a, "Preliminary Test Data Requirements for Level 2 Mixes"

S-32.14 MnDOT 2461.2.G shall be deleted.

S-32.15 The first paragraph of MnDOT 2461.3.A.9 shall be deleted and replaced with the following:

Provide horizontal axial-revolving blade type mixers (single or multiple shaft) in accordance with the applicable requirements for conventional type mixers in accordance with 2461.3.A.1 through 2461.3.A.7 and this subsection.

S-32.16 The first sentence of MnDOT 2461.3.D.1.c shall be deleted and replaced with the following:

Separately measure each type of mixing water on scales or water metering devices containing the following:

S-32.17 The fifth paragraph of MnDOT 2461.3.D.2 shall be deleted and replaced with the following:

Provide and use only sacked cement in the original mill containers unless the Contractor calibrates the mixer for the specific materials in use. Do not use previously opened sacks.

S-32.18 MnDOT 2461.3.F.1.a(2) shall be deleted and replaced with the following:

(2) The Producer will complete MnDOT Form 2163, *Concrete Plant Contact Report*, prior to the on-site inspection with the Department Representative.

(2.1) A MnDOT Certified Concrete Plant Level 1 or 2 Technician, representing the Producer, signs the *Concrete Plant Contact Report* certifying compliance with the Certified Ready Mix requirements and continual maintenance of the plant to assure that the plant can produce concrete meeting MnDOT Specifications.

(2.2) A MnDOT Certified Concrete Plant Level 1 or 2 Technician, representing the Department, signs the *Concrete Plant Contact Report* signifying that the plant complies with all requirements prior to concrete production.

S-32.19 MnDOT 2461.3.F.1.a(3) shall be deleted and replaced with the following:

(3) Include a site map showing stockpile locations identified with the MnDOT pit number.

S-32.20 MnDOT 2461.3.F.1.b shall be deleted and replaced with the following:

F.1.b Maintaining Plant Certification

The Producer will maintain plant certification by:

- (1) Displaying the current Contact Report and site map in plain sight at all times;
- (2) Updating the Contact Report with any material or equipment changes and submitting to the Department;
- (3) Sampling and testing the materials in accordance with this section and the requirements of the Schedule of Materials Control;
- (4) Documenting the production and testing of the materials used in the certified ready-mix concrete in the QC Workbook;
- (5) Making Producer Plant QC Workbook and QC charts available electronically at all times;
- (6) Supplying the following information at the request of the Engineer:
 - (6.1) Approved mix design sheets,
 - (6.2) Agency cementitious and admixture test results,
 - (6.3) Agency verification gradation test results,
 - (6.4) Aggregate quality test results.

Any procedural changes that cause non-compliance with this program may result in de-certification of the plant and cessation of further production of Department concrete as determined by the Concrete Engineer in accordance with 2461.3.F.4.h, "Certified Ready-Mix Plant Decertification."

S-32.21 MnDOT 2461.3.F.2 shall be modified to include the following:

- (21) For colored concrete, final color

S-32.22 The definition for "Mix design water" and "Batch water" in Table 2461-13 of MnDOT 2461.3.F.3 shall be deleted and replaced with the following:

Table 2461-13 Certified Ready-Mix Terminology	
Term	Definition
Mix design water	The maximum allowable water content for 1 cu. yd of concrete.
Batch water	Water actually batched into the truck by the batcher. Batch water includes potable water and clarified water.

S-32.23 MnDOT 2461.3.F.4(7) shall be deleted and replaced with the following:

- (7) Take cementitious and admixtures samples per Schedule of Materials Control.
- (8) Document the following samples in the appropriate Sampling Log:
 - (8.1) Cementitious Materials
 - (8.2) Admixtures
 - (8.3) Verification Gradations
 - (8.4) Coarse Aggregate Quality

S-32.24 MnDOT 2461.3.F.4.b, 2461.3.F.4.c, 2461.3.F.4.d, and 2461.3.F.4.e shall be deleted and replaced with the following:

F.4.b Sampling and Testing

Take all samples randomly in accordance with ASTM D 3665, Section 5, at a rate defined in accordance with the Schedule of Materials Control. Perform all sampling and testing in accordance with the Concrete Manual. The Engineer may oversee the QC sampling and testing process.

Perform QC gradation and moisture testing at the certified ready-mix plant site. Use mechanical shakers for sieve analysis. Determine the moisture content using the oven-dry method in all fractions of the aggregate.

Provide equipment and perform calibrations meeting the requirements of the following:

- (1) AASHTO T 27, "Sieve Analysis of Fine and Coarse Aggregates,"
- (2) AASHTO T 255, "Total Moisture Content of Aggregate by Drying,"
- (3) AASHTO M 92, "Wire-cloth Sieves for Testing Purpose," and
- (4) AASHTO M 231, "Weighing Devices Used in the Testing of Materials."

F.4.c QC Gradations

Complete the *Concrete Aggregate Worksheet* for each aggregate size and source:

- (1.1) QC gradations;
- (1.2) Verification Companion Gradations; The Engineer will not allow a Verification Companion Gradation as a substitute for a QC Gradation.

Identify QC companion samples with the following information:

- (2.1) Date,
- (2.2) Test number,
- (2.3) Time,
- (2.4) Type of material,
- (2.5) Plant, and
- (2.6) Sampling location.

F.4.d Aggregate Gradation QC Charts

Complete the *MnDOT Aggregate Gradation Control Charts* for each aggregate size and aggregate source:

- (1) Record Producer QC gradation and Department Verification Companion gradation results. These results are included in the moving average calculation.
- (2) Record Department Verification Gradation results. These results are not included in the moving average calculation.

F.4.e Moisture Content

Complete the *Batching Report* for each aggregate size and source.

S-32.25 MnDOT 2461.3.F.4.g shall be deleted and replaced with the following:

F.4.g Signing the Certificate of Compliance

The Producer's MnDOT Certified Plant Level 1 or Level 2 technician will:

- (1) Review the first Certificate of Compliance for each mix type, each day, for accuracy; and
- (2) Legibly hand sign the Certificate of Compliance at a location designated for Producer signature signifying agreement to the terms of this program and to certify that the materials comply with the requirements of the Contract; and
- (3) Write their MnDOT Technical Certification Number next to their signature.

S-32.26 MnDOT 2461.3.F.4.h shall be deleted and replaced with the following:

F.4.h Certified Ready-Mix Plant Decertification

The Concrete Engineer, with coordination from the Engineer, may decertify the plant and halt production of concrete under any of the following conditions:

- (1) Unauthorized procedural, material, or equipment changes made after the completion of the Concrete Plant Contact Report,
- (2) Failure to meet the required testing rates,
- (3) Failure to complete required documents,
- (4) Disregards any of the requirements of this section, and
- (5) Falsification of test records or certificates of compliance.

S-32.27 MnDOT 2461.3.F.5 shall be deleted and replaced with the following:

F.5 Quality Assurance (QA)

The Engineer's responsibilities include the following:

- (1) Confirm the Producer's QC Workbook and aggregate gradation quality charts are accurate and up-to-date;
- (2) Check Certificate of Compliance for completeness and accuracy;
- (3) Spot check the actual batching of concrete to verify batch weights and tolerances;

- (4) Check the bins and stockpiles for segregation, contamination, and interblending of the aggregates;
- (5) Obtain Aggregate Quality samples per Schedule of Materials Control;
- (6) Observe Producer's Certified Technician obtain aggregate samples and run gradation and moisture tests when possible;
- (7) Verify cement, fly ash, and admixtures are certified and approved;
- (8) Obtain cement, fly ash, and admixtures samples per the Schedule of Material Control;
- (9) Provide the following test results to the Producer in a timely manner:
 - (9.1) Cementitious Materials
 - (9.2) Admixtures
 - (9.3) Verification Gradations
 - (9.4) Coarse Aggregate Quality

S-32.28 The first paragraph of MnDOT 2461.3.G.1 shall be deleted and replaced with the following:

Notify the Engineer at least 24 h before beginning concrete production to allow the Engineer time to provide inspection forces needed for the work and to approve preparations for concrete placement. If the Contractor fails to provide 24 h notice, the Engineer may delay concrete placement and will consider any concrete incorporated into the work as unauthorized in accordance with 1512.2, "Unauthorized Work." The Engineer will consider any delays to the Contract resulting from unauthorized work as non-excusable in accordance with 1806.2.C, "Non-Excusable Delays."

S-32.29 MnDOT 2461.3.G.2 shall be deleted and replaced with the following:

G.2 Placement Temperatures

Maintain concrete temperature from 50 °F to 90 °F until placement.

Unless Engineer approved cold weather protection plans are in place, do not place concrete when the air temperature is either of the following at the point of placement:

- (1) Below 36 °F, or
- (2) The National Weather Service predicts the temperature to fall below 36 °F within the following 24 h period.

S-32.30 MnDOT 2461.3.G.4 shall be deleted and replaced with the following:

G.4 Field Adjustments

Mix the load a minimum of 5 min or 50 revolutions at mixing speed after addition of admixture or water.

G.4.a Water Adjustments

The Engineer will allow water adjustments in accordance with all the following:

- (1) Prior to discharging approximately 1 cubic yard of concrete,
- (2) Water available to add stated on the Certificate of Compliance, and
- (3) Concrete is within 60 min from the initial batch time stated on the Certificate of Compliance.

G.4.b Water Adjustments for Concrete Placed by the Slip-Form Method

The Engineer will allow water adjustments for all grades of concrete placed by the slip-form method, except Grade A paving concrete, in accordance with all of the following:

- (1) If water is available to add as stated on the Certificate of Compliance.
- (2) Concrete is within 60 min from the initial batch time stated on the Certificate of Compliance.

G.4.c Admixture Adjustments

Approved admixture additions are allowed within 90 min from the initial batch time stated on the Certificate of Compliance. If the load of concrete has no available water to add, or the load is greater than 60 minutes old, the Engineer will allow one admixture adjustment diluted with up to 2 gallons of water.

G.4.d Consistency and Air Content Adjustments

The Engineer will test the concrete for compliance with 2461.3.G.7, "Consistency," and 2461.3.G.8, "Air Content," in accordance with the following:

- (1) If the first test taken by the Engineer passes, the Engineer will continue verification testing in accordance with the Schedule of Materials Control.
- (2) If the test taken by the Engineer fails, make adjustments and perform any quality control testing before the Engineer performs a final test. Acceptance or rejection of the truck is based on the Engineer's final test result.
- (3) The Engineer will test up to two additional trucks in accordance with items (1) and (2) above, and
- (4) If the concrete does not meet the specification after those three trucks, the Engineer will reduce their verification testing rate to once per truck for acceptance for the remainder of the pour.

For concrete mixes 3U17A and 3U18, allow mix to hydrate 5 min before slump test to assure all cement is saturated.

S-32.31 MnDOT 2461.3.G.5, 2461.3.G.5.a, 2461.3.G.5.b and 2461.3.G.5.c shall be deleted and replaced with the following:

G.5 Test Methods and Specimens

Perform random sampling and testing in accordance with the Concrete Manual and determine testing rates meeting the requirements of the Schedule of Materials Control.

The Engineer performs random sampling and testing in accordance with the Concrete Manual, determines testing rates meeting the requirements of the Schedule of Materials Control.

Anyone fabricating concrete cylinders or beams is required to hold either a current ACI Field 1 Technician Certification or a MnDOT Field 1 Technician Certification.

Anyone performing concrete strength testing of cylinders is required to hold one of the following current certifications:

- (1.1) ACI Strength Testing Technician Certification,
- (1.2) MnDOT Strength Testing Technician Certification, or
- (1.3) WisDOT Strength Testing Technician Certification.

The Engineer will furnish molds based on the maximum size aggregate for the test specimens in accordance with the following:

- (2.1) 4 in × 8 in cylinder molds,
- (2.2) 6 in × 12 in cylinder molds for maximum aggregate sizes greater than 1¼ in, and
- (2.3) 6 in × 6 in × 20 in beam molds; use other beam mold sizes as approved by the Engineer.

The Engineer will transport the cylinders in accordance with the following:

- (3.1) A minimum of at least 16 hours after casting.
- (3.2) A minimum of at least 12 hours after casting for high early strength (28-day) cylinders.

- (3.3) With securely placed tight fitting plastic caps on plastic molds, or by other methods to prevent moisture loss.
- (3.4) Protected from jarring, bouncing, and freezing.
- (3.5) No greater than 4 hours, unless cylinders are maintained in the moistened condition at ambient temperature of 60 °F to 80 °F.

G.5.a Moist Curing Environments

At least 24 hours prior to concrete placement, provide moist curing environment(s) of adequate size and number, including all ancillary equipment and materials, necessary to maintain moist curing environment(s) in accordance with ASTM C31, 2031.3.C, "Special Requirements," and the following:

For each separate moist curing environment:

- (1) Provide a calibrated waterproof digital temperature recording device that records the daily maximum and minimum ambient temperatures for the previous 7 days.
- (2) Maintain the standard (28-day) strength cylinders or beams in an ambient temperature range from 60 °F to 80 °F during the initial and intermediate curing periods.

The Engineer will monitor the daily temperatures of the curing environments. Agency monitoring does not relieve the Contractor of the responsibility to maintain the water temperature as specified herein.

If the Contractor fails to comply with the requirements shown here-in, the Engineer may delay concrete placement and will consider any concrete incorporated into the work as unauthorized in accordance with 1512.2, "Unauthorized Work." The Engineer will consider any delays to the Contract resulting from unauthorized work as non-excusable in accordance with 1806.2.C, "Non-Excusable Delays."

All costs related to providing and maintaining moist curing environments is considered incidental.

G.5.b Standard (28-day) Strength Cylinders

The Engineer will perform the following for standard strength cylinders:

- (1.1) Cast cylinders (sets of 3) for testing at 28 days in accordance with the Schedule of Materials Control.
- (1.2) Mark cylinders for identification of the represented unit or section of concrete in accordance with the following: (1.1, 1.2, 1.3/ 2.1, 2.2, 2.3/ 3.1, 3.2, etc.). In order to differentiate between portions of a project, prefixes and suffixes are allowed.
- (1.3) Cure the cylinders meeting the requirements of the 2461.3.G.5.a, "Moist Curing Environments."
- (1.4) Complete the MnDOT Concrete Cylinder Identification Card including the results for air content, slump (if required), concrete, and air temperature testing from the same load.

The Concrete Engineer defines the curing period as the following:

- (2.1) **Initial curing period** as immediately after final finishing for a period of up to 48 hours. After the initial curing period, the Engineer will both transport and further cure the cylinders in the provided curing tanks for intermediate curing up to 7 days from the day of casting or deliver directly to the laboratory for final curing.
- (2.2) **Intermediate Curing Period** as the time between specimen pickup from the initial curing site and delivery to the laboratory for final curing, not to exceed 7 days from the day of casting.
- (2.3) **Final Curing Period** as the time when cylinders are cured in the laboratory within 7 days of casting.

G.5.c Field Control Strength Cylinders

The Engineer will use field control cylinders to determine when the sequence of construction operations is dependent upon the rate of concrete strength development. The Engineer will cast field control cylinders to determine when the concrete attains the required strength for all desired field control limitations.

The Engineer will perform the following for field control strength cylinders:

- (1) Cast up to three (3) field control cylinders per structure. The Contractor is responsible for any additional field control cylinders.
- (2) Mark field control cylinders for identification of the represented unit or section of concrete in accordance with 2461.3.G.5.a(2).
- (3) Cure the cylinders in the same location and under the same conditions as the concrete structure or unit involved meeting the requirements of the Concrete Manual,
 - (3.1) For High-Early (HE) Concrete as defined in Table 2461-7, the Engineer will allow the Contractor to cure field control cylinders using insulated cylinder storage compartment. Provide insulated storage compartments and any equipment necessary to continually monitor temperatures of both the newly poured concrete structure and the insulated cylinder storage compartment. Maintain the insulated storage compartment at a temperature no greater than 5 °F above the newly poured concrete structures temperature. When the temperature exceeds 5 °F or the temperature monitoring system fails, the Engineer will not accept field control cylinder results.
- (4) Complete the MnDOT Concrete Cylinder Identification Card including the results for air content, slump (if required), concrete, and air temperature testing from the same load.

During the Departments normal laboratory operating hours, the Engineer will perform compressive strength testing on the field control cylinders. If Project scheduling requires testing outside of the Departments' laboratories normal operating hours or the Department's nearest laboratory is greater than 30 miles from the project; Provide certified and calibrated hydraulic cylinder-testing machine within 30 miles of the project and at a location approved by the Engineer. Test the field control cylinders in the presence of the Engineer in accordance with ASTM C39.

The Engineer will allow the Contractor to submit a strength-maturity relationship curve for use in lieu of field control cylinders in accordance with 2461.3.G.6, "Estimating Concrete Strength by the Maturity Method."

S-32.33 MnDOT 2461.3.G.5.e, 2461.3.G.5.e(1), 2461.3.G.5.e(2), 2461.3.G.5.e(3), and 2461.3.G.5.e(4) shall be deleted and replaced with the following:

G.5.e Concrete Compressive Strength

The Concrete Engineer defines a single **strength test** as the average (28-day) strength of three (3) cylinders fabricated from a single sample of concrete and cured in accordance with the Concrete Manual.

If 1 of the set of 3 cylinders shows a strength variability of greater than 10% outside of the initial calculated three cylinder average strength, the Engineer will average the remaining two cylinders and report as the 28-day compressive strength.

If 2 or more of the set of 3 cylinders shows a strength variability greater than 10% outside of the initial calculated average strength, the Engineer will use all three cylinder results to calculate the 28-day compressive strength.

The Engineer will consider concrete acceptable in accordance with Table 2461-17 provided **both** the single strength test and the moving average of 3 consecutive strength tests are met for a required f'c.

Table 2461-17		
Acceptance Criteria for Standard 28-day Cylinders		
	Single Strength tests	Moving average of 3 consecutive strength tests *
$f'c \leq 5000$ psi	$> (f'c - 500 \text{ psi})$	$\geq f'c$
$f'c > 5000$ psi	$> 0.90 * f'c$	$\geq f'c$
* If a project does not establish a moving average of 3 consecutive strength tests, use the average of 2 strength tests to determine acceptance. If there is only a single strength test, contact the Concrete Engineer for recommendation.		

S-32.34 MnDOT 2461.3.G.5.f, 2461.3.G.5.f(1), 2461.3.G.5.f(2), 2461.3.G.5.f(3), and 2461.3.G.5.f(4) shall be added:

G.5.f Non-Conforming Material

If the Contractor places concrete not meeting the strength requirements of 2461.3.G.5.e, “Concrete Compressive Strength” into the work, the Engineer may not accept nonconforming concrete at the contract unit price. The Engineer will evaluate non-conforming strength results in accordance with the following:

G.5.f(1) Single Strength Test ≤ 500 psi Below $f'c$

If any single strength test (3 cylinders) shows a strength ≤ 500 psi below $f'c$ and is not deficient due to erroneous/invalid strength tests as defined in 2461.3.G.5.f(4), “Moving Average Below $f'c$ ”, no additional investigation will occur and the Engineer will include the low strength test result in the moving average.

G.5.f(2) Single Strength Test > 500 psi Below $f'c$

If any single strength test (3 cylinders) shows a strength > 500 psi below $f'c$ and is not deficient due to erroneous/invalid strength tests as defined in 2461.3.G.5.f(4), “Moving Average Below $f'c$ ”, the Engineer, in conjunction with the Concrete Engineer, will investigate to determine if the concrete has attained the critical load-carrying capacity.

The investigation may consist of, but is not limited to reviewing the following:

- (1) Sampling and testing plastic concrete
- (2) Handling of cylinders
- (3) Cylinder curing procedures
- (4) Compressive strength testing procedures
- (5) Certificate of Compliances
- (6) Evaluation using Rebound Hammer (ASTM C803), Penetration Resistance (ASTM C805), or other method approved by the Concrete Engineer
- (7) Review of the design calculations for the concrete in question

If it is determined that the concrete represented by the single strength test has attained the critical load carrying capacity, the Engineer will include the strength test in the moving average calculation.

If it is determined that the concrete has not attained the critical load carrying capacity, the Engineer will direct the Contractor to remove and replace concrete in accordance with 1503, “Conformity with Contract Documents,” and 1512, “Unacceptable and Unauthorized Work.” The Contractor may dispute the remove and replace order within 7 days of written notification by the Engineer. If the Contractor disputes the order, follow the dispute resolution coring procedure in accordance with 2461.3.G.5.f(3), “Dispute Resolution Coring for Single Strength Test Failure.”

G.5.f(3) Dispute Resolution Coring for Single Strength Test Failure

The Engineer and Contractor will mutually agree on an Independent Third Party to core and test the concrete in accordance with ASTM C42.

- (1) The Engineer will identify a minimum of three (3) locations for the Independent Third Party to core.
- (2) The Independent Third Party will take one (1) core at each location.
- (3) The Independent Third Party will complete all coring within 14 days of notification of the low strength concrete.
- (4) The Contractor is responsible for ensuring the core holes are repaired.

The Engineer, in conjunction with the Concrete Engineer, will review the core test results and evaluate in accordance with Table 2461-18, providing all other concrete tests meet requirements.

Table 2461-18 Evaluation of Core Test Results			
Core (average of 3 cores) Test Results:	Engineer considers concrete:	Cost of Coring and Testing:	Resolution:
$\geq 85\%$ of $f'c$ and No individual core is $< 75\%$ of $f'c$	Acceptable to remain in place	Agency	No monetary reduction for single strength test failure.
$< 85\%$ of $f'c$	Unacceptable	Contractor	Remove and replace concrete in accordance with 1503, "Conformity with Contract Documents," and 1512, "Unacceptable and Unauthorized Work," as directed by the Engineer.

G.5.f(4) Moving Average Below $f'c$

If the moving average of three (3) consecutive strength tests $< f'c$, the Concrete Engineer will review the strength test results and determine if a new mix design is required in accordance with Table 2461-6 or Table 2461-7.

