

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.

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PLANS, PROPOSALS AND ADDENDA

AFTER AWARD OF CONTRACT, THE LOW BIDDER WILL RECEIVE TEN (10) COMPLIMENTARY SETS OF PLANS, PROPOSALS, PROJECT Q & A FORUM, AND ADDENDA FOR FIELD AND OFFICE USE. AN ELECTRONIC COPY WILL ALSO BE PROVIDED. ANY ADDITIONAL COPIES REQUIRED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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NOTICE TO CONTRACTORS

Bid proposals for this project will be received electronically by the South Dakota Department of Transportation (SDDOT) via the SDDOT secure bid submission site at <http://apps.sd.gov/hc65bidletting/bidsubmittallogin.aspx> until 10 A.M. Central time, on September 16, 2015, at which time the SDDOT will open bids. All bids will be checked for qualifications with results posted on the SDDOT website. The South Dakota Transportation Commission will consider all bids at a scheduled Commission meeting.

The work for which proposals are hereby requested is to be completed within the following requirement(s):

FIELD WORK COMPLETION: NOVEMBER 4, 2016

The DBE goal for this project is: **MBE/DBE = 1%; WBE = 4%**.

Work Type for this project is: **Work Type 2.**

Bidders on this Sanitary Sewer Improvements Project will be required to comply with the: A) Federal Bid Requirements & Inclusions for Projects Involving Disadvantaged Business Enterprise (DBE) Program and B) D.E.N.R. State Revolving Funds (SRF) General Conditions. Goals for contract participation for DBE/MBE are 1% and WBE are 4%.

In addition to the above listed Federal requirement for work on this Sanitary Sewer Improvements Project, bidders will be required to comply with the President's Executive Order Nos. 11246, as amended, 11518 and 11625 as amended. The requirements for bidders and contractors under these orders are explained in the general conditions.

The low responsive bidder will be required to certify to compliance with the American Iron and Steel provision of the Consolidated Appropriations Act of 2014. This certification form may be found on page AIS 22-23 of the State Revolving Fund (SRF) General Conditions and must be included in the bid proposal.

Please be advised that waivers or exemptions from the American Iron and Steel provision that cite International Trade Agreements **DO NOT** comply with the Consolidated Appropriations Act of 2014 as it applies to the SRF programs. Claims from suppliers that the American Iron and Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.

Davis Bacon and related acts wages apply to this project. All provision relative those acts must be met.

Bidding package for the work may be obtained at:
<http://apps.sd.gov/hc65bidletting/ebslettings1.aspx>

City specifications for the City Utility work are provided and referenced within the advertised contract documents. All work not covered under the City utility specifications shall be completed in accordance with the Standard Specifications for Roads and Bridges, most recent edition. An

electronic version of the Standard Specifications for Roads and Bridges may be obtained at <http://www.sddot.com/business/contractors/specs/2015specbook/Default.aspx>

The electronic bid proposal must be submitted by a valid bidder as designated on the [Bidding Authorization Form](#). The Bidder ID and Password, coupled with a previously Department assigned Company ID, will serve as authentication that an individual is a valid bidder and will assure the secure electronic delivery of bid proposals to the Department. This authorization shall remain in full force and effect until written notice of termination of this authorization is sent by an Officer of the company and received by the Department.

PROPOSAL

Revised 8/10/11

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION, STATE OF SOUTH DAKOTA:

Ladies / Gentlemen:

The following proposal is made on behalf of the undersigned and no others. It is in all respects fair and is made without collusion on the part of any other person, firm or corporation not appearing in the signature to this proposal.

The undersigned certifies that she / he has carefully examined the plans listed herein, the Specifications hereinbefore referred to, the Special Provisions and the form of contract, both of which are attached hereto. The undersigned further certifies that she / he has personally inspected the actual location of the work, together with the local sources of supply and that she / he understands the conditions under which the work is to be performed, or, that if she / he has not so inspected the actual location of the work, that she / he waives all right to plea any misunderstanding regarding the location of the work or the conditions peculiar to the same.

On the basis of the plans, Specifications, Special Provisions and form of contract proposed for use, the undersigned proposes to furnish all necessary machinery, tools, apparatus and other means of construction, to do all the work and furnish all the materials in the manner specified, to finish the entire project **within the contract time specified** and to accept as full compensation therefore the amount of the summation of the products of the actual quantities, as finally determined, multiplied by the unit prices bid.

The undersigned understands that the quantities as shown in the Bid Schedule are subject to increase or decrease, and hereby proposes to perform all quantities of work, as increased or decreased, in accordance with the provisions of the specifications, and subject to any applicable special provisions, and at the unit prices bid.

The undersigned understands that the "Total or Gross Amount Bid" as immediately hereinbefore set forth is not the final amount which will be paid if this proposal is accepted and the work done, but that such amount is computed for the purpose of comparison of the bids submitted and the determination of the amount of the performance bond.

The undersigned further proposes to perform all extra work that may be required on the basis provided in the specifications, and to give such work personal attention in order to see that it is economically performed.

The undersigned further proposes to both execute the contract agreement and to furnish a satisfactory performance bond, in accordance with the terms of the specifications, within twenty (20) calendar days after the date of Notice of Award from the South Dakota Department of Transportation that this proposal has been accepted.

REV. 6/24/15

SPECIAL PROVISIONS

PROJECT NUMBER(S): A 5735() PCN: X03F

TYPE OF WORK: SANITARY SEWER AND WATERMAIN IMPROVEMENT

COUNTIES: POTTER, WALWORTH

The following clauses have been prepared subsequent to the Standard Specifications for Roads and Bridges and refer only to the above described improvement, for which the following Proposal is made. In case of any discrepancy or conflict between said specifications and these Special Provisions, the latter are to govern.

The Contractor's attention is directed to the need for securing from the Department of Environment & Natural Resources, Foss Building, Pierre, South Dakota, permission to remove water from public sources (lakes, rivers, streams, etc.). The Contractor should make his request as early as possible after receiving his contract, and insofar as possible at least 30 days prior to the date that the water is to be used.

Marge Mertz is the official in charge of the Mobridge Career Center for Potter, Walworth Counties.

THE FOLLOWING ITEMS ARE INCLUDED IN THIS PROPOSAL FORM:

Instructions for Bidders, dated 8/12/15.

Special Provision Regarding Combination Bids, dated 8/12/15.

Special Provision Regarding the City Portion for Subletting, dated 8/12/15.

State Revolving Fund (SRF) General Conditions with Davis-Bacon & American Iron and Steel Provisions, dated 4/14.

City of Hoven Standard Specifications

Standard Title VI Assurance, dated 1/15/04.

Special Provision For Implementation of Clean Air Act & Federal Water Pollution Control Act, dated 9/1/97.

Wage and Hour Division US Department of Labor Washington DC.

- US Dept. of Labor Decision Number SD100010, dated 8/30/13.

* * * *

**A 5735(), PCN X03F
SANITARY SEWER AND WATERMAIN IMPROVEMENT
SD HIGHWAY 20**

INSTRUCTIONS FOR BIDDERS

AUGUST 12, 2015

- 1) This Sanitary Sewer and Watermain Improvement Project will be let and awarded by the South Dakota Department of Transportation, subject to concurrence by the City of Hoven and the Department of Environment & Natural Resources.
- 2) Department of Transportation procedures regarding letting and awarding of contracts shall be followed.
- 3) All bid bonds shall be made out to the Department of Transportation
- 4) Bidders submitting a bid on this project shall also submit a bid on Project P 0020(117)254 PCN 02R9, Potter, Walworth County. Award of these projects will be to the same bidder based on the total of the two projects.
- 5) Bidders on this Sanitary Sewer and Watermain Improvement Project will be required to comply with the: A) Federal Bid Requirements & Inclusions for Projects Involving Disadvantaged Business Enterprise (DBE) Program and B) DENR State Revolving Funds (SRF) General Conditions. Goals for contract participation for DBE/MBE are 1% and WBE are 4%. DENR will not authorize the approval to award the contract until all forms are submitted and approved by DENR. Failure to submit all necessary documentation could affect the project SRF eligibility. All forms contained in the State Revolving Fund (SRF) General Conditions must be completed and submitted to DENR within 10 days of the bid proposal opening. Inquiries relative to the documents can be directed to Nick Nelson (605-773-4216), Water and Waste Funding Program, Dept. of Environment & Natural Resources, Foss Building, Pierre, SD.
- 6) In addition to the above listed Federal requirement (Item 5) for work on this Sanitary Sewer and Watermain Improvement Project, bidders will be required to comply with the President's Executive Order Nos. 11246, as amended, 11518 and 11625 as amended. The requirements for bidders and contractors under these orders are explained in the general conditions. Inquiries relative to these documents can be directed to Nick Nelson (605-773-4216), Water and Waste Funding Program, Dept. of Environment & Natural Resources, Foss Building, Pierre, SD.
- 7) A prospective bidder must request any explanation regarding the meaning or interpretation of the bidding package in adequate time to allow a Department reply to reach all prospective bidders before submission of final bid proposals. The bidder will contact the Department by submitting a request for explanation to the project Q&A forum.
- 8) The low responsive bidder will be required to certify to compliance with the American Iron and Steel provision of the Consolidated Appropriations Act of 2014. This certification form may be found on page AIS 21-22 of the State Revolving Fund (SRF) General Conditions and must be included in the bid proposal.

Please be advised that waivers or exemptions from the American provision that cite International Trade Agreements DO NOT comply with the Consolidated Appropriations Act of 2014 as it applies to the SRF programs. Claims from suppliers that the American Iron and

Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.

- 9) Davis Bacon and related acts wages apply to this project. All provision relative those acts must be met.
- 10) The contract completion date for this project will be the same as specified of Project Project P 0020(117)254 PCN 02R9, Potter, Walworth County. Any delays in completing this contract will not be a basis for an extension of the contract completion time for PCN 02R9, Potter, Walworth County.
- 11) After award of contract, the Contractor shall furnish satisfactory proof of coverage of insurance required. Copies of Certificates of Insurance shall be furnished to the Department of Transportation AND City of Hoven.
- 12) The contractor is required to schedule and conduct a preconstruction meeting that shall be held jointly with the preconstruction meeting for the state contract. Additionally the contractor is responsible for contacting the city for a list of required submittals upon receiving Notice of Award of the contract.
- 13) Construction engineering for this contract will be performed by the City of Hoven.
- 14) Payment for this Utilities project will be made to the Contractor by the City of Hoven.

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**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION REGARDING
COMBINATION BIDS**

**A 5735(), PCN X03F
SANITARY SEWER AND WATERMAIN IMPROVEMENT
POTTER, WALWORTH COUNTY**

AUGUST 12, 2015

Bidders submitting a bid on this project **MUST ALSO** submit a bid on project:

P 0020(117)254, PCN 02R9
SD HIGHWAY 20/47
GRADING, AC SURFACING, CURB & GUTTER, ROADWAY LIGHTING, SIDEWALK,
STORM SEWER, & ADA UPGRADES
POTTER, WALWORTH COUNTY

Award of both projects will be to the same bidder based on the total of the two projects.

Work on PCN 02R9 CANNOT be used to meet the DBE Goal established for this project.

After award, the contracts will be administered as entirely separate contracts.

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**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION REGARDING
THE CITY PORTION FOR SUBLETTING**

**A 5735(), PCN X03F
POTTER, WALWORTH COUNTY**

AUGUST 12, 2015

This project is let in combination with State Project Number P 0020(117)254 PCN 02R9. The provisions of section 8.1 of the specifications requiring the Contractor to perform work amounting to not less than 50% of the total contract cost with the Contractor's own organization will not apply to the work on this contract.

* * * *

STATE REVOLVING FUND (SRF)

GENERAL CONDITIONS

with

DAVIS-BACON

&

American Iron and Steel Provisions

South Dakota
Department of Environment
and Natural Resources

These provisions must be included in the specifications for all Clean Water SRF
and Drinking Water SRF projects.

April 2014

Table of Contents

Guidance for Utilization of Disadvantaged Business Enterprises	DBE – 1
DBE Subcontractor Solicitation Information Form	DBE – 6
DBE Subcontractor Participation Form (EPA Form 6100-2)	DBE – 7
DBE Subcontractor Performance Form (EPA Form 6100-3)	DBE – 9
DBE Subcontractor Utilization Form (EPA Form 6100-4)	DBE – 11
Equal Employment Opportunity and Affirmative Action Requirements	EEO – 1
DOL Notification Form	EEO – 7
Certification Regarding Debarment, Suspension and Other Responsibility Matters	Debar – 1
Prohibition Against Listed Violated Facilities	PALVF – 1
Williams-Steiger Occupational Safety and Health Act of 1970	OSHA – 1
Discovery of Archaeological and Other Historical Items	Archaeol – 1
Davis-Bacon and Related Acts	DB - 1
American Iron and Steel	AIS-1

GUIDANCE FOR UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS OF 40 CFR §33.

A. REQUIREMENTS

1. The recipient and prime contractor will exercise good faith efforts to attract and utilize small, minority, and women's business enterprises primarily through outreach, recruitment, and race/gender neutral activities; at a minimum, fulfillment of the six affirmative steps set forth below:
 - a. Including disadvantaged businesses on solicitation lists;
 - b. Assuring that disadvantaged businesses are solicited whenever they are potential sources;
 - c. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by disadvantaged businesses;
 - d. Establishing delivery schedules, when the requirements of the work permit, which will encourage participation by disadvantaged businesses;
 - e. Using the services of the Small Business Administration and the Office of Minority Business Enterprise of the U.S. Department of Commerce, as appropriate; and
 - f. Require a. through e. to be taken if subcontracts are awarded.

B. FAIR SHARE OBJECTIVE

1. The fair share objective for this project is 1 % MBE's and 4 % WBE's.

C. DEFINITIONS

1. Disadvantaged Business Enterprise (DBE) is a business concern which meets the qualifications of a Minority Business Enterprise (MBE), Women's Business Enterprise (WBE), Small Business (SBE), or Small Business in a Rural Area (SBRA).
2. Minority Business Enterprise (MBE) is a business concern which is:
 - a. Certified as socially and economically disadvantaged by the Small Business Administration;
 - (1) Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.
 - (2) Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system is impaired due to diminished capital and credit opportunities, as compared to others in the same business area who are not socially disadvantaged. In determining the degree of diminished credit and capital opportunities, the Small Business Administration shall consider, but not be limited to, the assets and net worth of such socially disadvantaged individuals. Individuals who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans), are to be considered socially and economically disadvantaged. Economically and socially disadvantaged individuals are deemed to include women.
 - b. Certified as a minority business enterprise by a State or Federal agency; and

c. An independent business concern which is at least 51 percent owned and controlled by minority group member(s).

(1) A minority group member is an individual who is a citizen of the United States and one of the following:

(a) Black American;

(b) Hispanic American (with origins from Puerto Rico, Mexico, Cuba, South or Central America)

(c) Native American (American Indian, Eskimo, Aleut, native Hawaiian); or

(d) Asian-Pacific American (with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, Taiwan or the Indian subcontinent).

(2) In order to satisfy this third criteria of the MBE definition, the minority ownership's interest must be real, substantial and continuing. Such interest is characterized by:

(a) Risk of loss/share of profit commensurate with the proportional ownership; and

(b) Receipt of the customary incidents of ownership, such as compensation (i.e., salary and other personnel compensation).

(3) A minority owner must have and exercise control of the business decisions. Characteristics of control include, but are not limited to:

(a) Authority to sign bids and contracts;

(b) Decisions in price negotiations;

(c) Incurring liabilities for the firm;

(d) Final staffing decisions;

(e) Policy-making; and

(f) General company management decisions.

(4) Only those firms performing a useful business function according to custom and practice in the industry, are qualified as MBEs. Acting merely as a passive conduit of funds to some other firm where such activity is unnecessary to accomplish the project does not constitute a "useful business function according to custom and practice in the industry." The purpose of this approach is to discourage the use of MBE "fronts" and limit the creation of an artificial supplier and broker marketplace.

3. Women's Business Enterprise (WBE) is a business which is certified as such by a State or Federal agency, or which meets the following definition:

"A women's business enterprise is an independent business concern which is at least 51 percent owned by a woman or women, who also control and operate it. Determination of whether a business is at least 51 percent owned by a woman or otherwise qualified WBE which is 51 percent owned by a married woman in a community property State will not be disqualified because her husband has a 50 percent interest in her share. Similarly, a business which is 51 percent owned by a married man and 49 percent owned by an

unmarried woman will not become a qualified WBE by virtue of his wife's 50 percent interest in his share of the business."

As in the case of a MBE, only United States citizens will be deemed to be WBEs. Similar to the MBE criteria, WBE should meet the criteria cited in subparagraphs B.1.c.(2), (3), and (4).

4. Fair Share or Fair Share Objective A fair share or a fair share objective is an amount of funds reasonably commensurate with the total project funding and the availability of qualified MBEs and WBEs, taking into account experience on EPA-funded projects and other comparable projects in the area. A fair share objective does not constitute an absolute requirement, but a commitment on the part of the bidder to exercise good faith efforts as defined in this section to use MBEs and WBEs to achieve the fair share objective.
5. Small Business (SBE) Any business entity, including its affiliates, that is independently owned and operated, and not dominant in its field of operations in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards set forth in 13 CFR Part 121.
6. Small Business in a Rural Area A small business in a rural area (SBRA) is a business entity meeting the definition of a small business, and is located and conducts its principal operations in a geographical area (county) listed in the Small Business Administration's Listing of Non-Metropolitan Counties by State.
7. Recipient A party receiving SRF financial assistance.
8. Project The scope of work for which an SRF loan is awarded.
9. Bidder A party seeking to obtain a contract with a recipient through a competitive, advertised, sealed bid process.
10. Offeror A party seeking to obtain a contract with a recipient through a negotiative procurement process.
11. Prime Contractor A party that has obtained a contract with a recipient through a competitive, advertised, sealed bid process.
12. Good Faith Efforts Good faith efforts by a recipient, prime contractor, and/or bidder/offeror means efforts to attract and utilize DBEs primarily through outreach, recruitment, and race/gender neutral activities. The following are examples of activities to assist recipients, prime contractors and/or bidders/offerors to comply with good faith efforts.
 - a. Include qualified DBEs on solicitation lists.
 - (1) Maintain and update a listing of qualified DBEs that can be solicited for supplies, construction and/or services.
 - (2) Provide listings to all interested parties who requested copies of the bidding or proposing documents.
 - (3) Contact appropriate sources within your geographic area and State to identify qualified DBEs for placement on your minority and women's business listings.
 - (4) Utilize other DBE listings such as those of the State's Minority Business Office, the Small Business Administration, Minority Business Development Agency, US EPA- Office of Small Business Programs and the Department of Transportation.
 - (5) Have the State environmental agency personnel review this solicitation list.

- b. Assure that DBEs are solicited.
 - (1) Conduct meetings, conferences, and follow-ups with DBEs, small, minority and/or women's business associations, minority media, etc., to inform these groups of opportunities to provide supplies, services, and construction.
 - (2) MBE Utilization is facilitated if the recipient or prime contractor advertises through the minority media. Such advertisements may include, but are not limited to, contracting and subcontracting opportunities, hiring and employment, or any other matter related to the project.
 - (3) Conduct pre-bid, pre-solicitation, and post-award conferences to ensure that consultants, suppliers, and builders solicit DBEs.
 - (4) Provide bidders and offerors with listings of qualified DBEs and establish that a fair share of contracts/procurements should be awarded to these groups.
 - (5) Advertise in general circulation, trade publications, State agency publications of identified source, disadvantaged business focused media, etc., concerning contracting opportunities on your projects. Maintain a list of disadvantaged business-focused publications that may be utilized to solicit MBEs or WBEs.
 - (6) Provide interested DBEs with adequate information about plans, specifications, timing and other requirements of the proposed projects.
 - (7) Provide DBE trade organizations with succinct summaries of solicitations.
 - (8) Notify DBEs of future procurement opportunities so that they may establish bidding solicitations and procurement plans.
- c. Divide total requirements when economically feasible, into small tasks or quantities to permit maximum participation of DBEs.
 - (1) Perform an analysis to identify portions of work that can be divided and performed by qualified DBEs.
 - (2) Scrutinize the elements of the total project to develop economically feasible units of work that are within the bonding range of DBEs.
 - (3) Analyze bid packages for compliance with the good faith efforts to afford DBEs maximum participation.
- d. Establish delivery schedules, where requirements of the work permit, which will encourage participation by DBEs.
 - (1) Consider lead times and scheduling requirements often needed by DBE participation.
 - (2) Develop realistic delivery schedules which may provide for greater DBE participation.
- e. Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the US Department of Commerce, as appropriate.
 - (1) Use the services of outreach programs sponsored by the Minority Business Development Agency and/or the Small Business Administration to recruit bona fide firms for placement on DBEs' bidders lists to assist these firms in the development of bid packaging.

- (2) Seek out Minority Business Development Centers (MBDCs) to assist recipients and prime contractors in identifying MBEs for potential work opportunities on this project.

D. ADDITIONAL CONTRACT PROVISIONS (New Requirements)

1. The prime contractor must pay its subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the owner.
2. The prime contractor must notify the owner in writing prior to any termination of a DBE subcontractor for convenience.
3. If a DBE subcontractor fails to complete work under the subcontract for any reason, the prime contractor must employ the good faith efforts if soliciting a replacement subcontractor, even if the fair share objectives have already been achieved.
4. Each procurement contract signed by an EPA financial recipient, including those for an identified loan under an EPA financial assistance agreement capitalizing a revolving loan fund, must include the following term and condition:

The contractor 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 40 CFR 33 in the award and administration of contracts awarded under EPA financial assistance agreements. 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 other legally available remedies.

E. REPORTING

1. Bidders/offerors shall demonstrate compliance with good faith efforts in order to be deemed responsible. To demonstrate compliance, the "DBE Subcontractor Solicitation Sheet" (pg. DBE - 6) shall be submitted as part of its bid or proposal package. Information shall be included for each DBE subcontractor contacted by the bidder/offeror, not just those used to meet the fair share objective.
2. The prime contractor must distribute DBE Program Subcontractor Participation Form (EPA Form 6100-2) to all of its DBE subcontractors. The subcontractors can submit completed forms to the South Dakota Department of Environment and Natural Resources, Water Resources Assistance Program.
3. The prime contractor must have its DBE subcontractors complete DBE Program Subcontractor Performance Form (EPA Form 6100-3) and should include completed forms in its bid or proposal package.
4. The prime contractor must complete DBE Program Subcontractor Utilization Form (EPA Form 6100-4) which should be submitted as part of its bid or proposal package.
5. Form 6100-3 and Form 6100-4 must be submitted by the apparent low-bidder within ten calendar days of the bid opening. Failure to submit this information will be viewed as a non-responsive bid.

Additional DBE forms can be downloaded at <http://www.epa.gov/osbp/grant.htm>

DBE SUBCONTRACTOR SOLICITATION INFORMATION

PROJECT NAME:

Subcontractor Name and Telephone Number	MBE or WBE	Description of Work Offered	Date of Phone Follow-up & Person Contacted	Amount of Bid or Reason for not Quoting	Bid Accepted or Rejected? Include Reason for Rejection

This information is true and correct to the best of my knowledge

This form shall be submitted as part of the contractor's bid.

