



PROJECT NO. 16101

**CONTRACT SPECIFICATIONS
FOR WATER MAIN AND APPURTENANCES
FOR**

**EAST FOREST HILL AVENUE
WATER MAIN EXTENSION**

FOR

OAK CREEK WATER AND SEWER UTILITY

March 3, 2017

**170 W. Drexel Avenue
Oak Creek, WI 53154**

**Telephone: (414) 570 - 8200
www.water.oak-creek.wi.us**

PROJECT NO. 16101

CONTRACT SPECIFICATIONS
FOR WATER MAIN AND APPURTENANCES

FOR

EAST FOREST HILL AVENUE
WATER MAIN EXTENSION

OAK CREEK WATER & SEWER UTILITY

March 3, 2017

Project Design & Construction Coordination
Ron J. Pritzlaff, P.E.
Utility Engineer
Phone: (414) 570-8210

TABLE OF CONTENTS

Notice to Bidders	A - B
Instruction to Bidders	IB-1 - IB-5
Bid Proposal.....	P-1 - P-5
Bid Bond	Not Included
Contract.....	Not Included
Performance Bond.....	Not Included
Detailed Specifications.....	D-1 - D-27
General Specifications.....	Eng. Dept. File
Standard Specifications for Sewer and Water Construction in Wisconsin, Sixth Edition	Eng. Dept. File
Highway and Structure Construction - Std. Specs. Dept. of Trans., Division of Highways, State of Wis.	Eng. Dept. File
Manual on Uniform Traffic Control Devices	Eng. Dept. File
Appendix A – Bedding and Cover Material Gradation.....	At the rear of Detailed Specifications

Note: Any addenda and plans are a part of this contract volume.

NOTICE TO BIDDERS

OWNER The Oak Creek Water & Sewer Utility hereby gives notice that sealed proposals will be received in the Utility's office at 170 W. Drexel Avenue, Oak Creek, Wisconsin, 53154.

PROJECT The work, officially known as Project No. 16101, EAST FOREST HILL AVENUE WATER MAIN, consists of constructing the following approximate quantities:

ITEM DESCRIPTION	QUANTITY
8" PVC Water Main, 1 1/4" T.B.B.F.	1,043 LF
Connect to Existing 8" Water Main	2 EA
Hydrant, Lead, and 6-Inch Gate Valve	2 EA
Hydrant Extension	1.5 VF
8" Gate Valve	3 EA
1-1/4" Water Service Laterals (Polyethylene) Open cut	15 EA
Asphalt Pavement Removal	4,162 SY
HMA Pavement, 3LT 58-28 S, 19mm Lower Layer	635 TON
HMA Pavement, 5LT 58-28 S, 9.5mm Upper Layer	384 TON
1-1/4" Dense Graded Base Course	224 TON
Stone Shoulder, 3/4" T.B.	93 TON
Sawing Existing Pavement Full Depth	1,726 LF
Excavation Below Base, 1 1/4" Dense Graded Limestone	100 TON
Excavation Below Base, Breaker Run	100 TON
Pavement Marking, Epoxy, 4-inch White Edge Line	2,748 LF
Pavement Marking, Epoxy, 4-inch Yellow Broken Centerline	94 LF
Pavement Marking, Epoxy, 4-inch Double Yellow Centerline	1006 LF
Pavement Marking, Epoxy, 18-inch White Stop Bars	48 LF
Pavement Marking, Epoxy, 6-inch White Cross Walks	360 LF
Restoration of Lawns and Parkways	1 LS
Erosion Control	1 LS
Traffic Control (Project)	1 LS

TIME	Proposals must be received by the office of the Utility, 170 W. Drexel Avenue, no later than 9:00 a.m., Friday, March 3, 2017, at which time and place the proposals will be publicly opened and read aloud.
CONTRACT DOCUMENTS	Bid documents may be obtained at the Utility's website: www.water.oak-creek.wi.us under the public contracts section after February 16, 2017.
STATUTORY PROVISIONS	The Contract letting shall be subject to the provisions of Section 62.15, 66.0901, 66.0903, and 779.16 Wisconsin Statutes.
BID GUARANTEE	A certified check or bank draft payable to the Oak Creek Water & Sewer Utility, or a satisfactory bid bond, in an amount not less than 5% of the bid shall accompany each bid as a guarantee that if the bid is accepted, the bidder will execute and file the proposed contract and bond within 10 days after the award of the contract. In case the bidder fails to file such contract and bond within the time set by the Utility, the check or bid bond shall be forfeited to the Utility as liquidated damages pursuant to SS.62.15(3).
EQUAL OPPORTUNITY	The Oak Creek Water & Sewer Utility hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the ground of race, color, sex, or national origin in consideration for an award.
BID REJECTION	The Oak Creek Water & Sewer Utility Commission reserves the right to reject any and all bids, waive any informalities in bidding, or to accept the bid or bids, which best serves the interest of the Utility.
BID WITHDRAWAL	No bid shall be withdrawn for a period of 30 days after the scheduled opening of the bids without the consent of the Oak Creek Water & Sewer Utility Commission.

INSTRUCTIONS TO BIDDERS

1. Proposal Forms

No bid will be considered which is not submitted on forms furnished by the Utility Engineer.

2. Quantities

The estimated quantities of the work are the result of careful calculations but are considered approximate. The quantity shown will be used as a basis for determining the lowest bidder. After the contract is awarded, the quantity of work listed under any item, or all items, may be increased or decreased according to the specifications at the discretion of the Utility Engineer, without invalidating the bid price.

The general description of bid items is provided to give bidders a brief description of the work covered under this contract, but is not meant to be all inclusive of the work and materials required to complete each item. All miscellaneous items required by the plans and specifications, although not expressly listed on the bid form, are assumed to be included on the unit prices of each general bid item. Bids will be compared on the basis of the quantities listed in the Bidding Schedule. Payment on the contract will be based on the actual, field-measured units installed.

3. Prior Examination of Contract Documents and Worksite

Bidders shall inform themselves of the conditions under which work is to be performed by examining the contract documents, site, ground conditions and obstacles to be encountered in the field, and by such other means necessary. After proposal submittal, the Utility will not accept a claim that there was any misunderstanding as to the quantities, conditions, nature of the work, or extra compensation for items the Contractor failed to inform himself of prior to bidding.

4. Inadequacies and Omissions

Any verbal information obtained from or statement made by representatives of the Utility at the time of the examination of the contract documents or the site for the purpose of bidding, which apparently corrects or in any way amends the contract documents shall be invalid. The Oak Creek Water and Sewer Utility will not be responsible for such verbal information or statements.

Bidders shall bring any inadequacies, omissions, or conflicts to the Utility Engineer's attention at least seven days before the due date of bids. Prompt clarification will be immediately supplied to all bidders by addenda, and each addendum shall be acknowledged on the proposal form. Failure to so request

clarification of any inadequacy, omission or conflict will not relieve the contractor of responsibility. The signing of the contract will be considered as implicitly denoting that the contractor has a thorough comprehension of the full intent and scope of the specifications and drawings.

5. Subcontractors

Bidders shall be required to submit a list of subcontractors with their proposal in accordance with Section 66.0901(7), Wisconsin Statutes.

This list of subcontractors shall not be added to nor altered without the written consent of the Utility Engineer. The Utility Engineer may reject proposals if the list of subcontractors and the class of work to be performed is omitted. The omission shall be considered inadvertent or a representation that the bidder will perform the work himself. If such an omission is inadvertent, the bidder shall provide the list of subcontractors within two working days from the date and time of the bid opening.

6. Time of Performance

When not otherwise specified, the bidder must state in the proposal the least number of calendar days (including Saturdays, Sundays and holidays) after the date to commence work given in the Notice to Proceed, in which he will start construction and the number of calendar days (including Saturdays, Sundays and holidays) after date to commence work given in the Notice to Proceed in which he will fully complete the work as specified.

In stating time, the bidder should make due allowance for all probable difficulties which may be encountered.

In the event of failure to complete the work within the time stated or otherwise specified, liquidated damages will be assessed as provided in the specifications.

The bidder may not begin work on the project until permits are received for WDNR Water System Construction & Operation.

7. Proposal Guaranty

The Oak Creek Water and Sewer Utility requires either a bid bond or a certified check of at least 5% of the bid.

8. Requirements for Signing Proposals

- A. The full name and business address of each bidder must be entered on the proposal submitted. The proposal shall be signed in the space provided by written signature of the person or persons properly authorized

to sign it.