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

- (1.1) After investigation the deficient concrete strength is found to be an erroneous/invalid strength test
- (1.2) The suspect concrete was removed and replaced
- (1.3) Dispute resolution coring identified the concrete acceptable to remain in place

Reasons for finding erroneous test results as determined by the Concrete Engineer:

- (2.1) Cylinders kept in the field longer than 7 days,
- (2.2) Improper handling/curing of the cylinders, and/or
- (2.3) Improper testing of the cylinders

For the quantity of non-conforming concrete not meeting the moving average of three (3) consecutive strength tests, the Engineer will make determinations regarding the disposition, payment, or removal of the concrete in accordance with Tables 2461-19.

Table 2461-19 All Concrete Grades	
Moving average of 3 consecutive strength tests	Monetary Reduction for Moving Average Failure *
> 93.0% of f'c	\$20.00 per cubic yard or 10% of the Contractor-provided invoice for quantity represented by test that brought moving average into non-conformance
≥ 87.5% and ≤ 93.0% of f'c	\$50.00 per cubic yard or 25% of the Contractor-provided invoice for quantity represented by test that brought moving average into non-conformance
< 87.5% 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% of the Contractor-provided invoice for quantity represented by test that brought moving average into non-conformance.

S-32.35 MnDOT 2461.3.G.6.a and 2461.3.G.6.a(1) shall be deleted and replaced with the following:

G.6.a Development of Maturity-Strength Relationship

The Engineer will allow development of the maturity curve in either the laboratory or in the field, provided the precautions for field curing and testing are followed, as described in the Concrete Manual. Test the concrete strength specimens for development of the maturity curve.

Determine the strength development criteria based on the type of concrete in accordance with the following:

- (1) For concrete pavement: 2301.3.O, "Opening Pavement to Traffic,"
- (2) For concrete pavement repairs: 2302.3.B.4, "Opening to Construction Equipment and Traffic,"
- (3) For concrete structures: 2401.3.G, "Concrete Curing and Protection"
- (4) For sidewalks, driveway entrances and curb and gutter, a minimum of 3000 psi [20.6 MPa] is required.

Until an acceptable strength-maturity relationship is established, verify strength using concrete beams or cylinders.

G.6.a(1) Procedure

Estimate the in-place concrete strength using the maturity method as described in ASTM C 1074, except as noted in this specification as follows:

- (a) Fabricate 15 cylinders plus 2 additional cylinders to embed temperature sensors or 15 beams;
- (b) The Nurse-Saul method of computing maturity;
- (c) A datum temperature of -10°C (14°F);
- (d) Maintain specimens at temperatures greater than 50° F for the duration of the maturity curve development.

Test three (3) strength specimens at five different ages specified in Table 2461-20 for the type of concrete work.

Table 2461-20 Chronological Testing Ages of Strength Specimens	
Type of Concrete	Testing Ages *
Concrete Pavement as defined in 2301	Determined by the Contractor
Normal Strength Concrete as defined in 2461	1, 2, 3, 7 and 28 days
High-Early (HE) Concrete as defined in 2461	12 hours, 1, 2, 7 and 28 days
Ultra High-Early (UHE) Concrete as defined in 2302	3, 4 and 8 hours, 1 and 14 days
* The Contractor may adjust the testing ages if approved by the Engineer, in conjunction with the Concrete Engineer.	
Test at least two (2) sets of strength specimens before the anticipated opening strength.	

S-32.36 The first paragraph of MnDOT 2461.3.G.6.c shall be deleted and replaced with the following:

Perform a verification strength test to ensure the in-place concrete strength correlates with the maturity-strength relationship as follows:

- (1) Notify the Engineer at least 24 hours in advance of the time and location of both the verification specimen's casting and strength testing.
- (2) When the maturity curve is developed prior to the start of construction or in a laboratory, perform a verification strength test on the first day of concrete placement.
- (3) Perform a verification strength test at least once every seven (7) calendar days during normal plant production for concrete paving. For all other concrete, perform a verification strength test at least once every thirty (30) calendar days during normal plant production.
- (4) If the plant has not supplied concrete to the project for a period of greater than thirty (30) calendar days, perform a verification strength test.
- (5) Cast 3 cylinders plus one additional cylinder to embed the temperature sensor or 3 beams for each verification strength test.
- (6) The Engineer will test the concrete strength specimens for verification of the maturity curve as close to the maturity value determined to represent the opening, loading or form removal strength criteria in accordance with the Concrete Manual.
- (7) Record the results of verification test on the *Concrete Maturity-Strength Verification* form and submit an updated copy with the newest test result to the Engineer the day that the verification test is completed.
- (8) The Engineer may direct additional verification testing as necessary.
- (9) Submit electronic data from the maturity meters or temperature loggers in a comma-delimited (.txt or .csv) file format to the Engineer, which includes at least the project number, date and location of the meters or loggers.

S-32.37 MnDOT 2461.3.G.6.d(4), 2461.3.G.6.d(5) and 2461.3.G.d(6) shall be deleted.

S-32.38 MnDOT 2461.3.G.7.b, Table 2461-25 and Table 2461-26 shall be deleted and replaced with the following:

G.7.b Non-Conforming Material

Only place concrete meeting the slump requirements in the work. If the Contractor places concrete not meeting the slump requirements into the work, the Engineer will not accept non-conforming concrete at the contract unit price.

For the quantity of non-conforming concrete not meeting the required slump, the Engineer will make determinations regarding the disposition, payment, or removal of the concrete in accordance with Tables 2461-23 and 2461-24.

Table 2461-23 All Concrete Grades > 1 in slump	
Outside of Slump Range	Monetary Reduction
Below slump range *	No deduction for materials placed as approved by the Engineer.
≤ 1½ in above slump range	\$20.00 per cubic yard or 10% of the Contractor-provided invoice for quantity represented by the materials placed
> 1½ in above slump range	\$50.00 per cubic yard or 25% of the Contractor-provided invoice for quantity represented by the materials placed
* The Engineer will not reduce contract unit price for low slump concrete placed with the slip-form method as approved by the Engineer.	

Table 2461-24 Low Slump Concrete From ½ in to 1 in	
Outside of Slump Range	Monetary Reduction
Below slump range *	No deduction for materials placed as approved by the Engineer
≤ ½ in above slump range	\$20.00 per cubic yard or 10% of the Contractor-provided invoice for quantity represented by the materials placed
≥ ¾ in above slump range	\$50.00 per cubic yard or 25% of the Contractor-provided invoice for quantity represented by the materials placed
* The Engineer will not reduce contract unit price for low slump concrete placed with the slip-form method as approved by the Engineer.	

S-32.39 MnDOT 2461.3.G.8.a shall be deleted and replaced with the following:

G.8.a Non-Conforming Material

Only place Type 3 concrete meeting the air content requirements in the work. If the Contractor places Type 3 concrete not meeting the air content requirements into the work, the Engineer will not accept non-conforming concrete at the contract unit price.

For the quantity of non-conforming concrete not meeting the required air content, the Engineer will make determinations regarding the disposition, payment, or removal in accordance with Table 2461-27.

Table 2461-27 All Concrete (Target Air Content 6.5%)	
Air Content, %	Monetary Reduction
> 10.0	\$50.00 per cubic yard or 25% of the Contractor-provided invoice for quantity represented by the materials placed
>8.5 – 10.0	\$20.00 per cubic yard or 10% of the Contractor-provided invoice for quantity represented by the materials placed
5.0 – 8.5	The Engineer will pay 100 percent of the contract unit price for the concrete represented, for material placed as approved by the Engineer.
>4.0 – <5.0	\$50.00 per cubic yard or 25% of the Contractor-provided invoice for quantity represented by the materials placed

Table 2461-27	
All Concrete (Target Air Content 6.5%)	
Air Content, %	Monetary Reduction
>3.5 – ≤4.0	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 as required by the Engineer, in conjunction with the Concrete Engineer.
≤ 3.5	Remove and replace concrete in accordance with 1503, “Conformity with Contract Documents,” and 1512, “Unacceptable and Unauthorized Work,” as directed by the Engineer. This may include testing on the hardened concrete as required by the Engineer, in conjunction with the Concrete Engineer. If the Engineer, in conjunction with the Concrete Engineer, determines the concrete can remain in place, the Engineer may not pay for the concrete and may require coating with an approved epoxy penetrant sealer from the Approved/Qualified Products List.

S-32.40 MnDOT 2461.3.G.9 shall be deleted and replaced with the following:

G.9 Allowable Testing Tolerances

Allowable tolerances are based on the results from two different testers and two different pieces of equipment from the same sample. Perform the test within the allowable tolerances in accordance with Table 2461-28.

Table 2461-28	
Allowable Testing Tolerances	
Test	Allowable Tolerance
Air content, % volume of concrete	1.0 %
Average slump:	
< 4 in	1.0 in
4 in – 6 in	1.5 in
> 6 in	2.0 in
Unit weight, per cu. ft, calculated to an air-free basis	1.0 lb/cu. ft
Compressive strength 3,000 psi – 8,000 psi, average of 3 tests	500 psi

S-33 (2462) PRECAST CONCRETE

REVISED 02/07/17

MnDOT 2462 is hereby modified as follows:

S-33.1 MnDOT 2462.2.A shall be modified to include the following:

A.5 Ternary Mixes

Ternary mixes are defined as portland cement or Type 1L and two other supplementary cementitious materials, or blended cement and one other supplementary cementitious material with a maximum replacement of 40% by weight.

S-33.2 MnDOT 2462.2.E deleted and replaced with the following:

E Concrete Admixtures3113

Provide admixtures from the Approved/Qualified Products list for all concrete grades shown in Table 2462-6.

Use of any of the following admixtures are at the Precaster's discretion:

- (1.1) Type A, Water Reducing Admixture
- (1.2) Type B, Retarding Admixture
- (1.3) Type D, Water Reducing and Retarding Admixture
- (1.4) Type F, High Range Water Reducing Admixture
- (1.5) Type G, High Range Water Reducing and Retarding Admixture
- (1.6) Type S, Specific Performance Based Admixture

Use of the following accelerating admixtures require approval of the Concrete Engineer, in conjunction with the Engineer, unless otherwise allowed in the Contract:

- (2.1) Type C, Accelerating Admixture
- (2.2) Type E, Water Reducing and Accelerating Admixture

The Materials Engineer may permit the use of Type C or Type E accelerating admixtures when all of the following conditions exist:

- (3.1) The ambient temperature is below 36 °F,
- (3.2) An Engineer approved cold weather protection plan is in-place, and
- (3.3) Cold weather protection materials are on-site and ready for use.

S-33.3 MnDOT 2462.2.F.1 shall be deleted and replaced with the following:

F.1 Classification of Concrete

The Department will classify concrete by mix number to identify type, grade, consistency and aggregate size, if any, in accordance with Table 2462-1.

Table 2462-1				
Mix Number Identification				
First Digit	Second Digit	Third Digit	Fourth Digit	Additional Digits
Type Designation	Grade Designation	Maximum Slump	Coarse Aggregate Gradation Designation	Additional Digits Allowed or as Specified

S-33.4 MnDOT 2461.2.F.1.d shall be deleted and replaced with the following:

F.1.d Coarse Aggregate Designation

Select the appropriate coarse aggregate gradation designation in accordance with Table 2462-3 based on the intended use and the gradation requirements in 3137, "Coarse Aggregate for Portland Cement Concrete."

Table 2462-3 Coarse Aggregate Designation for Concrete	
Designation	Coarse Aggregate Gradation
0	Job Mix Formula (JMF) combination of fine and coarse aggregate
Table 3137-4, "Coarse Aggregate Designation for Concrete"	
1	ASTM #467
2	ASTM #67
3	ASTM #7
4	ASTM #89
7	CA-70
8	CA-80

S-33.5 MnDOT 2462.2.F.1.e shall be deleted and replaced with the following:

F.1.e Additional Concrete Mix Designation Digits

Specialty concrete mixes require additional concrete digits in accordance with Table 2462-6. The Precaster may add additional digits to the right of the required digits in the concrete mix number.

S-33.6 MnDOT 2462.2.F.1.f and MnDOT 2462.2.F.2.g shall be deleted.

S-33.7 Table 2462-6 of MnDOT 2462.2.F.2.a shall be deleted and replaced with the following:

Table 2462-6 Precast Concrete Mix Design Requirements								
Concrete Grade	Mix Number *	Intended Use 	Maximum w/c ratio	Cementitious Content (lbs/cy)	Maximum %SCM (Fly Ash/ Slag/ Ternary)	Slump Range ‡	Minimum Compressive Strength, f'c (28-day) #	3137 Spec.
W	1W82	Bridge Girders	0.42	660 – 850	30/35/40	1 – 8"	Design Strength Per Plan	2.D.1
	3W82	Noisewall posts, box culverts, bridge girders†	0.42	660 - 850	30/35/40	1 – 8"	Design Strength Per Plan	2.D.1
Y	3Y82	Wetcast retaining wall blocks, noisewall panels, equipment pad	0.45	605 – 850	30/35/40	1 – 8"	4000 psi	2.D.1
	3Y82	Thin Panel Retaining Walls	0.45	605 – 850	30/35/40	1 – 8"	4000 psi	2.D.2

Table 2462-6								
Precast Concrete Mix Design Requirements								
Concrete Grade	Mix Number *	Intended Use 	Maximum w/c ratio	Cementitious Content (lbs/cy)	Maximum %SCM (Fly Ash/ Slag/ Ternary)	Slump Range ‡	Minimum Compressive Strength, f'c (28-day) #	3137 Spec.
M	3M82	Precast Concrete Barrier	0.45	530 – 750	30/35/40	1 – 8"	4500 psi	2.D.1
<p>* The Precaster may choose to use the Coarse Aggregate Designation "1" for the 4th digit in accordance with Table 2462-3, if allowed by the structure.</p> <p> If the intended use is not included elsewhere in the Specification or Special Provisions, design concrete mix 3W82.</p> <p>† Review the Plans to determine if the bridge girders require air entrainment.</p> <p>‡ Flowable slumps exceeding the designated slump range require approval of the MnDOT State Materials Engineer.</p> <p># Requires strength cylinders in accordance with 2462.3.G.4 for determining shipping strength.</p>								

S-33.8 The second paragraph of MnDOT 2462.2.F.3 shall be deleted and replaced with the following:
 Design the concrete mix to an absolute volume of 27.00 – 27.27 cu. ft [1.0 – 1.01 cu. m].

S-33.9 MnDOT 2462.3.G.1 shall be deleted and replaced with the following:

G.1 Placement Temperatures

Maintain concrete at a temperature from 50 °F to 90 °F until placement.

Unless approved cold-weather plans are in-place, do not place concrete when the air temperature is either of the following at the point of placement:

- (1) Below 36 °F, or
- (2) The National Weather Service predicts the temperature to fall below 36 °F within the following 24 h period.

S-33.10 MnDOT 2462.3.G.4 shall be deleted and replaced with the following:

G.4 Test Methods and Specimens

Perform sampling and testing in accordance with the Concrete Manual and test according to the requirements of the Schedule of Materials Control.

Anyone fabricating concrete cylinders is required to hold either a current ACI Field 1 Technician Certification or a MnDOT Field 1 Technician Certification.

Anyone performing concrete strength testing of cylinders is required to hold one of the following current certifications:

- (1.1) ACI Strength Testing Technician Certification,
- (1.2) MnDOT Strength Testing Technician Certification, or
- (1.3) WisDOT Strength Testing Technician Certification.

Furnish molds based on the maximum size aggregate for the test specimens in accordance with the following:

- (2.1) 4 in × 8 in cylinder molds,
- (2.2) 6 in × 12 in cylinder molds for maximum aggregate sizes greater than 1¼ in.

G.4.a Strength Cylinders

The Precaster will cast all strength cylinders to determine the following:

- (3.1) Handling or "Stripping" Strength
- (3.2) Shipping Strength
- (3.3) Verification

Cast all cylinders used for determining strength at each stage for all types of precast operations. Cure all cylinders in the same location and under the same conditions as the concrete structure or unit involved meeting the requirements of ASTM C39.

S-34 (2503) CONNECT TO EXISTING STORM SEWER

This work consists of constructing connections into existing storm sewers in accordance with the applicable MnDOT Standard Specifications and the following:

Measurement will be made by the number of connections constructed as specified. Payment will be under Item 2503.602 (Connect to Existing Storm Sewer) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto, including but not limited to, all materials and labor necessary to connect the proposed drainage structure to the existing storm sewer pipe. Any damage caused to the existing storm sewer pipe shall be repaired at no expense to the Department and to the satisfaction of the Engineer.

S-35 (2404) CONNECT TO EXISTING WATERMAIN

This work consists of constructing connections into existing watermain in accordance with the applicable MnDOT Standard Specifications and the following:

Measurement will be made by the number of connections constructed as specified. Payment will be under Item 2504.602 (Connect to Existing Watermain) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto, including but not limited to, all materials and labor necessary to connect to the existing watermain. Any damage caused to the existing watermain pipe shall be repaired at no expense to the Department and to the satisfaction of the Engineer.

S-36 (2504) ADJUST HYDRANT AND VALVE

This work shall consist of relocating hydrants and valves with housings after extending the leads, at a location outside of the roadbed, as directed by the Engineer, in accordance with the following:

S-36.1 All additional materials furnished under this specification shall be new and like in kind to that in place.

S-36.2 Prior to relocation, the hydrant and gate valve shall be cleaned of all foreign matter and after installation shall be disinfected in accordance with the procedures described in paragraphs No.'s 1227 and 1228 of Section XII "Manual of Water Supply Sanitation" of the Minnesota Department of Health.

S-36.3 Hydrant and valve relocation will be measured by the number of hydrants installed complete with gate valve and housing as specified. Payment will made under Item 2504.602 (Adjust Hydrant and Valve) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto including, but not limited to, any additional water leads, drain pits, concrete blocking, extensions, risers or fittings necessary to complete the relocation.

S-37 (2504) HYDRANT

This work shall consist of installing new hydrants as directed by the Engineer.

S-37.1 See Section 02510 for additional hydrant specifications.

S-37.2 All materials furnished under this specification shall be new.

S-37.3 Prior to its installation, the hydrant shall be cleaned of all foreign matter and after installation shall be disinfected in accordance with the procedures described in paragraphs No.'s 1227 and 1228 of Section XII "Manual of Water Supply Sanitation" of the Minnesota Department of Health.

S-37.4 Hydrant installation will be measured by the number of hydrants installed complete as specified. Payment will be made under Item 2504.602 (Hydrant) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto including, but not limited to any additional water leads, drain pits, concrete blocking, extensions, risers or fittings necessary to complete the new installation.

S-38 (2504) INSTALL VALVE AND BOX

This work shall consist of installing a new valve and box in accordance with the applicable MnDOT Standard Specifications, as detailed in the Plan, and the following:

S-38.1 See Section 02510 for additional valve and box specifications.

S-38.2 Prior to installation, the valve and box shall be cleaned of all foreign matter and after installation shall be disinfected in accordance with the standard procedures of the Minnesota Department of Health.

S-38.3 Measurement will be made by the number of valves and boxes installed as specified. Payment will be made under Item 2504.602 (___" Gate Valve and Box) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto to install the valve and box complete and in place.

S-39 (2504) ADJUST VALVE BOX

This work shall consist of adjusting existing valve boxes to new surface elevations without changing the elevation of the valves. The work shall be performed to the satisfaction of the Engineer in accordance with the following:

Measurement will be made by the number of boxes adjusted. Payment will be made under Item 2504.602 (Adjust Valve Box) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto including, but not limited to, furnishing extensions as required and replacing any materials damaged by the Contractor's operations.

S-40 (2504) WATERMAIN PIPE AND FITTINGS

S-40.1 See Section 02510 for specifications related to watermain pipe and fittings.

S-41 (2504) POLYSTYRENE INSULATION

This work shall consist of furnishing and installing 4 inch thick insulation board above the watermain at the locations designated in the Plan. This work shall be performed in accordance with the details shown in the Plans, the applicable MnDOT Standard Specifications, and the following:

S-41.1 The insulation board shall be rigid expanded polystyrene conforming to the material requirements of MnDOT 3760. Styrofoam S.M. and Styrofoam TG brand insulation is an approved insulation material.

S-41.2 The insulation material shall be furnished in panels 1 inch [25 mm] thick and shall be placed on a smooth level foundation in a staggered manner that will provide joint overlaps a minimum of 6 inches [150 mm] on the underlying sheets and the edges shall be trim and square. A minimum of two (2) wood skewers per board in each

layer driven flush with the surface of the material shall be utilized to hold the insulation material in place during the backfill operations.

S-41.3 The placement of the backfill material over the insulation board and compaction thereof shall be accomplished in a manner that will preclude damage to the insulation material. Construction equipment of any kind shall not operate directly on the insulation board. Sections of insulation board damaged by the Contractor's construction operations shall be replaced at the Contractor's own expense.

S-41.4 No separate payment will be mad for Polystyrene Insulation, it should be considered incidental to the item it is insulating.

S-42 (2506) MANHOLES AND CATCH BASINS

MnDOT 2506 is hereby modified and/or supplemented with the following:

S-42.1 Adjusting Rings manufactured from High Density Polyethylene (H.D.P.E.) are approved as an alternate to concrete adjusting rings. It is important that the H.D.P.E. adjusting ring be sealed with the product recommended by the manufacturer.

S-42.2 Construct Drainage Structure Design Special 1

A. This pay item shall be considered full compensation to construct a 48-inch diameter manhole 48-4020 style with a 2 x 3 opening in the top slab as shown in the detail in the plan set.

S-42.3 Construct Drainage Structure Design Special 2

A. This pay item shall be considered full compensation to construct a 2' x 3' structure as shown in the detail in the plan set.

S-42.4 Adjust Frame and Ring Casting

A. Adjust Frame and Ring Casting shall be paid per EACH for adjusting existing castings to proposed grade or any additional adjustments of new castings from base course to wear course elevation.