Contractor Name, Address and Telephone Number _____

Signature _____ Title _____ Date _____



Environmental
Protection Agency

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program
DBE Subcontractor Participation Form**

NAME OF SUBCONTRACTOR	PROJECT NAME
ADDRESS	CONTRACT NO.
TELEPHONE NO.	EMAIL ADDRESS
PRIME CONTRACTOR NAME	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR	AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR

_____	_____
Subcontractor Signature	Title/Date

*Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-2 (DBE Subcontractor Participation Form)



Environmental
Protection Agency

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

Disadvantaged Business Enterprise Program DBE Subcontractor Participation Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Participation Form to this address.



Environmental
Protection Agency

OMB Control No: _____
Approved: _____
Approval Expires: _____

**Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form**

NAME OF SUBCONTRACTOR ¹		PROJECT NAME
ADDRESS		BID/PROPOSAL NO.
TELEPHONE NO.		E-MAIL ADDRESS
PRIME CONTRACTOR NAME		
CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME	PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR
Currently certified as an MBE or WBE under EPA's DBE Program? ____ Yes ____ No		
_____ Signature of Prime Contractor		_____ Date
_____ Print Name		_____ Title
_____ Signature of Subcontractor		_____ Date
_____ Print Name		_____ Title

¹Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



Environmental
Protection Agency

OMB Control No: _____
Approved: _____
Approval Expires: _____

Disadvantaged Business Enterprise Program DBE Subcontractor Performance Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Performance Form to this address.



Environmental
Protection Agency

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form**

BID/PROPOSAL NO.	PROJECT NAME
NAME OF PRIME BIDDER/PROPOSER	E-MAIL ADDRESS
ADDRESS	
TELEPHONE NO.	FAX NO.

The following subcontractors will be used on this project:			
COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATED DOLLAR AMOUNT	CURRENTLY CERTIFIED AS AN MBE OR WBE?

I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c)

Signature of Prime Contractor	Date
Print Name	Title

'Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)



Environmental
Protection Agency

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form**

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Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Utilization Form to this address.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)

**EQUAL EMPLOYMENT OPPORTUNITY and AFFIRMATIVE ACTION REQUIREMENTS on
FEDERALLY ASSISTED CONSTRUCTION CONTRACTS**

**Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity
(Executive Order 11246)**

1. The Offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area as follows:

Goals for minority participation in each trade -	<u>1.2%</u>
(See Appendix A for goals by county)	
Goals for female participation in each trade -	<u>6.9%</u>

As used in this notice, and in the contract resulting from this solicitation, the "covered area" is
Potter and Walworth County.

These goals are applicable to all the contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside 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 nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 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. The notification shall list the name, address and telephone number for 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. A form is provided on page EEO - 7 that the contractor may use for this purpose.

This notice shall be included in, and shall be a part of, all solicitations for offers and bids on all federal and federally assisted construction contracts or subcontracts.

EQUAL OPPORTUNITY CLAUSES

The Equal Opportunity Clause published at 41 CFR Part 60-1.4(b) is required to be included in, and is part of, all nonexempt federally assisted construction contracts and subcontracts. The Equal Opportunity Clause shall be considered to be a part of every contract and subcontract required by the regulations in this part to include such a clause, whether or not it is physically incorporated in such contracts.

In addition to the clauses described above, all federal contracting officers, all applicants, and all non-construction contractors, as applicable, shall include the specifications set forth in this section in all federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of non-construction Federal contracts and subcontracts covered under the Executive Order.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

- a. "Covered Area" means the geographical area described in the 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);
 - (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 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the 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 in the Plan area, (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs (7)(a) through (p) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. 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. 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 office or from Federal procurement contracting officers. 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, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its 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 female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director 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 Department of Labor. The contractor shall provide notice of these programs to the sources compiled under (7)(b) above.

f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO 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, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7)(a) through (p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be

asserted as fulfilling any one or more of its obligations under (7)(a) through (p) of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. 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 if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Executive order if a specific minority group of women is under-utilized).

10. The contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph (7) of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

APPENDIX A

GOALS FOR MINORITY PARTICIPATION ON EACH TRADE

Counties	Goal
Aurora, Beadle, Brookings, Brule, Charles Mix, Davison, Douglas, Gregory, Hand, Hanson, Hutchinson, Jerauld, Kingsbury, Lake, Lincoln (excluding Sioux Falls), McCook, Miner, Moody, Sanborn, Turner	0.8
Bon Homme, Clay, Minnehaha (including all of Sioux Falls), Union, Yankton	1.2
Brown, Clark, Codington, Day, Deuel, Edmunds, Faulk, Grant, Hamlin, McPherson, Marshall, Roberts, Spink	1.3
Meade, Pennington	3.4
Bennett, Buffalo, Butte, Campbell, Corson, Custer, Dewey, Fall River, Haakon, Harding, Hughes, Hyde, Jackson, Jones, Lawrence, Lyman, Mellette, Perkins, Potter, Shannon, Stanley, Sully, Todd, Tripp, Walworth, Ziebach	7.9

CONTRACTOR'S NAME, ADDRESS & TELEPHONE NUMBER

Return to:

Joan Ford, Regional Director
 US Department of Labor
 Federal Building, Room 840
 525 South Griffin St.
 Dallas, TX 75202

Contractor Employer ID Number: _____

CONTRACT INFORMATION

PROJECT AND LOCATION:

Dollar Amount of Contract	Estimated Start Date	Estimated Completion Date	Contract No.	Geographical Area (County, State)

NOTIFICATION OF SUBCONTRACTS AWARDED (>\$10,000)

Subcontractor's Name Address, and Phone Number	Employer ID Number of Subcontractor	Estimated \$ Amount of Subcontract	Estimated Start Date	Estimated Completion Date

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

A. INSTRUCTIONS

Under Executive Order 12549, an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a subagreement thereunder for \$25,000 or more. The status of prospective individuals or organizations can be checked at:

<http://epls.arnet.gov/>

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification or provide an explanation why they cannot complete the certification. For further details, see 40 CFR 32.510, Participants Responsibilities.

B. WHERE TO SUBMIT

A prospective prime contractor must submit a completed certification or explanation to the project owner for the project. Each prospective subcontractor must submit a completed certification or explanation to the prime contractor for the project.

C. HOW TO OBTAIN FORMS

This form may reproduced as necessary. If needed, additional forms may be obtained from the Department of Environment and Natural Resources.

United States Environmental Protection Agency
Washington, DC 20460

**Certification Regarding
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement 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;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) 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.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

_____ I am unable to certify to the above statements. My explanation is attached.

PROHIBITION AGAINST LISTED VIOLATED FACILITIES

A. REQUIREMENTS

- (1) To comply with all the requirements of section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Pub. L. 92-604) and section 308 of the Clean Water Act (33 U.S.C. 1251, as amended), respectively, which relate to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the award of this contract.
- (2) That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency list of violating facilities on the date when this contract was awarded unless and until the EPA eliminates the name of such facility or facilities from the listing.
- (3) That the best efforts to comply with clean air and clean water standards at the facilities in which the contract is being performed.
- (4) To insert the substance of the provisions of this clause, including this paragraph (4), in any nonexempt subcontract.

B. DEFINITIONS

- (1) Air Act means the Clean Air Act, as amended (42 U.S.C. 1857 et seq.).
- (2) Water Act means the Clean Water Act, as amended (33 U.S.C. 1251 et seq.).
- (3) Clean Air Standards means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738, an applicable implementation plan as described in section 110 (d) of the Air Act (42 U.S.C. 1857c-5(d)), an approved implementation procedure or plan under section 111 (c) or section 111(d), or an approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).
- (4) Clean Water Standards means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated under the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by a local government to ensure compliance with pretreatment regulations as required by section 307 of Water Act (33 U.S.C. 1317).
- (5) Compliance means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency in accordance with the requirements of the Air Act or Water Act and regulations.
- (6) Facility means any building, plant, installation, structure, mine, vessel, or other floating craft, location, or site of operations, owned, leased, or supervised by a contractor or subcontractor, to be used in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are located in one geographical area.

WILLIAMS-STEIGER OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

A. AUTHORITY

- (1) The contractor is subject to the provisions of the Williams-Steiger Occupational Safety and Health Act of 1970.
- (2) These construction documents and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the Federal law(s) , including but not limited to the latest amendment of the following:
 - a. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 94-596;
 - b. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
 - c. Part 1926 - Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

B. SAFETY AND HEALTH PROGRAM REQUIREMENTS

- (1) This project, its prime contractor and its subcontractors, shall at all times be governed by Chapter XVII of Title 29, Code of Federal Regulations, Part 1926 - Safety and Health Regulations for Construction (29 CFR 22801), as amended to date.
- (2) To implement the program and to provide safe and healthful working conditions for all persons, general project safety meetings will be conducted at the site at least once each month during the course of construction, by the construction superintendent or his/her designated safety officer. Notice of such meeting shall be issued not less than three (3) days prior, stating the exact time, location, and agenda to be included. Attendance by the owner, architect, general foreman, shop steward(s), and trades, or their designated representatives, witnessed in writing as such, shall be mandatory.
- (3) To further implement the program, each trade shall conduct a short gang meeting, not less than once a week, to review project safety requirements mandatory for all persons during the coming week. The gang foreman shall report the agenda and specific items covered to the project superintendent, who shall incorporate these items in his/her daily log or report.
- (4) The prime contractor and all subcontractors shall immediately report all accidents, injuries, or health hazards to the owner and architect, or their designated representatives, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970.
- (5) This program shall become a part of the contract documents and the contract between the owner and prime contractor, prime contractor and all subcontractors, as though fully written therein.

DISCOVERY OF ARCHAEOLOGICAL AND OTHER HISTORICAL ITEMS

In the event of an archaeological find during any phase of construction, the following procedure will be followed:

- (1) Construction shall be halted, with as little disruption to the archaeological site as possible.
- (2) The Contractor shall notify the Owner who shall contact the State Historical Preservation Officer.
- (3) The State Historical Preservation Officer may decide to have an archaeologist inspect the site and make recommendations about the steps needed to protect the site, before construction is resumed.
- (4) The entire event should be handled as expediently as possible in order to hold the loss in construction time to a minimum while still protecting archaeological finds.

A similar procedure should be followed with regard to more recent historical resources. Should any artifacts, housing sites, etc., be uncovered, the same procedure should be followed as for an archaeological find.

In the event archaeological/historical data are evaluated to meet National Register criteria, the Advisory Council on Historic Preservation may be notified and asked to comment by the South Dakota Department of Environment and Natural Resources.

DAVIS-BACON AND RELATED ACTS

LABOR STANDARDS

Contractors performing work on construction projects which have been provided assistance through the State Revolving Fund must fulfill the requirements of the Labor Standards Provisions for federally assisted construction contracts. These standards are located at the end of this section.

WEEKLY CONTRACTOR PAYROLLS

Each week as work progresses, the contractor must submit to the Owner a copy of all weekly payrolls and required attachments stipulated therein. Sample suggested payrolls may be obtained from the Owner upon request. All weekly payrolls shall contain or have attached the following:

1. Name of each employee and the last four digits of the social security number.
2. Classification of employees (same as shown on wage determination).
3. Rate of pay not less than that shown on the wage determination.
4. Hours worked each day and total for each week for each employee.
5. All deductions made.
6. Net amount paid to employee.
7. The following certification:

"I certify that the payroll is correct and complete, that the wage rates contained therein are not less than the applicable rates contained in the Wage Determination decision of the Secretary of Labor and that the classification set forth for each laborer or mechanic conform with the work he performs."

(Signature)

(Title)

COMPLIANCE WITH THE COPELAND (ANTI-KICKBACK) ACT

The following anti-kickback statement must be submitted with each set of weekly payrolls:

"I, (name of signatory party), (title), do hereby state: That I pay or supervise the payment of the persons employed by (contractor or subcontractor) on the (work or building); that during the payroll period commencing on the _____ day of _____, 20____, and ending the _____ day of _____, 20____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly from the full weekly wages earned by any person, other than permissible deductions, as defined in Regulations, Part 3 (CFR Part 3) issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948; 63 Stat. 108; 72 Stat. 967; and 40 U.S.C. 276c), and described below: (Paragraph describing deductions, if any)"

(Signature)

(Title)

All prime contractors shall include the wage determination and all the labor standards provisions in all subcontracts as herein specified.

The Contractor shall make employment records available for inspection by authorized representatives of the State of South Dakota and the Department of Labor, and will permit employees to be interviewed during working hours by these representatives. Payroll records will be maintained during the course of the work by the Prime Contractor, including a copy of the payroll of each Subcontractor and they shall be preserved for a period of three years thereafter.

Each monthly engineering estimate must be accompanied by the following certificate executed by each Prime Contractor employing mechanics and laborers at the site on work in which the Federal government is to participate:

Principal Contractor _____

Project Name _____

Project No. _____

I, _____, as official representative of the above named principal contractor do hereby certify as follows:

- All Labor Standards Requirements have been fulfilled by principal contractor and all subcontractors under this contract; or
- There is an honest dispute regarding the required provisions.

Explanation: _____

(Signature) (Title)

In the event of a violation of the Labor Standards provisions of the contract by the Prime Contractor or any Subcontractor, the owner may, after notice to the Contractor, suspend further payments or proceed to terminate the contract as provided in the Labor Standards section of the Contract.

FEDERAL LABOR STANDARDS PROVISIONS

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A.1 Minimum Wages

(i) 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 payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act(29CFR 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 29 CFR 5.5(a)(1)(iv); 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 Part 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 29 CFR Part 5.5(a)(1)(ii) 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.

(ii)(a) Any class of laborers or mechanics 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. EPA shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and EPA or its designee 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 EPA or its designee to the Administrator of the Wage and Hour Division, Employment standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise EPA or its designee or will notify EPA or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)
- (c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and EPA or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), EPA or its designee shall refer the questions, including the views of all interested parties and the recommendation of EPA or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise EPA or its designee or will notify EPA or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control Number 1215-0140.)
- (d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, 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.
- (iii) 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.
- (iv) 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding.

EPA or its designee 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, EPA or its designee may, after written notice to the contractor, sponsor, applicant, or owner, 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. EPA or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. Payrolls and basic records

(i) Basic records relating thereto shall be maintained by the contractor during the course of the work 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 there 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. Certified weekly payrolls shall contain the name and last four digits of the social security number. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(b) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB control Numbers 1215-0140 and 1215-0017.)

(ii)(a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to EPA or its designee if the agency is a party to the contract, but if the agency is not such party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to EPA or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of management and Budget under OMB Control Number 1215-0149.)

(b) 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:

That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.59(a)(3)(i) and that such information is correct and complete;

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 29 CFR Part 3.

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.

- (c) 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 A.3(ii)(b) of this section.
 - (d) 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.
- (iii) The contractor or subcontractor shall make the records required under paragraph A.3(i) of this section available for inspection, copying, or transcription by authorized representatives of EPA or its designee 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, EPA or its designee may, after written notice to the contractor, sponsor, applicant, or owner, 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 Part 5.12.

4. **Apprentices and trainees.**

- (i) **Apprentices.** 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, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, 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 Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program

for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevail for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, 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.

(ii) **Trainees.** 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 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.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal and employment opportunity requirements of executive order 11246, as amended, and 29 CFR Part 30.

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 will insert in any subcontracts the clauses contained in 29 CFR 5.5 (a)(1) through (10) and such other clauses as EPA or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses 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 Part 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 EPA or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. **Certification of Eligibility**

- (i). 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) or to be awarded EPA contracts or participate in EPA programs pursuant to 24 CFR Part 24.
- (ii) 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) or to be awarded EPA contracts or participate in EPA programs pursuant to 24 CFR Part 24.
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part "Whoever, for the purpose of...influencing in any way the action of such Administration...makes, utters or publishes any statement, knowing the same to be false...shall be fined not more than \$5,000 or imprisoned not more than two years or both."

11. **Complaints, Proceedings, or Testimony by Employees.** No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

- B. **Contract Work Hours and Safety Standards Act.** As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

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, whichever is greater.

Violation: liability for unpaid wages: liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore 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 subparagraph (1) of this paragraph 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 subparagraph (1) of this paragraph.

Withholding for unpaid wages and liquidated damages. EPA or its designee 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 contract 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 subparagraph (2) of this paragraph.

Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph 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 subparagraphs (1) through (4) of this paragraph.

C. **Health and Safety**

No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54,83 Stat.96).

The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Administrator of Environment and Natural Resources or the Secretary of Labor shall direct as a means of enforcing such provisions.



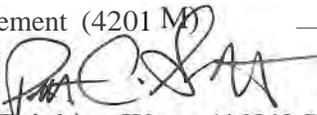
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MARCH 20 2014

OFFICE OF WATER

MEMORANDUM

SUBJECT: Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014

FROM: (Andrew D. Sawyers, Director
Office of Wastewater Management (4201M) _____
Peter C. Grevatt, Director 
Office of Ground Water and Drinking Water (4601M)

TO: Water Management Division Directors
Regions I- X

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an "American Iron and Steel (AIS)" requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

Section 436 also sets forth certain circumstances under which EPA may waive the AIS requirement. Furthermore, the Act specifically exempts projects where engineering plans and specifications were approved by a State agency prior to January 17, 2014.

The approach described below explains how EPA will implement the AIS requirement. The first section is in the form of questions and answers that address the types of projects that must comply with the AIS requirement, the types of products covered by the AIS requirement, and compliance. The second section is a step-by-step process for requesting waivers and the circumstances under which waivers may be granted.

Implementation

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out

the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following questions and answers provide guidance for implementing and complying with the AIS requirements:

Project Coverage

1) What classes of projects are covered by the AIS requirement?

All treatment works projects funded by a CWSRF assistance agreement, and all public water system projects funded by a DWSRF assistance agreement, from the date of enactment through the end of Federal Fiscal Year 2014, are covered. The AIS requirements apply to the entirety of the project, no matter when construction begins or ends. Additionally, the AIS requirements apply to all parts of the project, no matter the source of funding.

2) Does the AIS requirement apply to nonpoint source projects or national estuary projects?

No. Congress did not include an AIS requirement for nonpoint source and national estuary projects unless the project can also be classified as a 'treatment works' as defined by section 212 of the Clean Water Act.

3) Are any projects for the construction, alteration, maintenance, or repair of a public water system or treatment works excluded from the AIS requirement?

Any project, whether a treatment works project or a public water system project, for which engineering plans and specifications were approved by the responsible state agency prior to January 17, 2014, is excluded from the AIS requirements.

4) What if the project does not have approved engineering plans and specifications but has signed an assistance agreement with a CWSRF or DWSRF program prior to January 17, 2014?

The AIS requirements do not apply to any project for which an assistance agreement was signed prior to January 17, 2014.

5) What if the project does not have approved engineering plans and specifications, but bids were advertised prior to January 17, 2014 and an assistance agreement was signed after January 17, 2014?

If the project does not require approved engineering plans and specifications, the bid advertisement date will count in lieu of the approval date for purposes of the exemption in section 436(f).

6) What if the assistance agreement that was signed prior to January 17, 2014, only funded a part of the overall project, where the remainder of the project will be funded later with another SRF loan?

If the original assistance agreement funded any construction of the project, the date of the original assistance agreement counts for purposes of the exemption. If the original assistance agreement was only for planning and design, the date of that assistance agreement will count for purposes of the exemption only if there is a written commitment or expectation on the part of the assistance recipient to fund the remainder of the project with SRF funds.

7) What if the assistance agreement that was signed prior to January 17, 2014, funded the first phase of a multi-phase project, where the remaining phases will be funded by SRF assistance in the future?

In such a case, the phases of the project will be considered a single project if all construction necessary to complete the building or work, regardless of the number of contracts or assistance agreements involved, are closely related in purpose, time and place. However, there are many situations in which major construction activities are clearly undertaken in phases that are distinct in purpose, time, or place. In the case of distinct phases, projects with engineering plans and specifications approval or assistance agreements signed prior to January 17, 2014 would be excluded from AIS requirements while those approved/signed on January 17, 2014, or later would be covered by the AIS requirements.

8) What if a project has split funding from a non-SRF source?

Many States intend to fund projects with “split” funding, from the SRF program and from State or other programs. Based on the Act language in section 436, which requires that American iron and steel products be used in any project for the construction, alteration, maintenance, or repair of a public water system or treatment works receiving SRF funding between and including January 17, 2014 and September 30, 2014, any project that is funded in whole or in part with such funds must comply with the AIS requirement. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all contracts and assistance agreements awarded are closely related in purpose, time and place. This precludes the intentional splitting of SRF projects into separate and smaller contracts or assistance agreements to avoid AIS coverage on some portion of a

larger project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreement for SRF and State or other funding would carry separate requirements.

9) What about refinancing?

If a project began construction, financed from a non-SRF source, prior to January 17, 2014, but is refinanced through an SRF assistance agreement executed on or after January 17, 2014 and prior to October 1, 2014, AIS requirements will apply to all construction that occurs on or after January 17, 2014, through completion of construction, unless, as is likely, engineering plans and specifications were approved by a responsible state agency prior to January 17, 2014. There is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to January 17, 2014.

10) Do the AIS requirements apply to any other EPA programs, besides the SRF program, such as the Tribal Set-aside grants or grants to the Territories and DC?

No, the AIS requirement only applies to funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

12) What does the term ‘primarily iron or steel’ mean?

‘Primarily iron or steel’ places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does ‘produced in the United States’ mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the

material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of ‘municipal castings’?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

- Access Hatches;
- Ballast Screen;
- Benches (Iron or Steel);
- Bollards;
- Cast Bases;
- Cast Iron Hinged Hatches, Square and Rectangular;
- Cast Iron Riser Rings;
- Catch Basin Inlet;
- Cleanout/Monument Boxes;
- Construction Covers and Frames;
- Curb and Corner Guards;
- Curb Openings;
- Detectable Warning Plates;
- Downspout Shoes (Boot, Inlet);
- Drainage Grates, Frames and Curb Inlets;
- Inlets;
- Junction Boxes;
- Lampposts;
- Manhole Covers, Rings and Frames, Risers;

Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

20) What is ‘structural steel’?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a ‘construction material’ for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”. This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a ‘construction material’ for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and

data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Compliance

25) How should an assistance recipient document compliance with the AIS requirement?

In order to ensure compliance with the AIS requirement, specific AIS contract language must be included in each contract, starting with the assistance agreement, all the way down to the purchase agreements. Sample language for assistance agreements and contracts can be found in Appendix 3 and 4.

EPA recommends the use of a step certification process, similar to one used by the Federal Highway Administration. The step certification process is a method to ensure that producers adhere to the AIS requirement and assistance recipients can verify that products comply with the AIS requirement. The process also establishes accountability and better enables States to take enforcement actions against violators.

Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. A step certification is a process under which each handler (supplier, fabricator, manufacturer,

processor, etc) of the iron and steel products certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. A certification can be quite simple. Typically, it includes the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a manufacturer's responsible party. Attached, as Appendix 5, are sample certifications. These certifications should be collected and maintained by assistance recipients.

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. While this type of certification may be acceptable, it may not provide the same degree of assurance. Additional documentation may be needed if the certification is lacking important information. Step certification is the best practice.

26) How should a State ensure assistance recipients are complying with the AIS requirement?

In order to ensure compliance with the AIS requirement, States SRF programs must include specific AIS contract language in the assistance agreement. Sample language for assistance agreements can be found in Appendix 3.

States should also, as a best practice, conduct site visits of projects during construction and review documentation demonstrating proof of compliance which the assistance recipient has gathered.