- B. A proposal submitted by an individual shall be signed by the bidder or by an authorized agent.
- C. A proposal submitted by a firm or partnership shall be signed by a member or by an authorized agent; if by joint adventurers, the proposal shall be signed by each of their authorized agent(s).
- D. Proposals which are signed by an attorney-in-fact for individuals, firms, partnerships or joint adventurers shall have attached a power-of-attorney evidencing authority to sign the bid.
- E. A proposal submitted by a corporation shall be signed by an authorized officer or agent of such corporation. Such corporation must be licensed to do business in the State of Wisconsin before a proposal to do the work can be received. If a foreign corporation, the state under which it is incorporated must be named.

9. Submission of Proposal

The proposal and the proposal guaranty shall be placed in an envelope or in separate envelopes and shall be sealed. On the envelope or envelopes shall be plainly written the PROJECT NUMBER, DATE OF OPENING BIDS, NAME OF BIDDER, AND THE TYPE AND LOCATION OF THE WORK. Such envelope(s) shall be addressed and delivered to the office of the Utility before the time specified in the Notice to Bidders for opening bids.

10. Withdrawal of Proposal

A bidder may withdraw a proposal, provided the Utility Engineer receives a written request prior to the deadline for accepting proposals. The proposal will be returned to the bidder unopened.

11. Bid Prices

Bidders must submit a bid price, in accordance with the specifications, for each item of the job or branch, in compliance with the bidding units specified for the quantities listed in the proposal. Bid prices must be written out in words and also entered in figures. In case of variation, the written prices will prevail.

12. Double Bidding

Two proposals under different names will not be accepted from one firm or association.

13. Disqualifying of Bid Proposal

A bid proposal will be disqualified because of gross errors in computation which cannot be resolved by mathematical correction without resorting to information not contained in the bid.

Errors in extension may be corrected providing that the unit cost is legible and can be definitely identified as complying with item specifications. The total bid shall be adjusted in accordance with approved extension corrections. An extension may not be divided by number of units specified to determine a unit cost if such is omitted by the bidder. It is the responsibility of the bidder to submit a neat, accurate and complete proposal if his bid is to be accepted.

14. Right to Accept or Reject Bids

The Utility reserves the unqualified right to reject any or all bids at its sole and absolute discretion, or to reject any or all bids where the Utility Engineer has determined that the contractor or bidder has unbalanced his bid and unit prices. The Utility further reserves the unqualified right to waive any irregularities in any bid, or to accept any bid which will best serve the interests of the Utility. The Utility also reserves the unrestricted privilege to reject any unit prices for additions to or deductions from the scheduled amount of work as given in the bid, if the same are considered excessive or unreasonable, or to accept any or all such unit prices which may be considered fair and reasonable.

The bid openings are open to the public, and no awards will be made immediately upon opening bids nor until the bids opened can be compared, scheduled, and reviewed by the Utility Commission. The contract shall be awarded by Utility Commission action and the bidder to whom the award is made will be notified at the earliest possible date.

15. Performance Guaranty

The performance of the contract must be assured by a surety bond executed by the successful bidder in the full amount of the contract. Such bond must also be executed by a surety company.

16. Contract Execution

Within ten days from the date of receipt of the contract forms from the Utility Attorney, the successful bidder shall sign four copies of the contract form, attach the performance guarantee of the approved licensed surety, and deliver to the office of the Utility. The contract, when signed by the Utility, and approved as to form and execution by the City Attorney, shall be a part of the contract documents. When all parties have signed the contract, the Utility will refund the

proposal deposit to the successful bidder.

In case of failure to have delivered such properly executed copies of the contract within ten days, or such extension as the Utility Commission only may deem reasonable, bidder will be considered as having abandoned his proposal. Bidder will be considered in default to the Utility to the full amount of the bid deposit. It will be understood and agreed by the party submitting the proposal that such bid deposit represents the damages to which the Utility will be subjected by reason of the bidder's default in acceptance of contract, or failure to either properly execute the contract forms or deliver within the specified time of such extension.

17. Starting Work Before Notification

No work shall be performed under the contract and no materials or equipment shall be delivered to the site of the work prior to the date in the Utility Engineer's written Notice to Proceed.

18. Refund of Bid Deposit to Unsuccessful Bidders

The bid deposit of all except the two lowest bidders will be refunded after the Utility Commission has determined the lowest responsible bidder. The remaining bid deposit will be refunded upon execution of the contract.

March 3, 2017

To: The Oak Creek Water & Sewer Utility Commission

Re: Bid Proposal

In conformity with the notice to bidders, the undersigned bidder, having examined the site of the work and the contract, submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed hereunder, and agrees to execute the proposed contract and furnish the required bond for the completion of said work, at the locations and for the prices set forth in the attached Schedule One.

The undersigned bidder deposits herewith a certified check payable to the order of the Oak Creek Water and Sewer Utility, or an approved bid bond, in the sum designated in said notice, and hereby agrees that in the event the undersigned bidder shall fail to execute the contract with surety bond thereto and return the same to the Utility within ten calendar days after transmittal by the Utility, then said certified check shall be retained by and become the property of the Oak Creek Water & Sewer Utility as fixed and liquidated damages or the penalty as provided by said bond shall be recovered as liquidated damages.

It is further understood that construction on this contract shall commence and be completed as specified in the Detail Specifications.

This proposal submitted by:

Bidder

Address

Phone

City, State, Zip Code

Operating as: Sole Trader Partnership Corporation _____

Under the laws of the State of _____

By: _____ (Signature)

(Title)

ADDENDUM RECEIPT: We acknowledge the receipt of Addenda _____ inclusive.

SWORN STATEMENT OF BIDDER

PURSUANT TO SECTION 66.0901 (7) WISCONSIN STATUTES

I, being duly sworn at _____(City),
_____ (State), on oath, do hereby state on behalf of said bidder
that I have examined and carefully prepared this proposal from the plans, specifications, the
work site including surface and underground conditions, and other contract documents and have
checked the same in detail before submitting this proposal; and that this sworn statement is
hereby made an integral part of this proposal.

By: _____
(Signature)

(Title)

Subscribed and sworn to before me this _____ day of _____, 2017.

Notary Public, _____ County

State of _____

My commission expires: _____

Affix corporate seal below.

|

INFORMATION ON SURETY *(please fill out completely)*

Firm _____

Address, City, State, Zip Code _____

Attorney-in-fact _____

Address, City, State, Zip Code _____

INFORMATION ON SUBCONTRACTORS

The undersigned bidder will employ, subject to the approval of the said owner, the following subcontractors. This list shall not be added to nor altered without the written consent of the owner. A bid shall not be invalid if the list of subcontractors and the class of work to be performed has been omitted. The omission shall be considered inadvertent or a representation that the bidder will perform the work himself. If such an omission is inadvertent, the bidder shall provide the list of subcontractors within two working days from the date and time of the bid opening.

<u>NAME</u>	<u>ADDRESS</u>	<u>CLASS OF WORK</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Schedule One

Item No.	Item Description	Bid Quantity	Units	Unit Price	Total Price
1	8" PVC Water Main, 1-1/4" T.B.B.F. Unit price per lineal foot. _____ dollars & _____ cents.	1,043	LF		
2	Connect to Existing 8" Water Main Unit price per each. _____ dollars & _____ cents.	2	EA		
3	Hydrant, Lead and 6-inch Gate Valve Unit price per each. _____ dollars & _____ cents.	2	EA		
4	Hydrant Extension Unit price per vertical foot. _____ dollars & _____ cents.	1.5	VF		
5	8" Gate Valve Unit price per each. _____ dollars & _____ cents.	3	EA		
6	1-1/4" Water Service Laterals (Polyethylene) Open Cut Unit price per each. _____ dollars & _____ cents.	15	EA		
7	Asphalt Pavement Removal Unit price per square yard. _____ dollars & _____ cents.	4,162	SY		
8	HMA Pavement, 3LT 58-28 S, 19.0 mm Lower Layer Unit price per ton. _____ dollars & _____ cents.	635	TON		
9	HMA Pavement, 5LT 58-28 S, 9.5 mm Upper Layer Unit price per ton. _____ dollars & _____ cents.	384	TON		

Item No.	Item Description	Bid Quantity	Units	Unit Price	Total Price
10	1-1/4" Dense Graded Aggregate Base Course Unit price per ton. _____ dollars & _____ cents.	224	TON		
11	Stone Shoulder, 3/4" T.B. Unit price per ton. _____ dollars & _____ cents.	93	TON		
12	Sawing Existing Pavement Full Depth Unit price per lineal foot. _____ dollars & _____ cents.	1,726	LF		
13	Excavation Below Base, 1-1/4" Dense Graded Aggregate Base Course Unit price per ton. _____ dollars & _____ cents.	100	TON		
14	Excavation Below Base, Breaker Run Base Course Unit price per ton. _____ dollars & _____ cents.	100	TON		
15	Pavement Marking, Epoxy, White 4-inch Edge Line Unit price per lineal foot. _____ dollars & _____ cents.	2,748	LF		
16	Pavement Marking, Epoxy, Yellow 4-inch Broken Centerline Unit price per lineal foot. _____ dollars & _____ cents.	94	LF		
17	Pavement Marking, Epoxy, Yellow 4-inch Double Centerline Unit price per lineal foot. _____ dollars & _____ cents.	1006	LF		
18	Pavement Marking, Epoxy, White 18-inch Stop Bars Unit price per lineal foot. _____ dollars & _____ cents.	48	LF		

Item No.	Item Description	Bid Quantity	Units	Unit Price	Total Price
19	Pavement Marking, Epoxy, White 6-inch Cross Walks Unit price per lineal foot. _____ dollars & _____ cents.	360	LF		
20	Restoration of Lawns and Parkways Unit price per lump sum. _____ dollars & _____ cents.	1	LS		
21	Erosion Control Unit price per lump sum. _____ dollars & _____ cents.	1	LS		
22	Traffic Control Unit price per lump sum. _____ dollars & _____ cents.	1	LS		

BASE BID TOTAL ITEMS 1 - 22 INCLUSIVE \$ _____

DETAILED SPECIFICATIONS

I. GENERAL

A. INTRODUCTION

These specifications govern the construction of water main, in the City of Oak Creek in the locations as shown on the plans.