1. Initial adjustment of new casting shall be considered incidental to the casting being installed.

S-43 (2521) CONCRETE WALK (ADA)

This work shall consist of constructing Concrete Walk, including necessary Subgrade Preparation, Aggregate Base, and Grading as indicated in the Plan, in accordance with the provisions of MnDOT 2112, 2211, 2521, other Contract provisions, and the following:

S-43.1 CONSTRUCTION REQUIREMENTS

(A) **Concrete Walk** – The walk shall be constructed as detailed in the Plan and conform to the requirements of MnDOT 2521, Walks.

To avoid corner breaks, all walk edges shall be formed and constructed perpendicular to the back of curb and gutter sections and concrete structures for a one foot minimum distance.

All existing signs shall be salvaged and reinstalled as directed by the Engineer or as indicated in the Plan.

(B) **Grading** – If not otherwise detailed in the Plan, all fill sections shall be graded flush with the top of walk for a minimum 18 inches from the edge of walk and then down at a maximum 1:3 slope to existing terrain. The Contractor shall blend in the toe of fill slope and adjacent areas so as not to adversely affect drainage.

(C) **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 (>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. All landings adjacent to push buttons shall be formed and placed separately in an independent concrete pour, regardless of ramp type.

Wet casting or drill and grouting of dowel bars will be required in accordance with the details shown in Standard Plan 5-297.250 Sheet 5 of 5. These bars may be either smooth or deformed and shall be installed with 2 inch minimum concrete cover.

When not accounted for in the Plan, payment for these bars will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of \$10.00 per bar furnished and installed. 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.

S-43.2 METHOD OF MEASUREMENT

Measurement of Concrete Walk will be made by top surface area.

S-43.3 BASIS OF PAYMENT

Payment will be made under Item 2521.618 (Concrete Walk) at the Contract bid price per square foot, including the area of walk under the truncated domes, which shall be compensation in full for all costs of furnishing, and installing the required material. In areas where Directional Curb is constructed, the triangular area that is behind the projected back of curb line will be paid for as Concrete Walk at the Contract bid price for Item 2521.618 (Concrete Walk). All excavation or borrow including hauling or disposal that is necessary to meet the walk grades in the Contract shall be incidental unless specifically provided for in the Plan. If common borrow requirements exceed 8 cubic yards (CV) at any individual site/quadrant, than the common borrow required at that location and not specifically accounted for in the Plan will be paid for at \$20 per cubic yard (CV).

If the Plan calls for payment of Aggregate Base and/or other Grading items for a pedestrian facility, then payment will only be made for the locations specifically provided for in the Plan. All salvaging and reinstalling of signs as a result of concrete walk construction shall be incidental unless specifically provided for in the Plan.

S-44 (2531) CONCRETE CURB AND GUTTER (ADA)

This work shall consist of constructing Concrete Curb and Gutter and the necessary Aggregate Base in accordance with the provisions of MnDOT 2531, other Contract provisions, and the following:

S-44.1 CONSTRUCTION REQUIREMENTS

Concrete Curb and Gutter - The curb and gutter shall be constructed to meet the details in the Plan. The transition from the existing curb and gutter section to the new curb and gutter section should occur within 5-10 feet of the point where the curb and gutter construction begins. The gutter inslope shall be constructed as detailed in the Plans. The gutter inslope transitions shall occur outside of the zero height curb area. The proposed gutter width shall be modified as necessary so as not to protrude into the adjacent travel lane with approval from the Engineer.

At all locations where new curb and gutter meets existing curb and gutter, place saw cut to leave a minimum 3 feet of in place curb and gutter between an existing joint and the proposed saw cut. If the 3 foot minimum cannot be maintained, place the saw cut over the existing joint. At this saw cut location the

Contractor shall drill and grout 2 No. 4 x 12 inch long reinforcement bars (Epoxy coated). Reinforcement bars shall be placed a minimum of 3 inches from face and back of gutter section. When not accounted for in the Plan, payment for these bars will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of \$ 10.00 per bar furnished and installed.

The Contractor must form, at a minimum, the top 1.5 inches of the gutter face. The Contractor shall not use the existing roadway edge as a form for the top 1.5 inches of the gutter face unless approved by the Engineer.

If the gutter flow line in front of the proposed curb ramps exceeds 2.0% slope, the flow line should be adjusted to allow a flatter slope in front of the curb ramps, but still provide positive drainage. The bituminous patch in front of the truncated domes must not exceed 5% measured perpendicular to the flow line. In no case shall a newly constructed curb and gutter flow line exceed 8% unless the roadway profile exceeds 8%.

The Contractor shall not alter any existing drainage patterns unless called for in the plans or approved by the Engineer.

The Contractor shall construct a contraction joint through the curb and gutter section at the bottom of the curb height transitions where the curb height equals zero inches. If any curb and gutter joints fall within the PAR, they shall meet MnDOT 2521.3C.

When constructing directional curb where truncated domes are placed perpendicular to the path of travel, the concrete between the grade break/edge of truncated domes and the gutter toe shall be constructed integral.

S-44.2 METHOD OF MEASUREMENT

Measurement of Concrete Curb and Gutter will be by the linear foot measured at the face of the curb.

S-44.3 BASIS OF PAYMENT

Payment will be made under Item 2531.603 (Concrete Curb and Gutter) at the Contract bid price per linear foot, which shall be compensation in full for all costs of furnishing and installing the required material including Aggregate Base.

S-45 (2531) TRUNCATED DOMES

This work consists of furnishing and installing Truncated Dome Systems (detectable warning surfaces) at pedestrian curb ramps in compliance with the Public Rights-of-Way Accessibility Guidelines (PROWAG). This work shall be performed in accordance with the applicable MnDOT Standard Specifications, these Special Provisions, the details in the Plan, and the following:

S-45.1 CONSTRUCTION REQUIREMENTS

The Contractor shall select a truncated dome product from the approved products list at <http://www.dot.state.mn.us/products/miscmaterials/truncateddomes.html>. The truncated domes shall be placed in concrete and shall be pressed firmly into the concrete to the point that concrete fills the vent holes on the truncated dome plates. No cutting of truncated domes will be allowed unless approved by the Engineer. Any swelling of the concrete that occurs around the truncated domes must be screeded off and the surrounding concrete shall be finished flush with the truncated dome plate edge. To ensure that the truncated domes are well seated in concrete, the Contractor should provide a 3 inch minimum border around the edges of the truncated domes.

The Contractor will be allowed to interchange 9 foot 5 inch and 10 foot radial truncated domes when either is called for in the Plan. If the Contractor does make a substitution, the Contractor will be required to modify the curb line radius to match the truncated domes and meet the detectable edge requirements shown on Standard Plan Sheet No. 5-297.250 (Sheet 4 of 5). The Contractor will be allowed to adjust plan locations of zero inch height curb up to 6 inches laterally to make field fit adjustments for radial truncated domes placement.

S-45.2 METHOD OF MEASUREMENT

Square or rectangular truncated dome area will be measured by the square foot. Radial Truncated domes will be measured along the long cord and multiplied by 2 feet to compute S.F.

S-45.3 BASIS OF PAYMENT

Payment will be made under Item 2531.618 (Truncated Domes) at the Contract bid price per square foot, which shall be compensation in full for furnishing and installation of truncated domes. If additional radial domes are required and not called for in the plans they will be paid for at 4 square feet per each additional plate.

S-46 (2563) TRAFFIC CONTROL SUPERVISOR

The Contractor shall provide a Traffic Control Supervisor for all major traffic control modifications to the Project, in accordance with Contract provisions and as directed by the Engineer.

S-46.1 The Contractor shall provide a Traffic Control Supervisor for all major traffic control modifications listed below:

1. Initial startup of the Project
2. Whenever any bypass is placed into operation
3. Winter suspension traffic control adjustment operation
4. Spring start-up traffic control adjustment operation
5. Completion of the Project
6. Any other major changes to the Traffic Control set-up (due to Contractors staging of operations)

The Traffic Control Supervisor shall be on site 3 days prior to all major traffic control modifications listed above until the major traffic control modification is functioning properly allowing for safe, long term accommodations for traveling public.

During the 3 day time period prior to the major traffic control modification, the Traffic Control Supervisor will be expected to be on-site to develop a site plan for the major traffic control modification, to determine and ensure timely delivery of the proper quantity of traffic control devices, and to develop staging plans for the major traffic control modification operation. The Traffic Control Supervisor shall then coordinate and direct the installation of the devices as well as the staging of the traffic control modification to ensure a safe and efficient transition is completed. Following the transition, the Traffic Control Supervisor shall monitor the traffic flow of the site(s) in question and make modifications necessary to provide for the safe and efficient passage of the traveling public.

S-46.2 The Traffic Control Supervisor shall be certified as a worksite supervisor by MnDOT. A copy of the traffic Control Supervisor's certification shall be provided to the Engineer at the Project pre-construction conference.

MnDOT certification as a Traffic Control Supervisor can be obtained by attending a 3 day MnDOT Traffic Control Supervisor Course within the last 5 years. Additional information on MnDOT's certification can be obtained by contacting Leigh Kriewall at 651-366-4217.

The National ATSSA Traffic Control Supervisor Certification will not be accepted.

(A) The Contractor shall, at the pre-construction conference, designate a Traffic Control Supervisor who shall be responsible for and perform the traffic control management. The traffic Control Supervisor shall be either an employee of the Contractor other than the superintendent, or an employee of a firm which has a subcontract for overall traffic control management for the project. The Traffic Control Supervisor shall be responsible for the management of the traffic control operations of the Project, including those of the Contractor,

subcontractors, and suppliers. The primary responsibility of the Traffic Control Supervisor shall be the Traffic Control Management of this Project.

(B) The Traffic Control Supervisor shall have the authority needed to effectively require modifications and maintenance of traffic controls. This includes having the authority necessary to obtain and use all labor, equipment, and materials needed to provide and maintain traffic control in routine and in emergency situations.

(C) The Traffic Control Supervisor shall have an up-to-date copy of the Part VI of the MN MUTCD (Minnesota Manual on Uniform Traffic Control Devices), including the “Field Manual for Temporary Traffic Control Zone Layouts,” and “ A Guide to Establishing Speed Limits in Highway Work Zones.”

S-46.3 Traffic control management by the Traffic Control Supervisor includes, but is not limited to:

1. Ensuring that traffic control devices are functioning as required. This includes the repair or replacement of all signs, barricades, and other traffic devices that become damaged, moved, or destroyed, or lights that cease to function properly, and barricade weights that are damaged or otherwise fail to stabilize barricades.
2. Providing sufficient surveillance of signs, barricades, and other traffic control devices. This includes inspecting traffic control devices on every calendar day that traffic control devices are in use (by the Traffic Control Supervisor or his approved representative). Routine surveillance reports shall be submitted to the Project engineer weekly.
3. The Traffic Control Supervisor will be on the Project every working day, “on call” at all times, and available within 45 minutes of notification, at other than normal working hours. The Contractor shall give the Engineer, the names, addresses, and phone numbers of at least three individuals (one of which is the Traffic Control Supervisor) responsible to provide and ensure immediate attention to the traffic control management.

S-46.4 Traffic Control Supervisor shall be provided by the Contractor during the time periods indicated above. For any period of time the Traffic Control Supervisor is not available to provide traffic control management, the Contractor will be subject to an hourly charge assessed at a rate of \$250.00 per hour for each hour or any portion thereof which the Engineer determines that the Contractor has not complied.

S-46.5 No measurement will be made of the various duties of the Traffic Control Supervisor, but all such work shall be construed to be included in the lump sum payment under Item 2563.601 (Traffic Control Supervisor). The lump sum payment shall be compensation for all costs incidental thereto.

S-47 (2573) STORM WATER MANAGEMENT

REVISED 03/01/16

SP2016-243

MnDOT 2573 is modified as follows:

S-47.1 The following is added to MnDOT 2573.5:

J Unit Prices

The Department will pay the following unit prices for temporary sediment control items in the absence of a Contract bid price:

Bale Barrier	\$4.10 /In ft (\$13.45/meter)
Silt Fence, HI.....	\$3.00/ In ft (\$10/meter)
Silt Fence, Type MS.....	\$2.00/ In ft (\$6.50/meter)
Silt Fence, Type SD	\$10.00/ In ft (\$32.80/meter)
Sandbag Barrier.....	\$6.00 square foot (\$64.68/ sq meter)

Flotation Silt Curtain, Type: Still Water, 1.2 m (4 foot) depth.....	\$12.50 / In ft (\$41.00/meter)
Sediment Trap Excavation	\$5.50/cubic yard (\$7.20/cubic meter)
Bituminous Lined Flume.....	\$50.00/square yard (\$59.52/square meter)
Sediment Removal, Backhoe	\$175.00/ hour
Sediment Removal, Vacuum truck.....	\$250.00 /hour
Sediment Control Log, Type Wood Fiber.....	\$4.00/ In ft (\$13.00/meter)
Sediment Control Log, Type Rock.....	\$5.00/ In ft (\$16.50/meter)
Flocculant Sock.....	\$200 each

S-48 (2575) ESTABLISHING TURF AND CONTROLLING EROSION

REVISED 11/06/15

MnDOT 2575 is modified as follows:

S-48.1 The provisions of MnDOT 2575.5(L), “Payment Schedule” are modified as follows:

L Payment Schedule

The Department will pay for establishing and maintaining turf and controlling erosion on the basis of the following schedule:

Item No.:	Item:	Unit:
2575.501	Seeding	acre [hectare]
2575.502	Seed, Mixture ____, or (Species)	pound [kilogram]
2575.505	Sod, Type ____	square yard [square meter]
2575.511	Mulch Material, Type ____	ton [metric ton]
2575.513	Mulch Material, Type ____	cubic yard [cubic meter]
2575.515	Mulch Material, Type 4	square yard [square meter]
2575.518	Temporary Poly Covering	square yard [square meter]
2575.519	Disk Anchoring	acre [hectare]
2575.523	Erosion Control Blanket, Category ____*	square yard [square meter]
2575.525	Turf Reinforcement Mat, Category ____	square yard [square meter]
2575.526	Compost Blanket	square yard [square meter]
2575.527	Shoulder Mulch Overspray	pound [kilogram]
2575.535	Water	M gallons [cubic meter]
2575.541	Mowing	acre [hectare]
2575.545	Weed Spraying	acre [hectare]
2575.547	Weed Spray Mixture	gallon [liter]
2575.555	Turf Establishment	lump sum
2575.560	Hydraulic ____ Tackifier	pound [kilogram]
2575.560	Hydraulic ____ Matrix	pound [kilogram]
2575.561	Hydraulic ____ Tackifier	square yard [square meter]
2575.561	Hydraulic ____ Matrix	square yard [square meter]
2575.570	Rapid Stabilization Method 1	acre [hectare]
2575.570	Rapid Stabilization Method 2	acre [hectare]
2575.571	Rapid Stabilization Method 3	M gallons [cubic meter]
2575.572	Rapid Stabilization Method 4	square yard [square meter]
2575.573	Rapid Stabilization Method 5	ton [metric ton]

* If maintenance applies, the Department will place the subnote, “Includes Maintenance” on the pay item shown in the summary of quantities on the plans.

S-48.2 The following is added to MnDOT 2575.5:

M Unit Prices

The Department will pay the following unit prices for temporary erosion control items in the absence of a Contract bid price:

Disc anchoring.....	\$45.00/ acre (\$110.00/ hectare)
Temporary Seed Mixtures	
21-111, 21-112 or 21-113	\$1.25/ pound (\$2.50 /kilogram)
22-111	\$2.00 /pound (\$4.44/ kilogram)
Erosion Control Blanket	
Category 3N	\$1.80/square yard (\$2.15/ square meter)
Category 4N	\$2.10/square yard (\$2.51/ square meter)
Rapid Stabilization	
Method 1	\$465.00/acre (\$1162.5/hectare)
Method 2	\$800.00/acre (\$1976.75/hectare)
Method 3	\$726.00/M gallon (\$149.5/cubic meter)
Method 4	\$1.84/sq yd (\$2.20/square meter)
Hydraulic mulch.....	\$1.86/lb (\$3.33/kilogram)
Hydraulic Stabilized Fiber Matrix.....	\$1.81/lb (\$4.4/kilogram)
Hydraulic Reinforced Fiber Matrix	\$1.77/lb (\$4.4/kilogram)
Water.....	\$17.00/M gallon (\$0.53/cubic meter)
Mowing	\$160.00/ acre (\$400.00/hectare)
Weed Spraying	\$60.00 /acre (\$150.00/hectare)

S-49 (3137) COARSE AGGREGATE FOR PORTLAND CEMENT CONCRETE

REVISED 01/08/16

MnDOT 3137 is hereby modified as follows:

S-49.1 The first paragraph of MnDOT 3137.2.D.2 shall be deleted and replaced with the following:

Provide coarse aggregate in accordance with 3137.2.D.1, “Coarse Aggregate for General Use,” except as modified by Table 3137-2.

S-49.2 Table 3137-2 (h) of MnDOT 3137.2.D.2 shall be deleted and replaced with the following:

h)	Absorption for Class B aggregate for all concrete bridge decks and bridge barrier	≤ 1.10
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S-49.3 Table 3137-4 of MnDOT 3137.2.E shall be deleted and replaced with the following:

Table 3137-4						
Coarse Aggregate Designation for Concrete,						
<i>percent by weight passing square opening sieves</i>						
Sieve Sizes	Coarse Aggregate Designation					
	1	2	3	4	7	8
	ASTM #467	ASTM #67*	ASTM #7*	ASTM #89	CA-70	CA-80
2 in [50 mm]	100	-	-	-	-	-
1½ in [37.5 mm]	95 – 100	-	-	-	-	-
1 in [25.0 mm]	-	100	-	-	-	-
¾ in [19.0 mm]	35 – 70	90 – 100	100	-	-	-
5/8 in [16.0 mm]	-	-	-	-	100	-
½ in [12.5 mm]	-	-	90 – 100	100	85 – 100	-

¾ in [9.5 mm]	10 – 30	20 – 55	40 – 70	90 – 100	50 – 100	100
No.4 [4.75 mm]	0 – 5	0 – 10	0 – 15	20 – 55	0 – 25	55 – 95
No.8 [2.36 mm]	-	-	-	5 – 30	-	-
No.16 [1.18 mm]	-	-	-	0 – 10	-	-
No.50 [300 µm]	-	-	-	0 - 5	-	0-5
*ASTM #67 and ASTM #7 Gradations are MnDOT Modified.						

S-50 (3138) AGGREGATE FOR SURFACE AND BASES COURSES

REVISED 12/02/16

MnDOT 3138 is modified as follows:

S-50.1 Add the following to MnDOT 3138.2D Surfacing Aggregates:

- (5) Provide aggregate with a minimum clay content of 3% and a Plasticity Index (PI) of 5 – 12. The requirements for PI and minimum clay content are met, if the bitumen content is 1% or greater, the material is composed of at least 25% recycled materials or is composed of at least 50% crushed quarry aggregate.

S-50.2 Replace that portion of MnDOT 3138.2.E which occurs prior to Table 3138-3 with the following:

E Gradation Requirements

- (1) For products containing less than 25 percent recycled materials, conform to Table 3138-3.
- (2) For products containing 25 percent or more recycled materials and less than 75% recycled concrete, conform to Table 3138-4. Bituminous millings meeting a gradation of 100% passing the 1.5” sieve and 95-100% passing the 1” sieve may be used for the 1-2’ fillet/rollover outside of a paved shoulder for class 1 and class 2.
- (3) For products containing 75 percent or more recycled concrete, conform to Table 3138-5.
- (4) Perform gradation tests prior to bituminous extraction.

S-50.3 Add the following to MnDOT 3138.3:

- G Particle Size Analysis Laboratory Manual Method..... 1302**
- H Liquid Limit Determination Laboratory Manual Method..... 1303**
- I Plastic Limit Determination Laboratory Manual Method..... 1304**

3. (3151) BITUMINOUS MATERIAL (MSCR)

NEW WRITEUP 01/15/16

MnDOT 3151 is modified as follows:

S-50.4 Replace MnDOT 3151.2.A with the following:

A Asphalt Binder

Only use Performance Graded (PG) Asphalt Binder meeting the requirements of AASHTO M 332, Table 3151-1A, and the Combined State Binder Group Method of Acceptance for Asphalt Binder, available on the Asphalt Products page of the Approved/Qualified Products List.

Table 3151-1A Multi Stress Creep Recovery (MSCR) Test Requirements				
Grade*	Binder Code for 2360 Mix Design	Jnr@3.2kPa, maximum	%R @ 3.2kPa, min.**	Jnr Difference, max***
PG 58S-28	B	4.5	N/A	75 %
PG 58H-28	E	2.0	30 %	75 %
PG 58V-28	H	1.0	55 %	75 %
PG58E-28		0.5	75 %	N/A
PG58S-34		4.5	N/A	75 %
PG58H-34	C	2.0	30 %	75 %
PG58V-34	F	1.0	55 %	75 %
PG58E-34	I	0.5	75 %	N/A
PG49S-34	M	4.5	N/A	75 %
PG52S-34	A	4.5	N/A	75 %
PG64S-22	L	4.5	N/A	75 %

* LTPP Bind temperature for Minnesota is 58°C for the high PG Binder Grade temperature. The bottom three grades are special use binders and are to be tested at the high temperature indicated by the grade (example: PG 49S-34 is tested @ 49C).

** Use in place of Appendix X1 in AASHTO - M332.

*** Jnr Difference is waived for “E” grade binders.

Use asphalt binder supplier recommendations for mixing and compaction temperatures.

S-51 FINAL ESTIMATE AND FINAL PAYMENT

The following provisions shall apply to preparation of the Final Estimate and execution of Final Payment under this Contract:

S-51.1 FINAL ESTIMATE

State Law provides that the final estimate will be made within 90 days after completion of all work required under this Contract. If, however, the total value of the Contract exceeds \$2,000,000.00, the 90 day requirement will not apply and the time allowed for making such final estimate shall be 180 days after the work under this Contract has been, in all things, completed to the satisfaction of the Commissioner.

EQUAL EMPLOYMENT OPPORTUNITY (EEO) SPECIAL PROVISIONS

This section of Special Provisions contains the Equal Employment Opportunity (EEO) rules and regulations for highway construction projects in Minnesota which are federally and/or State funded.