27) What happens if a State or EPA finds a non-compliant iron and/or steel product permanently incorporated in the project?

If a potentially non-compliant product is identified, the State should notify the assistance recipient of the apparent unauthorized use of the non-domestic component, including a proposed corrective action, and should be given the opportunity to reply. If unauthorized use is confirmed, the State can take one or more of the following actions: request a waiver where appropriate; require the removal of the non-domestic item; or withhold payment for all or part of the project. Only EPA can issue waivers to authorize the use of a non-domestic item. EPA may use remedies available to it under the Clean Water Act, the Safe Drinking Water Act, and 40 CFR part 31 grant regulations, in the event of a violation of a grant term and condition.

It is recommended that the State work collaboratively with EPA to determine the appropriate corrective action, especially in cases where the State is the one who identifies the item in noncompliance or there is a disagreement with the assistance recipient.

If fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-

888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <http://www.epa.gov/oig/hotline.htm>.

28) How do international trade agreements affect the implementation of the AIS requirements?

The AIS provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to such agreements. In general, SRF assistance recipients are not signatories to such agreements, so these agreements have no impact on this AIS provision. In the few instances where such an agreement applies to a municipality, that municipality is under the obligation to determine its applicability and requirements and document the actions taken to comply for the State.

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow States, on behalf of the assistance recipients, to apply for waivers of the AIS requirement directly to EPA Headquarters. Only waiver requests received from states will be considered. Pursuant to the Act, EPA has the responsibility to make findings as to the issuance of waivers to the AIS requirements.

Definitions

The following terms are critical to the interpretation and implementation of the AIS requirements and apply to the process described in this memorandum:

Reasonably Available Quantity: The quantity of iron or steel products is available or will be available at the time needed and place needed, and in the proper form or specification as specified in the project plans and design.

Satisfactory Quality: The quality of iron or steel products, as specified in the project plans and designs.

Assistance Recipient: A borrower or grantee that receives funding from a State CWSRF or DWSRF program.

Step-By-Step Waiver Process

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 3 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 1.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA’s website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm
2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.
3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest.

EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public's interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact Jordan Dorfman, Attorney-Advisor, State Revolving Fund Branch, Municipal Support Division, at dorfman.jordan@epa.gov or (202) 564-0614 or Kiri Anderer, Environmental Engineer, Infrastructure Branch, Drinking Water Protection Division, at anderer.kirsten@epa.gov or (202) 564-3134.

Attachments

Appendix 1: Information Checklist for Waiver Request

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

Items	<input type="checkbox"/>	No
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Time of delivery or availability — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor 		
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

Appendix 2: HQ Review Checklist for Waiver Request

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items	Yes	No	N/A	Comments
Cost Waiver Requests <ul style="list-style-type: none"> • Does the waiver request include the following information? <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market • Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%? 				
Availability Waiver Requests <ul style="list-style-type: none"> • Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? <ul style="list-style-type: none"> — Supplier information or other documentation indicating availability/delivery date for materials — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials • Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers? • Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information) • Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? <p>Examples include:</p> <ul style="list-style-type: none"> — Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State — Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States — Correspondence with construction trade associations indicating the non-availability of the materials • Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits? 				

Appendix 3: Example Loan Agreement Language

ALL ASSISTANCE AGREEMENT MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN SRF ASSISTANCE AGREEMENTS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the Loan (including those imposed by the 2014 Appropriations Act and related SRF Policy Guidelines) which the Participant understands includes, among other, requirements that all of the iron and steel products used in the Project are to be produced in the United States (“American Iron and Steel Requirement”) unless (i) the Participant has requested and obtained a waiver from the Agency pertaining to the Project or (ii) the Finance Authority has otherwise advised the Participant in writing that the American Iron and Steel Requirement is not applicable to the Project.

Comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a Federal agency or the Finance Authority such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and this Agreement may be a default hereunder that results in a repayment of the Loan in advance of the maturity of the Bonds and/or other remedial actions.

Appendix 4: Sample Construction Contract Language

ALL CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN ALL CONTRACTS IN PROJECTS THAT USE SRF FUNDS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the City of _____ (“Purchaser”) and the _____ (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Appendix 5: Sample Certifications

The following information is provided as a sample letter of **step** certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company

Address City,

State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

AMERICAN IRON AND STEEL CERTIFICATION

1. Identification of American-made Iron and Steel: Consistent with the terms of the Borrower's bid solicitation and the provisions of the Consolidated Appropriations Act of 2014 ("Omnibus Spending Bill"), Section 436, the Bidder certifies that this bid reflects the Bidder's best, good faith to identify domestic sources of iron and steel for all iron and steel products contained in the bid solicitation where such American-made products are available on the schedule and consistent with the deadlines prescribed in or required by the bid solicitation.
2. Verification of U.S. Production: The Bidder certifies that all iron and steel products contained in the bid solicitation that are American-made have been so identified, and if this bid is accepted, the Bidder agrees that it will provide reasonable, sufficient, and timely verification to the Borrower of the U.S. production of each iron and steel product so identified through the completion of the step certification process.
3. The Bidder is responsible for submitting certified product information to the assistance recipient. Utilization of the step certification process is strongly encouraged. This process requires that each handler (supplier, fabricator, manufacturer, processor, etc.) of the iron and steel products certifies that their step in the process was domestically performed and provides a letter of certification from each supplier/fabricator on transfer of intermediate product. Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. An example certification letter can be found in Appendix 5 of the American Iron and Steel Provisions in the SRF General Conditions.
4. The American Iron and Steel provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatory to such agreements. State Revolving Fund assistance recipients are not signatories to such agreements, so these agreements have no impact on the American Iron and Steel provision. Claims from suppliers that the American Iron and Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.
5. Documentation Regarding Non-American-made Iron or Steel: The Bidder certifies that for any iron and steel product that is not American-made and is so identified in this bid, the Bidders has included in or attached to this bid the following, as applicable:
 - a. Identification of and citation to a national waiver published by the U.S. Environmental Protection Agency on the official public Internet Web site of the Environmental Protection Agency that is applicable to such iron and steel product, and an analysis that supports its applicability to the iron and steel product;
 - b. Verifiable documentation sufficient to the Borrower that the waiver request process has been initiated. The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:
 1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;

2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

A checklist detailing the types of information required for a waiver to be processed can be found in Appendix 1 of the American Iron and Steel Provisions of the SRF General Conditions. Until a waiver is granted by EPA, the AIS requirements stand.

Bidder/Contractor

Date

Signature of Contractor/Title

SPECIAL PROVISIONS FOR HOVEN HIGHWAY 20/47 - SANITARY SEWER AND WATERMAIN IMPROVEMENTS

	Page
SPECIAL PROVISION 02160 - SHEETING, SHORING, AND BRACING.....	3
SPECIAL PROVISION 02222 - STRUCTURAL EXCAVATING, FILLING, AND GRADING	5
SPECIAL PROVISION 02224 - TRENCHING, BACKFILLING, AND COMPACTING	13
SPECIAL PROVISION 02605 - MANHOLES AND CASTINGS	19
SPECIAL PROVISION 02627 - DIRECTIONAL BORING	27
SPECIAL PROVISION 02640 - VALVES AND APPURTENANCES	35
SPECIAL PROVISION 02645 - FIRE HYDRANTS	39
SPECIAL PROVISION 02647 - CURB STOPS, CORPORATIONS, AND SADDLES	43
SPECIAL PROVISION 02660 - WATERMAIN PIPING AND FITTINGS	47
SPECIAL PROVISION 02667 - THRUST BLOCKS AND RESTRAINING DEVICES	57
SPECIAL PROVISION 02675 - CLEANING AND DISINFECTION OF WATER DISTRIBUTION SYSTEMS	61
SPECIAL PROVISION 02676 - PIPELINE TESTING OF WATER MAINS	63
SPECIAL PROVISION 02730 – SANITARY SEWER PIPING AND FITTINGS	67
SPECIAL PROVISION 02731 - TESTING OF SANITARY SEWER PIPING	73
SPECIAL PROVISION 02732 - CLEANING OF SANITARY SEWER PIPING	77

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

By: Lucas Hoover
Lucas Hoover, P.E.

Registration Number: 11124

Date: July 9, 2015



Helms
& ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS
P.O. Box 111
Aberdeen, South Dakota 57402

SPECIAL PROVISION 02160 - SHEETING, SHORING, AND BRACING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related requirements specified elsewhere:
 - 1. Structural Excavating, Filling and Grading - Special Provision 02222
 - 2. Trenching, Backfilling and Compacting - Special Provision 02224
 - 3. Manholes and Castings – Special Provision 02605
 - 4. Sanitary Sewer Piping and Fittings – Special Provision 02730
 - 5. Watermain Piping and Fittings – Special Provision 02660

1.02 DESCRIPTION OF WORK

- A. Furnish and install all necessary sheeting, shoring, and bracing to adequately protect all new and existing structures, all existing piping as may be required during construction period, and all new piping.

PART 2 PRODUCTS

2.01 MATERIALS AND CONDITION

- A. All sheeting, shoring, and bracing shall be in good or new condition and shall conform to the requirements of current safety codes and guidelines.

PART 3 EXECUTION

3.01 METHODS

- A. All excavation shall be properly shored, sheeted, and braced to furnish safe working conditions conforming to the current codes, regulations, and guidelines; to prevent any shifting and movement of material which may endanger personnel; to prevent damage to structures, or other work; and to avoid delay to the work.
- B. Bracing shall be so arranged as not to place any strain on portions of completed work until the general construction has proceeded far enough to provide ample strength. If the Engineer is of the opinion that at any point the sheeting or supports furnished are inadequate or unsuited for the purpose, he may order additional sheeting or support to be installed. Whether so ordered by the Engineer or not, sufficient sheeting or support shall be installed to protect the work from any damage to new structures.

- C. Trench sheeting shall remain in place until pipe, etc., has been laid, tested for defects, and repaired if necessary, and the earth around it compacted to a depth of one foot over the top of the pipe. Timber sheeting if used shall not be removed below an elevation of two feet above the top of the pipe.
- D. No sheeting, shoring, and bracing which is within three feet of the surface of the finished grade may be left in place without the written permission of the Engineer.
- E. In general, the sheeting and bracing shall be removed as the excavation is refilled in such a manner as to avoid the caving in of the bank or disturbance to adjacent areas or structures. The voids left by the withdrawal of the sheeting shall be carefully filled by ramming or otherwise as directed. Permission of the Engineer shall be obtained before the removal of any shoring, sheeting, or bracing.
- F. It shall be the duty and responsibility of the Contractor to be familiar with all local, state, and federal regulations relating to this type of work and to comply with those regulations.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Sheeting, shoring, and bracing left in place to protect footings, structures, or piping shall be measured as part of the base bid prices if detailed on the plans.

4.02 BASIS OF PAYMENT

- A. Payment for sheeting, shoring, and bracing will be allowed, if not detailed on the plans, only if ordered to be left in place by the Engineer in writing during construction.

* * * END OF SECTION * * *

SPECIAL PROVISION 02222 - STRUCTURAL EXCAVATING, FILLING, AND GRADING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related requirements specified elsewhere:
 - 1. Sheeting, Shoring and Bracing - Special Provision 02160
 - 2. Trenching, Backfilling and Compacting - Special Provision 02224
 - 3. Manholes and Castings – Special Provision 02605
 - 4. Sanitary Sewer Piping and Fittings – Special Provision 02730
 - 5. Watermain Piping and Fittings – Special Provision 02660

1.02 DESCRIPTION OF WORK

- A. The work covered by this section of the specifications shall consist of furnishing all plant, labor, and equipment, appurtenances and material, and of performing all operations in connection with the excavation, filling, backfilling, and grading for all structures complete in accordance with the specifications, applicable drawings, and subject to the terms and conditions of the contract.
- B. Structures shall include, but not be limited to; manholes, pond structures, and ground vaults.
- C. Structural foundations for buildings, water storage structures, and other architectural structures are not included with this specification. See project specific specifications for those items.
- D. Such excavation and backfilling as is required for the installation of piping, electrical, and mechanical work is not covered in this section but is covered in those sections related to each item.
- E. The extent and performance of the excavations, filling, backfilling, and grading shall be as shown on the plans and shall comply with the requirements, codes, and guidelines of the various governing bodies and regulatory agencies.

1.03 QUALITY ASSURANCE

- A. The Contractor shall obtain qualified testing and inspection services and such other independent services as may be required to assure compliance with the requirements as specified hereinafter. Certified tests of all granular materials will be provided to the Engineer prior to delivery or installation on the job site.

- B. After the excavation has been completed and before any engineered fill or structures are placed, the subgrade shall be inspected and tested by the Engineer before it is used as a foundation.
- C. Moisture-density (Proctor) tests on the engineered fill materials and all in-place engineered fill field density tests shall be made as herein specified and in accordance with the General Conditions. Sufficient tests in number and location will be performed so as to assure that the engineered fill is in general compliance with the compaction requirements as specified herein.
- D. The Contractor may conduct additional soil testing and quality control testing as desired for his own information and use.

1.04 SUBMITTALS

- A. Three copies of the following reports shall be submitted directly to the Engineer from the testing and inspection services employed by the Contractor as per 1.03 above with copies to the Owner.
 - 1. Material Certifications
 - 2. Field density reports
 - 3. Results of quality control tests
 - 4. Inspection and observation reports
 - 5. Verification of footing conditions and elevations

1.05 JOB CONDITIONS

- A. The Contractor shall locate existing underground utilities in the areas of work. If existing utilities are to remain in place, provide adequate means of protection during earthwork operations.
- B. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Engineer immediately for directions as to procedure. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
- C. Do not interrupt existing utilities serving facilities occupied and used by Owner or others except when permitted in writing by the Owner, and then only after acceptable temporary utility services have been provided.
- D. The use of explosives on any portion of the work without prior written permission from authorities having jurisdiction is prohibited. Contractor is solely responsible for handling, storage, and use of explosive materials when their use is permitted.
- E. Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

- F. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

1.06 CLASSIFICATION OF EXCAVATED MATERIALS

- A. No classification of excavated materials will be made. Excavation and trenching work shall include the removal and subsequent handling of all materials excavated or otherwise removed in performance of the contract work, regardless of the type, character, composition, or condition thereof.

PART 2 PRODUCTS

2.01 ENGINEERED FILL MATERIAL

- A. The Contractor shall provide acceptable soil material where required for structural engineered fill which meets the following gradation:

MECHANICAL ANALYSIS:

SIEVE SIZE	% PASSING
3/8"	100%
#4	95-100
#8	80-100
#30	25-60
#200	0-10

- B. The engineered fill material shall be non-plastic when tested in accordance with ASTM D4318.

2.02 NON-ENGINEERED FILL AND BACKFILL MATERIALS

- A. The Contractor shall provide acceptable soil materials for backfill and fill which shall be non-expansive material and shall be free of clay, rock, or gravel larger than two (2) inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- B. Acceptable soil materials are defined as those materials that, in the judgment of the independent testing and inspection service, will perform as required for the intended use.

PART 3 EXECUTION

3.01 STRIPPING

- A. All vegetation such as brush, heavy sod, decayed matter, rubbish and any other unsuitable material within a fill area shall be stripped or otherwise removed before the excavation or backfill is started. In no case shall such objectionable material be allowed in or under fill.
- B. All dark loam shall be stripped and stockpiled to be replaced on top of the final embankments and all disturbed areas not covered by walks or pavements.

3.02 EXCAVATION

- A. The sloped sides of all excavations are to comply with all local, state, and federal codes and ordinances having jurisdiction. The sides and slopes of excavations should be maintained in a safe condition until completion of backfilling. Bottom of excavation shall slope as shown on the plans.
- B. Sheeting, shoring, and bracing are to be furnished and used where minimum sloping is not possible because of space restriction and stability of material.
- C. Excavation shall be completed to an extent to conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 feet and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction required and for inspection. Undercutting of banks will not be permitted. In excavating for footings and foundations, care shall be taken not to disturb the bottom of the excavation or over excavate. Excavate by hand, if necessary, to final grade just before concrete is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete or engineered fill. If excavations under footings are carried below the elevations shown or directed, the over excavation shall be restored to proper elevation by and at the expense of the Contractor, using approved, compacted engineered fill.
- D. Where unsuitable material underlies the footing or foundation, the unsatisfactory material is to be excavated to a depth where suitable materials are found or as directed by the independent testing and inspection service, or the Engineer. All over excavation required for removal of unstable material shall be backfilled with engineered fill material. The backfill material shall be compacted equal to the density and moisture content as specified herein. Footings shall be placed at the elevations shown on the plans.
- E. Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding project site and surrounding area. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations. Convey water removed from excavations and rainwater to collecting or runoff areas. Provide and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.

- F. Stockpile suitable excavated materials until required for backfill or fill. Place, grade, and shape stockpiles for proper drainage. Locate and retain soil materials away from edge of excavations. Dispose of excess soil material and waste materials as specified.
- G. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.

3.03 COMPACTION

- A. Soil compaction processes shall be controlled during construction providing for the percentage of density specified.
- B. Testing methods and Density Requirements:
 - 1. When depth of Engineered fill is greater than eight (8) inches, the Engineered Fill shall be tested and compacted to not less than 95% Proctor density (ASTM D698). If depth of Engineered Fill is less than eight (8) inches, testing will not be required unless visual observation by the Engineer warrants testing.
 - 2. All non-engineered fill and all subgrades shall be compacted to 95% of Standard Proctor (ASTM D698). Testing will be performed under each structure to assure density requirements are attained.
- C. Where subgrade or a layer of soil material must be moisture conditioned before compaction, uniformly apply water to the surface of subgrade or layer of soil material in such a manner as to prevent free water appearing on the surface during or subsequent to compaction operations. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing, or pulverizing, until moisture content is reduced to a satisfactory value as determined by moisture density relation tests.

3.04 COMPACTION AND FILL

- A. Backfill excavations as promptly as work permits but not until completion of the following:
 - 1. Inspection and acceptance by Engineer of all construction below finish grade, including the independent inspection service, and, where applicable, damp proofing, waterproofing, and perimeter insulation.
 - 2. Inspection, testing, approval, and recording locations of underground utilities.
 - 3. Removal of all concrete formwork.
 - 4. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
 - 5. Removal of trash and debris.

6. Permanent or temporary horizontal bracing is in place on horizontally supported walls.
- B. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break up sloped surfaces steeper than one (1) vertical to four (4) horizontal so that fill material will bond with existing surface. When existing ground surface has a density less than that specified herein, break up the ground surface, pulverize, moisture-condition to the optimum moisture content, and compact to required depth and percentage of maximum density.
 - C. Place backfill and fill materials in layers not exceeding 8 inches in loose depth. Before compaction moisten or aerate each layer as necessary to provide the optimum moisture content. Mechanically compact each layer to the required percentage of maximum density for each area classification. Compaction of structure backfill by inundation with water will not be permitted. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
 - D. Place all backfill and fill materials evenly adjacent to structures, to the required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.

3.05 GRADING

- A. Uniformly grade areas within the limits of grading under this section, including adjacent transition areas. Smooth all finished surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.
- B. Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes and as follows:
 1. Grassed Areas: Finished areas are to receive topsoil to within not more than 0.10 feet above or below the required subgrade elevations.
 2. Walks: Shape surface of areas under walks to line, grade, and cross section with finished surface not more than 0.10 feet above or below the required subgrade elevation.
 3. Roads and Parking within Building Excavation Limits: Shape surface of areas under pavement to line, grade, and cross section with finished surface not more than 1/2 inch above or below the required subgrade elevation.
- C. Grade all surfaces of fill under slabs smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/4-inch when tested with a 10-foot straightedge.

3.06 TOPSOIL

- A. The Contractor shall remove and stockpile sufficient topsoil to surface to a minimum depth of six (6) inches, or depth as shown on the plans, all fills, embankments, and any other areas on the site of the work where the original topsoil will be covered or damaged. Topsoil shall be free from trash, debris, and surface vegetation more than two (2) inches in height.

- B. Prior to the topsoiling and finish grading operations, all rough grades shall be corrected, adjusted, and repaired if required. All subgrade surfaces shall be brought to the prescribed elevations.
- C. The subgrade surface shall be prepared prior to topsoil placement by being made loose and friable by cross-disking or other approved method, to a depth of two (2) inches or more to permit bonding of the topsoil to the subgrade.
- D. All stones and other debris greater than two (2) inches in any dimension shall be removed from the surface of the subgrade prior to the placement of the topsoil.
- E. Topsoil shall be placed and evenly spread to such thickness that the finished compacted depth of four (4) inches, unless otherwise shown on the plans, is obtained.
- F. Topsoil material shall not be placed when the topsoil or subgrade is frozen or wet enough to cause clodding.
- G. Topsoiling operations shall be considered complete when the finished surface of the compacted topsoil is:
 - 1. Free of sticks, stones, and other material of one (1) inch or more in any direction.
 - 2. Smooth and true to required grades with a maximum allowable deviation of 0.1 foot.

3.07 MAINTENANCE

- A. Protect newly graded areas from traffic and erosion and keep free of trash and debris.
- B. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather the Contractor will scarify surface, reshape, and compact to required density prior to further construction.

3.08 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Transport acceptable excess excavated material to designated areas on the Owner's property. Stockpile soil or spread as directed by Owner.
- B. Remove all trash, debris, and waste materials from the Owner's property and dispose of at an approved landfill.

3.09 SETTLEMENT

- A. The Contractor shall be responsible for all settlement of backfill, fills, and embankments that may occur within the correction period stipulated in the General Conditions.
- B. The Contractor shall make, or cause to be made, all repairs, or replacements made necessary by settlement within thirty (30) days after notice from the Engineer or Owner.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Structural excavation, filling, and grading will not be measured for direct payment and will be considered incidental work pertaining to the contract. No direct compensation will be made for this work.

4.02 BASIS OF PAYMENT

- A. Structural excavation, filling, and grading will be considered incidental work pertaining to the contract. No direct compensation will be made for this work.

* * * END OF SECTION * * *

SPECIAL PROVISION 02224 - TRENCHING, BACKFILLING, AND COMPACTING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related Requirements specified elsewhere:
 - 1. Sheeting, Shoring and Bracing - Special Provision 02160
 - 2. Structural Excavating, Filling and Grading - Special Provision 02222
 - 3. Sanitary Sewer Piping and Fittings – Special Provision 02730
 - 4. Watermain Piping and Fittings – Special Provision 02660

1.02 SCOPE

- A. This section covers the excavation of all necessary trenching for underground utilities and backfilling same after the pipe and related material has been properly laid, inspected and tested all in accordance with applicable federal, state and local laws and regulations.