All work performed and all materials supplied under this contract shall conform to the Contract Documents and to all specifications, codes, and ordinances either referred to or established by law.

B. APPLICABLE SPECIFICATIONS

The following specifications shall be applicable to all construction under this project:

1. General Specifications of the Department of Engineering, City of Oak Creek, hereinafter referred to as the General Specifications in these Detailed Specifications.
2. Standard Specifications for Sewer and Water Construction in Wisconsin, current Edition, with addendums hereinafter referred to as the Standard Specifications in these Detailed Specifications.
3. Highway and Structure Construction - Std. Specs. Dept. of Trans., Division of Highways, State of Wis., current edition and supplemental specifications hereinafter referred to as the State Specifications in these Detailed Specifications.
4. These Detailed Specifications.
5. The Construction Plans.
6. Manual on Uniform Traffic Control Devices, current edition.
7. City of Oak Creek Engineering Design Manual, current edition.

Copies of the aforementioned General, Standard and State Specifications are on file at the Engineering Department of the City of Oak Creek for use and reference on the premises by prospective bidders and by the Contractor.

The Detail Specifications and the construction plans cover items, corrections, deletions or additions to the applicable contract specifications and take precedence over those other parts of these specifications that may be in conflict herewith.

Any conflict between the various specifications and the construction plans shall be brought to the attention of the Utility Engineer by the bidders and/or the Contractor.

Where such conflict may exist, the Utility Engineer shall have the sole authority to exercise a decision as to the meaning of the bidding and contract documents. Reference shall also be made to the Instructions to Bidders of the bid and contract documents.

C. CONTROL OF CONSTRUCTION OPERATIONS

1. Scheduling Work

The Contractor will not be permitted to start new phases of the project until previously started phases are fully completed or continuous work, in the opinion of the Utility Engineer, is being done to fully complete the previously started phases. However, the Contractor may with the approval of the Utility Engineer, start a second crew with a second foreman on other portions of the project. (Refer also to Sections 1.2.2 and 1.3.21 (Pages 1-10 and 1-21, respectively) of the Standard Specifications).

At any time during the execution of the contract that the Contractor either suspends or returns to work, he must notify the Utility Engineer of his intentions at least three working days in advance of said suspension or return to work.

2. Maintenance of Public Safety and Convenience

The Contractor shall provide for the placing of necessary detour signs, barricades, warning lights, and warning and informational signs to provide for the safety and convenience of the public prior to starting of any of the work per the State Manual on Uniform Traffic Control Devices. Adjustment to the traffic control devices shall be included and performed by the contractor as called for by the progression of work. Necessary traffic control adjustments shall be in place prior to proceeding with work that could impact the safety of the general public as determined by the Utility Engineer.

All such devices shall comply with the Federal Manual on Uniform Traffic Control Devices.

3. Access to Properties

The Contractor shall provide for access to the properties abutting the work site area in accordance with Section 1.7.7 (Page 1-33) of the Standard Specifications. East Forest Hill Avenue shall be closed to through traffic. In addition, the operations shall be conducted in such a manner that all abutting properties shall be provided with vehicular access overnight, on weekends and on holidays.

The Contractor shall inform residents at least 24 hours prior to a temporary closure of their driveway.

4. Haul Roads and Storage Areas

The Contractor shall be required to submit a plan indicating his intended location of haul roads and storage areas for equipment and materials. Such plan shall be presented at the pre-construction meeting and shall be subject to the approval of the Utility Engineer. Any subsequent proposed changes to the approved plan shall be submitted to the Utility Engineer for approval prior to implementation of the change. Construction traffic shall be permitted on pre-approved areas. All areas used for haul roads and storage shall be subject to restoration by the Contractor to the condition prior to the start of work under this contract.

II. NOTICES AND PERMITS

A. GENERAL UTILITY NOTIFICATION

Please note: Section 66.0831 of Wisconsin Statutes makes it mandatory that:

"66.0831 Interference with public service structure. A contractor with a contract for work upon, over, along or under a public street or highway may not interfere with, destroy or disturb the structures of a public utility, including a telecommunications carrier as defined in s. 196.01 (8m), encountered in the performance of the work in a manner that interrupts, impairs or affects the public service for which the structures may be used, without first obtaining written authority from the commissioner of public works or other appropriate authority. A public utility, if given reasonable notice by the contractor of the need for temporary protection of, or a temporary change in, the utility's structures, determined by the commissioner of public works or other appropriate authority to be reasonably necessary to enable the work, shall temporarily protect or change its structures located upon, over, along or under the surface of a public street or highway. The contractor shall pay or assure to the public utility the reasonable cost of the temporary structure or change, unless the public utility is otherwise liable. If work is done by or for the state or by or for any county, city, village, town sanitary district, metropolitan sewerage district created under ss. 200.01 to 200.15 or 200.21 to 200.65 or town, the cost of the temporary protection or temporary change shall be borne by the public utility."

The Contractor shall refer to Chapter 1.2.0 (Pages 1-9) of the Standard Specifications, in regard to necessary notices and permits required. These provisions shall be strictly adhered to at the start of any part of the project. In particular, the following requirements shall apply.

B. NOTIFICATION TO WE ENERGIES (Electric and Gas Utility)

In accordance with the provisions of the Wisconsin State Statutes, with regard to the maintenance of a certain clearance from energized conductors and with regard to notification where work might affect public utility facilities, it is the requirement herein that the Contractor shall be responsible for and duty-bound to notify the We Energies in writing in advance of work to be done near electric or gas facilities. Such notice shall be directed to:

We Energies – Electric Operations
4800 W. Rawson Avenue
Franklin, Wisconsin 53132
Phone: (414) 423-6112

Emergency or additional notification, if any is required during construction, shall be done by contacting their office at 221-3700.

We Energies - Gas Operations
4800 West Rawson Avenue
Franklin, WI 53132
Phone: (414) 423-5062

C. NOTIFICATION TO AT&T

The Contractor shall notify the communication utilities that have facilities located within the project limits of his construction schedule as it affects said each company as prescribed by the Wisconsin State Statutes.

Such notice shall be directed to the following Utilities:

AT&T
Cable Location Plant
435 S. 95th Street
Milwaukee, WI 53214
Phone: (262) 896-7434

D. NOTIFICATION TO TIME WARNER CABLE

The Contractor shall notify Time Warner Cable of his construction schedule as it affects said cable communications company as prescribed by the Wisconsin State Statutes. Notice shall be directed to:

Time Warner Cable
5475 West Abbott Avenue
Greenfield, WI 53220

Additional notification, if any is required during construction, shall be done by contacting their office by phone at 414/277-4280.

E. NOTIFICATION TO CITY'S STREET, FIRE, & POLICE DEPARTMENTS, & OAK CREEK WATER & SEWER UTILITY

Prior to starting construction within any street, three days' written notice shall be given to the following departments:

1. Street Division, 800 W. Puetz Road, (414) 768-6553
2. Fire Department, 7000 S. 6th Street, (414) 570-5630
3. Police Department, 301 W Ryan Road, (414) 768-8200
4. Oak Creek Public Schools, 7630 South Tenth Street (414) 768-5880
5. Oak Creek Water & Sewer Utility, 170 W. Drexel Avenue, (414) 570-8210

F. OAK CREEK WATER & SEWER UTILITY WATER USE PERMIT

The Contractor will be permitted to use the Utility water supply where available for incidental uses providing a permit is first obtained from the Oak Creek Water and Sewer Utility, 170 West Drexel Avenue, Oak Creek, Wisconsin. There will be no charge for this water use unless the amount is determined to be excessive as defined by the Utility Engineer. The included water will include water needed for filling, testing, and flushing of new water mains. If an invoice is issued and said bill is not paid by completion of the project, the amount of said bill will be deducted from the final contract payment.