The source of funding determines which EEO regulations and goals (Federal and/or State goals) apply to a specific project. When a project contains funding from both Federal and State sources, both sets of regulations apply, and the Minnesota Department of Transportation (MnDOT) monitors and reviews projects at both levels.

If the project contains any Federal funding, and has a total dollar value exceeding \$10,000, Federal EEO regulations and goals apply (pages 2, 6, 7-8, 9-14, 15, 16-17, 22-26, 27-38). The MnDOT Office of Civil Rights monitors and reviews these projects on behalf of the Federal Highway Administration (FHWA), under Federal statutes (23 USC 140) and rules (23 CFR 230).

If the project contains any State funding, and has a total dollar value exceeding \$100,000, State EEO regulations and goals apply (pages 2, 3, 4, 5, 6, 9-14, 16-22). MnDOT's Office of Civil Rights monitors and reviews these projects in conjunction with the Minnesota Department of Human Rights under Minnesota Statutes §363A.36 and its accompanying rules.

MnDOT has established a single review and monitoring process which meets both Federal and State requirements.

Please note that Pages 23-38 of these Special Provisions may be omitted from projects with no Federal funding.

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**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(23 USC 140, 23 CFR 230 and Minnesota Statute §363A.36)**

1. The offerer's or bidder's attention is called to the "Minnesota Affirmative Action Requirements" (EEO Page 4), the "Specific Federal Equal Employment opportunity Responsibilities" (EEO Pages 7-8), the "Standard Federal and State Equal Employment Opportunity Construction Contract Specifications" (EEO Pages 9-14), the "Equal Opportunity Clause" (EEO Page 15) and "Required Contract Provisions - Federal-Aid Construction Contracts" (EEO Pages 27-38).
2. The goals and timetables for minority and women participation, expressed in percentage terms of hours of labor for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as shown on EEO Pages 16-17.

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

The Contractor's compliance with the regulations in 41 CFR Part 60-4, and/or Minnesota Statutes §363A.36 and its accompanying rules shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) for Federal or federally assisted projects, and Minnesota Statutes §363A.36, and its accompanying rules for State or State assisted projects, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and women employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority and women employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4 for Federal or federally-assisted projects and/or Minnesota Statutes §363A.36 and its accompanying rules for state or state-assisted projects. Compliance with the goals will be measured against the total work hours performed.

3. If the contract is federally funded, the Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within ten working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. If the contract is state funded, the Contractor shall provide written notification to the Compliance Division, Minnesota Department of Human Rights, Freeman Building, 625 Robert Street North, Saint Paul, Minnesota 55155 within ten working days of award of any construction subcontract in excess of \$100,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the county or counties of the State of Minnesota where the work is to be performed.

**NOTICE TO ALL PRIME AND SUBCONTRACTORS
PRE-AWARD REPORTING REQUIREMENTS**

In order to ensure compliance with Federal and State laws and regulations (23 USC 140, and 23 CFR 230, and Minnesota Statutes §363A.36) and to ensure Mn/DOT's ability to monitor and enforce compliance efforts, the following requirements apply if the apparent low bid exceeds \$ 5,000,000.00:

- 1) The Apparent Low Bidder ("ALB") must provide to Mn/DOT the "EEO-8 Form" (also entitled "EEO Compliance Review Report"), which must provide detail on the contractor's total company workforce in the State of Minnesota during the twelve month period preceding July 30th of the previous year (Office and/or clerical personnel need not to be included).
- 2) The ALB must provide to Mn/DOT a work plan for meeting the minority and women employment goals established by the Minnesota Department of Human Rights, for the project in question. The work plan must include, at a minimum (1) how the ALB will incorporate its current minority and women employees in the ALB's efforts to meet the established goals; and (2) a contingency plan if the ALB has determined that its current workforce is not sufficient in order to achieve the established employment goals. If the ALB relies in whole or in part upon unions as a source of employees, then the ALB must (1) include a list of established organizations that are likely to yield qualified minority and women candidates if those union(s) are unable to provide a reasonable flow of minority and women candidates in their work plan; and (2) document the method by which these organizations will refer candidates to the ALB for employment opportunities. All bidders are hereby notified that the U.S. Department of Labor has determined that a contractor will not be excused from complying with the Federal and State laws and regulations cited above based solely on the fact that a contractor has a collective bargaining agreement with a union providing for the union to be the exclusive source of referral and that the union failed to refer minority employees. A contractor may obtain a list of organizations likely to yield qualified minority and women candidates from the Mn/DOT Office of Civil Rights.
- 3) The ALB must provide to Mn/DOT the ALB's total workforce and labor projections for the project (represented in hours), the ALB's projected total number of minority hours for the project, and the ALB's projected total number of women hours for the project. The details must include the trade(s) that will be utilized in order to complete the project.

The ALB must submit documents as required to comply with this section no later than five business days after the date that bids for the contract are opened. The five day period starts the business day following the date that bids were opened. The required documents must be received prior to Contract Award, and must be sent to the Mn/DOT Office of Civil Rights – 395 John Ireland Blvd., Mail Stop 170 St. Paul, MN 55155-1899. Submittal of the documents described in (1), (2) and (3) is required for contract award to the ALB. The submitted documents will be used as a tool to assist contractors in meeting employment goals; the content itself will not be evaluated for the purpose of determining contract award.

MINNESOTA AFFIRMATIVE ACTION REQUIREMENTS

1. It is hereby agreed between the parties to this contract that Minnesota Statutes, Section §363A.36, and its accompanying rules are incorporated into any contract between these parties based upon this specification or any modification of it. A copy of Minnesota Statutes, Section §363A.36, and its accompanying rules is available upon request from the contracting agency. The Contractor hereby agrees to comply with the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.
2. It is hereby agreed between the parties to this contract that this agency requires that the Contractor meet affirmative action criteria as provided for by Minnesota Statutes §363A.36 and its accompanying rules. It is the intent of the Minnesota Department of Transportation to fully carry out its responsibility for requiring affirmative action, and to implement sanctions for failure to meet these requirements. Failure by a contractor to implement an affirmative action plan, meet project employment goals for minority and women employment or make a good faith effort to do so may result in revocation of his/her Certificate of Compliance or suspension or revocation of the contract (Minnesota Statutes §363A.36).
3. Under the affirmative action obligation imposed by the Human Rights Act, Minnesota Statutes, Section §363A.36, contractors shall take affirmative action to employ and advance in employment minority, female, and qualified disabled individuals at all levels of employment. Affirmative action must apply to all employment practices, including but not limited to hiring, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor shall recruit, hire, train and promote persons in all job titles, without regard to race, color, creed, religion, sex, national origin, marital status, status with regard to public assistance, physical or mental disability, sexual orientation or age except where such status is a bona fide occupational qualification. These affirmative action requirements of the Minnesota Human Rights Act are consistent with but broader than the Federal requirements as covered in this contract.
4. Affirmative Action for disabled workers. The Contractor shall not discriminate against any employee or applicant for employment because of a physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled individuals without discrimination based upon their physical or mental disability in all employment practices such as employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training (including apprenticeship). In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with Minnesota Statutes, section §363A.36 and the rules and relevant orders of the Minnesota Department of Human Rights pursuant to the Minnesota Human Rights Act.
5. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the commissioner of the Minnesota Department of Human Rights. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment minority, women and qualified disabled employees and applicants for employment, and the rights of applicants and employees. **A poster entitled "Contractor Non-discrimination is the Law" may be obtained from: Compliance Unit, Minnesota Department of Human Rights, Freeman Building, 625 Robert Street North, Saint Paul, Minnesota 55155. (651) 539-1100, TTY 296-1283, Toll Free 1-800-657-3704.**
6. The Contractor shall notify each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Minnesota Statutes, section §363A.36 of the Minnesota Human Rights Act, and is committed to take affirmative action to employ and advance in employment minority, women and qualified physically and mentally disabled individuals.

APPROPRIATE WORK PLACE BEHAVIOR ON Mn/DOT CONSTRUCTION PROJECTS UTILIZING STATE FUNDS

It is the Minnesota Department of Transportation's (MnDOT's) policy to provide a workplace free from violence, threats of violence, harassment and discrimination. MnDOT has established a policy of zero tolerance for violence in the workplace. Contractors who perform work on MnDOT construction projects, or local government entities or public agencies utilizing state funds on highway construction projects, shall maintain a workplace free from violence, harassment and discrimination (See definitions, below).

Definitions:

1. Violence is the threatened or actual use of force which results in or has a high likelihood of causing fear, injury, suffering or death. Employees are prohibited from taking reprisal against anyone who reports a violent act or threat.

2. Harassment is the conduct of one employee (toward another employee) which has the purpose or effect of 1) unreasonably interfering with the employee's work performance, and/or 2) creating an intimidating, hostile or offensive work environment. Harassment is not legitimate job-related efforts of supervisor to direct/evaluate an employee or to have an employee improve work performance.

A. Unlawful discriminatory harassment is harassment which is based on these characteristics: race, color, creed, religion, national origin, sex, disability, age, marital status, status with regard to public assistance or sexual orientation. Managers, supervisors and employees shall not take disciplinary or retaliatory action against employees who make complaints of sexual harassment.

Sexual harassment is unwelcome sexual advances, requests for sexual favors, or sexually motivated physical contact, or other verbal or physical conduct or communication of a sexual nature, when submission to that conduct or communication is 1) made a term or condition, either explicitly or implicitly, of obtaining employment; or 2) is used as a factor in decisions affecting an individual's employment; or 3) when that conduct or communication has the purpose or effect of substantially interfering with an individual's employment or creating an intimidating, hostile or offensive work environment, and the employer knows or should have known of the existence of the harassment and fails to take timely and appropriate action. Examples include but are not limited to insulting or degrading sexual remarks or conduct; threats, demands or suggestions that status is contingent upon toleration or acquiescence to sexual advances; displaying in the workplace sexually suggestive objects, publications or pictures, or retaliation against employees for complaining about the behavior cited above or similar behaviors.

B. General harassment is harassment which is not based on the above characteristics. Examples may include, but are not limited to: physically intimidating behavior and/or threats of violence; use of profanity (swearing), vulgarity; ridiculing, taunting, belittling or humiliating another person; inappropriate assignments of work or benefits; derogatory name calling.

3. Discrimination includes actions which cause a person, solely because of race, color, creed, religion, national origin, sex, disability, age, marital status, status with regard to public assistance or sexual orientation to be subject to unequal treatment.

Prime Contractors who work on MnDOT projects shall ensure that their managers, supervisors, foremen/women and employees are familiar with MnDOT's policy on appropriate work place behavior; and shall ensure that their subcontractors are familiar with this policy. Managers, supervisors and foremen/women will respond to, document, and take appropriate action in response to all reports of violence, threats of violence, harassment or discrimination. Failure to comply with this policy may result in cancellation, termination or suspension of contracts or subcontracts currently held and debarment from further such contracts or subcontracts as provided by statute. If you need additional information or training regarding this policy, please contact the Office of Civil Rights at (651) 366-3073.

NOTICE TO ALL PRIME AND SUBCONTRACTORS REPORTING REQUIREMENTS

1. In order to monitor compliance with Federal Statutes 23 USC 140 and 23 CFR 230, and Minnesota Statutes §363A.36, all prime contractors and subcontractors are required to complete a Mn/DOT Monthly Employment Compliance Report each month for each project (Form EEO-13, sample copy at EEO Pages 20-21.) Prime contractors are also required to complete a Contractor Employment Data Report (Form EEO-12, sample copy at EEO Pages 18-19) once prior to work commencing on the project, unless one has been completed already within the calendar year.

The prime contractor of each project collects Monthly Employment Compliance Reports from each subcontractor who performed work during the month, and completes a Monthly Employment Compliance Report on its own work force. **For the month of July only, an EEO-13 is required for each payroll period within the month of July.** The prime contractor submits the EEO-13 forms to the Mn/DOT Project Engineer by the 15th day of the subsequent month.

Failure to submit the required reports in the allowable time frame will be cause for the imposition of contract sanctions.

It is the intent of Mn/DOT to implement monitoring measures on each project to ensure that each prime contractor and subcontractor is promoting the full realization of equal employment opportunities. Any project may be scheduled for an in depth on-site contract compliance review. During the scheduled on-site review, the Contractor will be required to provide to Mn/DOT documentation of its "good faith efforts" as shown in EEO Pages 10-13, at 7 a-p of this contract.

2. If a Federally funded project requires On-the-Job-Training (OJT) participation, information is provided in the contract and can be located by referring to the Table of Contents for Division S. (OJT is also listed as a bid line item under Trainees.) When a contract requires OJT participation, the Prime Contractor shall submit a training plan as indicated in the Proposal. The training plan shall include the job classification titles of trainees, planned training activities and the approximate start date of trainees.
3. When a Contractor selects a trainee applicant for OJT, the Contractor completes an On the Job Training Program-Trainee Assignment form (sample copy at EEO Page 23) and submits it to the Contract Compliance Specialist (CCS) assigned to the project for approval. The CCS notifies the Contractor and Project Engineer when the applicant is approved.
4. Hours of work performed by OJT employees shall be documented on a monthly basis on the Certification of On-The-Job Training Hours form, (Mn/DOT Form No. 21860, sample copy at EEO Page 24). The Contractor shall submit the original and one copy to the Project Engineer, and one copy to the CCS assigned to the project.

Do not remove forms from this contract. Please duplicate forms from the copies in this contract, or the Mn/DOT Office of Civil Rights will provide these forms upon request. Please call the Office of Civil Rights, (651) 366-3073.

SPECIFIC FEDERAL EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 CFR 230, Subpart A, Appendix A, FAPG June 6, 1996)

1. General.

a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required contract Provisions (Form PR-1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to Section 140 of title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.

b. The contractor will work with the State highway agencies and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

c. The contractor and all his/her subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of equal employment Opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy.

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote their full realization of equal employment through a positive continuing program:

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

3. Equal Employment Opportunity Officer. The contractor will designate and make known to State highway agency contracting officers

an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy.

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

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

(2). All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official, covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

(3). All personnel who are engaged in direct recruitment for the project will be instructed by the EEO officer or appropriate company official in the contractor's procedures for locating and hiring minority group employees.

b. In order to make the contractor's equal employment policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

(1). Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

(2). The contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment.

a. When advertising for employees, the contractor will include in all advertisements for employees the notation "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the contractor will, through his/her EEO Officer, identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where the implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

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

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

b. The contractor will periodically evaluate the spread of wages paid within each

SPECIFIC FEDERAL EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (cont.)

classification to determine any evidence of discriminatory wage practices.

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

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his/her obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all his avenues of appeal.

7. Training and Promotion.

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e. apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the Training Special Provision is provided under this contract, this subparagraph will be superseded as indicated in Attachment 2.

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

d. The Contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. Unions. If a contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as

agent will include the procedures set forth below:

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

b. The contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.

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

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, or national origin; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the State highway agency.

9. Subcontracting.

a. The contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State highway agency personnel.

b. The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports:

a. The contractor shall keep such records as necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

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

(2) The progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractor's who rely in whole or in part on unions as a source of their work force),

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and

(4) The progress and efforts being made in securing the services of minority group subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration.

c. The contractors will submit an annual report to the State highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR-1391. If on-the-job training is being required by a "Training Special Provision", the contractor will be required to furnish Form FHWA 1409.

**STANDARD FEDERAL AND STATE EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(41 CFR 60-4.3 and Minnesota Statute §363A.36)**

Unless noted, the following apply to both Federal/federally assisted projects and State/state assisted projects. Item 3 applies to Federal/federally assisted projects only

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer Identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 (\$100,000 for State projects) the provisions of these specifications and the Notice which contains the applicable goals for minority and women participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4, 5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work on the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7(a) to (p) of these specifications (itemized as 4 [a] to [o], Minnesota Rules

**STANDARD FEDERAL AND STATE EEO CONSTRUCTION
CONTRACT SPECIFICATIONS (cont.)**

5000.3535). The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minorities and utilization the Contractor should (shall, for State or state assisted projects) reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor shall make substantially uniform progress toward its goals in each craft during the period specified. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Federal goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any office of Federal Contract Compliance programs or from Federal procurement contracting officers. State goals are published periodically in the State Register in notice form, and may be obtained from the Minnesota Department of Human Rights or the Minnesota Department of Transportation Office of Civil Rights. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union, with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications and Executive Order 11246 and its associated rules and regulations for Federal or federally assisted projects, and Minnesota Statutes, Section §363A.36 of the Minnesota Human Rights Act, or the rules adopted under the Act for State or state assisted projects.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained according to training programs approved by the Minnesota Department of Human Rights, the Minnesota Department of Labor and Industry, or the United States Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications must be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following (referred to in Minnesota Rules 5000.3535 as items 4(a) to (o):
 - (a) Ensure and maintain, or for State or state assisted projects make a good faith effort to maintain, a working environment free of harassment, intimidation, and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work. For

**STANDARD FEDERAL AND STATE EEO CONSTRUCTION
CONTRACT SPECIFICATIONS (cont.)**

Federal or federally assisted projects, the Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or women individuals working at such sites or in such facilities.

- (b) Establish and maintain a current list of minority and women recruitment sources, provide written notification to minority and women recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- (c) Maintain a current file of the names, addresses, and telephone numbers of each minority and woman off-the-street applicant and minority or woman referral from a union, a recruitment source, or community organization and of what action was taken with respect to each individual. If the individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.
- (d) Provide immediate written notification to the commissioner of the Minnesota Department of Human Rights for State or state assisted projects, or the director of the Office of Federal Contract Compliance for Federal or federally assisted projects, when the union, or unions with which the Contractor has a collective bargaining agreement, has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- (e) Develop on-the-job training opportunities and/or participate in training programs for the areas which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the State of Minnesota for State or state assisted projects or the Department of Labor, for Federal or federally assisted projects. The Contractor shall provide notice of these programs to the sources compiled under (b).
- (f) Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its equal employment opportunity obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and women employees at least once a year; and by posting the company equal employment opportunity policy on bulletin boards accessible to all employees at each location where construction work is performed.

**STANDARD FEDERAL AND STATE EEO CONSTRUCTION
CONTRACT SPECIFICATIONS (cont.)**

- (g) Review, at least annually, the company's equal employment opportunity policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions; including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the first day of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- (h) Disseminate the Contractor's equal employment opportunity policy externally by including it in any advertising in the news media, specifically including minority and women news media, and providing written notification to and discussing the Contractor's equal employment opportunity policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.
- (i) Direct its recruitment efforts, both oral and written, to minority, women, and community organizations; to schools with minority and women students; and to minority and women recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- (j) Encourage present minority and women employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and women youth, both on the site and in other areas of a Contractor's work force.
- (k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3. (This requirement applies only to Federal and federally assisted projects.)
- (l) Conduct, at least annually, an inventory and evaluation at least of all minority and women personnel for promotional opportunities; and encourage these employees to seek or to prepare for, through appropriate training, such opportunities. (This is Item 4(k) in Minnesota Rules.)
- (m) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out. (This is item 4(l) in Minnesota Rules.)

**STANDARD FEDERAL AND STATE EEO CONSTRUCTION
CONTRACT SPECIFICATIONS (cont.)**

- (n) Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes. (This is item 4(m) in Minnesota Rules.)
 - (o) Document and maintain a record of all solicitations or offers for subcontracts from minority and women construction contractors and suppliers, including circulation of solicitations to minority and women contractor associations and other business associations. (This is item 4(n) in Minnesota Rules.)
 - (p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment opportunity policies and affirmative action obligations. (This is item 4(o) in Minnesota Rules.)
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7(a) to (p) for Federal or federally assisted projects, and 4(a)-(o) for State or state assisted projects). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7(a) to (p) or 4(a) to (o) of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and women work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor however, is required to provide equal employment opportunity and to take affirmative action for all minority groups both male and female, and all women both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order for Federal or federally assisted projects, or Minnesota Rules for State or state assisted projects, if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order or Minnesota Rules part 5000.3520 if a specific minority group is under-utilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, creed, religion, sex, or national origin. Minnesota Statutes §363A.36, part 5000.3535 (Subp. 7) also prohibits discrimination with regard to marital status, status with regard to public assistance, disability, age, or sexual orientation.

**STANDARD FEDERAL AND STATE EEO CONSTRUCTION
CONTRACT SPECIFICATIONS (cont.)**

11. The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts under the federal Executive Order 11246 or a local human rights ordinance, or whose certificate of compliance has been suspended or revoked pursuant to Minnesota Statutes, Section §363A.36.
12. The Contractor shall carry out such sanctions for violation of these specifications and of the equal opportunity clause, including suspension, termination, and cancellation of existing contracts as may be imposed or ordered pursuant to Minnesota Statutes, Section §363A.36, and its implementing rules for State or state assisted projects, or Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs for Federal or federally assisted projects. Any contractor who fails to carry out such sanctions shall be in violation of these specifications and Minnesota Statutes, Section §363A.36, or Executive Order 11246 as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications (paragraph 4 in Minnesota Rules 5000.3535), so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of these Specifications or Minnesota Statutes, Section §363A.36 and its implementing rules, or Executive Order 11246 and its regulations, the commissioner or the director shall proceed in accordance with Minnesota Rules part 5000.3570 for State or state assisted projects, or 41 CFR 60-4.8 for Federal or federally assisted projects.
14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Minnesota Department of Human Rights or the Government, and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (for example, mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing provided in this part shall be construed as a limitation upon the application of other state or federal laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents.