1.03 QUALITY ASSURANCE

- A. The Contractor shall obtain qualified testing and inspection services and such other independent services as may be required to assure compliance with the requirements as specified hereinafter. Certified tests of all granular materials will be provided to the Engineer prior to delivery or installation on the job site.
- B. Moisture-density (Proctor) tests on the engineered fill materials and all in-place engineered fill field density tests shall be made as herein specified and in accordance with the General Conditions. Sufficient tests in number and location will be performed so as to assure that the engineered fill is in general compliance with the compaction requirements as specified herein.
- C. The Contractor may conduct additional soil testing and quality control testing as desired for his own information and use.
- D. When requested by the Engineer or Resident Project Representative, the Contractor shall excavate and expose the pipe previously laid at any point.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL EXCAVATION

- A. All material encountered shall be excavated to the lines and grades as shown on the plans, set by the Engineer or as specified herein.
- B. Unless otherwise shown on the plans, trenches for forcemain shall be of a depth that will provide the following minimum covers over the top of the pipe as measured from the original ground surface.
- C. Where pipe elevation is determined by minimum depth only, the excavation shall be sufficient at all points to grade the pipes on the tangents and vertical curves as dictated by the minimum bending radius of the pipe and fittings as recommended by the manufacturers.
- D. The trenches shall be sufficiently straight between designated angle points to permit the pipe to be laid true to line in the approximate center of the trench.
- E. Intersections with and crossings of other underground utilities shall be as shown on the plans and/or in accordance with applicable state and local laws and regulations.
- F. All excavated material suitable for backfilling shall be placed in an area away from the trench edges so as to avoid overloading, sliding, and cave-ins.
- G. The areas immediately adjacent to the trench shall be graded as required to prevent surface water from entering the trenches.

3.02 EXCAVATION FOR APPURTENANCES

- A. A minimum of twelve (12) inches shall be left between the trench wall and the outside surface of the appurtenance.

3.03 SHEETING, SHORING AND BRACING

- A. Refer to Special Provision 02160 of these specifications

3.04 ROAD, STREET, AND DRIVEWAY CROSSINGS

- A. At such road and all other crossings as may be designated by the Engineer, the trenches are to be mechanically tamped and filled in such a manner as to prevent any serious interruption of traffic upon the roadway or crossing.
- B. Not more than one street crossing may be obstructed by the same trench at any one time except by permission of the Engineer and Owner.

3.05 ROCK EXCAVATION

- A. Rock excavation shall be completed to a minimum of eight (8) inches below and on each side of all pipes, valves, fittings, and other appurtenances.

- B. Excess excavation shall be backfilled with compacted material conforming to the bedding material required for the material being used.

3.06 DEWATERING

- A. Where water is encountered in a trench, water shall be removed by pumping to lower the water level to such elevation that the pipe may be laid dry at the grade shown on the plans.
- B. All water pumped from the trench shall be disposed of in a manner so as not to cause any damage to adjacent property.
- C. When dewatering is paid for, it shall be considered as dewatering only when a manifold or pump and system of well points is installed to lower ground water such that excavation and construction can take place.
- D. The process of pumping water out of the trench with a suction hose and pump will not be considered as dewatering.
- E. Where seepage of water into the trench occurs that can be removed using standard pumping procedures, it shall not be deemed sufficient cause for installing a system of manifolds and well points and classified as dewatering in order to obtain remuneration under the Bid Item - Dewatering.
- F. A dewatering permit is required when the discharge from dewatering may reach the waters of the state. To obtain information on the General Dewatering Permit, the Contractor should contact the Department of Environment and Natural Resources at (605) 773-3351.

3.07 TRENCH BOTTOM PREPARATION

- A. The sides of all trenches shall be vertical from the bottom of the trench to a point one (1) foot above the top of the pipe.
- B. The width of the trench shall be a minimum of twelve (12) inches on each side of the pipe bell.
- C. The bottom of all trenches for underground piping shall be carefully and accurately formed to the lines and grades as shown on the plans, set by the Engineer or as specified herein.
- D. Rock, boulders, and large stones, or other manmade material shall be removed to provide a clearance of at least eight (8) inches below the outside barrel of the pipes, valves, fittings appurtenances. Adequate clearance for properly jointing pipe laid in rock trenches shall be provided at bell holes. The space between the rock at the bottom of the trench and the bottom of the pipe barrel shall be filled with compacted bedding material.
- E. If the trench bottom is inadvertently excavated deeper than necessary, it shall be backfilled to the proper grade with compacted bedding material.

3.08 UNSTABLE TRENCH BOTTOM

- A. Whenever wet, soft or unstable soils incapable of properly supporting the pipe, or other appurtenances are encountered in the trench, the Contractor shall be required to remove the

unsuitable materials and backfill to the proper grade with concrete, granular material or other suitable approved material.

- B. Backfill material shall be compacted to provide a firm and level support for the piping system. Firm support is defined as no visual deformation in the surface when workers walk on the compacted material.

3.09 BACKFILLING AND COMPACTING

- A. Any trenches improperly backfilled or showing excessive settlement shall be reopened to a depth required for proper compaction.
- B. Backfill material shall be free of boulders, frozen clods, large roots, excessive sod or other vegetation, construction debris.
- C. No backfilling shall take place in freezing weather without written permission from the Engineer.
- D. Bedding material shall conform to the requirements of Special Provision 02730, Part 2.
- E. The bedding material backfilling around the pipe shall be deposited in layers not to exceed eight inches (8") and carefully compacted to a degree of compaction at least equal to 90% maximum dry density as determined by Standard Proctor Test, ASTM Test Designation D698 throughout the entire depth of each layer. Where the pipe has a protective coating, care shall be taken not to damage the coating.
- F. The embedment material shall be finely divided material free from debris, organic material, and clods, lumps or stones larger than 1-1/2 inches maximum diameter. The material shall be borrowed material or job site excavated material. Embedment material shall be placed in uniform layers not more than twelve (12) inches thick and compacted to 90% maximum density as determined by ASTM D698 until the pipe has a cover of not less than one (1) foot.
- G. The remainder of the backfill shall consist of selected material from excavation or borrow, and shall be free from cinders, ashes, refuse, organic and frozen material, boulders or other materials that are unsuitable. Stones larger than 3 inches in diameter shall not be placed within two feet of the top of the pipe. This material shall be placed from 12 inches above the top of the pipe to 6 inches below the ground surface, unless otherwise specified, or to the subgrade elevation for streets or paved surfaces.
- H. After completing the bedding and embedment of the pipe as specified above, the remainder of the backfill material beneath unpaved areas shall be placed in uniform layers not exceeding one (1) foot and tamped. It shall be the Contractor's responsibility to compact each layer throughout its entire depth to a degree of compaction at least equal to that of the surrounding earth. The Contractor shall moisten or aerate the backfill material to obtain the required compaction. The Contractor shall provide a final cover of topsoil as specified herein. Any additional settlement of the trench shall be brought back to grade with additional topsoil. The trench shall be left in a condition so as to present a neat appearance.

- I. Open trenches under road surfacing, sidewalks, curb and gutter, and other adjacent improvements to a point eight (8) feet from the edge of the road surface and as otherwise noted on the plans shall be backfilled with uniform layers not exceeding one (1) foot. Each layer, except the upper 6 inches of subgrade underlying the pavement, shall be spread uniformly and tamped with a hand tamper or other approved device until thoroughly compacted to at least 90% of the maximum density obtainable at optimum moisture content. The upper 6-inch layer, forming the subgrade for surfacing shall be compacted to at least 95% of the maximum density obtainable at optimum moisture content. Density of backfill shall be determined based on Standard Proctor Test, ASTM Test Designation D698.

3.10 TESTING REQUIREMENTS

- A. Frequency of Testing: Minimum of one (1) test every 250 feet to 350 feet of trench per lift or as directed by Engineer. Frequency of testing may be altered by Engineer after adequate testing is completed to determine level of effort by Contractor is sufficient. When frequency is altered by the Engineer, random testing will be performed to verify compaction efforts. The Contractor may be required to excavate to depths required by Engineer for testing and backfill test holes to density specified.
- B. Retesting: In the event of failure to meet compaction criteria, the Contractor shall re-excavate and re-backfill at direction of Engineer. All retesting to be paid for by Contractor and to be performed by soils testing firm secured by the Contractor and approved by the Engineer.

3.11 EXCESS EXCAVATION

- A. The Contractor shall be responsible for securing and maintaining an adequate area where excess excavation can be stockpiled for future use or wasted.
- B. The Engineer's approval on the site selection shall be required.
- C. The Contractor shall be responsible for the final cleanup of the site chosen. The site shall be cleaned to the satisfaction of the property owner, and a lien waiver or a letter of satisfaction written by the property owner and addressed to the Contractor shall be obtained by the Contractor and furnished to the Owner.

3.12 TOPSOIL

- A. All lawns, boulevards, and cropland areas shall be left smooth with a minimum of 6" of compacted black dirt (4" minimum on pasture and grasslands) throughout the entire area disturbed by the trench.
- B. Pasture or native grasslands or other areas designated on the plans shall be reseeded to the full width and length of areas disturbed during construction.
- C. Prior to topsoiling and finish grading, all rough grades shall be corrected, adjusted, and brought to the required elevations.
- D. The subgrade surface shall be prepared for topsoiling by cross disking to a depth of two (2) inches or more to permit bonding of the topsoil to the subgrade.

- E. All stones and other debris greater than two (2) inches in any dimension shall be removed from the surface of the subgrade prior to the placement of the topsoil.
- F. Topsoil material shall not be placed when the topsoil or subgrade is frozen or wet enough to cause clodding.
- G. Topsoiling operations adjacent to lagoons and along piping routes shall be considered complete when the finished surface is:
 - 1. Free of sticks, stones and other material one (1) inch or more in any dimension.
 - 2. Smooth and true to required grades with a maximum allowable deviation of 0.1 foot.
- H. All lawns shall be raked with a landscape rake, garden rake, or other approved equipment to remove all clods, stones, sticks, or other material greater than one (1) inch in any dimension. Trenches shall be slightly crowned and all disturbed areas smoothed to a maximum deviation of 0.1 foot and ready for seeding operations by Contractor prior to acceptance by the Engineer.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Trenching, backfilling, and compacting are considered incidental work with no separate measurement and payment to be made.
- B. Unless dewatering is specifically called out in the Bid Form, it will not be directly measured directly and will be considered as subsidiary work pertaining to the Contract.

4.02 BASIS OF PAYMENT

- A. Trenching, backfilling, and compacting are considered incidental work with no separate payment to be made.
- B. Unless dewatering is specifically called out in the Bid Form, dewatering will not be directly measured for direct payment.

* * * END OF SECTION * * *

SPECIAL PROVISION 02605 - MANHOLES AND CASTINGS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related Work Specified Elsewhere:
 - 1. Sheeting, Shoring and Bracing - Special Provision 02160
 - 2. Structural Excavating, Filling and Grading - Special Provision 02222
 - 3. Sanitary Sewer Piping and Fittings – Special Provision 02730

1.02 DESCRIPTION OF WORK

- A. The Work covered under these specifications shall include the furnishing of all material, labor, tools, and equipment necessary to furnish, install, and construct complete in place all manholes as shown on the drawings and specified herein.
- B. When the term "manhole" is used in these specifications, it shall mean a structure that is placed on the sewer line to permit entry, inspection, cleaning, and repair of the sewer, and shall apply to all types of manholes whether standard, drop, flow measuring, or pond control.

1.03 JOB CONDITIONS

- A. Existing underground utilities, as shown on the drawings, are located in accordance with available data, but locations may vary and cannot be guaranteed. The exact locations shall be determined by the Contractor as work proceeds. Excavation work shall be done carefully so as to avoid damaging existing work.
- B. Contractor shall provide for protection, temporary removal and replacement or relocation of said obstructions as required for the performance of the work required in these contract documents.

1.04 SUBMITTALS

- A. The Contractor shall submit for review copies of shop drawings for the materials as specified herein in accordance with the requirements of Special Provision 01340.

PART 2 PRODUCTS

2.01 MANHOLES

- A. Manholes shall be constructed of concrete or precast concrete with bases, rings, and covers according to the dimensions and details as shown on the plans or as called for in the specifications.
- B. The materials used shall conform to the following requirements:
 - 1. Concrete shall conform to the requirements of Division 3 of these specifications.
 - 2. Concrete reinforcing shall be Class 60 and conform to the requirements of Division 3 of these specifications.
 - 3. Precast manhole sections and bases shall be of the class as shown on the drawings and shall conform to ASTM C-478.

2.02 CASTINGS

- A. Gratings and covers shall be of the standard design of the manufacturer. All castings shall be of uniform quality, free from blowholes, shrinkage, cracks, distortion, or other defects affecting strength and appearance. They shall be smooth and well cleaned.
- B. Metal used in the manufacture of castings shall conform to ASTM A48, Class 35B for gray iron or ASTM A536, Grade 65-45-12 for ductile iron.
- C. All castings shall be manufactured true to pattern; component parts shall fit together in a satisfactory manner. Round frames and covers shall have continuously machined bearing surfaces to prevent rocking and rattling.
- D. All cast dimensions may vary 1/2 the maximum shrinkage possessed by the metal or plus or minus 1/16 inch per foot.
- E. All weights shall not exceed the manufacturer's published weights by plus or minus 5%.
- F. All castings shall exceed proof load requirements of 16,000 lbs. The proof load test results shall be furnished upon request. The proof load test procedure shall be in accordance with Federal Specification A-A 60005.
- G. Standard manhole castings and covers will provide a minimum 24.0 inches clear opening for access. Manholes will have a minimum height of 7.0 inches and a minimum base width of 35.25 inches. Manhole lids will be provided with a rubber gasket to provide a self-sealing water tight lid when installed. Lids will be furnished with concealed pick holes.

2.03 LADDERS AND STEPS

- A. No manhole steps will be provided.

2.04 MANHOLE WALL JOINT SEALANT

A. Flexible gasket material for sealing manhole wall joints shall be RAM-NEK as manufactured by Henry Company, Houston Texas; ConSeal CS-202 as manufactured by Concrete Sealants, Inc., New Carlisle, Ohio; Polylok’s Butyl Joint Sealant, Polylok, Incorporated, Wallingford, CT; or approved equivalent.

2.05 MANHOLE INTERIOR LINING

A. All manholes will not require interior coatings.

2.06 MANHOLE WALL - CASTING SEALANT

A. Sealant material meeting the requirements of Paragraph 2.04-A above shall be used to make a watertight seal between the manhole wall and casting.

2.07 PIPE OPENING GASKET

A. Unless otherwise shown on the plans, the pipe opening in the manhole wall shall be made watertight with a rubber gasket assembly meeting the requirements of ASTM C923 and the following:

1. GASKET:

- a. Minimum Thickness of Gasket Material
- b. 8" Holes thru 16" Hole Sizes----- 0.290" \ 0.025
- c. 18" Holes and Larger Hole Sizes----- 0.300" \ 0.025
- d. Minimum Compound Tensile
- e. Strength of Rubber -----1,800 PSI
- f. Elongation of Rubber -----450% - 550%
- g. Shore A Durometer of Rubber-----42 \ 5

2. EXPANSION SLEEVE:

- a. Type 304 Stainless Steel
- b. Tensile Strength of Steel----- 85,000 PSI
- c. Yield Strength of Steel----- 35,000 PSI
- d. 8" thru 26" Hole Sizes -----1.5" Wide 11-Gauge
- e. 28" Hole Sizes and Larger-----1.5" Wide 10-Gauge

3. TAKE UP CLAMPS:

- a. Stainless Steel
- b. Band, Saddle and Housing made of Type 302
- c. Screw made of Type 305 Stainless Steel

PART 3 EXECUTION

3.01 LOCATIONS

A. Manholes shall be constructed at the locations and grades indicated on the plans.

3.02 EXCAVATION

- A. The requirements of Special Provision 02222 shall apply to the excavation, backfilling, and compaction for manholes.

3.03 GENERAL CONSTRUCTION

- A. Manholes shall be constructed only when the temperature is above 32 degrees F. All Work shall be protected against freezing.
- B. The bottom of the foundations shall be not lower than 12 inches below the lines of the invert of the sewer at that point and shall be included in the unit price bid for manholes.
- C. Invert channels shall be smooth, accurately shaped, and in accordance with the plan elevations. Invert channels may be formed directly in the concrete of the manhole base, may be formed using a section of PVC of required size and length as form material, and pouring concrete around same on top of the manhole foundation, may be built up of brick work and mortar, may consist of half tile laid in the concrete base, or may be constructed by laying full section sewer pipe straight through the manhole and cutting out the top half after the manhole floor is constructed and sufficiently set. The floor of the manhole shall be constructed in such a manner as to drain into the invert properly.
- D. Manholes shall be built up so that the cover, when placed, will be at the grade required in the plans or as set by the Engineer.

3.04 PRECAST CONCRETE MANHOLES

- A. Monolithic precast concrete manholes shall be constructed in accordance with the details shown on the plans, as required by ASTM specification C478 and as specified hereinafter.
- B. Monolithic concrete and precast concrete manholes shall have offset cones; that is, one side shall be vertical.
- C. Precast base sections may be a base riser section and separate base slab or base section with integral floor. Cast in place bases shall be furnished as shown on the plans.
- D. Precast concrete manholes shall be placed using present acceptable construction methods.
- E. The openings in monolithic precast manhole sections shall be sealed using a rubber sleeve gasket to make a flexible watertight connection.
- F. All manhole sections shall be sealed with a double ring of sealant to form a watertight seal.
- G. All lifting holes in the manhole walls shall be carefully grouted with non-shrink grout prior to backfilling.

3.05 BACKFILLING

- A. After completion of footings, walls, and other construction below the elevation of the final grades and prior to backfilling, all forms shall be removed and the excavation cleaned of all trash and debris.

- B. The Contractor shall protect the manhole from all elements and from displacement during backfill operations. If any displacement of a manhole occurs, the Contractor shall repair all resulting damage and return the manhole to the original position required at his own expense.
- C. The backfill material shall conform to the requirements of Special Provision 02222.

3.06 CASTING PLACEMENT

- A. The manhole casting and cover shall be carefully centered and sealed in the opening manhole wall-casting. Sealant methods and material as shown on the plans.
- B. When an internal or external manhole casting sleeve is required. The Contractor shall install seal according to Manufacturer's requirement. Care shall be taken to insure seal is not damaged during installation. Contractor shall replace any damaged seals at no cost to Owner if damaged during installation procedures.

3.07 SURFACE FINISH

- A. The surface of the area shall be finished and smoothed to the lines and grades as shown on the plans.
- B. The requirements for the surface finish of the surrounding area shall conform to the requirements of the specifications relating to the surface to be replaced.

3.08 MANHOLE TESTING

A. Manhole Exfiltration Test

1. Sanitary sewer manholes must be tested by the Contractor before final acceptance. The maximum allowable exfiltration in this case will be 0.1 gallon per hour foot of diameter per foot of head in the manhole.

B. Manhole Vacuum Test: In lieu of an exfiltration test for sanitary sewer manholes, a vacuum test may be used when performed in accordance with the following procedures.

1. Each manhole shall pass two tests; the first test shall be after assembly but prior to backfilling and the second shall be after backfilling.
2. The vacuum shall include testing to the top of the manhole, excluding the adjusting rings and the cast iron rings.
3. Plug all pipes entering the manhole at least eight inches (8") into the sewer pipe. The plug must be inflated at a location past the manhole/pipe gasket.
4. Brace all plugs to prevent the plug or pipe from being dislodged and drawn into the manhole.
5. A vacuum of at least ten and one-half inches (10") of mercury shall be drawn on the manhole. Shut the valve on the vacuum line to the manhole and disconnect the vacuum line. Open the vacuum line valve and adjust the vacuum to ten inches (10") of mercury.

6. The pressure gauge shall be liquid filled having a 3.5-inch diameter face with a reading from zero to 30 inches of mercury.
7. The time for the vacuum to drop from ten (10) inches of mercury to nine (9) inches of mercury must be equal to or greater than the following values for the manhole to be considered as passing the vacuum test:

Manhole Depth (ft)	Diameter (in.)								
	30	33	36	42	48	54	60	66	72
	Time (seconds)								
8	11	12	14	17	20	23	26	29	33
10	14	15	18	21	25	29	33	36	41
12	17	18	21	25	30	35	39	43	49
14	20	21	25	30	35	41	46	51	57
16	22	24	39	34	40	46	52	58	65
18	25	27	32	38	45	52	59	65	73
20	28	30	35	42	50	58	65	72	81
22	31	33	39	46	55	64	72	79	89
24	33	36	42	51	59	69	78	87	97
26	36	39	46	55	64	75	85	94	105
28	39	42	49	59	69	81	91	101	113
30	42	45	53	63	74	87	98	108	121

8. If a manhole fails the vacuum test, the manhole shall be uncovered and patched on the exterior of the manhole, retested prior to backfilling when the leak has been patched and retested after the backfill is completed.
9. Equipment:
 - a. Manhole vacuum tester assembly and vacuum pumps shall be as manufactured by Cherne Industries Inc., P.A. Glazier Inc., or approved equal.
 - b. Pneumatic plugs shall be provided and installed in accordance with the above-approved manufacturer's recommendations.

PART 4 MEASUREMENT AND PAYMENT

4.02 MEASUREMENT

- A. Manholes shall be measured in units as specifically called for in the Bid Form.
- B. Castings shall be measured in units as specifically called for in the Bid Form.
- C. Manhole Testing shall be measured on a per each basis for each test passed. Retesting of manholes that failed previous tests will not be measured for payment.

4.03 BASIS OF PAYMENT

- A. The price bid for manholes, complete in place, shall be full compensation for furnishing all materials, labor, equipment, and incidentals necessary to construct and place in satisfactory operating condition the manholes, including excavation, backfill, and concrete foundations.
- B. The price bid for casting shall include and constitute full compensation for all adjustments, fittings, sealants, and other appurtenances as required therein.
- C. Manhole testing will be paid at the contract unit price per each as shown on the bid form.

* * * END OF SECTION * * *

SPECIAL PROVISION 02627 - DIRECTIONAL BORING

PART 1 GENERAL

1.01 WORK INCLUDED

A. Furnish all labor, materials and equipment required to install potable water services using directional drilling method of installation, all in accordance with the requirements of the Contract Documents. The pipe size, type, and length shall be as specified herein and as shown on the Drawings. Work shall include and not be limited to proper installation, testing, restoration of underground utilities and environmental protection and restoration.

B. The directional drill shall be accomplished by first drilling a pilot hole to design standards, and then enlarging the pilot hole no larger than 1.5 times larger than the outer diameter of the HDPE piping to accommodate the pull back of the pipe through the enlarged hole.

C. The general provisions of the Standard Specifications for Roads and Bridges.

1.03 REFERENCE DOCUMENTS

1. Sheeting, Shoring, and Bracing - Special Provision 02160
2. Trenching, Backfilling, and Compacting - Special Provision 02224
3. Watermain Piping and Fittings – Special Provision 02660

1.04 SUBMITTALS

A. Directional drilling contractor's qualifications and experience.

B. Work plan: Prior to beginning work, the CONTRACTOR must submit to the ENGINEER a work plan detailing the procedure and schedule to be used to execute the project. The work plan should include a description of all equipment to be used, down-hole tools, a list of personnel and their qualification and experience (including backup personnel in the event that an individual is unavailable), list of subcontractors, a schedule of work activity, a safety plan (including MSDS of any potentially hazardous substances to be used), an environmental protection plan and contingency plans for possible problems. Work plan should be comprehensive, realistic, and based on actual working conditions for this particular project. Plan should document the thoughtful planning required to successfully complete the project.

C. Equipment: Submit specifications on directional drilling equipment to be used to ensure that the equipment will be adequate to complete the project. Equipment shall include but not be limited to: drilling rig, mud system, mud motors (if applicable), downhole tools, guidance system, rig safety systems. Calibration records for guidance equipment shall be included.

Specifications for any drilling fluid additives that CONTRACTOR intends to use or might use shall be submitted.

1.05 QUALITY ASSURANCE

- A. All directional drilling operations shall be done by a qualified directional drilling CONTRACTOR with at least (3) years experience involving work of a similar nature to the work required of this project.
- B. Notify ENGINEER and OWNER a minimum of three (3) days in advance of the start of work.
- C. All work shall be performed in the presence of the OWNER or ENGINEER.