G. WORK IN EASEMENTS

The work will be performed in an easement or by right-of-entry upon private lands. The requirements of Sections 1.7.13 and 1.7.14 (Pages 1-35 and 1-36) of the Standard Specifications and these detailed specifications, if any, shall be adhered to.

The requirements of Section 1.7.14 of such Standard Specifications shall also apply to the public right-of-way between the pavement and the property line where the installation is in the public right-of-way or in an easement abutting public right-of-way.

III. CONTRACTOR'S INSURANCE

A. GENERAL

The Contractor shall not commence work under this contract until he has obtained all insurance required under this paragraph and such insurance has been approved by the Utility and insurance certificates have been filed with the Utility, nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved in accordance with Section 1.8.4 of the Standard Specifications and these Detailed

Specification provisions.

B. COMPENSATION INSURANCE

The Contractor shall take out and maintain during the life of this contract, Worker's Compensation Insurance for all of his employees at the site of the project and in case any work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each Subcontractor to provide adequate insurance coverage for the protection of his employees not otherwise protected.

C. PUBLIC LIABILITY, PROPERTY DAMAGE, AND CONTRACTUAL LIABILITY INSURANCE

The Contractor shall take out and maintain during the life of this contract, public liability, property damage, and contractual liability insurance in the following minimum amounts:

Bodily Injury	\$1,000,000 per occurrence \$1,000,000 aggregate
Property Damage	\$500,000 per occurrence \$500,000 aggregate

These policies shall protect the Contractor and any Subcontractor performing work covered by this contract from the claims and damages for personal injury, including accidental death, as well as claims for property damage, which may arise from the performance of the work or under the hold-harmless and indemnifying clauses which are a part of this contract. The said policies are to cover not only the Contractor or Subcontractor but also any other directly or indirectly employed by either of them.

D. INSURANCE AGAINST THE FOLLOWING SPECIAL HAZARDS

The following respective amounts shall be procured by the Contractor or Subcontractor before the commencement of any operation by the Contractor, or the happening of any circumstance creating or tending to create the particular special hazard:

<u>Kind</u>	<u>Amount</u>
Operating of elevators or hoists.....	\$25,000.00
Use and operation of automobiles and truck	\$25,000.00
Structural alterations or demolitions	\$25,000.00
Undermining adjacent structures.....	\$10,000.00
Blasting operations	\$10,000.00

Operation of excavating machinery in streets and highways	\$10,000.00
Operation within other public or private right-of-way (including railroad right-of-way)	As Required

IV. PERFORMANCE BOND AND GUARANTEE

Where the contract is over \$10,000.00, the contractor will be required to furnish a satisfactory performance bond in the amount of 100% of the contract. The Contractor shall pay the total cost of this bond. Such bond shall be executed by an authorized surety company and shall remain in full force and effect for a period of one year after the final payment for the work to guarantee workmanship and materials. A performance bond shall not be required for public works contracts below \$10,000.00 regardless of bond requirement.

The Contractor shall agree and guarantee that the material and workmanship supplied by him shall be free from all defects, and strictly in accordance with the plans and specifications, at the time of its completion and acceptance by the municipality, and for a time of one year thereafter, the Contractor agrees to forthwith repair the same upon notification by the municipality using the same material required by these specifications. In case the Contractor shall fail to make such repairs or cause the same to be made, the Contractor agrees and guarantees to pay on demand the cost thereof, to said municipality upon the completion of such repairs, and the Contractor further agrees and guarantees to pay for all labor and material used in or about the construction of said work in his contract, which may become a lien or a claim against the municipality.

V. METHOD OF PAYMENTS

Payments will normally be made monthly throughout the progress of the work, provided the work completed is substantial enough in the opinion of the Utility Engineer.

Substantial completion of water main construction shall be considered to include all flushing and testing of the mains including pressure tests and safe water samples. Partial and final payments will not be made until such time that all work is substantially completed including testing and accepted by the approving agencies.

Such payments shall be in accord with Section 66.0901 (9) b, of the State Statutes which states that the City,

“(b) Retained percentages. As the work progresses under a contract involving \$1,000 or more for the construction, execution, repair, remodeling or improvement of a public work or building or for the furnishing of supplies or materials, regardless of whether proposals for the contract are required to be advertised by law, the municipality, from time to time, shall grant to the contractor an estimate of the amount and proportionate value of the work done, which entitles the contractor to receive the amount of the estimate, less the retainage, from the proper fund. The retainage shall be an amount equal to not more than 5% of the estimate until 50% of the work has been completed. At 50% completion, further partial payments shall be made in

full to the contractor and no additional amounts may be retained unless the architect or engineer certifies that the job is not proceeding satisfactorily, but amounts previously retained shall not be paid to the contractor. At 50% completion or any time after 50% completion when the progress of the work is not satisfactory, additional amounts may be retained but the total retainage may not be more than 10% of the value of the work completed. Upon substantial completion of the work, an amount retained may be paid to the contractor. When the work has been substantially completed except for work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the municipality are valid reasons for noncompletion, the municipality may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed or may pay out the entire amount retained and receive from the contractor guarantees in the form of a bond or other collateral sufficient to ensure completion of the job. For the purposes of this section, estimates may include any fabricated or manufactured materials and components specified, previously paid for by the contractor and delivered to the work or properly stored and suitable for incorporation in the work embraced in the contract. "

VI. MATERIALS - GENERAL

In accordance with Utility purchasing policy, the Contractor is requested to use American products in the performance of the contract whenever the quality and the price are comparable with other goods.

VII. MATERIALS FOR WATER MAINS

A. SPECIFICATIONS FOR PVC WATER MAIN

1. All polyvinyl chloride (PVC) water pipe shall conform to the requirements of Chapter 8.10.0 of the Standard Specifications. Polyvinyl chloride pipe shall be used only on water mains of 12" or smaller in size unless otherwise specified on the construction plans or herein the Detailed Specifications.
2. All pipe 8" and larger (if specifically allowed), shall be Class 150 with a standard dimension ratio of 18; all pipe 6" and smaller shall be Class 200 with a standard dimension ratio of 14.
3. PVC fittings shall be used on all PVC pipe. PVC fittings 4"-12" in diameter shall be injection molded and comply with the requirements of AWWA C907 and be certified to CSA B137.2. Molded fittings will be made of PVC compound with a minimum hydrostatic design basis of 4000 psi. Molded fittings must be Factory Mutual approved and listed by the Underwriter's Laboratories International (ULI).

If a particular type of PVC fitting is not manufactured, or unavailable, the contractor may use ductile iron fittings on a case by case basis with the approval of the Utility Engineer.

4. All polyvinyl chloride (PVC) water pipe supplied shall be manufactured by one of the following companies:
 - a. Cantex Industries (Division of Harsco Corp.)
 - b. H & W Industries, Inc.
 - c. J.M. Corporation
 - d. CAPCO
 - e. North Star
 - f. Sceptor

B. GATE VALVES

All gate valves (3" through 12" diameter valves are to be gate valves) are to be the resilient wedge-type valve.

All resilient wedge-gate valves furnished shall be one of the following:

1. Clow - R.W.
2. Kennedy - R.W.
3. M & H - R.S.C.V.
4. Mueller - R.W.
5. Waterous – 500
6. American Flow Control (3" to 12" only)

All valves shall open counterclockwise.

All valves shall be epoxy coated interior and exterior with Type 316 stainless steel bolts, washers, and nuts and receive triple layer 6-mil poly-wrap.

Valves shall have a push-on connection to the new main or hydrant lead.

C. CAST IRON VALVE BOXES

All valve boxes shall be 5-1/4 inch diameter (minimum) shaft, round base, three (3) piece box; 5-1/4 inch drop lid marked "WATER"; length of assembly sized to span top of main to finished grade with a minimum remaining adjustment of three (3) inches. Contractor shall furnish Cast Iron Valve Boxes Series 8560 for the valve box and Series 6800 Lid as manufactured by East Jordan Iron Works or approved equal. Cast iron valve boxes shall receive double layer 6-mil poly-wrapping.

D. VALVE BOX ADAPTORS

All valve boxes shall be set upon the valve with the use of an adaptor, as manufactured by Adaptor, Incorporated, or an approved equal. The adaptor shall be installed

in lieu of hardwood blocking and shall be incidental to the valve and box installation.

E. MECHANICAL JOINTS

Wherever mechanical joints are to be installed, as specified, the bolts and nuts shall be T316 stainless steel or an approved equal and all fittings shall be triple polyethylene wrapped in accordance with the Standard Specifications.