EQUAL OPPORTUNITY CLAUSE
(41 CFR Part 60-1.4 b, 7-1-96 Edition)

The applicant hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and, selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Highway Agency (SHA) setting forth the provisions of this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
3. The Contractor will send to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of Executive Order 11246, Equal Employment Opportunity, dated September 24, 1965, and of the rules, regulations (41 CFR Part 60), and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by Executive Order 11246 and by rules, regulations, and orders of the Secretary of Labor, pursuant thereto, and will permit access to its books, records, and accounts by the Federal Highway Administration (FHWA) and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract, or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
7. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraph (1) through (7) in every subcontract or purchase order so that such provisions will be binding upon each subcontractor or vendor, unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246. The Contractor will take such action with respect to any subcontract or purchase order as the Secretary of Labor, SHA, or the Federal Highway Administration (FHWA) may direct as a means of enforcing such provisions, including sanctions for noncompliance. In the event a contractor becomes a party to litigation by a subcontractor or vendor as a result of such direction, the contractor may request the SHA to enter into such litigation to protect the interest of the State. In addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Minority and Women Employment Goals

County	Federal Goals		State Goals	
	Minority Goal	Women Goal	Minority Goal	Women Goal
Aitkin	2.2%	6.9%	5%	6%
Anoka	2.9%	6.9%	22%	6%
Becker	0.7%	6.9%	6%	6%
Beltrami	2.0%	6.9%	6%	6%
Benton	0.5%	6.9%	3%	6%
Big Stone	2.2%	6.9%	4%	6%
Blue Earth	2.2%	6.9%	4%	6%
Brown	2.2%	6.9%	4%	6%
Carlton	1.2%	6.9%	5%	6%
Carver	2.9%	6.9%	22%	6%
Cass	2.2%	6.9%	6%	6%
Chippewa	2.2%	6.9%	4%	6%
Chisago	2.9%	6.9%	3%	6%
Clay	0.7%	6.9%	6%	6%
Clearwater	2.0%	6.9%	6%	6%
Cook	1.2%	6.9%	5%	6%
Cottonwood	0.8%	6.9%	4%	6%
Crow Wing	2.2%	6.9%	6%	6%
Dakota	2.9%	6.9%	22%	6%
Dodge	0.9%	6.9%	4%	6%
Douglas	2.2%	6.9%	6%	6%
Faribault	2.2%	6.9%	4%	6%
Fillmore	0.9%	6.9%	4%	6%
Freeborn	0.9%	6.9%	4%	6%
Goodhue	2.2%	6.9%	4%	6%
Grant	2.2%	6.9%	6%	6%
Hennepin	2.9%	6.9%	32%	6%
Houston	0.6%	6.9%	4%	6%
Hubbard	2.0%	6.9%	6%	6%
Isanti	2.2%	6.9%	3%	6%
Itasca	1.2%	6.9%	5%	6%
Jackson	0.8%	6.9%	4%	6%
Kanabec	2.2%	6.9%	3%	6%
Kandiyohi	2.2%	6.9%	3%	6%
Kittson	2.0%	6.9%	6%	6%
Koochiching	1.2%	6.9%	5%	6%
Lac Qui Parle	2.2%	6.9%	4%	6%
Lake	1.2%	6.9%	5%	6%
Lake of the Woods	2.0%	6.9%	6%	6%
Le Sueur	2.2%	6.9%	4%	6%
Lincoln	0.8%	6.9%	4%	6%
Lyon	0.8%	6.9%	4%	6%

Minnesota Department of Transportation EEO Special Provisions
Office of Civil Rights

Revised 07/12

County	Federal Goals		State Goals	
	Minority Goal	Women Goal	Minority Goal	Women Goal
Mahnomen	2.0%	6.9%	6%	6%
Marshall	2.0%	6.9%	6%	6%
Martin	2.2%	6.9%	4%	6%
McLeod	2.2%	6.9%	3%	6%
Meeker	2.2%	6.9%	3%	6%
Mille Lacs	2.2%	6.9%	3%	6%
Morrison	2.2%	6.9%	6%	6%
Mower	0.9%	6.9%	4%	6%
Murray	0.8%	6.9%	4%	6%
Nicollet	2.2%	6.9%	4%	6%
Nobles	0.8%	6.9%	4%	6%
Norman	2.0%	6.9%	6%	6%
Olmsted	1.4%	6.9%	4%	6%
Otter Tail	2.2%	6.9%	6%	6%
Pennington	2.0%	6.9%	6%	6%
Pine	2.2%	6.9%	3%	6%
Pipestone	0.8%	6.9%	4%	6%
Polk	1.2%	6.9%	6%	6%
Pope	2.2%	6.9%	6%	6%
Ramsey	2.9%	6.9%	32%	6%
Red Lake	2.0%	6.9%	6%	6%
Redwood	0.8%	6.9%	4%	6%
Renville	2.2%	6.9%	3%	6%
Rice	2.2%	6.9%	4%	6%
Rock	0.8%	6.9%	4%	6%
Roseau	2.0%	6.9%	6%	6%
Scott	2.9%	6.9%	22%	6%
Sherburne	0.5%	6.9%	3%	6%
Sibley	2.2%	6.9%	4%	6%
St. Louis	1.0%	6.9%	5%	6%
Stearns	0.5%	6.9%	3%	6%
Steele	0.9%	6.9%	4%	6%
Stevens	2.2%	6.9%	6%	6%
Swift	2.2%	6.9%	4%	6%
Todd	2.2%	6.9%	6%	6%
Traverse	2.2%	6.9%	6%	6%
Wabasha	0.9%	6.9%	4%	6%
Wadena	2.2%	6.9%	6%	6%
Waseca	2.2%	6.9%	4%	6%
Washington	2.9%	6.9%	22%	6%
Watonwan	2.2%	6.9%	4%	6%
Wilkin	0.7%	6.9%	6%	6%
Winona	0.6%	6.9%	4%	6%
Wright	2.9%	6.9%	3%	6%
Yellow Medicine	2.2%	6.9%	4%	6%

Minnesota Department of Transportation Office of Civil Rights Contractor Employment Data	1. Contractor Name and Address: Phone: _____
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2. Employment Data	a) Name: Last Name, First Name, MI	b) Social Security #	c) New Hire (Y or N)	d) Ethnicity	e) Gender (M or F)	f) Trade/Foreman, Supervisors, Managers	g) Level (A, J, or T)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
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23.							
24.							
25.							
26.							
27.							

INSTRUCTIONS FOR EEO-12 CONTRACTOR EMPLOYMENT DATA

This form should be submitted at the Pre-Con to the Project Engineer prior to the start of your first MnDOT construction project for the calendar year (Prime and Subs)

1. Contractor Name and Address self-explanatory.
2. Employment Data information will coincide with your employment records.
 - 2a. Name should be listed First Name, Middle Initial, and Last Name. This will enable MnDOT EEO staff to readily identify individuals on all projects.
 - 2b. Social Security Number self-explanatory.
 - 2c. New Hire is to be indicated with a “Y” for Yes or an “N” for No. “New Hire” is an employee who has not worked for you in any capacity or on any other project within the current calendar year.
 - 2d. Ethnicity can be indicated by Black (B), Hispanic (H), American Indian/Alaskan Native (AI), Asian/Pacific Islander (AP), or White (W).
 - 2e. Gender is to be indicated with an “M” for Males or an “F” for Females.
 - 2f. Trade/Foreman, Supervisors, Managers self-explanatory. List trade that applies unless the employee fits one of the other three categories.
 - 2g. Level “A” is for an Apprentice, “J” is for a Journey Worker, and “T” is for a MnDOT approved Trainee.

If you have questions about filling out this form, contact the Office of Civil Rights at (651) 366-3073.
(Please make copies as you need them.)

This information can be submitted electronically via the web, through MnDOT’s Work force Information Tracking Initiative (WITI) Program. To open a free account to gain access to WITI or to find out more about this possibility please contact MnDOT’s Office of Civil Rights at (651) 366-3015.

Minnesota Department of Transportation EEO Special Provisions
Office of Civil Rights

Revised 07/12

Minnesota Department of Transportation Office of Civil Rights Monthly Employment Compliance Report EEO-13		1. SP <input type="checkbox"/> SAP <input type="checkbox"/> (Check one) SP# _____ County or City _____		3. Contractor Name: _____ Federal Tax ID: _____ Street Address: _____ City, State Zip _____		4. Prime <input type="checkbox"/> Subcontractor <input type="checkbox"/> (check one)				
		2. Reporting Period to _____		5. Dollar Amount of Contract: _____		6. Percent of Completion: _____				
		7. Employment Data a) Name: Last, First Middle Initial		b) Social Security #	c) New Hire (Y or N)	d) Ethnicity	e) Gender M or F	Trade/Foreman, Supervisors, Managers	g) Level (A, J or T)	h) Hours Worked This Period
		1.								
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
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15.										
16.										
17.										
18.										
19.										
20.										
8. Contract Goals MINNESOTA GOALS %OBTAINED _____ % Minority _____ % _____ % Women _____ %		9. Prepared by: (Signature) _____ Print Name: _____ Title: _____ Date: _____ Phone: _____ Fax: _____			10. Reviewed by: (Signature) _____ Print Name: _____ Title: _____ Date: _____ Phone: _____ Fax: _____					

INSTRUCTIONS FOR EEO-13
MONTHLY EMPLOYMENT COMPLIANCE REPORT

- 1.-5. Self-explanatory – State Project #, county project is located in, are you a prime or sub, and contract value.
6. Percent of Completion is the estimated percentage of work completed including this reporting period.
7. Employment Data information will coincide with your employment records. All professional, supervisory and managerial hours actually worked on the project site must be included, whether or not they appear on the certified payroll.
 - 7a. Name should be listed Last Name, First Name, and Middle Initial. This will enable MnDOT EEO staff to readily identify individuals on all projects.
 - 7b. Social Security Number self-explanatory.
 - 7c. New Hire is to be indicated with a “Y” for Yes or an “N” for No. “New Hire” is an employee who has not worked for you in any capacity or on any other project within the current calendar year.
 - 7d. Ethnicity can be indicated by Black (B), Hispanic (H), American Indian/Alaskan Native (AI), Asian/Pacific Islander (AP), or White (W).
 - 7e. Gender is to be indicated with an “M” for Males or an “F” for Females.
 - 7f. Trade/Foreman, Supervisors, Managers list the trade that applies unless the employee fits one of the other three categories.
 - 7g. Level “A” is for an Apprentice, “J” is for a Journey Worker, and “T” is for a MnDOT approved Trainee.
 - 7h. Hours Worked for This Period will be all hours worked by the individual, for each trade, during the specified reporting period.
8. Contract Goals are the percent of total project hours to be worked by minority and women employees. The goals are determined by the geographic location and source of funding for the project. Projects in excess of \$100,000 with any State funding must meet the State Employment Goals. Projects in excess of \$10,000 with any Federal funding must meet the Federal Employment Goals. (See chart on EEO Pages 16-17.) Minority and women employee hours shall be distributed evenly throughout the length of the project and in every trade and craft that performs work on the project.

% Obtained is the percent of the total project hours worked by minority and women employees, up to and including this reporting period.
9. Prepared by Contractor Designee is the signature of the prime or subcontractor’s EEO officer/designee.
10. Reviewed by Project Engineer is the signature of the MnDOT staff monitoring the project.

The Prime Contractor will submit EEO-13 forms for its workforce and all subcontractors to the MnDOT Project Engineer by the 15th day of the month following the month when work was performed. If you have questions about filling out this form, contact the Office of Civil Rights at (651) 366-3073. (Please make copies as you need them.)

This information can be submitted electronically via the web, through MnDOT’s Workforce Information Tracking Initiative (WITI) Program. To open a free account to gain access to WITI or to find out more about this possibility please contact MnDOT’s Office of Civil Rights at (651) 366-3321.

EEO COMPLIANCE REVIEW REPORT

Total Company Workforce
(For 12 Month Period Preceding July 30th of the previous year)

Name and Address of Contractor

Name and Title of Corporate Officer

Name of EEO Officer

Job Categories	Total Employees		Total Minorities		Blacks		Asian/ Pacific Is.		American Indian		Hispanic		On-the-Job Trainees	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Officials (Managers)														
Supervisors														
Foremen/Women														
Clerical														
Equipment Operators														
Mechanics														
Truck Drivers														
Iron Workers														
Carpenters														
Cement Masons														
Electricians														
Pipefitters & Plumbers														
Painters														
Laborers														
Misc. Trades														
Total														
On-the-Job Trainees														



MINNESOTA DEPARTMENT OF TRANSPORTATION
ON-THE-JOB TRAINING PROGRAM
TRAINEE ASSIGNMENT

SP #: _____ Location: _____ District: _____

Project Engineer: _____ Phone: () _____

Prime Contractor: _____ Phone: () _____

Address: _____

City: _____ State: _____ Zip: _____

EEO Officer: _____ Project Manager: _____

Tel: _____

Training Contractor: _____ Phone: () _____

Address: _____

City: _____ State: _____ Zip: _____

EEO Officer: _____ Project Manager: _____

Tel: _____

TRAINEE

Job Title or Trade Classification: _____ Number of Training Hours on this Project: _____

Name: _____ S.S.#: _____

Address: _____ Phone: () _____

City: _____ State: _____ Zip: _____

EEO Officer: _____ Project Manager: _____

Tel: _____

Approximate Start Date: _____

Approximate Completion Date: _____

Is the trainee a member of a certified apprenticeship program?

If YES, verify with Apprenticeship Form or Indenture Number: _____

1. Ethnic Background: Hispanic _____; Black _____; Asian/Pacific Islander _____; White _____; Am. Ind/Alaskan _____ (Verify with Tribal I.D. # or Affiliation _____).
2. Male; _____ Female; _____.

MINNESOTA DEPARTMENT OF TRANSPORTATION
OFFICE OF CIVIL RIGHTS

**CERTIFICATION OF ON-THE-JOB TRAINING HOURS
FEDERAL-AID-PROJECTS**

Contractor: *submit original and one copy monthly to the project engineer*

CONTRACTOR	REPORTING PERIOD:
ADDRESS	S.P. NO. (LOW):
	F.P. NO.:

TRAINEE	HOURS WORKED PREVIOUSLY	HOURS WORKED THIS PERIOD	TOTAL HOURS TO DATE

AMOUNT OF CLAIM _____ HOURS @ _____ PER HOUR = \$ _____

Progress of Trainee(s) Excellent Very Good Good Below Good

COMMENTS (Please detail any supplementary training offered):

<p>CONTRACTOR: The undersigned contractor hereby certifies that the listed employees are bonafide trainees as required by the On-the-Job Training Special Provision and that they have worked the hours as reported above.</p> <p>_____</p> <p style="text-align: center;"><i>Contractor Signature/Title</i> <i>Date</i></p>
<p>PROJECT ENGINEER: I hereby certify that the On-the-Job training hours reported above have been reviewed and found correct.</p> <p>_____</p> <p style="text-align: center;"><i>Engineer Signature/Title</i> <i>Date</i></p>



Minnesota Department of Transportation EEO Special Provisions
Office of Civil Rights
On-the-Job Training (OJT) Program Approval Form

07/12

The Special Provisions of the contract clearly indicate that training and upgrading of minorities and women toward Journey worker status is the primary objective of the training provisions.

We,		, submit the following training program for (Trade) for approval.
	(Name of Contractor)	

I. Project Information

Contractor Name	S.P. #	County	Prime	Sub
Address	City	State	Zip	
Contact Person/ EEO Officer		Phone #	e-mail address	
Project Goals				
Trainees	Hours			

II. Project Training Plan Information

Trade	# of Trainees Projected	Hourly Assignment per Trainee	Estimated Start Date	Estimated End Date	Recruiting Resource

Planned Training Activities

III. Contractor Acknowledgment Statement.

I understand and will comply fully with the plans and specifications under which this training is being performed, and will report subsequent revisions to the training program as changes occur.

Contractor's Representative Signature	Title	Date

IV. Instruction for the Contractor.

The contractor's proposed training programs must be documented on this form and submitted as indicated in the Proposal. Your Company's compliance with this specification will factor into any and all employment related "Good Faith Effort" determinations.



On-the-Job Training Program Trainee Termination Form

Contractor Name		County	Prime	Sub
Address		City	State	Zip
EEO Officer		Phone #	e-mail address	
Trainee Name		Phone #	Social Security No.	
Address		City	State	Zip
Race/Ethnicity				
<input type="checkbox"/> Hispanic		<input type="checkbox"/> White		<input type="checkbox"/> Asian
<input type="checkbox"/> Black		<input type="checkbox"/> American Indian		<input type="checkbox"/> Other
Gender		Classification/Trade		S.P. #
<input type="checkbox"/> Female	<input type="checkbox"/> Male			
Start Date	Termination Date	Hours Assigned	Hrs Completed	

Reason for Termination/Separation/Layoff:

<input type="checkbox"/> Construction phase completed
<input type="checkbox"/> Death
<input type="checkbox"/> Fired (please explain below)
<input type="checkbox"/> Illness/health problems
<input type="checkbox"/> Lack of transportation and /or travel distance
<input type="checkbox"/> Military duty
<input type="checkbox"/> Relocated
<input type="checkbox"/> Personal
<input type="checkbox"/> Quit to work for another company
<input type="checkbox"/> Other (please explain below)

Please provide comments:

Contractor's Representative Signature	Title	Date
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**MAIL or Fax THE ORIGINAL and MAINTAIN COPY:
395 John Ireland Boulevard
St. Paul, MN 55155-1899
Office of Civil Rights M.S. 170
On-The -Job Training Coordinator
Fax # 651/366-3129**

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS
Form-1273**

(52 FR 36920, October 2, 1987, revised October 21, 1993, FHWA Electronic Version May 1, 2012)

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

REQUIRED CONTRACT PROVISIONS (cont.)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REQUIRED CONTRACT PROVISIONS (cont.)

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

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

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

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

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

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

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

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

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

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

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

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

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

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

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

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

10. Assurance Required by 49 CFR 26.13(b):

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

REQUIRED CONTRACT PROVISIONS (cont.)

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any

location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of

REQUIRED CONTRACT PROVISIONS (cont.)

this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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

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

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

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

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit

which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

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

2. Withholding

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

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain

REQUIRED CONTRACT PROVISIONS (cont.)

written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

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

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

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

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

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

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the

"Statement of Compliance" required by paragraph 3.b.(2) of this section.

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

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

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

REQUIRED CONTRACT PROVISIONS (cont.)

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

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

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

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

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

REQUIRED CONTRACT PROVISIONS (cont.)

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

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

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

subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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

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

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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

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

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its

REQUIRED CONTRACT PROVISIONS (cont.)

own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

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

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

VII. SAFETY: ACCIDENT PREVENTION

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

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

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

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

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

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

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

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

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

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

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

REQUIRED CONTRACT PROVISIONS (cont.)

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

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

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

1. Instructions for Certification – First Tier Participants:

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

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

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

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

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

has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

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

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

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

* * * * *

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

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

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

REQUIRED CONTRACT PROVISIONS (cont.)

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

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

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

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

2. Instructions for Certification - Lower Tier Participants:

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

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

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

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

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier

Covered Transactions" refers to any covered transaction under a

First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

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

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

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

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

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently

REQUIRED CONTRACT PROVISIONS (cont.)

debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

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

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

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

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

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

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

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

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

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

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

SALT Schedule of Materials Control - Local Government Agency

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.

1603.2 SAMPLING AND TESTING - INSERT INTO SPECIAL PROVISIONS

The first paragraph is hereby deleted and replaced with the following:

Sampling and testing of materials for this project will be in accordance with the State Aid for Local Transportation (SALT) "Schedule of Materials Control – Local Government Agency" (SMC-LGA). The SMC-LGA establishes the size of samples and the minimum rate of testing. The SMC-LGA references the 2016 MnDOT Standard Specifications for Construction and does not set contract requirements for the material.

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 tests 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.

Definitions

[SALT Construction Website](#)

MnDOT Office of State Aid for Local Transportation. The SMC - LGA is located at the construction page under "Information & Resources - Manuals".

[MnDOT Schedule of Materials Control](#)

Schedule of Materials Control (SMC) are inserted into project proposals to direct how materials are to be sampled. The SMC is updated yearly. Each SMC is project specific. Therefore, one needs to refer to their specific proposal.

[Approved 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.

[Qualified Products List](#)

Products are predicted to meet all applicable standards and specifications, but random sample testing is required to verify specific product lots meet specifications prior to usage. These products are generally considered to be "qualified" but not approved until tested for compliance. Successfully tested products lots are considered to be "approved". The approval process for the individual product should specify any further testing requirements for the product.

[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 "qualified" products.

Quality assurance (QA) is a process-centered approach to ensuring that the best possible products or services are provided. Related to quality control, quality assurance focuses on enhancing and improving the process that is used to create the end result, rather than focusing on the result itself. Among the parts of the process that are considered in QA are planning, design, development, production and service.

Quality control (QC) is a process that is used to ensure a certain level of quality in a product or service. It includes actions deemed necessary to provide for the control and verification of certain characteristics of a product or service. It involves thoroughly examining and testing the quality of products or the results of services. The basic goal of quality control is to ensure that the products or services that are provided meet specific requirements and characteristics.

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.

	Type of Test	Spec Section *	Contractor - QC Testing Rates	Agency - Testing Rates	
Start-Up Testing Rates for the 1st 2000 tons **	Bulk Specific Gravity	2360.2.G.7.b	1 test per 500 tons 55 lb. sample 3 full cylinder molds	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 calc'd	2360.2.G.7.a/f			
	Coarse Aggregate Angularity (CAA)	2360.2.G.7.g	1 test per 1000 tons		
	Fine Aggregate Angularity (FAA)	2360.2.G.7.h			
	Added AC/Total AC Ratio (calc'd)	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	1 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	NOTE 1		
	Fine Aggregate Angularity (FAA)	2360.2.G.7.h	NOTE 2		
	TSR	2360.2.G.7.i	When directed by the Materials Engineer		
	Aggregate Specific Gravity	2360.2.G.7.j			
	Mixture Moisture Content	2360.2.G.7.k	As directed by the Engineer		
	Asphalt Binder Certified Supplier	2360.2.G.7.l	NOTE 3 (1qt. Steel container for asphalt binder. 1/2 gal. plastic container with wide screw top for emulsion)		
	Asphalt Emulsion Certified Supplier	2357			
Compaction / Density Requirements	2360.3.D	Review special provisions			
Small Quantity Requirements	See 2360.2G.5 & 2360.3G				

Testing rates are minimums, additional testing is encouraged to ensure a quality product.

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

* Review Special Provisions & 2360.2.G Mixture Quality Management.