PART 2 PRODUCTS

2.01 WATER SERVICE PIPE

The pipe material shall meet the requirements of Special Provision 02660.

2.02 DIRECTIONAL DRILLING EQUIPMENT REQUIREMENTS

- A. The directional drilling equipment shall consist of a directional drilling rig of sufficient capacity to perform the bore and pull back the pipe, a drilling fluid mixing, delivery and recovery system of sufficient capacity to successfully complete the installation, a drilling fluid recycling system to remove solids from the drilling fluid so that the fluid can be reused (if required), a magnetic guidance system or walk-over system to accurately guide boring operations, a vacuum truck of sufficient capacity to handle the drilling fluid volume, and trained and competent personnel to operate the system. All equipment shall be in good, safe condition with sufficient supplies, materials, and spare parts on hand to maintain the system in good working order for the duration of this project.
- B. The directional drilling machine shall consist of a hydraulically powered system to rotate and push hollow drilling pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the installation. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor and record maximum pullback pressure during pullback operations. There shall be a system to detect electrical current from the drill string and an audible alarm, which automatically sounds when a electrical current is detected.

C. The drill head shall be steerable by changing its rotation, and shall provide necessary cutting surfaces and drilling fluid jets.

D. Mud motors shall be of adequate power to turn the required drilling tools.

E. Shall be constructed of high quality 4130 seamless tubing, grade D or better, with threaded box and pins. Tools joints should be hardened to 32-36 RC.

2.03 GUIDANCE SYSTEM

A. An electronic walkover tracking system or a Magnetic Guidance System (MGS) probe or proven gyroscopic probe and interface shall be used to provide a continuous and accurate determination of the location of the drill head during the drilling operation.

B. The guidance shall be capable of tracking at all depths up to fifty feet and in any soil condition, including hard rock. It shall enable the driller to guide the drill head by providing immediate information on the tool face, azimuth (horizontal direction), and inclination (vertical direction). The guidance system shall be accurate and calibrated to manufacturer's specifications of the vertical depth of the borehole at sensing position at depths up to fifty feet and accurate to 2-feet horizontally.

C. Components: The CONTRACTOR shall supply all components and materials to install, operate, and maintain the guidance system.

D. The guidance system shall be of a proven type, and shall be set up and operated by personnel trained and experienced with the system. The operator shall be aware of any geo-magnetic anomalies and shall consider such influences in the operation of the guidance system.

2.04 DRILLING FLUID (MUD) SYSTEM

A. A self-contained, closed, drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid composed of bentonite clay, potable water, and appropriate additives. Mixing system shall be able to molecularly shear individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing.

B. The drilling fluid reservoir tank shall be minimum of 1,000 gallons. Mixing system shall continually agitate the drilling fluid during drilling operations.

C. Drilling fluid shall be composed of clean water and bentonite clay. Water shall be from an authorized source with a pH of 8.5 - 10. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate or equal. No additional material may be used in drilling fluid without prior approval from ENGINEER. The bentonite mixture used shall have the minimum viscosities as measured by a March funnel:

- Rocky Clay - 60 seconds
- Hard Clay - 40 seconds
- Soft Clay - 45 seconds
- Sandy Clay - 90 seconds
- Stable Sand - 80 seconds
- Loose Sand - 110 seconds
- Wet Sand - 110 seconds

D. These viscosities may be varied to best fit the soil conditions encountered, or as determined by the operator.

E. The mud pumping system shall have a minimum capacity of 35-500 GPM and the capability of delivering the drilling fluid at a constant minimum pressure of 1200 psi. The delivery system shall have filters in-line to prevent solids from being pumped into drill pipe. Used drilling fluid and drilling fluid spilled during operations shall be contained and conveyed to the drilling fluid recycling system or shall be removed by vacuum trucks or other methods acceptable to ENGINEER. A berm, minimum of 12-inches high, shall be maintained around drill rigs drilling fluid mixing system, entry and exit pits and drilling fluid recycling system to prevent spills into the surrounding environment. Pumps and or vacuum truck(s) of sufficient size shall be in place to convey drilling fluid from containment areas to storage and recycling facilities for disposal.

2.05 OTHER EQUIPMENT

A. Pipe rollers shall be used for pipe assembly during final product pull back.

B. Other devices or utility placement systems for providing horizontal thrust other than those previously defined in the preceding sections shall not be used unless approved by the ENGINEER prior to commencement of the work. Consideration for approval will be made on an individual basis for each specified location. The proposed device or system shall maintain line and grade within the tolerances prescribed by the particular conditions of the project.

2.06 PERSONNEL REQUIREMENTS

A. All personnel shall be fully trained in their respective duties as part of the directional drilling crew and in safety. Each person must have at least two years directional drilling experience.

B. A competent and experienced supervisor representing the CONTRACTOR and Drilling Subcontractor shall be present at all times during the actual drilling operations. A responsible representative who is thoroughly familiar with the equipment and type of work to be performed must be in direct charge and control of the operation at all times.

C. In all cases, the supervisor must be continually present at the job site during the actual Directional Bore operation. The CONTRACTOR and Subcontractor shall have a sufficient

number of competent workers on the job at all times to insure the Directional Bore is made in a timely and satisfactory manner.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. The ENGINEER must be notified 3 days in advance of starting work. The Directional Bore shall not begin until the ENGINEER is present at the job site and agrees that proper preparations for the operation have been made. The ENGINEER'S approval for beginning the installation shall in no way relieve the CONTRACTOR of the ultimate responsibility for the satisfactory completion of the work as authorized under the Contract. It shall be the responsibility of ENGINEER to provide inspection personnel at such time as appropriate without causing undue hardship by reason of delay to the CONTRACTOR.

B. All work under this specification affecting the South Dakota Department of Transportation (SD-DOT) property, right-of-way, or facilities shall be carried out to the full satisfaction of the SD-DOT authorized representative. The CONTRACTOR shall fully inform himself of all requirements of the SD-DOT as pertains to specific project and shall conduct all his work accordingly.

C. All equipment used by the CONTRACTOR on Owner's property and right-of-ways may be inspected by the OWNER or the Owner's Representatives and shall not be used if considered unsatisfactory by OWNER or Owner's Representatives.

D. The Contractor shall be fully responsible for all damages arising from his failure to comply with the regulations and the requirements of these Specifications.

3.02 DIRECTIONAL DRILLING OPERATION

A. The CONTRACTOR shall provide all material, equipment, and facilities required for directional drilling. Proper alignment and elevation of the borehole shall be consistently maintained throughout the directional drilling operation.

B. The entire drill path shall be accurately surveyed with entry and exit stakes placed in the appropriate locations within the areas indicated on drawings. If CONTRACTOR is using a magnetic guidance system, drill path will be surveyed for any surface geo-magnetic variations or anomalies.

C. CONTRACTOR shall place slit fence between all drilling operations and any drainage, well-fields, wetland, waterway or other area designated for such protection necessary by documents, state, federal and local regulations. Additional environmental protection necessary to contain any hydraulic or drilling fluid spills shall be put in place, including berms, liners, turbidity

curtains and other measures. CONTRACTOR shall adhere to all applicable environmental regulations. Fuel may not be stored in bulk containers within 200 feet of any water body or wetland.

D. Readings shall be recorded after advancement of each successive drill pipe (no more than 10') and the readings recorded, both vertical and horizontal. Access to all recorded readings shall be made available to the ENGINEER, or his representative, at all times. At no time shall the deflection radius of the drill pipe exceed the deflection limits of the carrier pipe.

E. A complete list of all drilling fluid additives and mixtures to be used in the directional operation will be submitted to the ENGINEER, along with their respective Material Safety Data Sheets. All drilling fluids and loose cuttings shall be contained in pits or holding tanks for recycling or disposal, no fluids shall be allowed to enter any unapproved areas or natural waterways. Upon completion of the directional drill project, the drilling mud and cuttings shall be disposed of by the CONTRACTOR at an approved dumpsite.

F. The pilot hole shall be drilled on bore path with no deviations greater than 5% of depth over a length of 100-feet. In the event that pilot does deviate from the bore path more than 5-feet of depth in 100-feet, CONTRACTOR will notify ENGINEER and ENGINEER may require CONTRACTOR to pull-back and re-drill from the location along bore path before the deviation. In the event that a drilling fluid fracture, inadvertent returns or returns loss occurs during pilot hole drilling operations, CONTRACTOR shall cease drilling, wait at least 30 minutes, inject a quantity of drilling fluid with a viscosity exceeding 120 seconds as measured by a March funnel and wait another 30 minutes. If mud fracture or returns loss continues, CONTRACTOR will discuss additional options with the engineer and work will then proceed accordingly.

G. Upon approval of the pilot hole location, the hole opening or enlarging phase of the installation shall begin. The borehole diameter shall be increased to accommodate the pullback operation of the required size of HDPE pipe. The type of hole opener or back reamer to be utilized in this phase shall be determined by the types of subsurface soil conditions that have been encountered during the pilot hole drilling operation. The reamer type shall be at the CONTRACTOR'S discretion with the final hole opening being a maximum of 1.5 times larger than the outside diameter of the HDPE pipe to be installed in the bore hole.

I. The open borehole may be stabilized by means of bentonite drilling slurry pumped through the inside diameter of the drill rod and through openings in the reamer. The drilling slurry must be in a homogenous/flowable state serving as an agent to carry the loose cuttings to the surface through the annulus of the borehole. The volume of bentonite mud required for each pullback shall be calculated based on soil conditions, largest diameter of the pipe couplings, capacity of the bentonite mud pump, and the speed of pullback as recommended by the bentonite drilling fluid manufacture. The bentonite slurry is to be contained at the exit or entry side of the directional bore in pits or holding tanks. The slurry may be recycled at this time for reuse in the

hole opening operation, or shall be hauled by the CONTRACTOR to an approved dumpsite for proper disposal.

J. The PE pipe shall be joined together according to Special Provision 02660 and/or the manufacturer's specifications. Tracer wire (#8) solid coated copper wire shall be attached to the pulling eye and the crown of pipe with a minimum of two full wraps of duct tape around the pipe. This will allow for a straight, smooth pull of the product pipe as it enters and passes through the borehole toward the drill rig and original entrance hole of the directional bore. The product pipe will be elevated to the approximate angle of entry and supported by means of a sideboom with roller arm, or similar equipment, to allow for the "free stress" situation as the pipe is pulled into the exit hole toward the drill rig. The product pullback phase of the directional operation shall be carried out in a continuous manner until the pipe reaches the original entry side of the bore.

3.03 SITE RESTORATION

A. Following drilling operations, CONTRACTOR will de-mobilize equipment and restore the work site to the original conditions or better. All excavations will be backfilled and compacted according to the specifications.

B. Surface restoration shall be completed in accordance with the requirements of the contract, to a condition as good as or better than existed prior construction.

3.04 RECORD KEEPING

CONTRACTOR shall maintain a daily project log of drilling operations and a guidance system log with a copy given to the ENGINEER at completion of project.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

A. Measurement shall be per linear feet of directional boring detailed in the plans or as adjusted in the field by the Engineer.

B. Measurement shall only include distance for boring at the plan depth shown in the plans, and will not include distance of boring from surface elevations.

4.02 BASIS OF PAYMENT

A. Payment shall be at the contract unit price per linear foot.

* * * END OF SECTION * * *

SPECIAL PROVISION 02640 - VALVES AND APPURTENANCES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related requirements specified elsewhere:
 - 1. Watermain Piping and Fittings – Special Provision 02660
 - 2. Sanitary Sewer Piping and Fittings - Special Provision 02730

1.02 DESCRIPTION OF WORK

- A. This section covers the furnishing and installation of valves and appurtenances as specified herein and as shown on the plans.

1.03 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. All valves and related appurtenances shall be shipped in accordance to the requirements of AWWA C509 or C515. Valve ends shall be sealed to prevent the entry of foreign matter into the valve body. The boxes and crates in which valves are shipped shall completely enclose and protect the valve and accessories from foreign matter.
- B. Valves and accessories shall be stored in a manner so as to be protected from weather, moisture, and other possible damage. Materials shall not be stored directly on the ground.
- C. All material shall be handled in a manner that will prevent damage to the interior and exterior surfaces.

1.04 SUBMITTALS

- A. The Contractor shall submit for review copies of shop drawings for materials specified herein in accordance with the requirements of Section 01340 and the requirements as hereinafter specified.
- B. Certification of performance, leakage, and hydrostatic tests as described in Section 5 of AWWA C-504 (Butterfly Valves) and/or AWWA C-509/515(Resilient Seated Gate Valves) shall be furnished when requested by the Engineer.
- C. Certifications for all fasteners shall be provided for valves, fittings, and all other appurtenances provided under this specification.

PART 2 PRODUCTS

2.01 GATE VALVES

- A. Gate valves shall be resilient wedge type manufactured to meet all applicable requirements of AWWA Standard for Resilient Seated Gate Valve C509 or C515.

- B. All valves shall have non-rising stems, opening by turning left and provided with standard 2" square nut operator with arrow cast in metal to indicate direction of opening.
- C. Cast iron wedge shall have sealing surfaces of the wedge permanently bonded with resilient material to meet ASTM tests for rubber to metal bond ASTM D429. Each valve shall have a smooth unobstructed waterway free from any sediment pockets. Stuffing boxes shall be O Ring seal type with 2 rings located in stem above thrust collar. Low friction torque reduction thrust bearings shall be located both above and below the stem collar.
- D. Body and cover bolts and nuts shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.
- E. Exterior and interior coatings in accordance with ANSI/AWWA C550 for potable water.
- F. Non-rising stems shall be in full compliance with AWWA specification with cast integral stem collar and furnished of bronze conforming to ASTM B584 Alloy A. Stem nuts shall be independent of wedge and shall be made of solid bronze conforming to ASTM B 62.
- G. Valves shall have hydrostatic shell test of 400 psi and shut-off test of 200 psi. At the 200-psi shut-off test, valve must be bubble-tight with a zero (0) leakage allowance.
- H. Resilient wedge gate valves shall be the product of a manufacturer having a minimum of five (5) years experience in the manufacture of water works and distribution valves.
- I. Pre-Approved resilient wedge gate valves are as manufactured by: American Darling Valve Co., Birmingham, Alabama; Mueller Company, Decatur, Illinois; Clow Valve Division, Oskaloosa, Iowa; American Flow Control, Birmingham, Alabama; American AVK Company, Minden, NV; or Engineer approved equal.

2.02 VALVE BOXES

- A. Valve boxes shall be cast iron, 5-1/4" inside diameter, adjustable valve boxes of the screw type with sufficient length for the pipe bury as shown. Where the valve box is shown or required on control manholes, the length shall be sufficient to penetrate the valve marker and the Type II reinforced manhole cover. The cast iron cover of the valve box shall have an arrow indicating the direction of opening.
- B. Covers for water piping shall have the word "WATER" cast on the top.
- C. Pre-Approved valve boxes and covers are as manufactured by: Tyler Pipe Utilities Division, Tyler, Texas; Mueller Co., Decatur, Illinois; Clow Corporation, Oak Brook, Illinois; or Engineer approved equal.
- D. Each valve box shall be furnished with valve box centering adaptor compatible with the valve boxes furnished.
- E. The Contractor shall furnish one T-handled valve wrench to the owner that is compatible with the installed valves.

2.03 FLANGED AND MECHANICAL JOINT VALVES

- A. Valves located in non-bury locations shall be flanged style with 125 lb. ANSI flanged ends. Valves located in buried locations shall be mechanical joint type conforming to the requirements of ANSI Specification A21.11.

2.04 FASTENERS

- A. All fasteners in buried locations shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

2.05 POLYETHYLENE WRAP

- A. All ductile fittings shall be wrapped with polyethylene plastic film having a minimum thickness of 0.008 inches or with a cross woven polyethylene plastic film having a minimum thickness of 0.004 inches.

PART 3 EXECUTION

3.01 VALVE INSTALLATION

- A. All valves shall be installed in locations as shown on the plans or as directed by the Owner's Resident Project representative.
- B. The valve and joints shall be installed in accordance with the manufacturer's recommendations.
- C. All pipe bevels shall be removed prior to installation of any valve or ductile iron fitting.

3.02 VALVE BOX INSTALLATION

All foreign material and debris shall be removed from the top of the valve operator prior to setting the valve box.

- A. Valve box centering device shall be installed to center valve box on valve.
- B. Valve boxes shall be centered and plumb over the operating nut of the valve and shall be set so that no shock or stress will be transmitted to the valve.
- C. Tops of the valve boxes shall be set flush with the valve identification collar or manhole cover unless otherwise directed.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. All valves and related appurtenances shall be measured on a per each basis at the unit prices provided in the bid form. If a specific unit of measure is not provided in the bid form, the valves and related appurtenances shall be considered incidental to other work provided.

4.02 BASIS OF PAYMENT

- A. All valves listed in the Bid Form shall be measured and paid for on a per each basis including all fasteners, gaskets, coatings, operators, blocking, and miscellaneous hardware to install the valve properly in the locations designated on the plans.

* * * END OF SECTION * * *

SPECIAL PROVISION 02645 - FIRE HYDRANTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related work specified elsewhere.
 - 1. Trenching, Backfilling and Compacting - Special Provision 02224
 - 2. Thrust Blocks and Anchors - Special Provision 02667
 - 3. Cleaning and Disinfection of Water Distribution Systems - Special Provision 02675
 - 4. Pipeline Testing of Watermain - Special Provision 02676

1.02 DESCRIPTION OF WORK

- A. The work covered under this section of the specifications shall include the furnishing of all material, labor, tools and equipment necessary to furnish and install, complete in place, all piping, fittings, blocking and hydrants of the size and type as shown on the plans.

1.03 SUBMITTALS

- A. The contractor shall submit for review copies of shop drawings for materials specified in accordance with the requirements of Section 01340 and the requirements as specified herein.
- B. Certificates from the manufacturer that the materials meet or exceed specified requirements, including fasteners.
- C. The manufacturer's installation recommendations, including blocking, joint type, lubricants, etc. to be used.
- D. Certification shall be provided that all pipes, plumbing fittings, and fixtures are "Lead Free" in accordance with the January 4, 2011 modification to Section 1417 of the Safe Drinking Water Act.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All material shall be packed, loaded, transported, handled and stored in such a manner so as to prevent damage to the materials.
- B. Materials stored on the site shall be stored in accordance with manufacturer's recommendation and shall be protected from damage and theft. Materials shall not be stored directly on the ground.
- C. The inside of all materials are to be kept dry and clean of all debris and dirt.

PART 2 PRODUCTS

2.01 FIRE HYDRANT

- A. All fire hydrants located on water lines 6" diameter or larger shall be provided with two (2) 2½" inch and one 4 ½" inch pumper connection..
- B. Hydrant shall be manufacturer's latest design, conforming to the latest issue of AWWA Specifications C-502, "Standard for Fire Hydrants."

- C. Hydrant main valve shall close with the water pressure and all operating parts shall remove through the barrel, without digging.
- D. Hydrant operating threads shall be oil lubricated, and shall be O-ring sealed from water, moisture, and foreign matter.
- E. Hydrant barrel shall be centrifugally cast of high-grade cast grey iron.
- F. Design shall permit easy installation of top extension without shutting off water to the hydrant.
- G. Nozzle caps shall be equipped with rocker lugs.
- H. Fire hydrants shall be constructed so that replacement of interior parts may be made without disturbing any connections. Valve openings shall be 5 1/4 inches in diameter. Valves, when shut, shall be reasonably tight when upper portion of barrel is broken off.
- I. The barrel section shall be bolted, not screwed, to the lower section. There shall be no chattering of operation.
- J. Bolts: All bolts below ground shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.
- K. Hydrants shall be furnished with 7-½ feet of bury to the bottom of the piping.
- L. The height of the fire hydrant shall be 24 to 30 inches from final grade to the center of the 4”pumper connection.
- M. Hydrants shall be red in color.
- N. A break-off repair kit, including seals, shall be provided based on the following schedule:
 - 1. 1 to 15 hydrants furnished, one (1) kit
- O. Two operating wrenches for removal of caps and opening valve will be provided.
- P. Pre-approved hydrants are: Waterous Hydrants WB67; American-Darling Model B-62 B; American AVK Model 2700; Mueller Hydrants Model A-423/422, or Engineer approved equal.

2.02 FASTENERS

- A. All fasteners in buried locations shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

PART 3 EXECUTION

3.01 EXCAVATION, FILLING, AND COMPACTION

- A. Excavation of trench for fire hydrant shall be so that blocking below and behind hydrant may be placed against undisturbed earth.
- B. The backfill shall be placed in lifts not exceeding 1-foot loose thickness. Each lift shall be mechanically tamped to 95% of maximum density as determined by the standard proctor method.

3.02 THRUST REACTION

- A. The Contractor shall install restraining rings on all hydrant leads. Typical thrust blocking will still be required.
- B. Concrete blocking shall be placed beneath and behind the fire hydrant and at all points subject to thrust reaction. Blocking shall be a least 8" x 16" x 6" and shall be placed against undisturbed earth.
- C. Concrete reaction blocking shall be placed so that all pipe and fitting joints are accessible for repair.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Fire Hydrants as called for on the proposal and as shown on the plans shall be measured on a per each basis. This shall include the entire fire hydrant with elbow at base (if required), riser and hydrant all mechanicals related specifically to fire hydrant, excavation, backfill, compaction, bedding, and any connections required.

4.02 BASIS OF PAYMENT

- A. Payment for Fire Hydrants will be paid for on at the contract unit per each size and type of fire hydrant provided in the bid form.

* * END OF SECTION * * *

SPECIAL PROVISION 02647 - CURB STOPS, CORPORATIONS, AND SADDLES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The general provisions of the Standard Specifications for Roads and Bridges.

1.02 DESCRIPTION OF WORK

A. The work covered under this section of the specifications shall include the furnishing of all material, labor, tools and equipment to construct, complete in place, all saddle connections.

1.03 DESCRIPTION OF WORK

A. The work covered under this section of the specifications shall include the furnishing of all material, labor, tools, and equipment to construct, complete in place, all service connections including saddles, corporations, service pipe, and curb stops.

1.04 SUBMITTALS

- A. The Contractor shall submit for review copies of shop drawings for materials specified herein in accordance with the requirements of Section 01340 and the requirements as hereinafter specified.
- B. Certifications for all fasteners shall be provided for valves, fittings, and all other appurtenances provided under this specification.
- C. Certification shall be provided that all pipes, plumbing fittings, and fixtures are "Lead Free" in accordance with the January 4, 2011 modification to Section 1417 of the Safe Drinking Water Act.

PART 2 PRODUCTS

2.01 SERVICE PIPE

- A. Service Pipe, when shown on the plans will be polyethylene (PE) tubing. PE tubing shall be rated for a maximum allowable pressure of 160 psi at 73 degree F or higher. The PE tubing shall conform to ASTM D 2239, IDR 7, PE 3406, or PE 3408. Each length of pipe shall be marked with nominal size, manufacturer's trademark, pressure classification, date and shift of manufacture with appropriate designation code, IDR, etc.
- B. All fittings shall have compression style couplers and the fittings shall be brass. All PE tubing will utilize stainless steel inserts at all fittings.