F. HYDRANT ASSEMBLY

Hydrant and hydrant leads shall be installed in accordance with Section 4.8.5 of the Standard Specifications and WD-13 or WD-15, whichever applies. The pipe materials shall be polyvinyl chloride in accordance with these Detailed Specifications. All hydrant extension and hydrant valve materials shall be furnished by the Contractor.

All hydrants shall be furnished with a 5-1/4" main valve, a 1-1/2" pentagon-shaped operating nut with two each of 2-1/2" and one each of a 4-1/2" National Standard Thread nozzles. All hydrants furnished and installed shall be one of the following:

1. Clow Medallion
2. Kennedy Guardian K81A
3. Mueller Centurian

Hydrants shall have a 6-inch push connection to the hydrant lead or approved equal.

Hydrant Valves shall be a resilient wedge-gate valve meeting the requirements outlined above in Section B – Gate valves.

All hydrants shall be epoxy coated red body and yellow top with Type 316 stainless steel bolts, washers, and nuts and shall receive triple layer 6-mil plastic wrapping.

Hydrant leads shall be fully restrained back to the water main using mega-lugs or approved equal.

All hydrant barrels shall be 6'6" in length.

All hydrant nozzle threads shall receive a food grade grease coating. The coating shall be MANTEK Elite FG Heavy Duty NLGI #2 food grade grease, or equal.

G. SERVICE CONNECTIONS TO 8-INCH WATER MAIN

The following materials shall be used for the Corporation stop:

Corporation Stops: Mueller H-15000

All water main taps for services 1-1/4" and smaller shall be direct tap with 1" x 1-

1/4" corporation stop. For service taps greater than 1-1/4", the contractor shall provide a full-circle stainless steel tapping saddle as manufactured by Smith-Blair Model 372 or approved equal. Provide and install single layer 6-mil plastic wrapping.

H. TRACER WIRE

All water main shall include a 10 gauge solid, blue coated copper tracer wire to be taped to each pipe. Tape shall be securely fastened to main, hydrant leads and hydrants. Splices shall be soldered and water proofed using shrink wrap or underground splice kit. Test station shall be an adjustable height tracer wire access box manufactured by VALVCO, Inc. Tracer wire ends at existing main shall be bonded to 5/8" diameter, 3' copper ground rod driven next to the pipe utilizing a ground rod clamp with UL listed cast copper alloy hex-head bolt.

Tracer wire shall be tested via locating equipment for the entire length of the new main prior to asphalt restoration.

I. GALVANIC ANODE PROTECTION

Where connecting to an existing ductile iron water main, the contractor shall install galvanic anode protection in accordance with the galvanic anode installation detail. For ductile iron water mains 12" in diameter and less, the contractor shall provide and install one 32 lb. magnesium anode. For ductile iron water mains greater than 12" in diameter, the contractor shall provide and install two-32lb. magnesium anodes. The weld shall be coated using REBOUND Aerosol Rubberized Coating or approved equal.

VIII. MATERIALS - GENERAL

A. BEDDING AND COVER, ALL WATER MAIN

All water main shall consist of 4 inches bedding and cover to 6" above the pipe. Sand backfill shall also be used to a minimum of 6" on either side of the pipe. The material gradation is located in Appendix D.

B. 1 1/4" T.B. BACKFILL

Where shown on the plans, the contractor shall use mechanically compacted 1 1/4" dense graded aggregate (T.B.) placed up to the bottom of pavement grade. Recycled concrete meeting the gradation may be utilized.

C. COMPOUNDS FOR ASPHALT PAVEMENT

1. 2 1/2" Lower Layer mixture shall conform to Section 460 of the State Specifications and consist of depths identified on Drawings, 19.0 mm Lower Layer Type 3LT, with a Performance Graded Designation of PG 58-28.

2. 1 ½" Upper Layer mixture shall conform to Section 460 of the State Specifications and consist of depths identified on Drawings, 9.5 mm Upper Layer Type 5LT, with a Performance Graded Designation of PG 58-28.
3. Asphalt delivered to the site shall arrive at a temperature of 275 degrees plus or minus 25 degrees. Any trucks not meeting this requirement shall be rejected.
4. Compounds for asphaltic pavement shall be provided in conformance with the following section of the State Specifications.

Materials for Asphaltic Mixtures and Surface Treatments	Section 455
Tack Coat.....	Section 455
Plant Mixed Asphaltic Surfaces and Pavements	
General Requirements.....	Section 460
Asphaltic Concrete Pavements	Section 460

IX. CONSTRUCTION DETAILS

A. COMPLYING WITH SPECIFICATIONS

The Contractor shall comply with the specifications and ably perform all operations to the extent that the first-class work will be obtained. A representative of the Oak Creek Water & Sewer Utility will inspect the work as it progresses to determine full compliance with the specifications. The Inspector shall notify the Utility Engineer of any noncompliance and have authority to stop any work not being performed in accordance with the specifications, in order that an Engineer may investigate such noncompliance.

Any work performed after the work has been ordered stopped by the Inspector shall not be considered as work performed under the contract, and consequently will not be accepted by the Utility nor allowed in any monthly or final payment until corrected to the satisfaction of the Utility Engineer.

The "Standard Specifications for Sewer and Water Construction in Wisconsin", (herein referred to as The Standard Specifications), shall apply for all sewer and water main construction unless otherwise noted in these Detail Specifications or on the construction plans. The Highway and Structure Construction - Standard Specifications Department of Transportation, Division of Highways, State of Wisconsin and Supplemental Specifications (herein referred to as the State Specifications), shall apply for pavement restoration. The MUTCD and State Specifications shall apply to all traffic control.

B. LOCATION - STAKING

The line for each facility will be located as shown on the plan and will be staked out once by the Oak Creek Water and Sewer Utility. If necessary to pass an existing

obstruction, the Utility Engineer may shift the line to avoid such obstruction.

The Contractor must protect all stakes and benchmarks from disturbances until permission is given to remove them. A width of not less than 2' on each side of the line on which stakes are located shall be kept free from obstruction. Additional staking required due to damage or removal shall be at the Contractor's expense.

C. MATERIAL ENCOUNTERED

No variation from the price named in the proposal will be made or allowed whether the material through which excavations must be made are hard or soft, and wet or dry. It is the Contractor's responsibility to determine for himself the character, nature, type and condition of materials likely to be encountered in the proposed work. The submission of a proposal for the work herein shall in itself be accepted as evidence that the Contractor has examined the site of all work, made borings, investigations and studies of all conditions and provided for all such conditions in his proposal.

Any and all necessary dewatering shall be in accordance with Chapter 2.2.13 of the Standard Specifications.

Contractor will be required to obtain a high capacity dewatering permit prior to start of construction for dewatering rate of 70 gallons per minute (gpm) or higher.

Contractor is responsible to reconnect existing field tiles that may be encountered during excavation. Existing tiles must be repaired and connected to a storm sewer or have positive outfall provided.

D. EROSION CONTROL AND GROUND COVER

Pursuant to City of Oak Creek Code, construction activities are required to comply with erosion control and ground cover requirements. For public works construction, specifically, the following construction activity requirements are applicable.

1. Those involving grading, removal of protective ground cover or vegetation, excavation, landfilling or other land disturbing activity affecting a surface area of 4,000 square feet or more;
2. Those involving excavation or filling or a combination of excavation and filling affecting 400 cubic yards or more of dirt, sand or other excavation or fill material;
3. Those involving street, highway, road, or bridge construction, enlargement, relocation or reconstruction;
4. Those involving the laying, repairing, replacing or enlarging of an underground pipe facility for a distance of 300' or more.

To address the requirements, the Contractor shall provide for the implementation of the control measures as may be specified on the construction plans and in these Detail Specifications.

E. DISTRIBUTION OF EXCESS EXCAVATED MATERIAL

The disposal of all surplus excavated materials shall be the responsibility of the Contractor, shall be at the Contractor's expense and if disposed of within the limits of the City of Oak Creek, shall comply with the following regulations. The Contractor prior to the start of construction shall indicate the location at which the surplus excavated material will be disposed of.

The placement of fill on private lands located in the City of Oak Creek is under City regulation, in accordance with the Municipal Code. The disposal of surplus excavated materials, including that derived from public works construction, is subject to compliance with this code. Basically, the Code provides for only the following forms of landfilling:

1. When the fill comprises of less than 1,000 cubic yards and is to be placed on a parcel of land of one acre or less in size. An application shall be made to the City Engineer for a permit, on a one-time-only basis. A \$300.00 fee, plus an applicable erosion control permit and fee, is required.
2. Shoreline erosion control, whereby a license must be applied for and granted prior to landfilling activity being undertaken.
3. On a site, where fill may be needed in conjunction with building construction and where a building permit is in effect.
4. On City-owned property, subject to plans approved by the Common Council.
5. On a site where a landfill license is in effect.