** The testing rates apply only to mixtures that have not been tested on previous projects.

Mixtures from previous years should use the start- up testing rates.

NOTE 1: **At start-up or new Mix Design:** 2 tests per day for a minimum of 2 days, then 1 per day if CAA is met. If CAA > 8% of requirement, 1 sample per day but test 1 per week. No testing required for Class A and or B Aggregates.

NOTE 2: **At start-up or new Mix Design:** 2 tests per day for a minimum of 2 days, then 1 per day if FAA is met. If FAA > 5% of requirement, 1 sample per day but test 1 per week.

NOTE 3: Shall be a Certified Supplier - No Samples Required unless otherwise directed by the Engineer. Agencies using MnDOT Metro Inspection Services will be sampled at the current MnDOT Schedule of Materials Control rates and will be billed accordingly.

BITUMINOUS SPECIALTY ITEMS

Type of Test	Spec	Contractor - QC Testing Rates	Agency - 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)	Stockpile & Machine Hopper: 1/day 30 lbs.
Seal Coat & Otto Seal	2356 3137.2 B	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	Stockpile or Machine Hopper: 1/500 Tons (min 1/day)	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 Mixture	2356	1/300 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 2350	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 draindown. Copy MDR to Project Engineer and Grading & Base Engineer.
Asphalt Binder Tests		<u>Asphalt Emulsion List</u>	<u>Asphalt Binder List</u>
UTBWC	2353 3151	Shall be a Certified Supplier - No Samples Required unless otherwise directed by the Engineer : Asphalt Binder: First load, then 1/250,000 gallons. Sample size of 1 quart metal container. Emulsified Asphalt: First load, then 1/50,000 gallons. Sample size of 1/2 gallon wide screw top plastic container.	
Micro-Surfacing	2354		
Seal Coat & Otto 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 & Otto Seal	2356		
Bit Tack Coat	2357		

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

Cold Inplace Recycling (CIR) & Stabilized Full Depth Reclamation (SFDR)

Specification 2215

Test Type	Producer Testing Rates	Engineer 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", 3/4", 3/8", #4, #10, #30.
Gradation (Simple) (Material to be stabilized)	1 per mile for SFDR & CIR w/o top size screening. 4 / mile for CIR with top size screens.	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
Depth Check - Unstabilized and Stabilized	1 per 1,000' /machine width for each vertical machine face for initial pulverization and stabilization.	1 per day	.284 / 401
SFDR: Moisture during compaction of unstabilized portion	1/6,000 sq. yd.	none	.245 Speedy tester not allowed.
Penetration Index (DCP) - SFDR only Unstabilized.	1 per 1/2 mile lane mile	1 per lane 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 5,000 feet of lane of daily anticipated SFDR & one after the addition of water by the Contractor 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	1 per 500 feet of lane width, (see note below) .	Observe the Contractor.	0.282
Control Strip: SFDR Stabilized and CIR	Minimum of once per project	Observe the Contractor.	
Bituminous Material Samples	none	Shall be a Certified Supplier - No Samples Required unless otherwise directed by the Engineer.	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 once per day.	0.285
Moisture (stabilized) - before placement of next layer during curing.	none	3 daily after compaction.	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 3

		Material Type	Spec.*	Minimum Required Agency Acceptance Testing - QA	QC Testing Rates	Lab Sample
Gradation Testing (See Notes 2 & 3)		Aggregate Surfacing	2118 2211.5	Total quantity less than 4000 tons (2200 cy-cv) = 1 gradation/1,000 tons (550 cy.cv) or less, determine compliance to individual results (table 2211-5). Total quantity greater than 4,000 tons (2200 cy-cv), divide the total quantity by 10,000, roundup to the next whole number to determine the number of lots. Each lot is divide into 4 equal sublots, randomly sample each subplot. Determine individual results and subplot averages for compliance (Table 2211-4 & 2211-5)	1 / 1,000 tons stockpile gradation only required for materials on hand. Spec 1906.2	1/source 30 lb.
		Aggregate Base	2211 2211.5			
		Shoulder Base Aggregate	2221 2211.5			
		Drainable Aggregate Base (OGAB & DSB)	2212 3136			
		Granular and Select Granular Material (borrow/embankment)	3149.2B	1/40,000 Cubic Yards - Compacted Volume - CV	1/10,000 CY - req'd for mat'l on hand, Spec 1906.2	1/source 30 lb.
		Stabilizing Aggregate	3149.2C			
		Reclamation FDR & SFDR	3135.2B 2215.2C	1/day	1/6,000 yd ² & depth check See Note 4	None
		Granular Filter	3601.2B	1/ source	1/source - before delivery on the project.	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 Sand Cone * Specified Density	Non-Granular Material per 2105.3F	2105 2106 3149	1 per major soil, subgrade preparation specified density requires 100% of proctor density.	None	1 sample 25 lb.	
	Non-Granular Material per 2105.3F		AGENCY TESTING: Roadway Embankment: One test per 4,000 yd ³ (CV) <u>or</u> if test rolled, One test per 8,000 yd ³ (CV), Transverse culverts & Abutments: 1 test per every 2 feet of fill per 250' of trench length. Structures Trenches: One test/500 feet of each structure length at various depths. Subgrade Preparation: One per 25 road stations.			
Penetration Index Method (DCP) *	Aggregate Base	3138 2211.3C	1 DCP tests per 500 yd ³ (CV) or 1 per 900 Tons. If test rolled, 1 test / 1,000 yd ³ (CV) or 1,800 Tons.	None	None	
	Shoulder Base Aggregate					
	Reclamation FDR & SFDR	3135.2B 2215.2C	1 DCP test per 3,000 yd ²			
	Granular Materials Subgrade Preparation (for materials meeting 3149.2B1)	3149.2B	AGENCY TESTING: Roadway Embankment: One test per 2,000 yd ³ (CV) <u>or</u> if test rolled, One test per 4,000 yd ³ (CV), Transverse culverts & Abutments: 1 test per every 5 feet of fill per 250' of trench length. Structures Trenches: One test/500 feet of each structure length at various depths. Subgrade Preparation: One per 25 road stations.			

[The Grading and Base Manual allows the nuclear density gauge, see pages 60 and 65.](#)

GRADING AND BASE CONSTRUCTION ITEMS 2 of 3

	Material Type	Spec.*	Minimum Required Agency Acceptance Testing - QA	QC Testing Rates	Lab Sample
Moisture Content Test During All Compaction Methods	*Aggregate Base, Shoulder & Surfacing	3138	1 per project unless directed by the Engineer, obtain split companion sample for the Contractor. * May replace tests with time stamped photos showing water being applied.	1 / 1,000 yd ³	None
	Drainable Aggregate Base (OGAB & DSB)				
	Reclamation FDR & SFDR	3135.2B 2215.2C		1/6000 yd ²	
	All Embankment Materials	3149 2105		1/10,000 yd ³	
	Subgrade Preparation			1 per 25 road stations	
Percent Crushing	Particle Count (note 1)	1/ source unless directed by Engineer, (required for 3138.2B & C, 3149.2C & G1, 3136.2B Drainable Bases).		1 required for mat'l on hand, Spec 1906.2	1/source 30lb
Quality	Aggregate Quality Tests	3138 3149 3601	1/ source unless directed by Engineer	2 required for mat'l on hand, Spec 1906.2	1/source 30lb
Depth Check	Reclamation FDR & SFDR	3135.2B 2215.2C	1 per day unless directed by Engineer	1/1,000 feet of machine width.	
Test Rolling	Test Rolling (as directed in the special provisions)	2111	As directed by the Engineer the contractor will perform test rolling at the top of all subgrade, base layers (2211), non stabilized FDR (2215) and granular layers not meeting the requirements of 3149.2B2 (2105 & 2106). Minimum 12' width and 300' length. Agency to observe test rolling. See G & B Manual 5-692.270.		

Laboratory Samples are companion split samples to the QA sample:

1. Companion gradation, proctor, QA crushing, aggregate quality samples not required 1,000 tons or less.
2. Include the laboratory companion with the first field sample.
3. Include the field sample results with the laboratory sample.
4. Laboratories with AMRL Accreditation are not required to submit laboratory companion samples.
5. Carbonate aggregate materials require 50 lb. samples for the laboratory testing.

- NOTE 1: Percent crushing test is not required when the material is crushed from a quarry or contains 25% or greater recycled materials.
- NOTE 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.
- NOTE 3: The Certification of Aggregates and Granular Materials procedure and documentation of testing locations is at the discretion of the Engineer.
- NOTE 4: Provide gradation test results to the Engineer within the first 500 feet of production and within 500 feet after a failing gradation.

* Review the Special Provisions. For granular materials, aggregate compaction will be by the "Penetration Index Method" unless otherwise designated in the Special Provisions. Other compaction methods include the "Specified Density Method" (sand cone), "Quality Compaction Method" or "Light Weight Deflectometer Method. See 2211.3.D.2 Compaction. The Grading and Base Manual allows the nuclear density gauge, see pages 60 and 65.

Conversions: 1 ton = 0.55 yd³ (CV), 1 ton = 0.7 yd³ (LV), 1 yd³ (CV) = 1.8 tons.

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

Samples are not required for less than 500 tons (275 yd³).

GRADING AND BASE CONSTRUCTION ITEMS 3 of 3

Guidelines for Required Crushing & Aggregate Quality Tests

	3149 Granular Materials	3138 Aggregate for Surface and Base	3136 Drainable Bases
Crushing	<p>Yes, for Stabilizing Aggregate, Fine Aggregate Bedding and Medium Filter Aggregate.</p> <p>Test waived if material contains recycled at twice the minimum crushing requirement.</p> <p>Not required for quarried sources.</p>	<p>Yes, for Class 5, 5Q & 6. Test waived if material contains recycled at twice the minimum crushing requirement.</p> <p>Not required for quarried sources. Class 2 must contain 100% crushed quarry rock.</p>	<p>Yes. Not required for quarried sources.</p>
Bitumen Content	Yes , if it contains Bitumen	Yes , if it contains Bitumen	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.

[Click here for testing procedures in the Grading & Base Manual.](#)

[Forms and worksheets at the Grading & Base Website.](#)

[Gradation worksheets at the SALT Construction Website](#)

SALT Schedule of Materials Control - Local Government Agency

CERTIFIED READY-MIX CONCRETE, 1 of 2

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.	Test Type (Concrete Manual)	Producer QC Testing Rates	Engineer Testing Rates (1) Verification-companion to QC			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 Plant Production Testing Rates *	Gradation (5-694.145) (5-694.148)	Coarse & Fine: When over 20 yd3 per week, 1 per week or 1 per 400 yd3, whichever is greater. <u>Bridge Deck Concrete</u> must have passing gradations prior to mixing.		Coarse & Fine: 1 per week* per ready-mix plant		21763 Concrete Agg. Work sheet 2449 Weekly Concrete Agg. Report 24143 Weekly Certified R-M Plant Report			
		Moisture Content (5-694.142)	1 every 4 hours		None					
		Aggregate Quality (5-694.146)	Engineer Testing Rates: Minimum of 1 per project per each fraction - use of MnDOT test results for the same 30 day time period is acceptable. <u>For bridge concrete:</u> 1 test each fraction per month. <u>For all bridge deck concrete poured during the month:</u> 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 *companion required, double sample size								
		Aggregate Size	Gradation*	Quality*	Moisture	% -200 C.Agg				
		3/4" Plus, #4	25 lb.	50 lb.	2000 g	10 lb.				
		3/4" Minus, #67	25 lb.	30 lb.	2000 g	6 lb.				
		#7, CA-70	6 lb.	30 lb.	2000 g	6 lb.				
		CA-80, #89	1.1 lb. (500 g)	30 lb.	500 g	-				
		Fine Aggregate	1.1 lb. (500 g)	30 lb.	500 g	-				
		Concrete Field Testing Rates	<u>Sampling Locations for Air, Slump, Temperature and Cylinder Testing</u> (1) 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 <u>passing</u> air content and slump <u>prior to placement</u> . Cast strength specimens from the same load as the air content and slump test. Test whenever adjustments are made to the mix. (2) Subsequent tests - Sample from the middle portion of the load.						2448 Weekly Concrete Report	
			Test Type	Engineer Testing Rates (1)						
Air Content - Type 3 Concrete (5-694.541)	1 test per 200 yd3. <u>For Bridge Concrete:</u> 1 test per 100 yd3. Test first load each day per mix. Test when adjustments are made to the mix.									
Slump (5-694.531)	1 test per 200 yd3. For Bridge Concrete: 1 test per 100 yd3. Test first load each day per mix, or as necessary to verify passing slump. Not 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.									

(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 is 25 yd3 or less per week with no gradation testing or plant monitoring required but remember that **Concrete Field Testing is required.**

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

SALT Schedule of Materials Control - Local Government Agency

CERTIFIED READY-MIX CONCRETE, 2 of 2

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.

Spec.	Test Type	Engineer Testing Rates (1)	Form
See page 1 of 2	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.	2409 Concrete Cylinder
		Bridge Concrete Grades B, S, and Y: 1 set of 3 cylinders per 100 yd3, then 1 set of 3 cylinders per 300 yd3	
		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, <u>do not rod</u> , lightly tap the sides, cover and move to area with no vibration. Do not disturb for 24 hours.	
	Concrete Pavement Thickness **	Observation of probing or coring at the Engineer's discretion.	24327
Flexural Strength	Producer: 1 beam (28 day) per day per mix. Make additional control beams as necessary. Control beams shall be made within the last hour of concrete poured each day. Fabricate beams, deliver beams to curing site, and clean beam boxes. Cylinders may be substituted for beams at the discretion of the Engineer.	2162 Concrete Test Beam Data	
Concrete Pavement Texture	Producer: 1 per 1000 lineal feet per lane of concrete pavement at locations determined by the Agency. The Contractor supplies all materials necessary to perform the required testing.	MIT SCAN T2 Report	

(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 is 25 yd3 or less per week with no gradation testing or plant monitoring required but remember that **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.

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

Agencies using MnDOT Metro Inspection Services will be sampled at the current MnDOT Schedule of Materials Control rates and will be billed accordingly.

The testing rates shown in the SMC - LGA are minimums. Take as many tests as necessary to ensure quality concrete. It is recommended that the Agency Plant Monitor be present during critical pours, such as superstructure or paving concrete. If any field test fails, reject the concrete or if the Producer makes adjustments to the load to meet requirements, record the adjustments on the Certificate of Compliance and Weekly Concrete Report. Retest the load and record the adjusted test results. Make sure the next load is tested, before it gets into the work. If batching adjustments are made at the plant, test the adjusted load, before it gets into the work. Continue to test the concrete when test results are inconsistent or marginal. Material not meeting requirements shall not knowingly be placed in the work. If failing concrete inadvertently gets placed in the work, use either the MN/DOT Standard Specifications for Construction or the Schedule of Price Reductions for Concrete to address penalties. It is recommended that the Agency representative continually monitor the progress of all concrete pours. (It is not a recommended practice to only perform minimum testing requirements and leave the project.)

Concrete Plant and Field Materials

All materials must come from certified or qualified sources. All certified source 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 Products List do not have to be sampled and 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.	Minimum Required Field Sampling Rate	Form No.
Concrete Plant Batching Materials	Portland Cement	3101	Shall be a Certified Supplier - No Samples Required unless otherwise directed by the Engineer. For certified ready-mix and concrete paving sample rates: 1 sample when the plant is certified. Take additional samples at 6 months if producing Agency concrete, if 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 suppliers 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 in a 1/2 pint plastic container provided by the Agency when the plant is certified. Take additional samples at 3 months if producing Agency concrete, if the plant changes sources or as the contract requires.	2410 Sample ID Card
	Water	3906	1 sample in a 1 gallon clean glass or plastic container from a questionable source.	
	Concrete Field Materials	Preformed Joint Filler	3702	Visual Inspection, sample size 2 sq.ft.
Preformed Elastomeric Type		3721	1 per lot. Only materials from a qualified sources. Link to Approved Products List.	
Silicone Joint Sealer		3722		
Hot Poured Elastomeric Type		3723 3725		
Burlap		3751	Visual Inspection	
Paper		3752	Visual Inspection - Must be white opaque.	
Membrane Curing Compound		3754 3754AMS 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.				

Agencies using MnDOT Metro Inspection Services will be sampled at the current MnDOT Schedule of Materials Control rates and will be billed accordingly.

2301 CONCRETE PAVEMENT - AGENCY 1 of 2 *

Test Type (concrete manual)	Spec.	Concrete Paving Batch Plant Agency Testing	Certified Ready-Mix Plant Agency Testing	Form
Gradation (1) (5-694.145) (5-694.148)	3126 3137	Test the first 4 QA samples of production each time the Contractor mobilizes the plant in a calendar year or changes aggregate sources.		21764 Agg Work sheet
		1 per day randomly thereafter.	1 per 1000 yd ³ or 1 per week whichever is higher, randomly.	
Aggregate Moisture - QC Verification (2) (5-694.142)	3126 3137	If w/c incentives apply: 1 per 1000 yd ³ or every 4 hours, whichever is greater. Take initial sample within the first 250 yd ³ .	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)	Concrete Manual	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)	3137	1 randomly selected 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.		21764 Agg Work sheet
Coarse and Fine Aggregate Quality (4)	3126 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) Test the -200 on the coarse aggregate at the plant the day it was sampled. 3) 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 Incent / Disincent Work sheet
		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.

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 of your Federal Aid Project.

2301 CONCRETE PAVEMENT - AGENCY 2 of 2

Test Type	Spec.	Concrete Field Testing - Agency	Form
Air Content before consolidation for Type 3 concrete	Review Concrete Manual Website	1 correlation air test per day	2448 Weekly Concrete Report
Air Content after consolidation for Type 3 concrete		1 air test per day	
Slump		For fixed form placement: 1 slump test per day. For slip form placement: No slump testing required.	
Concrete Temperature		Record temperature each time air content, slump or strength test specimen is performed/fabricated by the Agency.	
Flexural Strength		Supply beam boxes, cure, and test beams. MnDOT standard beam box size is 6" x 6" x 20" unless other sizes or types are approved by the Concrete Engineer.	2162 Test Beam Data
Concrete Pavement Texture		Determine texture testing locations using random numbers.	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.	
Surface Smoothness		None	Concrete Profile Summary Work Sheet

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

NOTE (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 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.

NOTE (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.

NOTE(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.

NOTE (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 size				
Aggregate Size	Gradation*	Quality*	Moisture	% -200 C.Agg
3/4" Plus, #4	25 lb.	50 lb.	2000 g	10 lb.
3/4" Minus, #67	25 lb.	30 lb.	2000 g	6 lb.
#7, CA-70	6 lb.	30 lb.	2000 g	6 lb.
CA-80, #89	1.1 lb. (500 g)	30 lb.	500 g	-
Fine Aggregate	1.1 lb. (500 g)	30 lb.	500 g	-

CONCRETE PAVEMENT - PRODUCER / CONTRACTOR 1 of 2*

Test Type (concrete manual)	Spec.	Concrete Paving Batch Plant Production Testing	Certified Ready-Mix Plant Production Testing	
Gradation (1) (5-694.145) (5-694.148)	3126 3137	When over 250 yd ³ produced per day: 1 per 1500 yd ³ , or completed 1 per 1/2 day, whichever is the higher sampling rate.	When over 20 yd ³ produced per day: 1 per 400 yd ³ , or completed every 4 hours, whichever is the higher sampling rate.	
Coarse Aggregate -200 sieve (5-694.146)	3137	Test the first sample then at least 1 of the next 3 samples 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 day randomly thereafter. Test these samples at the plant.		
Aggregate Moisture QC Verification (2) (5-694.142)	3126 3137	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	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 and Fine Aggregate Quality	3126 3137	Prior to concrete production: Test the Agency's pre-production sample at the Contractor's discretion. During concrete production: Test the -200 on the quality companion sample the day it was sampled. All other testing is at the Contractor's discretion.		
Coarse Aggregate Quality Testing for Incentive / Disincentive	3137	Test at the Contractor's discretion.		
Minimum Aggregate Sample Size *companion required, double sample size				
Aggregate Size	Gradation*	Quality*	Moisture	% -200 C.Agg
3/4" Plus, #4	25 lb.	50 lb.	2000 g	10 lb.
3/4" Minus, #67	25 lb.	30 lb.	2000 g	6 lb.
#7, CA-70	6 lb.	30 lb.	2000 g	6 lb.
CA-80, #89	1.1 lb. (500 g)	30 lb.	500 g	-
Fine Aggregate	1.1 lb. (500 g)	30 lb.	500 g	-

* 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.

NOTE (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.

NOTE (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.

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

CONCRETE PAVEMENT - PRODUCER / CONTRACTOR 2 of 2

Test Type	Spec.	Concrete Field Testing - Contractor
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.
Air Content after consolidation for Type 3 concrete		Test 1 air content per 1/2 day per mix of slip form paving to establish an air loss correction factor (ACF). See Special Provisions for additional information.
Slump		For fixed form placement: 1 per 300 yd ³ and as directed by the Engineer. Test first load each day per mix. For slip form placement: No slump testing required.
Concrete Temperature		Record temperature each time air content, slump or strength test specimen is performed/fabricated by the Contractor.
Flexural Strength		1 beam (28 day) per day per mix. Make additional control beams as necessary. Control beams shall be made within the last hour of concrete poured each day. Fabricate beams, deliver beams to curing site, and clean beam boxes. Cylinders may be substituted for beams at the discretion of the Engineer.
Concrete Pavement Texture		1 per 1000 lineal feet per lane of concrete pavement at locations determined by the Agency. All adjoining lanes shall be tested at the same location if paved at the same time. The Contractor supplies all materials necessary to perform the required testing.
Thickness		The Contractor drills concrete cores at locations determined by the Agency. The Contractor probes the plastic concrete at locations determined by the Agency.
Surface Smoothness		Contractor provides MnDOT certified inertial profiler results for the entire project as required by the contract. Check for current certification.