2.02 SADDLES

- A. The body shall be made of high strength ductile iron per ASTM A536.
- B. The clamping band shall be a double wide band with 5/8" UNC threaded bolts of 18-8 type 304 stainless steel with stainless steel spring tension washers under the nuts.
- C. The gasket shall be EPDM rubber per ASTM-D2000.

- D. The finish on saddle body shall be fusion bonded epoxy coating approximately 12 mils thick.
- E. Pre-Approved saddles are as manufactured by: Ford Meter Box Co., style FC202; JCM Industries, Inc., Model No. 406; Mueller Company, DR 2; or Engineer approved equal.

2.03 CORPORATION STOPS

- A. Corporation stops shall be designed and manufactured in accordance with AWWA C800 and shall have standard AWWA Ball Joint end connection. Corporation shall incorporate A.Y. McDonald 4701B-33; Mueller E-25009; Ford FB1001; or Engineer approved equal compression coupling for PE service pipe when specified.
- B. Pre-Approved corporations are as manufactured by: Ford Meter Box Co.; A.Y. McDonald; or Engineer approved equal with latest design for the intended use.
- C. Corp Stop compression joints will be provided with an optional tracer wire hole that has a set screw for a positive connection.

2.04 CURB STOPS WITH BOXES (MINNEAPOLIS PATTERN)

- A. Curb stops shall be of the size indicated on the plans. Inlet and outlet shall be pack joint or compression type fitting (for PE pipe). Curb Stop shall be provided with 2" base thread for curb box.
- B. Curb box shall be Minneapolis Base with 1 ½" or 2" base thread. Box riser shall be minimum 1 ¼" in diameter. Box shall be fully adjustable between 6' and 7'. Lid shall have brass pentagon head plug. **Stainless steel stationary rod riser will not be required.** Contractor shall verify top nut dimensions with owner to insure compatibility with existing system. Contractor shall provide two curb box keys and shut-off wrenches to the Owner.
- C. Pre-Approved curb stops are as manufactured by: Ford Meter Box Company; Mueller Company; A.Y. McDonald; or Engineer approved equal.
- D. Curb Box lids will also be provided with a tracer wire screw that is tapped into the bottom of the lid for securing a quick connect eyelet terminal. Once tightened, the threaded end of the screw becomes accessible for attaching an alligator clip at the top of the lid.

2.05 COMPRESSION COUPLERS

- A. All connections to existing service piping will be made with a compression style coupler.
- B. Pre-Approved Compression Couplers are: A.Y. McDonald Series 4758; Ford Pack Joint Coupler Models C44, C46, & C47; Mueller Series 15400; or Engineer approved equal.

PART 3 INSTALLATION

3.01 COMPRESSION COUPLERS

- A. Use a tube or pipe cutter to assure a square end. Make sure pipe is round. On copper tubing, use a rounding tool, if necessary. Surface should be clean and free of nicks.
- B. Insert stiffeners must be used on flexible plastic service tube or pipe.
- C. Stab tube or pipe through the nut and into the socket of the valve or fitting until it bottoms out (some fittings may or may not have a stop).

- D. If the nut or socket appears too large or small, a check should be made to be sure you are using the correct fitting and pipe/tube.
- E. Tighten the Mac-Pak nut onto the valve or fitting to the Manufacturer's recommendations.
- F. Lock the tube or pipe into the nut by securely tightening the split clamp side screw (use a box end or socket wrench, not a screwdriver). For soft copper, PVC, polybutylene, and polyethylene tubing, the torques to which the clamp side screw should be tightened to manufacture's recommendations.
- G. Pressure test for leaks before backfilling.
- H. Use only on cold water services.

3.02 CORPORATION STOPS

- A. Protect threads Nicks or distorted threads, especially on tapered threads, can cause leaks.
- B. Use a good thread sealant where threads are intended to provide a leak-proof connection. Do not over tighten.
- C. Do not use Vaseline, plumber's grease, or any other petroleum product on seals or o-rings.
- D. Use only a smooth jawed adjustable wrench on the flats provided nearest the thread being made up. Serrated pipe wrenches apply a loose, improper fit that can distort the body and cause a leak, especially on valves.
- E. Plug style corp valves should be installed so that the wrenching flats of a tightened valve are positioned top and bottom.
- F. Avoid dropping or the use of a hammer on any plug or key type valve. Impacts, causing dents or distortion, can cause leaks by unseating the plug portion of the valve.
- G. Pressure test for leaks before backfilling.
- H. Backfill carefully to avoid damage to the service line and connections. Loop service piping on corporation connections to minimize strain on the body and connections.

3.03 SADDLES

- A. Make sure you have proper type and size saddle for pipe.
- B. Clean pipe surface thoroughly.
- C. Lubricate face of gasket.
- D. Mount saddle on pipe with outlet facing desired direction.
- E. Evenly tighten bolts and nuts to the torque specified below. Saddles without hinges require opposite sides of the saddle to be tightened evenly, keeping an even distance and torque on each side. Brass bottom saddles are not designed to bottom out when tightening. Over-tightening can cause breakage.
- F. After the corporation stop has been installed, recheck saddle torque and tighten if necessary.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Corporations and Saddles of the size specified will be measured as a complete unit, in place.
- B. Service pipe of each type and size provided in the bid form will be measured in lineal feet to the nearest foot.
- C. Curb stops curb stops, box riser, stationary rod, and other appurtenances for each size specified will be measured per each.
- D. The Contractor shall furnish two curb box keys and shut-off wrenches to the owner that is compatible with the installed curb stops. These items will be incidental to the curb stops with no separate measurement made.

4.02 BASIS OF PAYMENT

- A. Payment for corporations and saddles of the size specified shall be made at the contract unit price provided in the Bid Form.
- B. Payment for each size and type of service piping shall be made at the contract unit price provided in the Bid Form.
- C. Payment for curb stops, riser, stationary rod, and other appurtenances shall be at the contract unit price provided in the Bid Form.
- D. Payment for curb box keys and shut-off wrench shall be considered incidental items with no separate payment.

* * * END OF SECTION * * *

SPECIAL PROVISION 02660 - WATERMAIN PIPING AND FITTINGS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related Work Specified Elsewhere:
 - 1. Trenching, Backfilling and Compacting - Special Provision 02224
 - 2. Valves and Appurtenances - Special Provision 02640
 - 3. Thrust Blocks and Anchors - Special Provision 02667
 - 4. Cleaning and Disinfection of Water Distribution Systems - Special Provision 02675
 - 5. Pipeline Testing of Watermain - Special Provision 02676
 - 6. Standard Drawing 02660-1

1.02 DESCRIPTION OF WORK

- A. The work covered under these specifications shall include the furnishing of all labor, material, tools, and equipment necessary to furnish and install, complete in place, all piping and fittings as shown on the drawings and as specified herein.

1.03 SUBMITTALS

- A. The Contractor shall submit for review copies of shop drawings for materials specified herein.
- B. Certificates from the manufacturer that the materials meet or exceed specified requirements.
- C. The manufacturer's installation recommendations, including types and amounts of gasket lubricant, where applicable, to be used.
- D. Certification shall be provided that all pipes, plumbing fittings, and fixtures are "Lead Free" in accordance with the January 4, 2011 modification to Section 1417 of the Safe Drinking Water Act.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All materials shall be packed, loaded, transported, unloaded, and handled in such a manner so as to prevent damage to the materials.
- B. All material shall be loaded and unloaded by lifting with slings or hoists or skidding so as to avoid shock or damage. Dropping or rolling will not be permitted. The use of end hooks to install or move piping will not be allowed.
- C. All materials shall be stored on the site in accordance with the manufacturer's recommendations. Do not store materials directly on the ground.
- D. All materials shall be kept clean and dry. The insides of all piping and fittings shall be kept free of dirt and debris.

PART 2 PRODUCTS

2.01 DUCTILE IRON PIPE

- A. The wall thickness of ductile iron pipe shall conform to the requirements of AWWA/ANSI Specification C151/A21.51 for a type 2 laying condition and the depth of cover encountered unless specifically shown otherwise on the plan.
- B. Push-On Joint Ductile Iron Pipe will conform to the requirements of AWWA/ANSI Specification C151/A21.51 and AWWA/ANSI Specification C111/A21.11.
- C. Mechanical joints for ductile iron pipe buried underground shall conform to the requirements of AWWA/ANSI Specification C110/A21.10.
- D. Flanged joints for ductile iron pipe in "non-buried" locations shall be furnished with full-face rubber gaskets and shall conform to the requirements of AWWA/ANSI Specification C115/A21.15. The flanged faces shall be drilled to standard 125-pound template.
- E. All ductile iron pipes shall be lined with cement mortar in accordance with AWWA/ANSI Specifications C104/A21.4. Pipe shall have a coal tar varnish exterior finish not less than 1-mil thick.
- F. A rust preventative coating, soluble in commercial solvent for removal prior to pipe installation, shall be applied to the machined faces of flanges. The back of these flanges and the bolt holes shall be coated with not less than a 1-mil thickness of asphaltic varnish.
- G. When utilized for contaminated soils areas, the piping will be furnished with Nitrile Butadiene gaskets.

2.02 DUCTILE IRON FITTINGS

- A. Ductile iron fittings shall conform to the requirements of AWWA/ANSI Specifications C110/A21.10 & C153/A21.53.
- B. Ductile Iron Fittings to be installed underground shall be mechanical joint type conforming to the requirements of AWWA/ANSI Specifications C111/A21.11.
- C. Ductile Iron Fittings to be installed in "non-buried" locations shall be provided with flanged joints with rubber full-face gaskets. Flanged faces shall be drilled to standard 125-pound template unless otherwise noted.
- D. All Ductile Iron Fittings shall be lined with cement mortar in accordance with AWWA/ANSI Specifications C104/A21.4. The exterior finishes shall be an asphaltic varnish coating not less than 1-mil thick.
- E. When utilized for contaminated soils areas, the fittings will be furnished with Nitrile Butadiene gaskets.

2.03 PRESSURIZED POLYVINYL CHLORIDE (PVC) PIPE

- A. All Polyvinyl Chloride pipe shall be SDR 21, Class 200 rated pipe with rubber gasket sealed joints. The pipe shall be made from Type 1, Grade 1, Class 12454-B compounds conforming to ASTM D1784 with a hydrostatic design basis (HDB) of 4,000 psi as per ASTM 2837.
- B. All pipes shall be marked with the following: Nominal pipe size, material code designation, SDR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers.
- C. The PVC pipe shall be furnished in 20 foot laying lengths. Longer lengths will be allowed

only if the Contractor certifies that he will provide equipment on the project to fully support the pipe while being transported and distributed over the project.

- D. All PVC pipe shall be furnished with gasket joints conforming to ASTM D3139. Rubber gaskets shall conform to the requirement of ASTM F477.
- E. Manufacturer's proof of design tests and joint dimensions shall be submitted to the Engineer for gasket joints, which do not maintain SDR throughout the joint.
- F. Gasket joint couplings used for plain end pipe shall have a pressure rating equal to the pipe on which used. Centering of pipe within the coupling will be assured by means of an integral positive stop in the coupling. All couplings must be of the double gasket type. Couplings requiring welds will not be allowed.
- G. All gasket joints shall have a seating depth equal to at least 50% of the nominal pipe diameter.
- H. The ends of the pipe to be inserted into couplings or joints shall be factory marked to allow field checking of the depth of setting of the pipe in the joint socket.

2.04 FITTINGS FOR PRESSURIZED PVC PIPE

- A. Repair couplers and gaskets will be pressure rated 200 psi if not otherwise indicated and meet the following specifications, standards and approvals:
 - 1. NSF Standards 14 & 61
 - 2. ASTM D-1784 materials
 - 3. ASTM D-3139 joints
 - 4. SDR 21 dimensions and pressure ratings per ASTM D2241
 - 5. ASTM F-477 gaskets
- B. All other fittings for use on PVC SDR 21, Class 200 pipe will be ductile iron fittings conforming to the requirements of paragraph 2.02 above, with the exception of transition couplers as specified in paragraph 2.05 below.

2.05 TRANSITION COUPLERS

- A. The couplings used for transitions between piping of different materials, piping of different diameters, and existing piping to new piping (excluding repair couplers), shall be a wide-range flexible coupler with a sleeve type design meeting the requirements of AWWA C219.
 - 1. The coupling body shall be a center sleeve fabricated of high strength carbon steel tubing equivalent to ANSI/AWWA C200. The transition couplers will be readily available in nominal diameter ranges from 1.5 to 24 inches on all pipe classes.
 - 2. Compression End Rings: One gasket compression end ring per coupling end. End rings to be of either one, two, or four bolt design, fabricated of carbon steel equivalent to ASTM A576.
 - 3. Hydraulic Wide Range Gasket: Chloramine Resistant NSF-61 approved EPDM gasket designed with a multi-layered wide range removable outer layer. Gasket hydraulically actuated with a pressure-equalizing dam, pressure cavity and sealing lip for working pressure of 260 psi (1.5 to 16 inches) and 232 psi (18 to 24 inch nominal diameter coupling).
 - 4. Fasteners shall be grade 304 (A2) or 316 (A4) stainless steel with yield strengths that

conform to all nationally recognized standards. Bolts to be coated with an anti-seize type coating to prevent galling.

5. The interior and exterior coatings shall NSF-61 approved fusion bonded epoxy coating conforming to AWWA C213.
 6. When properly installed the coupling will provide a minimum deflection of 8 degrees, up to 260 psi working pressure and 3/8 inch longitudinal pipe movement without leakage. (Flanged adapters will provide half the longitudinal movement and deflection.)
 7. All products will be proof tested to a minimum of 1.5 times working pressure.
- B. Flanged couplers shall consist of one compression end and gasket, coupling center sleeve, and AWWA Class "D" Flange (per AWWA C207).
- C. Pre-Approved transition couplers are: "Macro" extended range coupling by Romac Industries, Inc.; Omega Series Style CRCER by Cascade Waterworks Mfg. Co.; Maxi-Range Pipe Coupling by Mueller Co.; or Engineer approved equal.

2.06 PVC CASING PIPE

- A. All Polyvinyl Chloride pipe used for casing pipe shall be SDR 26, Class 160 rated pipe with rubber gasket sealed joints.
- B. The pipe shall be made from Type 1, Grade 1, Class 12454-B compounds conforming to ASTM D1784 with a hydrostatic design basis (HDB) of 4,000 psi as per ASTM 2837.
- C. All pipe shall be marked with the following: Nominal pipe size, material code designation, SDR, pressure rating, manufacturer's name or trademark, NSF seal and ASTM numbers.
- D. The PVC pipe shall be furnished in 20 foot laying lengths. Longer lengths will be allowed only if the Contractor certifies that he will provide equipment on the project to fully support the pipe while being transported and distributed over the project.
- E. All PVC pipe shall be furnished with gasket joints conforming to ASTM D3139. Rubber gaskets shall conform to the requirement of ASTM F477.
- F. Casing pipe end seals will be a "Pull-On" or "Wrap Around" type seal manufactured from a minimum 1/8" thick neoprene rubber. End seals will be sealed to the carrier pipe and casing pipe by 1/2" wide T304 stainless steel bandings with 100% non-magnetic worm gear mechanism.
- G. Casing spacers are not required for PVC casings under sanitary sewer or storm sewer crossings when the total cased length is 30 feet or less.
- H. Use manufactured casing spacers to position carrier pipe in casing. Wood skids will not be allowed.
- I. Use the following material requirements for casing spacers:
 1. HDPE Band/Panel and Riser: ASTM D 638.
 2. Stainless Steel or Carbon Steel Band/Panel and Riser: Type 304 stainless steel per ASTM A 240 or carbon steel per ASTM 36.
 3. Liner: Elastomeric PVC per ASTM D 149.
 4. Spacer Skid/Runner: Abrasion resistant polymer with a low coefficient of friction.
 5. Fasteners: Type 304 (18-8) stainless steel per ASTM A193.

- J. Watermain piping will be centered and restrained within the casing pipe. Spacers shall be sized such that the height of the risers and runners are to center the carrier pipe in the casing pipe with a top clearance of three-fourths inch minimum.

2.07 FASTENERS

- A. All fasteners in buried locations shall be Grade 304 (A2) or Grade 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

2.08 LUBRICANT FOR PIPE GASKETS

- A. Lubricant shall be an emulsified polymer based product, specifically formulated to be water-soluble without causing turbidity. Lubricant shall not transfer taste and/or odor to new water main installations. Lubricant must not promote bacterial growth and be safe for use on all metal and plastic pipes. Lubricant shall be easily flushed from the line and be non-reactive to chlorinated water. Lubricant should work easily on both wet and dry surfaces.

2.09 POLYETHYLENE WRAP

- A. All ductile fittings shall be wrapped with polyethylene plastic film having a minimum thickness of 0.006 inches or with a cross woven polyethylene plastic film having a minimum thickness of 0.004 inches.

2.010 TRACER WIRE

- A. Tracer wire shall be 12-gauge solid copper or high strength stainless steel wire with a 45-mil polyethylene coating. Provide sufficient length to be continuous over each separate run of nonmetallic pipe.
- B. Corp Stop compression joints will be provided with an optional tracer wire hole that has a set screw for a positive connection. Curb Box lids will also be provided with a tracer wire screw that is tapped into the bottom of the lid for securing a quick connect eyelet terminal. Once tightened, the threaded end of the screw becomes accessible for attaching an alligator clip at the top of the lid.
- C. All tracer wires are to be connected to a combination cast iron & ABS/PVC tamper proof tracer wire access box. The cover is to be manufactured of cast iron and ABS/PVC components produced in the USA. Cast iron collar & cover is to be manufactured in accordance with ASTM A48 Class 25. The ABS is to be manufactured in accordance with ASTM D 1788. The cover shall be lettered "Water" and shall have a standard AWWA size cast-in pentagonal bolt. Box will be a minimum of three (3) inches in diameter and adjustable from 18 to 24 inches.

PART 3 EXECUTION

3.01 GENERAL

- A. The areas to receive piping shall be examined for defects that may adversely affect the execution and quality of Work. Prior to the start of piping installation, all measurements shall be checked for deviations from allowable tolerances for piping.

3.02 BURIED PIPING INSTALLATION

- A. All piping and fittings shall be laid true to line and grade as shown on the plans. Each section of pipe shall be so laid and fitted together that when complete the piping will have a smooth uniform flow line. The inside of all pipes shall be cleaned before installation and kept thoroughly clean during and after the laying. Pipe ends shall be cleaned inside and outside.
- B. Apply lubricant liberally to the inside of the pipe bell and spigot. Make sure lubricated surfaces remain free of dirt, gravel or other debris. Assemble the pipe joint immediately after application of the lubricant.
- C. All pipe and fitting shall be examined for defects before being lowered into the trench. The interior and exterior protective coating shall be inspected and field repaired, if required, and possible accordance with applicable standards.
- D. The pipe shall be handled and installed in accordance with manufacturer's recommendations and the requirements of AWWA C600 for Ductile Iron pipe, ANSI/AWWA C605 and ASTM D2774 for PVC pipe.
- E. When pipe laying is not in progress, including the noon hours, the open ends of pipe shall be closed. No trench water, animals, or foreign material shall be permitted to enter the pipe.
- F. The Contractor shall provide and maintain all necessary means and devices at all times to remove and dispose of all water entering the trench during the process of pipe laying. The trench shall be kept dry until the pipe laying and jointing are completed. Removal of water shall comply with Special Provision 02224.
- G. Thrust blocks or restraining fittings to restrain pressurized piping shall be provided at all abrupt changes in direction, tees, bends, dead ends and hydrants, and shall be in accordance with the pipe manufacturer's recommendations.

3.03 EXPOSED PIPING INSTALLATION

- A. Each item or system shall be furnished complete and installed as shown on the plans and in accordance with the manufacturer's recommendations, instructions, and directions. All installed equipment and systems shall be properly protected during subsequent construction operation.
- B. The Contractor shall inspect all material or equipment as it is received to determine damage and/or missing parts. It shall be his responsibility to repair or replace damaged items in accordance with the manufacturer's instructions.
- C. The Contractor shall provide all scaffolding required for the proper installation of this work

in conformance with the standards of any local and state safety codes applying to scaffolding.

- D. All pipes shall be set such that the vertical and horizontal centerlines are properly aligned. Installation of piping by means of springing, forcing or stressing the pipe or adjacent fittings, valves or equipment will not be allowed.

3.04 MECHANICAL JOINTS AND COUPLINGS

- A. Mechanical joints shall be carefully assembled in accordance with the manufacturer's recommendations. If effective sealing is not obtained, the joint shall be disassembled, thoroughly cleaned, and reassembled or replaced. Over tightening bolts to compensate for poor installation practice will not be permitted.
- B. The holes in mechanical joints with tie rods shall be carefully aligned to permit installation of the tie rods. In flange and mechanical joint pieces, holes in the mechanical joint bells and the flanges shall straddle the top (or side for vertical piping) centerline. The top (or side) centerline shall be marked on each flange and mechanical joint piece at the foundry.

3.05 TRACER WIRE INSTALLATION

- A. Tracer wire shall be installed in the trench at the same time as the pipe or immediately prior to starting the backfill of the trench.
- B. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.
- C. Splices will be allowed at pipeline intersections, manholes, bored crossings, and at other locations as agreed upon by the Resident Project Representative. Splices in tracer wire will be made with split bolt or compression-type connectors. Wire nuts may not be used. A waterproof connection is necessary to prevent corrosion. Splices shall be completed in accordance with the manufacturer's recommendations.
- D. Prior to final acceptance, all tracer wire shall be electrically tested for continuity from one exposed end to another.
- E. Tracer wire will be installed from Corporation Pack Joint to the Curb Stop. Attach wire to corporation stop compression nut and underside of curb stop box.
- F. Bring the wire to the ground surface at each fire hydrant and loop the wire in a tracer wire terminal box. These boxes shall be located between the hydrant and the hydrant valve with at least two feet of extra wire inside the box. The tracer wire terminal box must be installed flush with the finished grade.

3.06 TESTING

- A. All piping shall be tested in accordance with Special Provision 02676.
- B. All piping shall be cleaned and flushed in accordance with the requirements of Special Provision 02675.