F. WATER MAIN DETAIL DRAWINGS

The Detail Drawings included at the rear of the Detailed Specifications, cover corrections, deletions or additions to the Standard Specifications and take precedence over such Standard Specifications and supplement these Detail Specifications.

G. POLYVINYL CHLORIDE WATER PIPE

The laying of PVC pipe shall be laid with a torpedo sand bedding and cover and comply with Part IV of the Standard Specifications and the following requirements:

1. Acceptable Procedure on Anchoring of Vertical Water Main Offsets where Polyvinyl Chloride Pipe is used shall comply with Chapter 4.9.0 and 4.10.0 and File No. 47A of the Standard Specifications.

2. Elimination of Vertical Offsets by the Use of Deflected Pipe - In lieu of the procedures outlined under subsection 1 above, the Contractor may elect to deflect the polyvinyl chloride pipe to provide the vertical location or alignment concept indicated on the construction plans. The use of this alternate must be approved by the Utility Engineer prior to installation, in particular as to clearance with other utilities, both existing and anticipated and as to compliance with maximum pipe deflection.

Pipe Diameter Maximum Deflection per 20' Length

6"	8"
8"	6"
12"	4"

THRUST RESTRAINT

Thrust restraint shall be as shown on the plans using mega lugs, bell joint restraint clamps, or approved equal. The contractor shall pour a concrete buttress using Class D concrete as specified in the Standard Specifications at all horizontal fittings.

WATER MAIN - HYDROSTATIC TESTING

The Contractor shall provide for the testing of all new mains under the supervision of the Utility in accordance with Chapter 4.15.0 of the Standard Specifications and the following requirements:

1. Separate leakage tests on the entire length of new main and on valved sections thereof, may be required as determined by the Utility. The Utility's requirements on all new mains are a 150 psi pressure test for a duration of one hour and a 100 psi leakage test for a duration of two hours.
2. Where a new main will be connected to an existing main, it may be necessary for the Contractor to install a temporary plug in the new main for testing purposes. After the specified pressure and leakage tests have been completed on the new main, actual connection to the existing main shall be made. The section of new connecting main between the removed test plug and the existing main, shall be subject to line pressure prior to backfilling. Any visible defects observed in the connecting main shall immediately be repaired by the Contractor at his expense, prior to backfilling.
3. Costs of all testing including the installation and removal of temporary test plugs, shall be at the Contractor's expense.

H. WATER MAIN – PIPE DISINFECTING AND FLUSHING

Disinfection shall be in accordance with the Standard Specifications Chapter 4.3.12. Chlorinated water shall remain in the pipe for a minimum of 24hrs. If the water temperature is less than 41°F (5°C) it shall remain in the pipe for a minimum of 48

hours. A minimum 25 ppm chlorine residual should be found at each sampling point after the 24 hr. or 48 hr. period. If the residual is less than 25 ppm, the system shall be disinfected using 50 ppm available chlorine in accordance with AWWA standards.

After disinfection the water main shall be dechlorinated while it is being flushed. After completing final flushing of the main, 2 separate water samples (one sample each day) a minimum of 24 hours apart will be required for safe water sampling. After the Contractor sets up the tests and the Utility will collect samples for testing.

I. NOTICE TO UTILITY

Contractor shall give a 48 hour written notice to the Utility before requesting a shut down of any existing water mains in order to make the connections.

X. RESTORATION IN THE WORK AREA

A. GENERAL

Upon completion of the utility installation, the Contractor shall remove all debris, surplus materials, and return the surface of the street or right-of-way and all other places disturbed or affected by the work to a condition at least comparable to that existing before starting the work and shall maintain it in such condition until its final completion and acceptance. The restoration shall include hydro-seeding and erosion mat for grass areas and graveling or pavement repair of streets and driveways. Final payment for any installation will not be made until this restoration has been completed and accepted.

Acceptance or approval of any excavation work by the City Engineer shall not prevent the City from asserting a claim against the Contractor and his surety under the surety bond required hereunder for incomplete or defective work if discovered within 12 months from the acceptance of the completed work. The City Engineer's presence during the performance of any excavation work shall not relieve the Contractor of his responsibilities hereunder.

It shall be the duty of the Contractor to guarantee and maintain the site of the excavation for one year after restoring it to its original condition.

Included in the restoration shall be any damage to drainage ways due to discharge of trench waters. The Contractor is required to implement erosion control techniques.

B. RESTORATION OF PAVED ROADWAY SURFACES

The Contractor shall commence street resurfacing within 10 days of completion, backfill, and testing of the water main that required the removal of all or part of such arterial or collector street pavement. The replacement of the pavement referred to above shall not be delayed due to any service lateral construction on the segment of water main in the street pavement area that the Contractor may have remaining after

the two-week period elapses.

C. RESTORATION OF GRAVELED SURFACES

The Contractor shall be required to restore all graveled surfaces to a drivable condition, which were removed for the underground installation with traffic bound granular materials. Materials and installation shall conform to Section 304 of the State Specifications.

D. RESTORATION OF LAWNS

The contractor shall repair and reseed all established lawns damaged during the course of construction to a condition equal to or better than the condition at the commencement of his work in accordance with Standard Specifications for Type C seed mix, placed by hydro-seeding method.

Replace cover by means of seeding with grass seed at the rate of not less than six pounds per thousand square feet on leveled topsoil.

The contractor shall place Class I Urban erosion mat on all areas of the restored lawns and ditches utilizing all biodegradable materials.

E. UTILITY'S RIGHT TO RESTORE SURFACE

If the Contractor shall have failed to restore the surface to its specified condition upon the expiration of the time fixed by such contract or shall otherwise have failed to complete the excavation work covered by the contract, the Utility Engineer, if he deems it advisable, shall have the right to use Utility forces to do all the work necessary to restore the work area. The Contractor shall be liable for the actual cost thereof plus 25% for general overhead and administrative expenses. Compensation for the amount of such costs shall become due to the Utility and credit for such amount shall be applied against any funds that may be due to the Contractor. If final payment under the contract has already been made, the Contractor shall be directly billed for the amount due. As a last resort, the Utility will enforce compensation for costs it has incurred through collection from the Contractor's surety.

XI. CLEAN-UP AND FINAL INSPECTION

The Contractor shall have thorough and systematic clean-up operations follow closely behind the construction work. He shall at his own expense, remove and properly dispose of all water, dirt, rubbish, or any other foreign substances. Any defects of any nature whatsoever shall be promptly corrected at his own expense. Notice to begin final cleaning and repairs if such is needed will be given by the Engineer and shall be complied with by the Contractor. The Engineer will make an inspection of the work during the progress of final cleaning and repairing and any work so inspected shall be kept clean by the Contractor until the final inspection by the Engineer and the acceptance of the entire work. When the Contractor has finally cleaned and repaired the work, he shall notify the Engineer that he is ready for a final inspection and the Engineer will thereupon inspect the work. If the work is

not found satisfactory, the Engineer may require further cleaning and repairing and when these are completed will again inspect the work. In no case will the final payment be made until the Contractor has complied with all the requirements set forth and the Engineer has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the plans and specifications and contract, and that such work is ready for his final inspection and acceptance by the Utility (see Section 1.5.2 - of the Standard Specifications).

Note: The routing of all punch lists on items that remain needing attention shall be between the Engineer and the Contractor or his authorized project coordinator.

XII. PROTECTION AND RESTORATION OF PROPERTY

A. UNDERGROUND

The Contractor shall protect, repair and restore any underground drain lines, conduit, culverts, etc., encountered in the progress of the work and shall be responsible for the protection and replacing of any utilities encountered or damaged during construction, at no cost to the Utility. The Contractor shall also restore any septic system drain lines or field tiles encountered in the progress of the work and shall use watertight joints on the replaced drain lines when directed to do so by the Engineer. The cost of this work shall be included in the unit bid and contract price for water main, and no extra payment will be made therefore.

B. SURVEY CORNERS AND ABOVE SURFACE OBSTRUCTIONS

The Contractor while on this job, will be solely responsible for the protection and/or replacement of all survey corners which exist throughout the area. These corners will be located and marked by the Engineering Department of the City of Oak Creek upon request by the Contractor prior to commencing his work. Any such damaged corners shall be replaced by the City and the amount deducted from the contract payment.

The Contractor shall protect, repair and replace any mailboxes, fences, signs or other structures damaged or displaced in the progress of the work.