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

2404 CONCRETE WEARING COURSE FOR BRIDGES

Test Type (concrete manual)	Spec.	Contractor Testing	Agency Testing	Form
Gradation, Quality, Coarse Agg -200 QC/Verification (5-694.145) (5-694.146) (5-694.148)	3126 3137	Prior to production, provide the Agency with: Aggregate pit numbers, 1 passing gradation result per fraction per source. Test Agency companion samples are Contractor's discretion.	1 per fraction prior to production and each time aggregate is delivered to the site.	2410 Sample ID Card
Air Content - Type 3 Concrete (Verification) (5-694.541)	Review Concrete Manual Website	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. 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	2409 Cyl. ID Card

Test	Minimum Sample Size *companion req'd, double sample size	
Gradation	6 lb. for # 7	1.1 lb. Sand
Quality	50 lb. for Coarse Aggregate	30 lb. Fine Aggregate

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

CONCRETE PAVEMENT REPAIR - CPR for 3U18

Test Type	Spec.	Contractor Testing	Agency Testing	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: 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.	2410 Sample ID Card
Air Content - Type 3 Concrete	Review Concrete Manual Website	None	1 per 15 yd ³ , Test at beginning of pour each day.	21412 Weekly Report of Low Slump Concrete
Slump		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.	
Compressive Strength		None	1 cylinder (28 day) per 30 yd ³	2409 Cyl. ID Card

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

DOWEL BAR RETROFIT - DBR

Test Type	Spec.	Contractor Testing	Agency Testing	Form
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 are Contractor's discretion.	1 per fraction prior to production and each time aggregate is delivered to the site.	2410 Sample ID Card

Test Type	Spec.	Agency Testing	Form
DBR Material Compressive Strength	Review Concrete Manual	Contractor Testing: None	
		Agency Testing: During the pre-production test operations: 1 set of 3 cylinders tested at a rate as directed by the Engineer. Testing may need to be repeated if any problems with the dowel bar retrofit material are encountered. First day of production: 1 set of 3 cylinders at a rate directed by the Concrete Engineer. After the first day of production: 1 cylinder per day during production tested at a rate determined by the Engineer to determine traffic strength.	
			2409 Cylinder ID Card

Test	Minimum Sample Size *companion req'd, double sample size	
Gradation	1.1 lb. for # 89 & Sand	
Quality	50 lb. Coarse Aggregate	30 lb. Fine Aggregate

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

LANDSCAPING AND EROSION CONTROL ITEMS

Kind of Material	Spec. #	Min. Required 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.

Contact the MnDOT District IA Inspector to provide servicing of your Federal Aid Project.

CHEMICAL ITEMS

Kind of Material	Spec. No.	Min. Required 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.	Min. Required 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 Sign Posts	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

Kind of Material	Spec. No.	Min. Required Acceptance Testing (Field Testing Rate)*	
Reinforcing Steel - Inspected by MnDOT & will be charged back to the Local Agency.			
Steel Fabric	3303	2 sq ft if epoxy coated.	
Dowel Bars	3302	One dowel bar and basket from each shipment.	
Prestress/Post Tension Strands	3348 Spec.Prov.	One sample of 2 strands by 6 ft from each heat/production lot.	
Castings			
<u>Drainage Castings</u>	3321	Visual Inspection - Check approved / qualified list.	
	2471		
<u>Electrical</u>	2565		
Anchor Rods (Cast in Place) and Structural Fasteners	3385 3391	Visual Inspection - Check approved / qualified list. Testing as directed by the Engineer, (see Notes below)	
Notes: 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.			
<u>Anchorage (Drilled In)</u>	Special Provisions	Visual Inspection - Check qualified products list.	
<u>Structural Steel</u>	Inspected by MnDOT & will be charged back to the Local Agency.		
Steel Bridge - Beams, Girders, Diaphragms, etc.	2471	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 web site: http://www.dot.state.mn.us/bridge/	
Concrete Girders-Diaphragms and sole plates			
Expansion Joints			
Steel Bearings			
Railing-Structural tube and ornamental			
Drainage Systems			
Protection Angles			
Overhead Sign structures	2564 2471		
High Mast Lighting Structures	2545 2471		
Monotube Signal Structures	2565 2471		

* Check domestic steel requirement under 1601 Special Provision.

Geosynthetics, Pipe, Tile, Precast/Prestressed Concrete

Kind of Material	Spec. No.	Min. Required 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 certified 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 (Construction)	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 available at http://www.dot.state.mn.us/materials/aggregatedocs/gtxlist.pdf
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.	Min. Required 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	Visual Inspection - Check approved/qualified products list. Traffic signal and street lighting projects require hand holes to be listed on the Mn/DOT Signals Approved Products List (APL). For cast iron frame and cover: see Metals - Drainage and Electrical Castings
	2550	
	2565	
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	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.
	3802	
	3803	
	Special Provisions	
Non-Metallic (Rigid and HDPE)		
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 Mn/DOT Signals and Lighting Approved Products Lists (APL). The Contract documents indicate, which items must be on the Signals and/or Lighting APL.
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 AND SIGNAL EQUIPMENT ITEMS 2 of 2

Kind of Material	Spec. No.	Min. Required Acceptance Testing (Field Testing Rate)
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), & Mn/DOT 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 Mn/DOT 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 luminaires and lamps to be listed on the Mn/DOT 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.	Min. Required 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.
<u>Modular Block Retaining Walls</u>	Review Current Special Provisions	Visual Inspection - Note: All lots of block 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	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.	Min. Required 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

[Asphalt Products](#)

[Roadside Safety Hardware](#)

[Bridge Products](#)

[Roadway Lighting Products](#)

[Concrete Products](#)

[Traffic Control Signals Products](#)

[Crack & Joint Materials Products](#)

[Signing Products](#)

[Truncated Domes](#)

[Snow and Ice Chemical Products](#)

[Drainage](#)

[Temporary Traffic Control Devices](#)

[Erosion Control and Landscaping Products](#)

[Traffic Management Systems/ITS](#)

[Geosynthetics](#)

[Vehicle Safety Lighting](#)

[Maintenance Shop Supplies](#)

[Walls \(Retaining/Noise\)](#)

[Paint/Stain/Coating Systems \(Non-Pavement\) Products](#)

[SALT Construction Website - Additional Resources](#)

[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 at the SALT Construction Website](#)

SALT SMC - LGA Contacts

Districts 1, 2, 3, 4

Ron Bumann - State Aid Construction Practices Specialist

ronald.bumann@state.mn.us

218-725-2811

Districts 6, 7, 8

Rollin Larson - State Aid Construction Specialist

rollin.larson@state.mn.us

507-205-6403

Metro

Mike Pretel - State Aid Construction Engineer

michael.pretel@state.mn.us

651-234-7778

Jim Deeny - State Aid Construction Liaison

james.deeny@state.mn.us

651-234-7762

Telephone Index for MnDOT Specialty Offices

Grading & Base

Terry Beaudry	(651) 366-5456
John Bormann	(651) 366-5496
Melissa Cole	(651) 366-5432

[Website: www.dot.state.mn.us/materials/gradingandbase.html](http://www.dot.state.mn.us/materials/gradingandbase.html)

Bituminous

John Garrity	(651) 366-5577
Asphalt Binder	
Jim McGraw	(651) 366-5548
Jason Szondy	(651) 366-5549

Bituminous Specialty Items

Terry Beaudry	(651) 366-5456
Greg Schneider	(651) 366-5403
Melissa Cole	(651) 366-5432
Tom Wood	(651) 366-5573

[Website: www.dot.state.mn.us/materials/bituminous.html](http://www.dot.state.mn.us/materials/bituminous.html)

Concrete

Concrete – Aggregates and Mix Design	
Concrete – Certified Ready Mix Concrete	
Wendy Garr	(651) 366-5423
Concrete – Paving	(651) 366-5576
Rob Golish	
Concrete – Bridges	(651) 366-5575
Ron Mulvaney	
Concrete – Pavement Rehabilitation	
Gordy Bruhn	(651) 366-5523

[Website: www.dot.state.mn.us/materials/concrete.html](http://www.dot.state.mn.us/materials/concrete.html)

Landscaping and Erosion Control Items

Erosion Control	(651) 366-3607
Lori Belz	
Landscaping	(651) 366-4612
Scott Bradley	
Wood Chips	(651) 366-3619
Tina Markeson	

Chemical Items

Allen Gallistell	(651) 366-5545
Dave Iverson	(651) 366-5550

Metallic Materials and Metal Products Sampling

Steve Grover	(651) 366-5540
Laboratory - Test Results	(651) 366-5560
Bridge Structural Metals	
Todd Niemann	(651) 366-4567
Barry Glassman	(651) 366-4568

Miscellaneous Materials

Steve Grover	(651) 366-5540
Bearing Pads	
Todd Niemann	(651) 366-4567
Barry Glassman	(651) 366-4568
Laboratory - Test Results	(651) 366-5560

Geosynthetics, Pipe, Tile, and Precast/Prestressed Concrete

Steve Grover	(651) 366-5540
Rich Lamb	(651) 366-5595
Randy Tilseth	(651) 366-5451
Laboratory - Test Results	(651) 366-5560

Brick, Stone and Masonry Units/Modular Retaining Wall Blocks

Steve Grover	(651) 366-5540
Blake Nelson	(651) 366-5599
Laboratory - Test Results	(651) 366-5561

Electrical & Signal

Susan Zaring	(651) 234-7052
Steve Grover	(651) 366-5540
Wendy Garr - Concrete	(651) 366-5423
Laboratory - Test Results	(651) 366-5560

Materials Lab. Contacts

Independent Assurance

<p>District 1, Duluth Leila DeLuca 218-725-2738 Fax 218-725-2814</p>	<p>Nadine Miller (218) 725-2737 Cell (218) 348-6297</p>
<p>District 2, Bemidji Jeff Long, 218-755-6544 Jason Kisseo, 218-755-6542 Fax 218-755-6540</p>	<p>Thomas Lloyd (218) 755-6545 Cell (218) 766-6949</p>
<p>District 3A, Baxter Tom Boser, 218-828-5755 Fax 218-828-5816</p>	<p>Matt Miles (218) 828-5753 Cell (218)232-6748</p>
<p>District 3B, Saint Cloud Teresa Mertens, 320-223-6555 Fax 320-223-6582</p>	<p>Teresa Mertens, 320-223-6555 Cell (320) 493-3559</p>
<p>District 4, Detroit Lakes Brad Hanson, 218-846-3616 Bruce Bryngelson, 218-846-3614 Wayne Koons, 218-846-3617 Fax 218-846-0744</p>	<p>David Brunner Dist. 4 Mat'ls (218) 846-3613 Cell (218) 849-7393 Sandy Kay Wollschlager 4B Mat'ls (320) 589-7300 Cell (320) 815-6660</p>
<p>Metro District, Maplewood Lab Mike Evans, 651-366-5409 Fax 651-366-5408</p>	<p>Waters Edge Mat'ls (651) 234-7356 East Steve Reinardy (651) 755-1581 Mike Sroga (651) 775-0997 West Greg Bohmert (651) 775-1005 Mike Amiot (651) 775-1042</p>
<p>District 6, Rochester Ken DeCramer, 507-286-7580 Jeff Bale, 507-286-7586 Russ Smith, 507-286-7535 Fax 507-285-7112</p>	<p>Ken Pickett (507) 286-7584 Cell (507) 251-0138</p>
<p>District 7, Mankato Mark Schoeb, 507-304-6186 Scott Swanson, 507-304-6189 Fax 507-304-6191</p>	<p>Mitch Jordahl (507) 304-6187 Cell (507) 380-9619 Brian Lueck (507) 304-6188 Cell (507) 380-8248</p>
<p>District 8A, Willmar Jay Jorgensen, 320-214-6345 Fax 320-214-6306 District 8B, Marshall Mark DeAustin, 507-537-2068 Fax 507-537-3802</p>	<p>Jon Vlaminck (320) 214-6348 Cell (320) 894-7409</p>

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 Processsed 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.



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January 14, 2016

Bolton & Menk, Inc.
Attention: Kevin Kielb, P.E.
2035 County Road D East, Suite B
Maplewood, MN 55109

Subject: Geotechnical Exploration and Engineering Review
Riverdale Drive Improvement Project
Ramsey, Minnesota
NTI Project No. 15.61197.100

Northern Technologies, Inc. (NTI) has completed a total of 5 soil borings for the Riverdale Drive reconstruction project in Ramsey, Minnesota. The scope of services included determining existing subsurface conditions and providing recommendations for site preparation, excavations, engineered fill and compaction, depths of unsuitable soils to be removed, ground water management and potential difficulties during construction. Our services were performed in accordance with our proposal dated November 15, 2015.

PROJECT AND SITE DESCRIPTION

The proposed project consists of the construction of Riverdale Drive between Traprock Street Northwest and Ramsey Boulevard in the City of Ramsey, Minnesota. NTI assumes that the proposed project may include below grade utility improvements, minor grade changes and the construction of an asphalt surfaced roadway.

NTI was not aware of invert elevations or other design details of the proposed utilities at the time this report was prepared.

SUBSURFACE EXPLORATION SUMMARY

NTI performed the subsurface exploration program on December 21, 2015 with a two-person crew using a truck-mounted CME-55 drill rig. Samples were generally collected in accordance with ASTM D 1586 "Standard Test Method for Standard Penetration Testing (SPT) and Split-Barrel Sampling of Soils."

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The boring locations and depths were determined by Bolton & Menk, Inc. personnel. The borings terminated at nominal of 10 feet below the existing ground surface. NTI estimated ground surface elevations based upon publically available MNTopo LiDAR data. Subsurface conditions are summarized in the table below. Please refer to the boring logs for additional information.

Table 1: Pavement and Subgrade Summary

Boring No.	Apparent Topsoil Thickness ¹ (in)	Fill ¹ Subgrade Material	Native Subgrade Material	Notes
B-1	18	SP-SM	SP	4 ½ Feet of Agricultural Till Zone/ Existing Fill
B-2	10	SP-SM	SP-SM	4 ½ Feet of Agricultural Till Zone/ Existing Fill
B-3	18	NE ²	SP-SM	
B-4	7	SP-SM, SC	SM	4 ½ Feet of Agricultural Till Zone/ Existing Fill
B-5	8	SP-SM	SP-SM	4 ½ Feet of Agricultural Till Zone/ Existing Fill

1. Material appeared to contain organic matter. This material may not necessarily meet MnDOT or other specifications for topsoil.
2. Fill not encountered in the soil boring.

GROUNDWATER AND GROUNDWATER CONTROL

Groundwater was not observed in our soil borings at the time of our explorations. Groundwater elevations can change due to precipitation events seasonally, changes in topography and site development, and due to long-term climate changes. Also, soil conditions between borings may be conducive to localized seeps or perched water zones that may be permanent or transient.

UTILITIES

The fill and native soils observed in soil borings were generally suitable for utility support. For utilities with planned invert elevations within the existing fill, we recommend that at least the upper 1 foot of the excavation subgrade be scarified, moisture conditioned and re-compacted. In addition, areas unstable or organic laden soils (if encountered) should be subcut and replaced with engineered fill consisting of non-organic debris free mineral soil of similar composition as the underlying native soils. Groundwater, if encountered, should be maintained at least 2 feet below the bottom of the excavation.

The Geotechnical Engineer of Record or their designated representative should observe the project excavations to determine that unsuitable materials have been properly removed and adequate bearing support is provided by the exposed soils. The exposed soil at the base should be compacted with a vibratory roller to 95 percent standard Proctor dry density (ASTM D698). Such observations and testing should be performed prior to backfilling.

The on-site non-organic soils are anticipated to be suitable for reuse if properly moisture conditioned and compacted. Replacement backfill required in utility trenches should consist of non-organic material similar to the surrounding soil.



All import fill should generally consist of non-organic debris free soils of similar composition to the in place native soils. All import fill soils should be approved by NTI or the City's representative prior to utilization.

It is especially important that trench backfill for utility construction within paved areas be thoroughly compacted to minimize future pavement damage. We recommend that such soils be compacted in accordance with the recommendations noted in the "Placement and Compaction of Engineered Fill" section in Appendix B of this report.

The stability of embankments along utility excavations is dependent on soil strength, site geometry, moisture content, and any surcharge load for excavated soils and equipment. We present cautionary remarks concerning stability of excavation side slopes in the "Excavation Stability" section of this report.

The Contractor is solely responsible for assessing the stability of and executing underground utility and project excavations using safe methods. The contractor is also responsible for naming the "competent individual" as per Subpart P of 29 CFR 1926.6 (Federal Register - OSHA).

PAVEMENT RECOMMENDATIONS

The most conservative method of subgrade preparation would be remove the undocumented fill soils and replace them properly compacted engineered fill. This method of subgrade preparation would provide the most uniform subgrade but would also be the most costly method of construction and relatively atypical considering the relative uniformity of the subgrade soils encountered within the soil borings.

If the City is willing to accept some risk in regard to the future pavement performance, NTI recommends that prior to installing the aggregate base that the existing subgrade be scarified and re-compacted to a depth of at least 12 inches. A proof roll test should then be performed to determine soft or unstable subgrade areas. If rutting or localized unstable subgrade areas are observed, those areas should be subcut, moisture-conditioned, and re-compacted or removed to a stable depth. Excavations for soil corrections in paved areas should allow for a 2 foot oversize beyond the edges of the pavement.

The proof roll should be performed with a tandem axle dump truck loaded to gross capacity (at least 20 tons). Acceptance criteria of the proof roll shall be limited to rut formation no more than one inch depth (front or rear axles) and no pumping (rolling) observed during the visual inspection. Proof roll tests should be observed by an experienced technician or geotechnical engineer prior to placement of the aggregate base course to verify the subgrade will provide adequate pavement support.

If imported fill is required in paved areas it should consist of debris free, non-organic, mineral soil similar in composition to the subgrade soils encountered in the surrounding areas. If sand is imported into areas that are underlain by relatively impervious fine grained soils the sand layer should be drained with drain tile in order to prevent frost heave from water trapped within the imported sand layer during freezing temperatures. Similarly, if clay is used in conjunction with lane widening, drainage from any existing granular soils may be impeded unless subsurface drainage is included. Individual lifts of engineered fill should be tempered for moisture content, placed and compacted as noted in the "Placement and Compaction of Engineered Fill" section in Appendix B of this report.

MINIMUM PAVEMENT THICKNESS

Estimates of minimum thicknesses for new pavement sections for this project have been based on the procedures outlined in the MnDOT Pavement Design Manual using soil parameters based on soil types.



The following minimum thicknesses were estimated based upon our estimated traffic loading, limited soils information, variation across the project area, and experience with similar projects and soil conditions. The performance of stabilometer or similar tests, were beyond the scope of this report; however, they may be performed, upon request, for an additional fee. We estimate that a properly prepared subgrade would have an average stabilometer R-value of 40.

For a 20-year design pavement life and light commercial traffic volumes, Table 2 presents our thickness recommendations for flexible (bituminous) pavement. The 9-ton design assumes that there will less than 300 heavy commercial vehicles per day, a thicker pavement section may be needed if the city anticipates more growth in the project area.

Table 2: Recommended Flexible Pavement Thickness Design Alternative

Pavement Section	(7-ton)	(9-ton)
Bituminous Wear Course (inches)	1.5	2.0
Bituminous Base Course (inches)	2.0	2.0
Class 5 or 7 Aggregate Base (inches)	6.0	8.0

Pavement recommendations assume the subgrade soils and aggregate section below paved surfaces will drain to subsurface piping for eventual discharge into storm sewer, or above grade to ditching, or similar acceptable systems. Lack of surface and subsurface drainage will significantly reduce the capacity and longevity of the pavement systems indicated above.

We recommend pavements receive annual maintenance, as a minimum, to correct damages to the pavement structure, clean and infill cracks which develop, and repair or resurface areas which exhibit reduced subgrade performance. The lack of maintenance can lead to moisture infiltration of the pavement structure and softening of the subgrade soils. This, in turn, can degrade the performance of the pavement system and result in poorly performing pavements with shortened life expectancy.

EXCAVATION STABILITY

Excavation depth and sidewall inclination should not exceed those specified in local, state or federal regulations. Excavations may need to be widened and sloped, or temporarily braced, to maintain or develop a safe work environment. Contractors must comply with local, state, and federal safety regulations including current OSHA excavation and trench safety standards. Temporary shoring must be designed in accordance with applicable regulatory requirements.

ENGINEERED FILL & WINTER CONSTRUCTION

The soils encountered at the project locations will be susceptible to freezing if not provided adequate drainage, insulation or coverage. Frozen soil should not be used as backfill. When the ambient air temperature falls below freezing for an extended period of time, frost forms, and soil near the surface grade expands. Settlement of the fill may occur as the frozen soils thaw.

If frost penetrates the soil prior to paving, soils must be thawed, scarified, and re-compacted as recommended in this report. Subgrade soils should be inspected prior to paving to verify frozen conditions are not present.



CLOSURE

The conclusions and recommendations in this report are predicated on observation and testing of the earthwork directed by Geotechnical Engineer of Record. Our opinions were based on data assumed representative of the site, as encountered from the five soil borings on site. For this and other reasons, we do not warrant conditions below the depth of our borings, or that the strata logged from our borings are necessarily typical across the site. Deviations from our recommendations by plans, written specifications, or field applications shall relieve us of responsibility unless our written concurrence with such deviations has been established.

Our conclusions and recommendations are predicated on observation and testing of the earthwork directed by Geotechnical Engineer of Record. Our opinions are based on data assumed representative of the site. However, the area coverage of borings in relation to the entire project is very small. For this and other reasons, we do not warrant conditions below the depth of our borings, or that the strata logged from our borings are necessarily typical of the site. Deviations from our recommendations by plans, written specifications, or field applications shall relieve us of responsibility unless our written concurrence with such deviations has been established.

The scope of services for this project does not include either specifically or by implication any environmental or biological assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of The City of Ramsey and its agents for specific application to the proposed project areas. Northern Technologies, Inc. has endeavored to comply with generally accepted geotechnical engineering practice common to the local area. Northern Technologies, Inc. makes no other warranty, express or implied.

Northern Technologies, Inc.