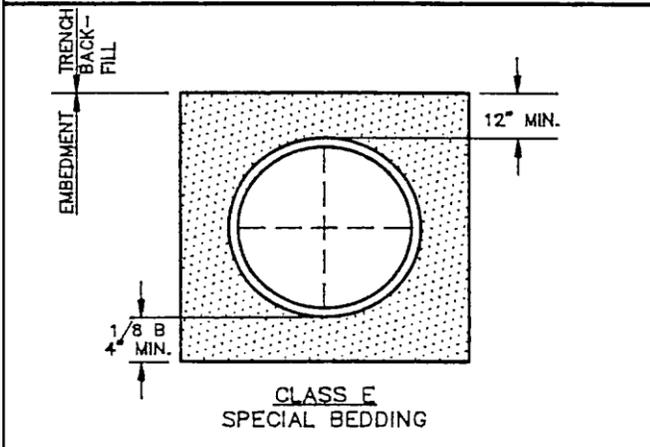
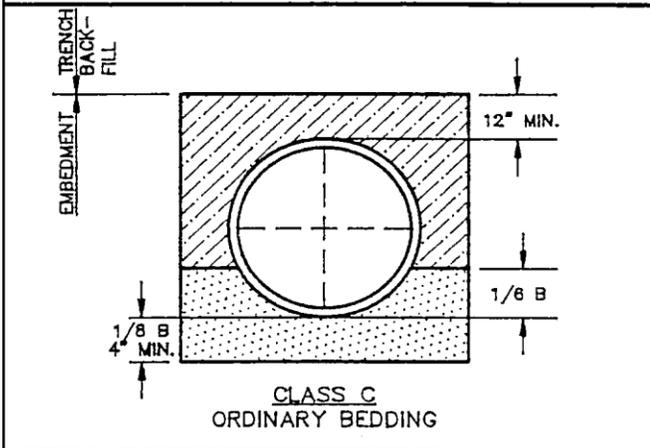
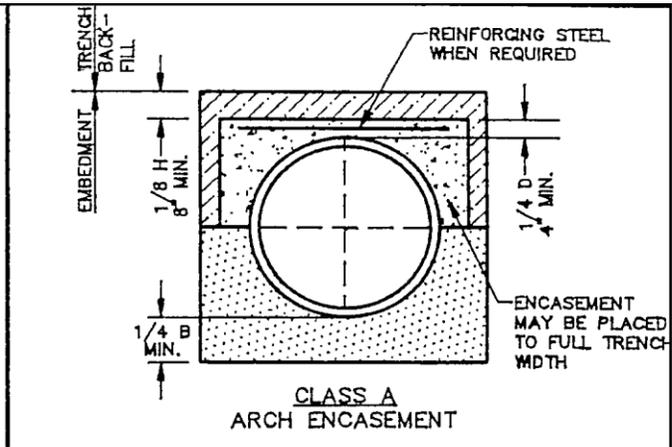
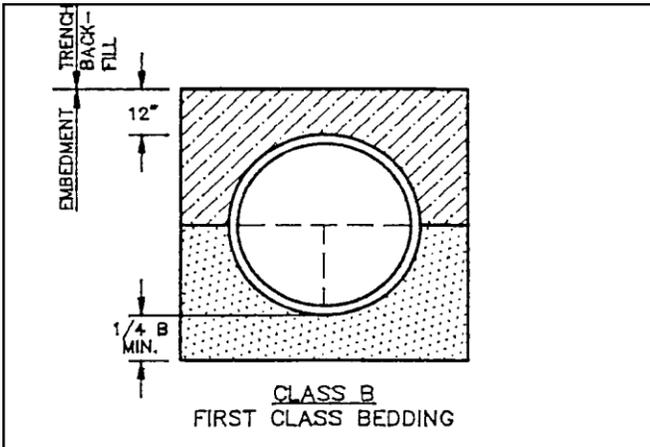
PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Piping of the different types and classes as called for on the Bid Form shall be measured on a lineal foot in place basis.
- B. All fittings specifically called for on the Bid Form will be measured on a per each basis for each type and size of fitting, including all fasteners, gaskets, coatings, blocking, and miscellaneous hardware to install the fitting properly in the locations designated on the plans.
- C. Incidental items associated with the piping materials for which no separate measurement and payment will be made include but are not limited to:
 - 1. Gaskets
 - 2. Lubricants
 - 3. Protective Coatings
 - 4. Linings
 - 5. Tracer Wire
- D. Nitrile Butadiene gaskets will be measured on a per each basis if authorized by the Engineer for use in contaminated soil areas.

4.02 BASIS OF PAYMENT

- A. Piping of the different types and classes as called for on the Bid Form shall be paid at the contract unit price provided in the Bid Form.
- B. Fittings listed in the Bid Form shall be paid at the contract unit price provided in the Bid Form.
- C. Nitrile Butadiene gaskets will be paid at the contract unit price per each provided in the Bid Form.



NOTES:

GRANULAR EMBEDMENT SHALL BE SIZE 67 COARSE AGGREGATE ASTM D-33 (SEE SPECIFICATIONS) TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.

COMPACTED EMBEDMENT SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL, AND STONES, PLACED IN UNIFORM LAYERS NOT MORE THAN 8" THICK AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY ASTM D698; INUNDATED SAND; OR GRADED GRAVEL GRANULAR EMBEDMENT MAY BE SUBSTITUTED FOR ALL OR PART OF COMPACTED EMBEDMENT.

LEGEND

- B OUTSIDE DIAMETER OF PIPE
- H COVER ABOVE TOP OF PIPE
- D NOMINAL PIPE SIZE
- COMPACTED EMBEDMENT
- GRANULAR BEDDING
- CONCRETE

EMBEDMENTS FOR CONDUITS

HELMS AND ASSOCIATES
CONSULTING ENGINEERS
ABERDEEN, SOUTH DAKOTA

STANDARD DRAWING
02660-1

* * * END OF SECTION * * *

SPECIAL PROVISION 02667 - THRUST BLOCKS AND RESTRAINING DEVICES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related requirements specified elsewhere:
 - 1. Watermain Piping and Fittings - Special Provision 02660
 - 2. Sanitary Sewer Piping and Fittings – Special Provision 02730
 - 3. Standard Drawing - No. 02667-1

1.02 DESCRIPTION OF WORK

This Section covers the furnishing and installation of thrust blocks, anchors, and restraining devices where necessary.

1.03 SUBMITTALS

The Contractor shall submit for review copies of shop drawings for restraining devices as specified herein in accordance with the requirements of Section 01340 and the requirements as hereinafter specified.

1.04 LOCATION

- A. Thrust blocks shall be furnished at locations including, but not limited to, the following:
 - 1. Tees
 - 2. Bends
 - 3. Valves
 - 4. Wyes
 - 5. Caps
- B. Restraining devices shall be installed at locations including, but not limited to, the following:
 - 1. Tees
 - 2. Bends
 - 3. Wyes
 - 4. Valves
 - 5. Fire Hydrants
 - 6. Caps

PART 2 PRODUCTS

2.01 CONCRETE

All concrete shall be minimum 3000 psi compressive strength. Precast concrete blocks shall be solid construction and conform to ASTM C 55.

2.02 RESTRAINING DEVICES

A. Restraint devices for use on ductile iron, PVC, and C-900 PVC “pushon” joints shall be constructed of high strength ductile iron, ASTM A536, Grade 65-45-12 and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1300, 1360, or 1390; Star Pipe Products Series 1000, 1100, 1200, and 4100P; EBAA Iron, Inc. Mega-Lug Series 1700; Romac Industries, Inc. 600 Series; or Engineer approved equal.

B. Restraint devices for use on mechanical joint to PVC and C-900 PVC, shall be constructed of high strength ductile iron, conforming to the requirements of ASTM A536, Grade 65-45-12, and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1500; Star Pipe Products, Allgrip Series 4000; Romac Industries, Inc Romagrip; EBAA Iron, Inc. Mega-Lug Series 2000; or Engineer approved equal.

C. Restraint devices for use on mechanical joint ductile iron, shall be constructed of high strength ductile iron, conforming to the requirements of ASTM A536, Grade 65-45-12, and shall incorporate machined serrations on the inside diameter to provide positive restraint, exact fit, and support of the pipe in an even and uniform manner. Bolts and connecting hardware shall be 304 (A2) or 316 (A4) Stainless Steel. All devices shall have a safety factor of no less than 2:1 at the full rated pressure of the pipe on which it is installed. They shall be UL listed and Factory Mutual approved. Pre-Approved restraining devices are: Uni-Flange Series 1400; Star Pipe Products, Allgrip Series 4000; Romac Industries, Inc. Romagrip; EBAA Iron, Inc. Mega-Lug Series 1100; or Engineer approved equal.

PART 3 INSTALLATION

3.01 THRUST BLOCK INSTALLATION

- A. The thrust blocks shall be constructed and/or placed so that the bearing surface is in direct line with the major force created by the pipe or fitting.
- B. The cast-in-place thrust blocks shall be constructed by pouring concrete between the fitting and the undisturbed trench shall be the bearing surface. Precast concrete blocks shall be installed by placing blocks between fitting and undisturbed wall. The precast concrete blocks shall be placed to provide a minimum of four (4) inches of concrete between fitting and undisturbed trench wall.
- C. The cast-in-place concrete shall not be allowed to cover the bolts of any fitting.
- D. Thrust restraints shall be completed in accordance with ANSI/AWWA C605/5.7 for PVC Pipe, ANSI/AWWA C600/4.28 for Ductile Iron Pipe, ANSI/AWWA 907, AWWA Manual M23, and as recommended by the Manufacturer.

3.02 RESTRAINING DEVICE INSTALLATION

The Contractor shall install restraining devices in accordance with the manufacturer's recommendations.

PART 4 MEASUREMENT AND PAYMENT

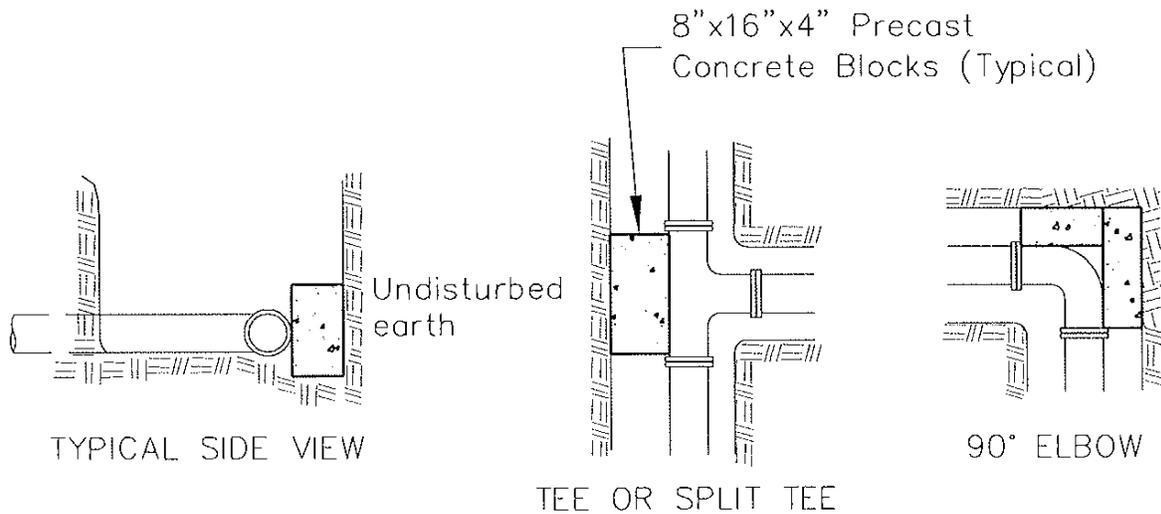
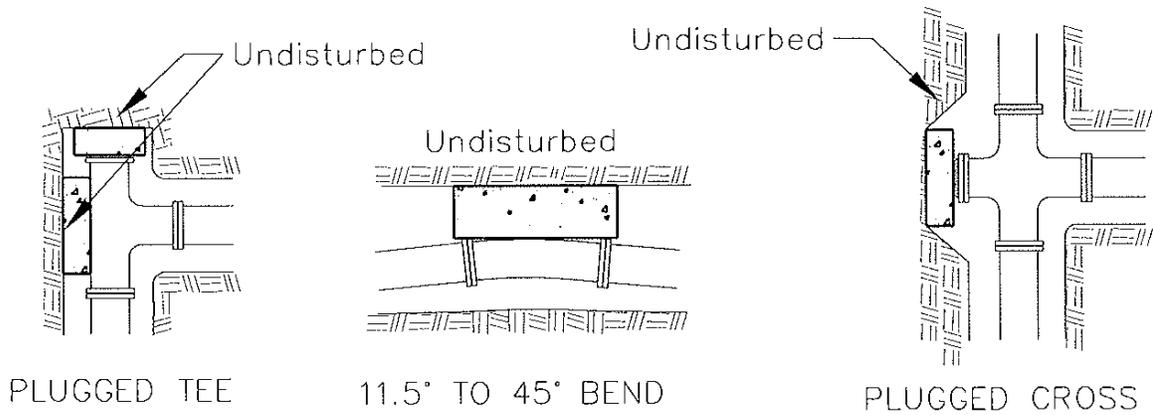
4.01 METHOD OF MEASUREMENT

- A. Thrust blocks are considered incidental to the fitting, valve, or appurtenance with no separate measurement and payment to be made.
- B. Restraining devices will be measured on a per each basis for the size furnished and installed.

4.02 BASIS OF PAYMENT

- A. No separate payment will be made for thrust blocks.
- B. Restraining devices will be paid at the Contract Unit price per each.

* * * END OF SECTION * * *



Note: Use as many 8"x16"x4" concrete blocks as needed to achieve secure placement of the pressure piping.

Standard Drawing 02667-1

**THRUST BLOCK LOCATIONS
FOR
PRESSURE PIPING INSTALLATIONS**

SCALE: NONE

Note: The Contractor shall be required to furnish and install both the mechanical anchors and precast concrete blocks in those locations as shown.

Helms
ASSOCIATES

CIVIL ENGINEERS & LAND SURVEYORS

SPECIAL PROVISION 02675 - CLEANING AND DISINFECTION OF WATER DISTRIBUTION SYSTEMS

PART 1 GENERAL

1.01. RELATED DOCUMENTS

B. The general provisions of the Standard Specifications for Roads and Bridges.

1.02. DESCRIPTION OF WORK

A. This section covers flushing of new and existing water lines, and disinfection of the installed piping.

B. The Contractor shall furnish all water required for flushing and disinfection work as specified in the temporary facilities section.

C. The Contractor shall provide, at his own expense, all means required for draining and disposing of water used in flushing and disinfection. This shall include, but not be limited to, additional drain valves, temporary piping and pumping equipment. Wastewater shall be stored and/or treated, if required, so as to cause the water quality to meet the requirements of the S. D. Department of Environment & Natural Resources for discharge. Contact the South Dakota Department of Environment & Natural Resources at 1-800-737-8676 for more information.

1.03. SUBMITTALS

A. Copies of all bacteriological test reports shall be furnished to the Engineer and Resident Project Representative.

PART 2 PRODUCTS

2.01. CHLORINE

A. Liquid chlorine shall conform to AWWA Specification B-301.

B. Hypochlorites shall conform to AWWA Specification B-300.

PART 3 EXECUTION

3.01. CLEANING AND FLUSHING

A. All lines shall be thoroughly flushed before acceptance until all traces of construction materials, soil or other foreign matter have been removed.

B. The Contractor shall take all necessary measures to protect adjacent facilities and property. Damages caused by flushing water or water carried material shall be the responsibility of the Contractor.

C. All flushing shall be completed prior to the initiation of the disinfection process described herein.

D. The chlorinated water used for disinfection/pressure testing shall not be discharged to a stream, river, or other waterway where danger to aquatic life may occur. Dechlorination may be necessary prior to discharge. Contact the SD-DENR Surface Water Quality Program at 1-800-737-8676 for more information.

3.02. PIPELINE DISINFECTION

A. Each unit of completed supply line and distribution system shall be sterilized with chlorine before acceptance.

B. The amount of chlorine applied shall be such as to provide a dosage of not less than 50 parts per million. The chlorinating material shall be introduced to the water lines and distribution system in an approved manner. If possible to do so, the lines shall be thoroughly flushed before introduction of the chlorinating material.

C. After a contact period of not less than 24 hours, the system shall be flushed with clean water until the residual chlorine content is not greater than 1.0 parts per million. All valves in the lines being sterilized shall be opened and closed several times during the contact period.

D. Prior to final flushing, the treated water shall contain at least 25-ppm chlorine as per AWWA Specification C651.

E. After the disinfection and flushing process, two (2) consecutive samples of water from the end of the disinfected water line must be collected at least 24 hours apart and submitted to the State Health Laboratory in Pierre or another approved laboratory. The sample shall be found free of bacteria before the system is placed into service.

F. Should the sample be returned positive, the disinfection process shall be repeated until negative samples are obtained.

PART 4 MEASUREMENT AND PAYMENT

Cleaning and disinfection will be considered incidental work pertaining to the contract with no direct measurement or compensation made for this work.

* * * END OF SECTION * * *

SPECIAL PROVISION 02676 - PIPELINE TESTING OF WATER MAINS

PART 1 GENERAL

1.01. RELATED DOCUMENTS

C. The general provisions of the Standard Specifications for Roads and Bridges.

1.02. DESCRIPTION OF WORK

A. All piping and related appurtenances shall be subjected to alignment and pressure and/or leakage tests as specified herein and as directed by the Engineer.

B. The required pressure and leakage tests shall be made by the Contractor and witnessed by the Engineer. All tests shall be completed after all pipe laying has been completed. All concrete reaction blocks and bracing or restraining facilities shall be in place at least 7 days before the initial pressure testing of the lines, except where tension joints are used at bends.

C. The Contractor shall perform the necessary work to fill the pipeline with test water as specified. The Contractor shall furnish all water, pumping equipment, water meter, pressure gage, and other equipment, materials, and facilities required for the tests.

1.03. SUBMITTALS

A. Prior to filling, flushing and testing the system, the proposed procedures shall be submitted for review by the Engineer.

B. Pressure test forms completed in the field shall be submitted to the Engineer and Owner.

PART 2 PRODUCTS - None

PART 3 EXECUTION

3.01. TEST SECTIONS

A. The pressure and leakage tests shall be applied to all sections of the line with a section being the shortest practical length between shut-off valves.

B. The Contractor shall be solely responsible for any and all damage to the pipeline, and to public and private property, which may result from defective material or workmanship.

C. The chlorinated water used for disinfection/pressure testing shall not be discharged to a stream, river, or other waterway where danger to aquatic life may occur. Dechlorination may be necessary prior to discharge. Contact the SD-DENR Surface Water Quality Program at (605) 773-3351 for more information.

3.02. FILLING AND VENTING OF WATERMAINS

The section of line to be tested shall be slowly filled with water and all air expelled from the pipe. Care shall be taken that all air valves are installed and open in the section being filled and that the rate of filling does not exceed the venting capacity of the air valves.

3.03. TEST EQUIPMENT AND FACILITIES

A. Test pressures shall be applied by means of a force pump of such design and capacity that the required pressure can be applied and maintained without interruption for the duration of each test.

B. The water meter and the pressure gage shall be accurately calibrated and shall be subject to the approval of the Engineer.

3.04. WATERMAIN PRESSURE TEST

A. Test pressures shall be applied to each section of pipeline with all connections, valves and fittings along the length of the test section in place.

B. The pressure test shall be initiated by bringing the hydrostatic pressure in the section being tested to a minimum of 120 psi, as measured at the highest point of the section being tested.

C. After the section of the line to be tested has been filled with water and brought to the specified level, the test pressure shall be maintained for a period of not less than one hour, or for whatever longer period as may be necessary for the Engineer to complete the inspection of the line under test, or for the Contractor to locate any and all defective joints and pipeline materials.

D. If repairs are needed, such repairs shall be made, the line refilled and the test pressure applied as before; this operation shall be repeated until the line and all parts thereof withstand the test pressure in a satisfactory manner.

3.05. WATERMAIN LEAKAGE TEST

A. All hydrostatic testing shall be completed in accordance with ANSI/AWWA C600/Sec. 5.2 for ductile iron pipe and ANSI/AWWA C605/Sec. 7.3 for PVC pipe.

B. After the specified pressure test has been completed, the line being tested shall be subjected to a leakage test under the same hydrostatic pressure specified. The pressure shall be maintained constant (within a maximum variation, plus or minus, of 5%) during the entire time that line leakage measurements are being made so that the allowable leakage rate may be determined accurately from the leakage rate formula.

C. Leakage testing shall not be started until a constant test pressure has been established. After the test pressure has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump.

D. Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The pipeline or tested section thereof will not be accepted if and while it has a leakage rate in excess of the following rate:

1. Leakage rate for ductile iron buried pipelines shall be as determined by the following formula:

$$L=S*D*\sqrt{P} \div 148,000$$

in which:

L = Maximum permissible leakage rate, in gallons per hour, throughout the entire length of line being tested.

S = Length of line under test in feet.

D = Nominal diameter (in inches) of the pipe in the line.

P = The average test pressure, in psig, in the tested portion of the line.

2. Leakage rate for PVC buried pipelines shall be as determined by the following formula:

$$Q=L*D*\sqrt{P} \div 148,000$$

in which:

Q = Maximum permissible leakage rate, in gallons per hour, throughout the entire length of line being tested.

L = Length of line under test in feet.

D = Nominal diameter (in inches) of the pipe in the line.

P = The average test pressure, in psig, in the tested portion of the line.

- E. Where the leakage rate is in excess of the permissible maximum, the Contractor shall be responsible for the location and the repair of all leaks to the extent required to reduce the total leakage to an acceptable amount.
- F. All joints in piping in non-buried locations shall be watertight and free from visible leaks during the prescribed tests.
- G. Each and every leak which may be discovered at any time prior to the expiration of one year from and after the date of final acceptance of the work by the Owner shall be located and repaired by and at the expense of the Contractor regardless of any amount that the total line leakage rate during the specified leakage test may be below the specified maximum rate.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

Pipeline testing will not be measured for direct payment and will be considered subsidiary work pertaining to the contract.

4.02 BASIS OF PAYMENT

No direct compensation will be made for this work. Payment will be included in the contract bid prices as shown on the Bid Form.

* * * END OF SECTION * * *

SPECIAL PROVISION 02730 – SANITARY SEWER PIPING AND FITTINGS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related Work Specified Elsewhere:
 - 1. Trenching, Backfilling and Compacting - Special Provision 02224
 - 2. Pipeline Testing - Special Provision 02731
 - 3. Cleaning of Sanitary Sewer Piping - Special Provision 02732
 - 4. Sewer Televising - Special Provision 02766

1.02 DESCRIPTION OF WORK

- A. The work covered under these specifications shall include the furnishing of all labor, material, tools, and equipment necessary to furnish and install, complete in place, all piping and fittings as shown on the drawings and as specified herein.

1.03 SUBMITTALS

- A. The Contractor shall submit for review 5 copies of shop drawings for materials specified herein as hereinafter specified.
- B. Certificates from the manufacturer that the materials meet or exceed specified requirements.
- C. The manufacturer's installation recommendations, including types and amounts of gasket lubricant, where applicable, to be used.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. All materials shall be packed, loaded, transported, unloaded, and handled in such a manner so as to prevent damage to the materials.
- B. All material shall be loaded and unloaded by lifting with slings or hoists or skidding so as to avoid shock or damage. Dropping or rolling will not be permitted. The use of end hooks to install or move piping will not be allowed.
- C. All materials shall be stored on the site in accordance with the manufacturer's recommendations. Do not store materials directly on the ground.
- D. All materials shall be kept clean and dry. The insides of all piping and fittings shall be kept free of dirt and debris.

PART 2 PRODUCTS

2.01 GRAVITY PVC PIPE

A. Polyvinyl Chloride (PVC) gravity pipe shall be Type I, Grade I, conforming to the requirements of ASTM Specification D 3034 for Rigid Poly (Vinyl Chloride) Sewer pipe. The pipe shall have the following minimum wall thickness:

4-inch diameter	SDR 35	0.120-inch wall thickness
6-inch diameter	SDR 35	0.180-inch wall thickness
8-inch diameter	SDR 35	0.240-inch wall thickness

B. Solvent Cement for PVC pipe joints shall conform to ASTM Specification ASTM D 2564 and shall be applied in conformance with ASTM D 2855. Solvent weld joints will be allowed on PVC cleanout risers only.

C. Gasket type joints shall be made with rubber gaskets conforming to the requirements of ASTM F-477.

D. The pipe shall be capable of withstanding trench loads imposed on it.

2.02 GRAVITY PVC PIPE FITTINGS

A. Repair couplers, tees, wyes, and bends for Polyvinyl Chloride (PVC) gravity pipe fittings shall be of PVC with material and dimensions conforming to the requirements of ASTM Specification D 3034.