XIII. TIME OF COMPLETION

The starting date for work under this contract shall be at the discretion of the Contractor, subject to the following:

- A. Preconstruction meeting as arranged by the Utility Engineer.
- B. Issuance of the Notice to Proceed by the Utility Engineer.
- C. Completion of the water main and ready to use by May 17, 2017.
- D. The entire project, including surface restoration shall be completed no later than

May 31, 2017.

It shall be understood by the Contractor that the date of starting construction and the date of completion of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract, and it is further understood and agreed that the work shall be commenced as aforementioned.

The Contractor agrees that the work shall be pursued regularly, diligently, and uninterruptedly at such rate of progress as will assure completion of the work on the dates as stated in the proposal.

XIV. EXTENSIONS OF TIME

Extensions of time may be allowed by the Utility for reasonable delays due exclusively to causes beyond the control and without the fault of the Contractor including but not restricted to owner purchased material delivery delays, extra work or supplemental contract work added to the original contract, fires, strikes, unusual floods, accidents and unreasonable delays in receiving ordered materials and equipment. It should be understood by the Contractor that rain events occur and fluctuate from year to year and shall not be considered cause for a time extension.

All requests for extensions of time shall be presented in writing to the Utility Engineer within ten calendar days after the occurrence of the claimed delay, accompanied by all necessary supporting data, and, if based on valid grounds will be considered by the Utility and such extensions of time shall be granted as may seem to be fair and reasonable. However, no claims will be considered when based on delays caused by conditions existing at the time bids were received and of which the Contractor might be reasonably expected to have knowledge at the time of bidding, or upon delays caused by failure on the part of the Contractor to anticipate properly the requirements of the work contracted for as to the securing of needed materials, labor and equipment.

XV. LIQUIDATED DAMAGES

When the work embraced in the contract is not completed within the time stated in the Detail Specifications for the water main construction, and/or for the entire work, including testing, flushing, and surface restoration, as stated, and within such extra time as may be allowed by extensions, the Contractor shall pay to the Oak Creek Water & Sewer Utility the following sum for each and every calendar day that the time consumed in final completion exceeds the time allowed therefore, plus the engineering and inspection costs incurred during the time used beyond the allowed time:

Original Contract Amount		Daily Charge
From More Than	To and Including	Calendar Day
\$0	\$50,000	\$200.00
\$50,000	\$100,000	\$250.00

\$100,000	\$300,000	\$350.00
\$300,000	\$500,000	\$500.00
\$500,000	\$1,000,000	\$700.00
\$1,000,000	\$1,500,000	\$1,000.00
\$1,500,000	\$2,000,000	\$1,350.00
\$2,000,000	\$2,500,000	\$1,400.00
\$2,500,000	---	\$1,550.00

Completion of the work under this contract on the specified time schedules is necessary and vital to the Utility. Failure to complete the project on or before specified working days or calendar dates will result in loss of revenues, loss of timely use of the proposed facilities, delays, and possibly inflated costs for related or subsequent improvement installations, detrimental to the economic development of the City and Utility, as well as the additional cost of engineering expenses which will be required to be paid by the Utility.

Said sum in view of the difficulty of accurately ascertaining the loss which the Utility will suffer by reason of delay in completion is hereby fixed and agreed by the parties hereto as the liquidated damages that will be suffered by reason of such delay, and not as a penalty. The Utility will deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered, the Contractor shall be liable to pay the difference upon demand by the Utility.

XVI. PROPOSAL ITEMS

Special note to the bidder and successful contractor

Contractor will be allowed to work only while there is an Inspector at the site at any or all times and the Contractor must notify the Utility Engineer prior to commencing with any of the work specified for this project (i.e., excavation, shoring, sheathing, bedding, laying pipe, backfilling, clean-up, etc.) An Inspector will be provided to the Contractor by the Utility at no cost to the Contractor, except that inspection time shall be charged to the Contractor in addition to the specified liquidated damages after he has exceeded his time of completion (see Instructions to Bidders). If the Contractor requests to work on Sundays or declared Utility holidays, an Inspector will be provided but the Contractor must pay for the Inspector's wages for such work. A list of official holidays can be obtained from the City of Oak Creek Engineering Department.

The bid price for each bid item shall include the furnishings of all materials, tools, labor, etc. It shall include saw cutting pavement full depth, execution disposition of surplus material, pipe laying, backfilling, sheeting, shoring, tunneling, auguring, dewatering, furnishing and installing of fittings, connecting to existing water mains disturbed or damaged by the Contractor's operation and clean-up, all as specified. The item numbers referred to below correspond to the item number in the proposal. Contractor shall refer to

the items below for details of the work included.

Item 1 - 8-Inch Diameter PVC Water Main, 1-1/4" T.B.B.F.

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to install 8-inch Water Main, 1 1/4" T.B.B.F. complete in place and ready to use. This item shall include but not be limited to:

- trench excavation
- placement of torpedo sand bedding aggregate
- provide and install 8" PVC piping
- provide and install water main insulation
- provide and install mechanical restraints at required locations
- provide and install tracer wire
- provide and install a triple layer of 6-mil plastic wrapping for any appurtenance requiring stainless steel bolts
- provide and install all 8" PVC bends and fittings at locations indicated on Drawings
- placement and compaction of torpedo sand cover aggregate
- placement and compaction of 1-1/4" traffic bond gravel backfill to bottom of pavement grade
- disinfection of installed 8-inch piping
- pressure testing of installed 8-inch piping
- assisting Utility staff with GPS point collection
- provide temporary support of power and light poles near excavations

The water main shall be placed in the manner indicated in these Detail Specifications and shall conform to the Detail Drawings included with these specifications. Type of backfill shall be as specified.

This item shall be paid based on the contract unit price per lineal foot installed as measured and documented by the Inspector.

Item 2 - Connect to Existing 8-Inch Water Main

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to connect to existing 8-inch water main complete in place and ready to use. These items shall include but not be limited to:

- exposing existing water main to verify location and depth prior to scheduling connections
- provide and install fittings
- provide and install 8" PVC piping
- provide and install mechanical restraints at required locations
- provide and install tracer wire
- provide and install 32 lb. magnesium galvanic anode protection on existing ductile iron pipe in accordance with the detail at the end of these Detailed Specifications
- provide and install a triple layer of 6-mil plastic wrapping for fittings and appurtenances

- requiring stainless steel bolts
- backfill in accordance with the plans with specified materials up to bottom of pavement grade

This item shall be paid based on the contract unit price per each installed as documented by the Inspector.

Item 3 - Hydrant, Lead, and 6-inch Gate Valve

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to furnish and set a hydrant with 6'-6" barrel, with associated hydrant lead and auxiliary valve, together with all work and proper backfilling, complete in place and ready to use, in accordance with the construction plans and these Detailed Specifications. This shall include installation of tracer wire test stations.

This item shall include the hydrant, hydrant lead (of various lengths), and aux. valve, as shown on the plans. The hydrant, lead, and valve shall be restrained back the water main.

This item shall be paid based on the contract unit price per each as documented by the Inspector.

Item 4 – Hydrant Extensions

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to install hydrant extensions at required locations. This item shall include but not be limited to:

- disassemble hydrant to receive extension as required to install extension assembly
- reassemble hydrant with connected extension

The contractor shall insure that all curb & gutter has been completed before commencing work on final grade extensions.

This item shall be paid based on the contract unit price per vertical foot added to hydrant as documented by the Inspector.

Item 5 - 8-inch Gate Valve

The unit bid and contract price for this item shall include but not be limited to all equipment, materials, and labor necessary to install the 82" resilient wedge gate valve complete, in place, and ready to use in accordance with Section VII of these Detailed Specifications.

This item shall be paid based on the contract unit price per each installed as documented by the Inspector.

Item 6 - 1-1/4-inch Polyethylene (PE) Water Service Lateral – Open Cut

The unit bid and contract price for this item shall include all equipment, materials, and labor

necessary to install a 1-1/4-inch Polyethylene (PE) Water Service Lateral in place and ready to use by using the open-cut installation method. This item shall include but not be limited to:

- excavate trench to tap and install corporation stops
- placement of torpedo sand bedding aggregate
- provide and install PE tubing
- connect new service laterals to existing 3/4-inch or 1-inch copper laterals utilizing an adapter appropriate for the size and material
- provide and install tracer wire
- provide and install new curb stop valve and cast iron service box at right-of-way for services where existing boxes are within the right-of-way
- connect new laterals to existing lateral pipe inside the right-of-way for services with boxes outside the right-of-way
- backfill and compact trench with spoil when in ditch/grassy areas and 1 1/4" T.B. in roadway areas to 3" from the existing surface

This item shall be paid based on the contract unit price for each installed as documented by the Inspector.