Steven D. Gerber, P.E.
Senior Engineer

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a Duly Licensed Professional Engineer under the Laws of the State of Minnesota.

Ryan M. Benson, P.E. Regional Manager/
Principal Engineer

Steven D. Gerber

Date: 01/14/2016 Reg. No. 45298

SDG/rmb

Attachments

Appendix A - General Notes

Appendix B - Groundwater Issues, Compaction and Placement of Fill

Appendix C - Boring Location Diagram, Soil Boring Logs



APPENDIX A



GEOTECHNICAL EVALUATION OF RECOVERED SOIL SAMPLES

We visually examined recovered soil samples to estimate distribution of grain sizes, plasticity, consistency, moisture condition, color, presence of lenses and seams, and apparent geologic origin. We then classified the soils according using the Unified Soil Classification System (ASTM D2488). A chart describing this classification system and general notes explaining soil sampling procedures are presented within appendices attachments.

The stratification depth lines between soil types on the logs are estimated based on the available data. In-situ, the transition between type(s) may be distinct or gradual in either the horizontal or vertical directions. The soil conditions have been established at our specific boring locations only. Variations in the soil stratigraphy may occur between and around the borings, with the nature and extent of such change not readily evident until exposed by excavation. These variations must be properly assessed when utilizing information presented on the boring logs.

We request that you, your design team or contractors contact NTI immediately if local conditions differ from those assumed by this report, as we would need to review how such changes impact our recommendations. Such contact would also allow us to revise our recommendations as necessary to account for the changed site conditions.



FIELD EXPLORATION PROCEDURES

Soil Sampling – Standard Penetration Boring:

Soil sampling was performed according to the procedures described by ASTM D-1586. Using this procedure, a 2 inch O.D. split barrel sampler is driven into the soil by a 140 pound weight falling 30 inches. After an initial set of six inches, the number of blows required to drive the sampler an additional 12 inches is recorded (known as the penetration resistance (i.e. “N-value”) of the soil at the point of sampling. The N-value is an index of the relative density of cohesionless soils and an approximation of the consistency of cohesive soils.

Soil Sampling – Power Auger Boring:

The boring(s) was/were advanced with a 6 inch nominal diameter continuous flight auger. As a result, samples recovered from the boring are disturbed, and our determination of the depth, extend of various stratum and layers, and relative density or consistency of the soils is approximate.

Soil Classification:

Soil samples were visually and manually classified in general conformance with ASTM D-2488 as they were removed from the sampler(s). Representative fractions of soil samples were then sealed within respective containers and returned to the laboratory for further examination and verification of the field classification. In addition, select samples were submitted for laboratory tests. Individual sample information, identification of sampling methods, method of advancement of the samples and other pertinent information concerning the soil samples are presented on boring logs and related report attachments.



General Notes

DRILLING & SAMPLING SYMBOLS		LABORATORY TEST SYMBOLS	
SYMBOL	DEFINITION	SYMBOL	DEFINITION
C.S.	Continuous Sampling	W	Moisture content-percent of dry weight
P.D.	2-3/8" Pipe Drill	D	Dry Density-pounds per cubic foot
C.O.	Cleanout Tube	LL, PL	Liquid and plastic limits determined in accordance with ASTM D 423 and D 424
3 HSA	3 1/4" I.D. Hollow Stem Auger	Q _u	Unconfined compressive strength-pounds per square foot in accordance with ASTM D 2166-66
4 FA	4" Diameter Flight Auger		
6 FA	6" Diameter Flight Auger		
2 1/2 C	2 1/2" Casing		
4 C	4" Casing		
D.M.	Drilling Mud	Qp	Penetrometer reading-tons/square foot
J.W.	Jet Water	S	Torvane reading-tons/square foot
H.A.	Hand Auger	G	Specific Gravity – ASTM D 854-58
NXC	Size NX Casing	SL	Shrinkage limit – ASTM 427-61
BXC	Size BX Casing	pH	Hydrogen ion content-meter method
AXC	Size AX casing	O	Organic content-combustion method
SS	2" O.D. Split Spoon Sample	M.A.*	Grain size analysis
2T	2" Thin Wall Tube Sample	C*	One dimensional consolidation
3T	3" Thin Wall Tube Sample	Q _c *	Triaxial Compression

Additional insertions in Qu Column

Additional insertions in Qu Column

Qp	Penetrometer reading-tons/square foot
S	Torvane reading-tons/square foot
G	Specific Gravity – ASTM D 854-58
SL	Shrinkage limit – ASTM 427-61
pH	Hydrogen ion content-meter method
O	Organic content-combustion method
M.A.*	Grain size analysis
C*	One dimensional consolidation
Q _c *	Triaxial Compression

* See attached data Sheet and/or graph

Water Level Symbol

Water levels shown on the boring logs are the levels measured in the borings at the time and under the conditions indicated. In sand, the indicated levels can be considered reliable ground water levels. In clay soils, it is not possible to determine the ground water level within the normal scope of a test boring investigation, except where lenses or layers of more pervious water bearing soil is present and then a long period of time may be necessary to reach equilibrium. Therefore, the position of the water level symbol for cohesive or mixed soils may not indicate the true level of the ground water table. The available water level information is given at the bottom of the log sheet.

Descriptive Terminology

DENSITY		CONSISTENCY	
TERM	"N" VALUE	TERM	"N" VALUE
Very Loose	0-4	Soft	0-4
Loose	5-8	Medium	5-8
Medium Dense	9 – 15	Rather Stiff	9 – 15
Dense	16 – 30	Stiff	16 – 30
Very Dense	Over 30	Very Stiff	Over 30

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon.

Relative Proportions

TERMS	RANGE
Trace	0-5%
A little	5-15%
Some	15-30%
With	30-50%

Particle Sizes

Boulders	Over 3"
Gravel - Coarse	3/4" – 3"
Medium	#4 – 3/4"
Sand - Coarse	#4 - #10
Medium	#10 - #40
Fine	#40 - #200
Silt and Clay	Determined by plasticity characteristics.

Note: Sieve sizes are U.S. Standard.



Classification of Soils for Engineering Purposes

ASTM Designation D-2487 and D 2488 (Unified Soil Classification System)

Major Divisions	Group Symbols	Typical Names	Classification Criteria		
Course Grained Soils More than 50% retained on No. 200 sieve *	Gravels 50% or more of coarse fraction retained on No. 4 sieve.	Clean Gravels	Classification on basis of percentage of fines. Less than 5% passing No. 200 Sieve: GW, GP, SW, SP More than 12% passing No. 200 Sieve: GM, GC, SM, SC From 5% to 12% passing No. 200 Sieve: Borderline Classification requiring use of dual symbols	$C_u = D_{60} / D_{10}$ greater than 4. $C_z = (D_{30})^2 / (D_{10} \times D_{60})$ between 1 & 3.	
		Gravels with Fines		Not meeting both criteria for GW materials.	
		Clean Sands		Atterberg limits below "A" line, or P.I. less than 4.	Atterberg limits plotting in hatched area are <i>borderline</i> classifications requiring use of dual symbols.
				Atterberg limits above "A" line with P.I. greater than 7.	Atterberg limits plotting in hatched area are <i>borderline</i> classifications requiring use of dual symbols.
				$C_u = D_{60} / D_{10}$ greater than 6.	
				$C_z = (D_{30})^2 / (D_{10} \times D_{60})$ between 1 & 3.	
	Sands with Fines	Not meeting both criteria for SW materials.			
		Atterberg limits below "A" line, or P.I. less than 4.	Atterberg limits plotting in hatched area are <i>borderline</i> classifications requiring use of dual symbols.		
	Fine Grained Soils More than 50% passes No. 200 sieve *	Silts and Clays Liquid Limit of 50% or less	ML	Plasticity Index Chart Chart for classification of fine grained soils and the fin fraction of coarse grained soils. Atterberg Limit plotting in hatched area are borderline classifications requiring use of dual symbols. Y-axis: Plasticity Limit (0 to 60) X-axis: Liquid Limit (0 to 100) Key features: "A" Line, CH Soils, CL Soils, OH & MH Soils, CL-ML Soils, OL & ML Soils.	
			CL		
			OL		
		Silts and Clays Liquid Limit greater than 50%.	MH		
CH					
OH					
Highly Organic Soils		Pt	Peat, muck and other highly organic soils.		



APPENDIX B



GROUNDWATER ISSUES

The following presents additional comment and soil specific issues related to measurement of ground water conditions at your project site.

Note that our ground water measurements, or lack thereof, will vary depending on the time allowed for equilibrium to occur in the borings. Extended observation time was not available during the scope of the field exploration program and, therefore, ground water measurements as noted on the borings logs may or may not accurately reflect actual conditions at your site.

Seasonal and yearly fluctuations of the ground water level, if any, occur. Perched ground water may be present within sand and silt lenses bedded within cohesive soil formations.

If minor seepage into project excavations occurs, dewatering with sumps and pumps within excavations will be adequate within fine grained clay or silt based soils. Within the clean sand soils dewatering can likely be accomplished with the use of a well point system.



PLACEMENT AND COMPACTION OF ENGINEERED FILL

Unless otherwise superseded within the body of the Geotechnical Exploration Report, the following criteria shall be utilized for placement of engineered fill on project. This includes, but is not limited to earthen fill placement to improve site grades, fill placed below structural footings, fill placed interior of structure, and fill placed as backfill of foundations.

Engineered fill placed for construction, if necessary should consist of natural, non-organic, competent soils native to the project area. Such soils may include, but are not limited to gravel, sand, or clays with Unified Soil Classification System (ASTM D2488) classifications of GW, SP, SM, CL or CH. Use of silt or clayey silt as project fill will require additional review and approval of project Geotechnical Engineer of Record. Such soils have USCS classifications of ML, MH, ML-CL, MH-CH. Use of topsoil, marl, peat, other organic soils construction debris and/or other unsuitable materials as fill is not allowed. Such soils have USCS classifications of OL, OH, Pt.

Engineered fill, classified as clay, should be tempered such that the moisture content at the time of placement is equal to and no more than 3 percent above the optimum content for as defined by the appropriate proctor test. Likewise, engineered fill classified as gravel or sand should be tempered such that the moisture content at the time of placement is within 3 percent of the optimum content.

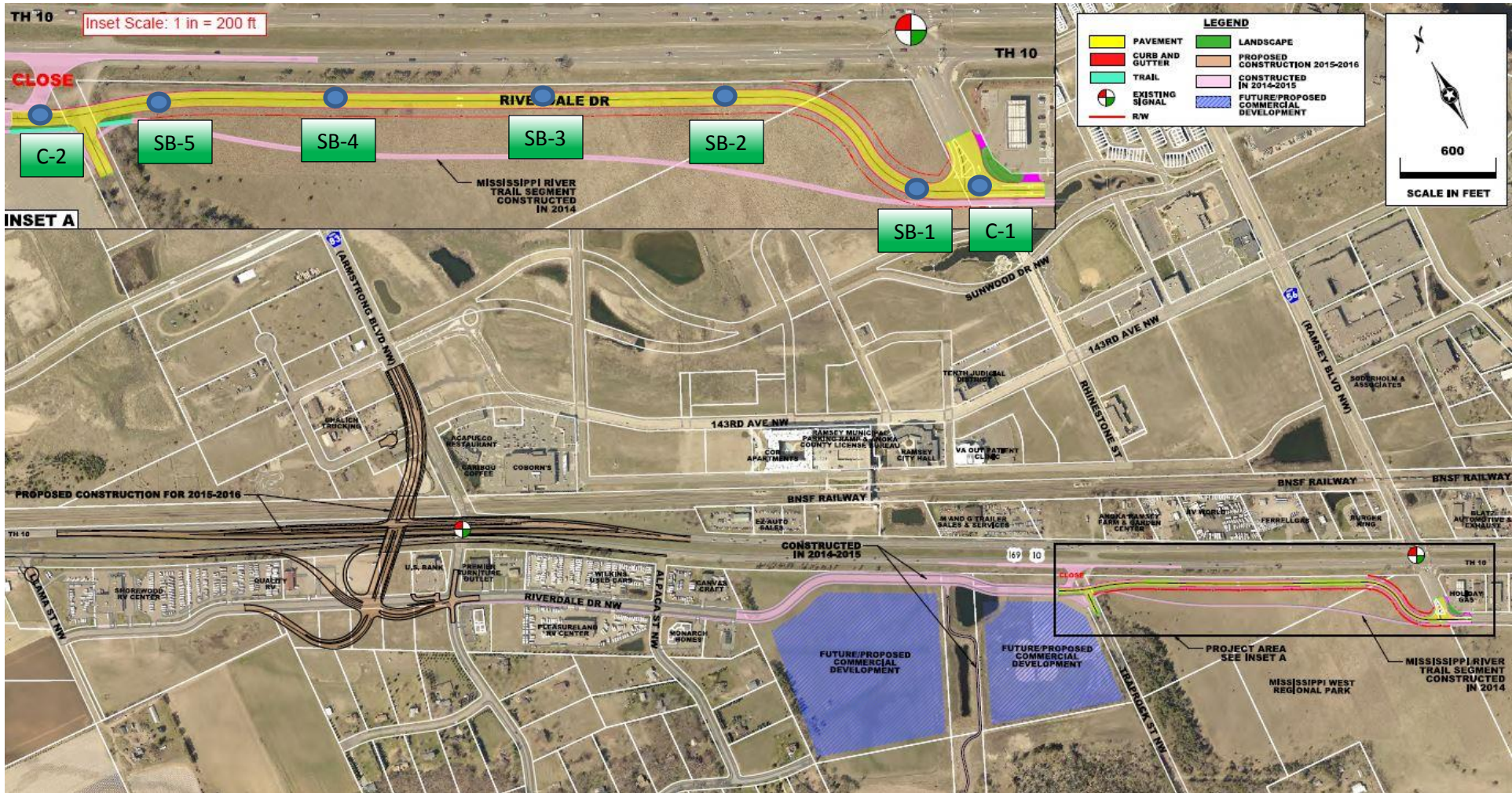
All engineered fill for construction should be placed in individual 8 inch maximum depth lifts. Each lift of fill should be compacted by large vibratory equipment until the in-place soil density is equal to or greater than the criteria established within the following tabulation.

Type of Construction	Compaction Criteria	
	(% respective Proctor) ¹	
	Clay	Sand or Gravel
Engineered Fill placed as Pavement Subgrade (more than 3 feet below bottom of final grade)	Min. 95	Min. 95
Engineered Fill placed as Pavement Subgrade (less than 3 feet below bottom of final grade)	Min. 100	Min. 100
Engineered Fill placed as Pavement Aggregate Base	NA	Min. 100
Note 1 Unless otherwise required, compaction criteria shall be based on the Standard Proctor Test (ASTM D698).		

Density tests should be taken during engineered fill placement to document earthwork has achieved necessary compaction of the material(s).



APPENDIX C



Boring Location Diagram
 Riverdale Drive
 Ramsey, Minnesota
 NTI Project #: 15.61224.100

NOTE: Boring locations are approximate.



NTI
 NORTHERN
 TECHNOLOGIES, INC.



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 Inver Grove Heights, MN, 55076
 Telephone: 651-389-4191

BORING NUMBER SB-1

CLIENT Bolton & Menk, Inc. PROJECT NAME Riverdale Drive
 PROJECT NUMBER 15.61224.100 PROJECT LOCATION Ramsey, MN
 DATE STARTED 12/21/15 COMPLETED 12/21/15 GROUND ELEVATION 866.2 ft HOLE SIZE 6 1/2 inches
 DRILLING CONTRACTOR NTI GROUND WATER LEVELS:
 DRILLING METHOD 3 1/4 in H.S.A AT TIME OF DRILLING --- No water encountered
 LOGGED BY BH CHECKED BY SDG AT END OF DRILLING ---
 NOTES Elevations estimated using MNTopo LiDAR data. AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0												
1.5		TOPSOIL (18 inches). 864.7	SS 1	0	1-1-1 (2)							
4.5		POORLY GRADED SAND WITH SILT, (SP-SM) dark brown, fine to medium grained, moist, trace gravel, occasional fine roots (Fill) 861.7	SS 2	100	2-2-2 (4)			7				
5		POORLY GRADED SAND, (SP) brown, fine to medium grained, moist, medium dense, trace gravel (Terrace Deposit)	SS 3	67	3-4-5 (9)			5				3
10		NOTE: Light brown below 9.5 feet.	SS 4	100	4-5-6 (11)							
11.0		855.2	SS 5	100	5-6-7 (13)							

Bottom of borehole at 11.0 feet.



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BORING NUMBER SB-2

CLIENT Bolton & Menk, Inc. PROJECT NAME Riverdale Drive
 PROJECT NUMBER 15.61224.100 PROJECT LOCATION Ramsey, MN
 DATE STARTED 12/21/15 COMPLETED 12/21/15 GROUND ELEVATION 863.2 ft HOLE SIZE 6 1/2 inches
 DRILLING CONTRACTOR NTI GROUND WATER LEVELS:
 DRILLING METHOD 3 1/4 in H.S.A ∇ AT TIME OF DRILLING 9.50 ft / Elev 853.70 ft
 LOGGED BY BH CHECKED BY SDG AT END OF DRILLING ---
 NOTES Elevations estimated using MNTopo LiDAR data. AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0												
0.8		TOPSOIL (10 inches).	SS 1	11	1-2-1 (3)							
		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, moist, trace gravel (Fill)	SS 2	100	1-2-2 (4)			6				
4.5		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, moist, loose to medium dense, trace gravel (Terrace Deposit) Note: Fine to coarse below 7 feet.	SS 3	100	3-4-4 (8)							
			SS 4	100	4-5-5 (10)							
11.0			SS 5	100	5-4-6 (10)			5				

Bottom of borehole at 11.0 feet.



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BORING NUMBER SB-3

CLIENT Bolton & Menk, Inc. PROJECT NAME Riverdale Drive
 PROJECT NUMBER 15.61224.100 PROJECT LOCATION Ramsey, MN
 DATE STARTED 12/21/15 COMPLETED 12/21/15 GROUND ELEVATION 863.4 ft HOLE SIZE 6 1/2 inches
 DRILLING CONTRACTOR NTI GROUND WATER LEVELS:
 DRILLING METHOD 3 1/4 in H.S.A ∇ AT TIME OF DRILLING 9.50 ft / Elev 853.90 ft
 LOGGED BY BH CHECKED BY SDG AT END OF DRILLING ---
 NOTES Elevations estimated using MNTopo LiDAR data. AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		TOPSOIL (18 inches).	SS 1	22	2-1-2 (3)							
1.5		POORLY GRADED SAND WITH SILT, (SP-SM) light brown, fine to medium grained, moist, loose to medium dense, trace gravel (Terrace Deposit)	SS 2	100	2-3-3 (6)			5				7
5			SS 3	100	4-4-5 (9)							
			SS 4	100	6-6-6 (12)							
10			SS 5	100	6-8-8 (16)							
11.0		Bottom of borehole at 11.0 feet.										

NTI GEOTECH COLUMNS - GINT STD US LAB MAY 2012.GDT - 12/21/15 14:11 - HURAMSEY1\PROJECTS\2015 PROJECTS\RIVERDALE DRIVE - GEO - (15.61274.100)\ENGINEERING\ENGINEERING REPORTS\RIVERDALE DR.GPJ



Northern Technologies Inc.
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 Inver Grove Heights, MN, 55076
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BORING NUMBER SB-4

CLIENT Bolton & Menk, Inc. PROJECT NAME Riverdale Drive
 PROJECT NUMBER 15.61224.100 PROJECT LOCATION Ramsey, MN
 DATE STARTED 12/21/15 COMPLETED 12/21/15 GROUND ELEVATION 868 ft HOLE SIZE 6 1/2 inches
 DRILLING CONTRACTOR NTI GROUND WATER LEVELS:
 DRILLING METHOD 3 1/4 in H.S.A AT TIME OF DRILLING --- No water encountered
 LOGGED BY BH CHECKED BY SDG AT END OF DRILLING ---
 NOTES Elevations estimated using MNTopo LiDAR data. AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0												
0.6		TOPSOIL (7 inches).	867.4									
		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, moist, trace gravel (Fill)	SS 1	33	1-2-2 (4)							
			SS 2	100	2-2-3 (5)			17				6
4.5			863.5									
5		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, moist, loose, trace gravel (Terrace Deposit)	SS 3	100	3-3-4 (7)							
7.0			861.0									
		CLAYEY SAND, (SC) brown, fine to coarse grained, moist, medium, trace gravel (Terrace Deposit)	SS 4	100	4-5-5 (10)							
9.5			858.5									
10		SILTY SAND, (SM) brown, fine grained, moist, medium dense, trace gravel, iron oxide staining (Terrace Deposit)	SS 5	100	5-5-9 (14)			12				
11.0			857.0									

Bottom of borehole at 11.0 feet.

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Northern Technologies Inc.
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BORING NUMBER SB-5

PAGE 1 OF 1

CLIENT Bolton & Menk, Inc. PROJECT NAME Riverdale Drive
 PROJECT NUMBER 15.61224.100 PROJECT LOCATION Ramsey, MN
 DATE STARTED 12/21/15 COMPLETED 12/21/15 GROUND ELEVATION 868.7 ft HOLE SIZE 6 1/2 inches
 DRILLING CONTRACTOR NTI GROUND WATER LEVELS:
 DRILLING METHOD 3 1/4 in H.S.A AT TIME OF DRILLING --- No water encountered
 LOGGED BY BH CHECKED BY SDG AT END OF DRILLING ---
 NOTES Elevations estimated using MNTopo LiDAR data. AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0												
0.7		TOPSOIL (8 inches).										
		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, moist, trace gravel (Fill)	SS 1	56	1-1-2 (3)							
			SS 2	67	2-3-2 (5)							
4.5												
5		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, moist, loose, trace gravel (Terrace Deposit)	SS 3	100	3-3-3 (6)			4				
			SS 4	89	3-3-3 (6)							
10												
11.0			SS 5	89	2-3-2 (5)							

Bottom of borehole at 11.0 feet.

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Bituminous Pavement Cores, C-1: 8 ¾ Inches, C-2: 4 ¾ Inches