B. Gaskets for elastomeric joints shall conform to the requirements of ASTM F-477.

C. Solvent Cement for solvent weld joints shall conform to the requirements of ASTM Specification D 2564 and shall be applied in conformance with ASTM D 2855. Solvent weld joints will be allowed on PVC cleanout risers only.

D. Sewer "Wyes" for service connections shall be in-line sewer wyes. Saddle wyes will not be permitted for use without permission from Project Engineer.

2.03 TRANSITION COUPLINGS (GRAVITY PIPING)

A. GASKET

1. Manufactured to meet the material requirements of:

- a. CSA B602 - mechanical couplings for drain, waste, vent pipe and sewer pipe
- b. ASTM D 5926 - Standard Specification for Poly Vinyl Chloride (PVC) Gaskets for Drain, Waste, and Vent (DWV), Sewer, Sanitary, and Storm Plumbing Systems
- c. ASTM C 1173 - Standard Specification for Flexible Transition Couplings for Underground Piping Systems

2. Hardness, Shore"A", Inst. +5.....65

3. Tensile Strength, Min. psi1000

4. Elongation at Rupture, Min. %.....250
5. Tear Strength, Min..... 150 lb/in.
6. Brittleness Temperature..... -40°F

B. CLAMPS

1. Manufactured to the requirements of CSA B602
2. Clamp Housing- 301 Stainless Steel
3. Clamp Band - 301 Stainless Steel
4. Clamp Screw - 305 Stainless Steel
5. Installation torque 60" lbs

C. SHEAR RING

1. 0.012" Thick, 300 Series Stainless Steel
2. Width manufactured according to coupling width (1.50", 2.13", or 4")
3. Length manufactured according to coupling diameter
4. Clamps spot welded in place

D. COUPLING

1. Manufactured to conform to the performance requirements of:
2. ASTM C 1173 - standard specification for flexible transition couplings for underground piping systems
3. CSA B602 - mechanical couplings for drain, waste, vent pipe and sewer pipe
4. Maximum test pressure: 4.3 PSI (29.6KPA)
5. Maximum operating temperature: 140° F nonconsistent

E. Pre-Approved transition couplers are Strong Back RC Series Repair Couplings manufactured by Fernco Inc. or Engineer approved equal.

2.04 BEDDING MATERIAL

A. Borrowed granular bedding material shall conform to the gradation indicated below.

<u>Sieve Opening</u>	<u>Bedding Material (Percent Passing)</u>
1"	95-100
No. 200	< 15

- B. Borrowed granular bedding material for unstable trench bottom shall conform to the gradation indicated of size 67 Course Aggregate, ASTM C33 which is indicated below.

<u>Sieve Opening</u>	<u>Bedding Material (Percent Passing)</u>
1-1/2"	100
3/4"	90-100
3/8"	20-55
No. 4	0-10
No. 8	0-5

- C. Bedding material excavated from the job site shall be finely divided material free from organic material and clods, lumps of frozen material or stones larger than 1 1/2" in maximum diameter. Bedding material shall be of proper moisture content to form a firm bed for the pipe.

2.05 FASTENERS

- A. All fasteners in buried locations shall be Grade 304 (A2) or Grade 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

2.06 LUBRICANT FOR GASKETED PIPE

- A. Lubricant shall be an emulsified polymer based product, specifically formulated to be water-soluble without causing turbidity. Lubricant shall not transfer taste and/or odor to new water main installations. Lubricant must not promote bacterial growth and be safe for use on all metal and plastic pipes. Lubricant shall be easily flushed from the line and be non-reactive to chlorinated water. Lubricant should work easily on both wet and dry surfaces.

PART 3 EXECUTION

3.01 GENERAL

- A. The areas to receive piping shall be examined for defects that may adversely affect the execution and quality of Work. Prior to the start of piping installation, all measurements shall be checked for deviations from allowable tolerances for piping.

3.02 BURIED PIPING INSTALLATION

- A. All piping and fittings shall be laid true to line and grade as shown on the plans. Each section of pipe shall be so laid and fitted together that when complete the piping will have a smooth uniform flow line. The inside of all pipe shall be cleaned before installation and kept thoroughly clean during and after the laying. Pipe ends shall be cleaned inside and outside.
- B. Apply lubricant liberally to the inside of the pipe bell and spigot. Make sure lubricated surfaces remain free of dirt, gravel, or other debris. Assemble the pipe joint immediately after application of the lubricant.

- C. All pipe and fitting shall be examined for defects before being lowered into the trench. The interior and exterior protective coating shall be inspected and field repaired, if required.
- D. The pipe shall be handled and installed in accordance with manufacturer's recommendations and the requirements of ASTM D 2321 for PVC gravity sewer piping.
- E. When pipe laying is not in progress, including the noon hours, the open ends of pipe shall be closed. No trench water, animals, or foreign material shall be permitted to enter the pipe.
- F. Granular Pipe Bedding shall be used with all piping. The bedding material shall conform to the requirements of Part 2 above.
- G. Whenever possible, the piping will be placed on undisturbed trench bottom so that the barrel of the pipe will have a bearing for its full length. Bell holes and depressions for joints will be hand excavated. When the trench bottom does not allow for this condition, the trench will be excavated for the placement of ± 4 inches of bedding material below the pipe. The pipe shall be laid upon properly placed bedding material so that the barrel of the pipe will have a bearing for its full length. No blocking will be allowed to bring the piping up to grade. Bell holes and depressions for joints shall be excavated after the trench bedding has been graded to provide uniform support for the entire pipe.
- H. After each pipe has been graded, aligned, and placed in final position on the trench bottom and/or bedding material and shoved home, sufficient Granular Pipe Bedding shall be installed along the pipe to a minimum of $\frac{1}{2}$ the pipe diameter. The remainder of the pipe embedment material will be select trench excavation material free from soil chunks and rocks larger than 3 inches. The embedment material shall be deposited and compacted to hold the pipe in proper position and alignment during subsequent pipe joining and embedment operations.
- I. The Contractor shall provide and maintain all necessary means and devices at all times to remove and dispose of all water entering the trench during the process of pipe laying. The trench shall be kept dry until the pipe laying and jointing are completed. Removal of water shall comply with Special Provision 02224.
- J. The Contractor shall place backfill material in lifts not exceeding 1-foot and compact to 95% Standard Proctor Density (ASTM D698). Stones equal to or larger than 3-inches in diameter shall not be placed within 2-feet of the pipe.

3.03 TESTING

- A. All piping will be tested for alignment in accordance with Special Provision 02731.
- B. All piping shall be cleaned and flushed after completion of installation in accordance with Special Provision 02732.
- C. All piping will be televised in accordance with Special Provision 02766.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Piping of the different types and classes, as shown on the plans, and as called for on the Bid Form shall be measured on a per lineal foot, in-place basis.
- B. Bedding material shall be measured to the nearest 0.1 ton. Measurement shall be considered full compensation for all labor, materials, and equipment necessary to furnish and install the material, as needed, to obtain the appropriate grades as specified herein.
- C. The Contractor shall provide certified weight tickets for each load of bedding material hauled and placed in accordance with the plans and specifications. Quantities provided without scale tickets will not be included for payment unless preauthorized by the Engineer.
- D. All fittings specifically called for on the Bid Form will be measured on a per each basis for each type and size of fitting, including all fasteners, gaskets, coatings, blocking, and miscellaneous hardware to install the fitting properly in the locations designated on the plans.
- E. Incidental items associated with the piping materials for which no separate measurement will be made include but are not limited to:
 - 1. Gaskets
 - 2. Lubricants
 - 3. Protective Coatings
 - 4. Linings
- F. Measurement for inline service wyes and tees shall include all additional fittings necessary to make the connection on the sewer main. Payment for inline sewer wyes on gravity sewer lines shall include 45° bend, 3 feet of vertical piping, and glue cap.

4.02 BASIS OF PAYMENT

- A. Piping of the different types and classes as called for on the Bid Form shall be paid at the contract unit price provided in the Bid Form.
- B. Fittings listed in the Bid Form shall be paid at the contract unit price provided in the Bid Form.

* * * END OF SECTION * * *

SPECIAL PROVISION 02731 - TESTING OF SANITARY SEWER PIPING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related work specified elsewhere:
 - 1. Cleaning of Sanitary Sewer Piping – Special Provision 02766
 - 2. Sewer Televising - Special Provision 02766

1.02 DESCRIPTION OF WORK

- A. All piping and related appurtenances shall be subjected to alignment and pressure and/or leakage tests as specified herein and as directed by the Engineer.
- B. The Engineer will complete the test for displacement of gravity sewer lines as specified herein. The Contractor will be responsible for all subsequent tests as specified herein.
- C. The required pressure and leakage tests shall be made by the Contractor and witnessed by the Engineer. All tests shall be completed after all pipe laying has been completed. All concrete reaction blocks and bracing or restraining facilities shall be in place at least 7 days before the initial pressure testing of the lines, except where tension joints are used at bends.
- D. The Contractor shall perform the necessary work to fill the pipeline with test water as specified. The Contractor shall furnish all pumping equipment, water meter, pressure gage, and other equipment, materials, and facilities required for the tests. Water will be supplied by the City as necessary.

1.03 SUBMITTALS

- A. Prior to filling, flushing and testing the system, the proposed procedures shall be submitted for review by the Engineer.
- B. Pressure test forms completed in the field shall be submitted to the Engineer and Owner.

PART 2 PRODUCTS - None

PART 3 EXECUTION

3.01 TEST SECTIONS

- A. The alignment tests of all gravity sewer lines shall be carried out on sections of sewer line located between manholes and/or inlets.

- B. The pressure and leakage tests shall be applied to all sections of the forcemain line with a section being the shortest practical length between shut-off valves.
- C. The Contractor shall be solely responsible for any and all damage to the pipeline, and to public and private property, which may result from defective material or workmanship.

3.02 FILLING AND VENTING OF FORCEMAINS

- 3.03 The section of line to be tested shall be slowly filled with water and all air expelled from the pipe. Care shall be taken that all air valves are installed and open in the section being filled, and that the rate of filling does not exceed the venting capacity of the air valves.

3.04 TEST EQUIPMENT AND FACILITIES

- A. Test pressures shall be applied by means of a force pump of such design and capacity that the required pressure can be applied and maintained without interruption for the duration of each test.
- B. The water meter and the pressure gage shall be accurately calibrated and shall be subject to the approval of the Engineer.

3.05 GRAVITY SEWER LINE DISPLACEMENT AND DEFLECTION

- A. All tests for alignment and displacement of the gravity sewer lines will be made after the pipe has been laid and the trench backfilled and compacted as specified.
- B. The Contractor shall conduct deflection tests, a minimum of 30 days after installation, as may be necessary to insure that the long-term pipe deflection does not exceed 5%. Pipe deflections exceeding 5%, anytime during the 1-year warranty period, will require corrective action by the Contractor at his own expense.
- C. Acceptable methods for testing deflection are:
 - 1. Electronic deflectometer.
 - 2. Rigid "Go-No-Go" device of the size, dimensions, and construction as recommended by the pipe manufacturer for the pipe size being tested.

3.06 GRAVITY SEWER LINE INFILTRATION TEST – **IN LIEU OF INFILTRATION TESTING, LINES WILL BE TELEVISED – SEE SPECIAL PROVISION 02766.**

3.07 GRAVITY SEWER LINE EXFILTRATION TEST – **IN LIEU OF EXFILTRATION TESTING, LINES WILL BE TELEVISED – SEE SPECIAL PROVISION 02766.**

3.08 GRAVITY SEWER LINE AIR TEST – **IN LIEU OF AIR TESTING, LINES WILL BE TELEVISED – SEE SPECIAL PROVISION 02766.**

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Gravity Sewer Line Displacement and Deflection Pipeline Testing will be measure on the basis of feet for the length of piping tested excluding manholes. Measurement will be to the nearest whole foot.
- B. All other testing will not be measured for direct payment and will be considered subsidiary work pertaining to the contract.

4.02 BASIS OF PAYMENT

- A. Gravity Sewer Line Displacement and Deflection Pipeline Testing will be paid at the contract unit price per foot as provided in the Bid Form.

* * END OF SECTION * * *

SPECIAL PROVISION 02732 - CLEANING OF SANITARY SEWER PIPING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related work specified elsewhere:
 - 1. Sewer Televising - Special Provision 02766

1.02 DESCRIPTION OF WORK

- A. This section covers cleaning and flushing of new and existing lines.
- B. The Contractor shall furnish all water and facilities required for flushing and cleaning work as specified hereinafter.
- C. The Contractor shall provide, at his own expense, all means required for draining and disposing of water used in flushing and cleaning. This shall include, but not be limited to, additional drain valves, temporary piping and pumping equipment. Wastewater shall be stored and/or treated, if required, so as to cause the water quality to meet the requirements of the S.D. Department of Environment & Natural Resources for discharge.

1.03 SUBMITTALS

- A. The methods and equipment, as recommended by the manufacturer, to launch the forcemain cleaning pig and to properly conduct the cleaning operation shall be submitted to the Engineer for review. This information shall be submitted with the shop drawings for the forcemain material.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 CLEANING AND FLUSHING

- A. All lines shall be thoroughly flushed and cleaned before acceptance until all traces of construction materials, soil or other foreign matter have been removed.
- B. The Contractor shall take all necessary measures to protect adjacent facilities and property. Damages caused by flushing water or water carried material shall be the responsibility of the Contractor.
- C. All flushing and cleaning shall be completed prior to the initiation of the testing process described in Special Provision 02731.

- D. Forcemain cleaning shall be accomplished using a hydraulically propelled polyurethane pig, conforming to the requirements of Section 2.01 above, to remove all construction debris from the forcemain.

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Cleaning and flushing will be considered incidental work pertaining to the Contract with no direct measurement made for this work.

4.02 BASIS OF PAYMENT

- A. No direct compensation will be made for this work. Payment will be included in the contract bid prices as shown on the Bid Form.

* * * END OF SECTION * * *

SPECIAL PROVISION 02766 - SEWER TELEVISIONING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Standard Specifications for Roads and Bridges.
- B. Related work specified elsewhere:
 - 1. Pipeline Testing - Special Provision 02731
 - 2. Cleaning of Sanitary Sewer Piping - Special Provision 02732

1.02 DESCRIPTION OF WORK

- A. This section describes the work required to televise new sanitary sewer system as described in the following paragraphs. The work shall include the preparation and furnishing of the various reports and data as described in this Section.

1.03 SUBMITTALS

- A. Items to be submitted upon completion of the project:
 - 1. All video DVD's and observation/commentary logs, or copies thereof, shall become property of the Owner.
 - 2. Two (2) copies of all videos in DVD format, paper printouts of descriptions of observations and recommendations and still photos of all services (both working and abandoned) shall be submitted to the Owner upon completion of the work.
 - 3. All reports related to the cleaning and televising of the sanitary sewer system shall be in Microsoft Word format. The contractor may furnish electronic versions of the report in another format provided the submittal also includes the software to convert the electronic version to hardcopy.

PART 2 EQUIPMENT

2.01 TELEVISIONING EQUIPMENT

- A. The televising equipment shall be capable of televising in color.
- B. The televising equipment shall be capable of televising pipe of the size shown in the Bid Form.
- C. Video camera will have pan and tilt capabilities to allow up close and right angled inspections of defects and other significant observations.
- D. Lighting on video camera will be suitable to allow proper illumination and a clear video image of the entire periphery of the pipe.

PART 3 EXECUTION

3.01 TELEVISIONING AND REPORT

- A. The sanitary sewer system shall be inspected with a remote camera. The footage distance measured by system shall be accurate within one percent and will be used to determine footages for reporting. The centerline between manholes shall be the reference points used to determine footage measurements. The video inspection shall not exceed a traverse rate of 30 feet per minute so that the sewer line can later be thoroughly examined by the Owner while viewing the video.
- B. The Contractor shall make a color recording on DVD-R of all sewers inspected and shall also provide a computer generated report. The file format of the recorded video shall be MPEG or other formats that are compatible with standard windows-based computers. Any proprietary formatted media will be accepted provided it is furnished with software for viewing and analysis of the data. Technical support for operating the software shall be provided, if necessary.
- C. Audio inspection reporting will not be allowed to minimize operator description subjectivity and to prevent video report being different from written report. All observations and defects shall be recorded in written reports and video.
- D. The length from the starting manhole to each sewer service connection shall be identified. The remote camera shall be rotated to directly view the sewer service connections in a parallel line with the service entry. Digital photographs shall be made of all significant sewer defect observations and of each sewer service. The photographs shall be printed as part of the report.
- E. Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television. The inspection shall give particular attention to any deficiencies identified in the sewer pipe such as sags, cracks, holes, offsets, pipes that are not round, crushed pipe locations, locations of infiltration, significant improper service connections or any other significant pipe deficiency. The distances from the starting manhole and lengths of such deficiencies shall be recorded.
- F. If deficiencies are found, the Contractor will make repairs as necessary and the lengths of pipe will be re-televised to insure repairs are made properly.

3.02 CLEAN-UP

- A. Upon acceptance of the televising work, the Contractor shall complete all clean-up of the project area affected by the operations as may be necessary to the satisfaction of the Owner.

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT AND PAYMENT

- A. Measurement of sanitary sewer televising shall be made on a per lineal foot of sanitary sewer televised. Payment shall be made on a per lineal foot of sanitary sewer televised at the

contract unit price. Payment shall be full compensation for all equipment, material and personnel necessary to complete the work and for all copies of the records and reports to be furnished to the Owner.

- B. No separate measurement or payment shall be made for traffic control measures implemented by the contractor for the safety of the general public during the completion of the work.
- C. The Owner will measure for payment initial televising only. Additional televising required after repairs are completed will be the responsibility of the Contractor.

* * * END OF SECTION * * *

**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION
FOR
STANDARD TITLE VI ASSURANCE**

JANUARY 15, 2004

TITLE VI – NONDISCRIMINATION:

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

- (1) Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally or State assisted programs of the South Dakota Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended (hereinafter referred to as the “Regulations”), incorporated by reference and made a part of this contract.
- (2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, religion, national origin, sex, age or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor’s obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, religion, national origin, sex, age or disability.
- (4) Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the South Dakota Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the South Dakota Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain this information.
- (5) Sanctions for Noncompliance: In the event of the contractor’s noncompliance with the nondiscrimination provisions of this contract, the South Dakota Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including but not limited to:
 - (a) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (b) cancellation, termination or suspension of the contract, in whole or in part.
- (6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the South Dakota Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for non-compliance. Provided, however, that, in the event of a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the South Dakota Department of Transportation to enter into such litigation to protect the interest of the State, and, in addition, the contractor may request the United States to enter such litigation to protect the interests of the United States.

* * * *

**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION FOR
IMPLEMENTATION OF CLEAN AIR ACT
AND
FEDERAL WATER POLLUTION CONTROL ACT**

SEPTEMBER 1, 1997

By signing this bid, the bidder will be deemed to have stipulated as follows:

- a) That any facility to be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub. L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR, Part 15), is not listed on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
- b) That the State Transportation Department shall be promptly notified prior to contract award of the receipt by the bidder of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

* * * *

**Wage and Hour Division
U.S. Department of Labor (DOL)
200 Constitution Avenue, N.W.
Washington, DC 20210**

Davis-Bacon Act Wage Decisions
State: South Dakota
Construction Types: Heavy and Highway
Counties: South Dakota Statewide

*** SUSD2013-001**

Agency: U.S. DOL
Wage Decision Number: **SD130009 SD9**
Counties: Statewide: All
 Counties in South
 Dakota
Wage Decision Date: **08/30/2013**

LABORERS

GROUP GL1

Air Tool Operator; Common Laborer; Landscape Worker; Flagger; Pilot Car Driver;
 Trucks under 26,000 GVW; Blue-top Checker; Materials Checker

GROUP GL2

Mechanic Tender (Helper); Pipe Layer (except culvert); Form Builder Tender;
 Special Surface Finish Applicator; Striping

GROUP GL3

Asphalt Plant Tender; Pile Driver Leadsman; Form Setter; Oiler/Greaser

GROUP GL5

Carpenter; Form Builder

GROUP GL6

Concrete Finisher; Painter; Grade Checker

Rates Fringes

15.08 0.00

16.78 0.00

18.42 0.00

21.82 0.00

20.81 0.00

POWER EQUIPMENT OPERATORS

GROUP G01

Concrete Paving Cure Machine; Concrete Paving Joint Sealer; Conveyor; Tractor (farm type with
 attachments); Self Propelled Broom; Concrete Routing Machine; Paver Feeder; Pugmill; Skid Steer

16.15 0.00

GROUP G02

Bull Dozer 80 HP or less; Front End Loader 1.25 CY or less; Self Propelled Roller (except Hot Mix);
 Sheepsfoot/50Ton Pneumatic Roller; Pneumatic Tired Tractor or Crawler (includes Water Wagon and
 Power Spray units); Wagon Drill; Air Trac; Truck Type Auger; Concrete Paving Saw

17.62 0.00

GROUP G03

Asphalt Distributor; Bull Dozer over 80 HP; Concrete Paving Finishing Machine; Backhoes/ Excavators
 20 tons or less; Crusher (may include internal screening plant); Front End Loader over 1.25 CY;
 Rough Motor Grader; Self Propelled Hot Mix Roller; Push Tractor; Euclid or Dumpster; Material Spreader;
 Rumble Strip Machine

19.33 0.00

GROUP G04

Asphalt Paving Machine Screed; Asphalt Paving Machine; Cranes/Derricks/Draglines/Pile Drivers/Shovels
 30 to 50 tons; Backhoes/Excavators 21 to 40 tons; Maintenance Mechanic; Scrapers; Concrete Pump Truck

19.73 0.00

GROUP G05

Asphalt Plant; Concrete Batch Plant; Backhoes/Excavators over 40 Tons; Cranes/ Derricks/Draglines/Pile
 Drivers/Shovels over 50 tons; Heavy Duty Mechanic; Finish Motor Grader; Automatic Fine Grader;
 Milling Machine; Bridge Welder

21.80 0.00

TRUCK DRIVERS

GROUP GT1

Tandem Truck without trailer or pup; Single Axle Truck over 26,000 GVW with Trailer

15.88 0.00

GROUP GT2

Semi-Tractor and Trailer; Tandem Truck with Pup

18.29 0.00

ELECTRICIANS

GROUP E01

Electrician

21.84 0.00

*Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Survey wage rates will remain in effect and will not change until a new survey is conducted.

A COPY OF THIS DOCUMENT, COLORED SOLAR YELLOW, MUST BE CONSPICUOUSLY POSTED AT THE PROJECT SITE

**Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210**

**Davis-Bacon Act Wage Decisions
State: South Dakota
Construction Types: Heavy and Highway
Counties: South Dakota Statewide**

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WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award, pursuant to 29 CFR 5.5(a)(1)(ii); contractors are responsible for requesting SDDOT to secure necessary additional work classifications and rates.

For SDDOT Defined Work Classifications, please visit: <http://www.sddot.com/business/contractors/labor/wcwr/Default.aspx>

In the listing above, the "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- an existing published wage determination
- a survey underlying a wage determination
- a Wage and Hour Division letter setting forth a position on a wage determination matter
- a conformance (additional classification and rate)
- ruling on survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and our Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, Project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