Item 7 – Asphalt Pavement Removal

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to remove and dispose of designated asphalt pavements indicated on the Drawings. This item shall include providing all labor, tools, and equipment required for the removal and legal disposal of designated pavement but not be limited to:

- pavement removal
- for pavement removal outside of the trench width, the contractor shall remove all pavement taking care to preserve the existing pavement base
- providing dust control
- cleanup of removed pavement area

This item shall be paid based on the contract unit price per square yard removed as documented by the Inspector.

Item 8 – HMA Pavement, Type 3LT 58-28 S, 19.0 mm Lower Layer

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 19.0 mm asphaltic concrete pavement Lower Layer, Type 3LT, Performance Graded Designation of PG 58-28 S, indicated on the Drawings. This item shall include but not be limited to:

- furnishing, hauling and placement of HMA Pavement, 19mm Lower Layer Type 3LT, Performance Designation of 58-28 S, in compliance with WisDOT Standard Specifications Section 460
- existing manhole frame and valve box adjustment
- cleanup

This item shall be paid based on the contract unit price per ton placed as documented by the Inspector.

Item 9 – HMA Pavement, Type 5LT 58-28 S, 9.5 mm Upper Layer

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 9.5 mm asphaltic concrete pavement Upper Layer, Type 5LT, Performance Graded Designation of 58-28 S, indicated on the Drawings. This item shall include but not be limited to:

- furnishing, hauling and placement of HMA Pavement, 9.5mm Upper Layer Type 5LT, Performance Graded Designation of 58-28 S, in compliance with WisDOT Standard Specifications Section 460
- existing manhole frame and valve box adjustment
- cleanup

This item shall be paid based on the contract unit price per ton placed as documented by the Inspector.

Item 10 - 1-1/4 Inch Dense Graded Aggregate Base Course

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 1-1/4" dense graded aggregate base course indicated on the Drawings. This item shall include but not be limited to:

- furnishing, hauling and placement of, 1-1/4" dense graded aggregate base course to an approximate depth of 2" in preparation for pavement
- placement and removal of aggregate ramps for access at driveways and intersections
- use for shoulder material
- water dispersion
- finish grading for pavement
- compaction
- proof-rolling
- cleanup

This item shall be paid based on the contract unit price per ton placed as documented by the Inspector.

Item 11 – Stone Shoulder, 3/4" T.B.

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 3/4" traffic bond material as indicated on the Drawings. This item shall include but not be limited to:

- furnishing, hauling and placement of, 3/4" T.B. for shoulders.
- compaction
- cleanup

This item shall be paid based on the contract unit price per ton placed as documented by the Inspector.

Item 12 – Sawcutting Existing Pavement Full Depth

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide sawcutting of existing pavements. This item shall include but not be limited to:

- layout and marking
- full-depth sawcutting
- cleanup

This item shall be paid based on the contract unit price per lineal foot as documented by the Inspector.

Item 13 – Excavation Below Base, 1-1/4 Inch Dense Graded Aggregate Base Course

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to excavate poor base materials and replace with 1-1/4" dense graded aggregate base course indicated on the Drawings. This item is intended for excavations of 18-inches or less in depth. This item shall include but not be limited to:

- provide proper equipment to perform proof rolls as needed
- excavate the existing base to depths indicated by the Engineer and haul excess material off site
- prepare subgrade by compacting
- furnishing, hauling and placement of, 1-1/4" dense graded aggregate base course to meet the existing base course elevation
- cleanup

This item shall be paid based on the contract unit price per cubic yard placed as documented by the Inspector.

Item 14 – Excavation Below Base, Breaker Run Base Course

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to excavate poor base materials and replace with breaker run aggregate base course indicated on the Drawings. This item is intended for excavations of greater than 18-inches in depth. This item shall include but not be limited to:

- provide proper equipment to perform proof rolls as needed
- excavate the existing base to depths indicated by the Engineer and haul excess material off site
- prepare subgrade by compacting
- furnishing, hauling and placement of, breaker run aggregate base course to meet the existing base course elevation

- cleanup

This item shall be paid based on the contract unit price per cubic yard placed as documented by the Inspector.

Item 15 – Pavement Marking, Epoxy, 4-inch White Edge Line

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 4-inch white edge line epoxy pavement marking on new pavements. Comply with WisDOT Standard Specifications Section 646. This item shall include but not be limited to:

- layout and marking
- placement of 4-inch epoxy markings and glass beads
- protection of pavement markings until safe for vehicular traffic
- cleanup

This item shall be paid based on the contract unit price per lineal foot as documented by the Inspector.

Item 16 – Pavement Marking, Epoxy, 4-inch Yellow Broken Center Line

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 4-inch yellow broken center line epoxy pavement marking on new pavements. Comply with WisDOT Standard Specifications Section 646. This item shall include but not be limited to:

- layout and marking
- placement of 4-inch epoxy markings and glass beads
- protection of pavement markings until safe for vehicular traffic
- cleanup

This item shall be paid based on the contract unit price per lineal foot as documented by the Inspector.

Item 17 – Pavement Marking, Epoxy, 4-inch Yellow Double Center Line

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 4-inch yellow broken center line epoxy pavement marking on new pavements. Comply with WisDOT Standard Specifications Section 646. This item shall include but not be limited to:

- layout and marking
- placement of 4-inch epoxy markings and glass beads
- protection of pavement markings until safe for vehicular traffic
- cleanup

This item shall be paid based on the contract unit price per lineal foot as documented by the

Inspector.

Item 18 – Pavement Marking, Epoxy, 18-inch White Stop bars

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 18-inch white epoxy pavement marking on new pavements. Comply with WisDOT Standard Specifications Section 646. This item shall include but not be limited to:

- layout and marking
- placement of 18-inch epoxy markings and glass beads
- protection of pavement markings until safe for vehicular traffic
- cleanup

This item shall be paid based on the contract unit price per lineal foot as documented by the Inspector.

Item 19 – Pavement Marking, Epoxy, 6-inch White Cross Walks

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide 6-inch white epoxy pavement marking on new pavements. Comply with WisDOT Standard Specifications Section 646. This item shall include but not be limited to:

- layout and marking
- placement of 6-inch epoxy markings and glass beads
- protection of pavement markings until safe for vehicular traffic
- cleanup

This item shall be paid based on the contract unit price per lineal foot as documented by the Inspector.

Item 20 – Restoration of Lawns and Parkways

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to provide the restoration of all lawns, ditches, and parkways disturbed by the construction activities, complete in place and ready to use. This item shall include but not be limited to:

- providing and placing at least 4-inches of raked topsoil
- place Type C salt tolerant lawn seed by hydro-seeding, in accordance with the Standard Specifications Section 2.7.4
- place Class I Urban erosion mat on all areas of the restored lawns and ditches utilizing all biodegradable materials.
- all incidental work related to ditch and wetland restoration required by local, state, and federal ordinances, statutes, permits, and regulations

This item shall be paid based on the contract unit price per lump sum as documented by the

Inspector.

Item 21 – Erosion Control

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to install Erosion Control items complete in place and ready to use. This item shall include but not be limited to:

- furnishing, hauling, and placement of inlet protection and ditch checks
- all incidental work related to erosion control required by local, state, and federal ordinances, statutes, permits, and regulations
- maintaining and removal of all temporary erosion control devices

This item shall be paid based on the contract unit price per lump sum as documented by the Inspector.

Item 22 - Traffic Control

The unit bid and contract price for this item shall include all equipment, materials, and labor necessary to install all Traffic Control as shown on the construction drawings. This item shall include but not be limited to:

- setting, maintaining, and removal of traffic control devices in accordance with the plans and specifications including flagging operations
- daily checks and maintenance
- adherence to the Manual on Uniform Traffic Control Devices, latest edition

This item shall be paid based on the contract unit price per lump sum as documented by the Inspector.

APPENDIX A

BEDDING AND COVER MATERIAL GRADATION

Sieve	Size of Opening (mm)	Cumul. Wt. Retained	%Retained	% Passing	Specs		Pass or Fail
					Low	High	
2	50.8	0.0	0.0	100.0			
1 1/2	38.1	0.0	0.0	100.0			
1	25.4	0.0	0.0	100.0			
3/4	19.05	0.0	0.0	100.0			
1/2	12.7	0.0	0.0	100.0			
3/8	9.525	0.0	0.0	100.0	100	100	Pass
#4	4.75	21.7	3.8	96.2	90	100	Pass
#8	2.36	84.0	14.6	85.4			
#16	1.18	147.8	25.7	74.3	45	85	Pass
#30	0.6	259.6	45.1	54.9			
#40	0.425	369.7	64.2	35.8			
#50	0.3	474.9	82.5	17.5	5	30	Pass
#100	0.15	558.3	97.0	3.0	0	10	Pass
#200	0.075	569.6	99.0	1.0	0	3.5	Pass
Pan	#N/A	569.7	99.0	1.0			
Percentage of Error (%):			0.0	Pass			