

# Project Specifications

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Owner: City of Kalamazoo

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Project Title: Beekman Court Water Main Replacement

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## GENERAL

The intent of this project is to install new ductile iron water main, connect the new water main to existing water mains, provide service connections to the new water main, and properly abandon potable wells.

Owner = City of Kalamazoo

Engineer = City of Kalamazoo, Eric Sajtar or Anna Crandall

All materials and labor shall be provided by contractor, unless specifically stated otherwise.

### 1. SPECIFICATIONS

The work under this contract shall be performed in accordance with the attached specifications titled:

“Standard Specifications for Water Main and Service Installation 2021”

with the following modifications and additions in addition to the above specifications. In the event of a conflict between the above specifications and these "Project Specifications", the "Project Specifications" shall prevail.

The Michigan Department of Transportation Standard Specifications for Highway Construction 2020 Edition are included by specific paragraph reference.

### 2. PROJECT AREA

The Contractor shall confine his work to the project area needed for the work. Any other area required for equipment, material storage or for construction operation shall be the Contractor's responsibility. The Contractor shall receive written permission from the Owner's of adjacent properties before using any portion of the property outside the project area.

The Contractor shall take all necessary precautions to minimize disturbances to the area during the construction period. All damage caused by the Contractor or sub-contractors to the property outside the project area shall be repaired at no expense either to the property owner or to this project.

### 3. SUMMARY OF WORK

Work to be constructed in this project generally includes furnishing and installing the following:

Approximately 500 LF Water Main Installation  
Approximately 6 Water Service Replacements

All labor, materials, equipment, transportation, and activity or costs necessary for completion of this work shall be included in this contract unless specifically stated otherwise.

4. PERMITS

EGLE Water Main Permit  
COK Right of Way Permit  
COK SESC Plan

5. SCHEDULING

The Contractor shall file a construction schedule with the Engineer and Owner and receive approval in writing prior to commencing construction.

The Construction Observer shall coordinate/communicate schedule of shut down and reconnection of service with Resident/Bill Payer for each property.

Certain areas within the project may require street closing. The Contractor shall coordinate his work with the Owner and shall take the necessary precautions required by the Owner to minimize traffic interference.

All costs associated with scheduling shall be considered incidental to the project.

6. MAINTENANCE OF TRAFFIC

Local traffic shall be maintained at all times during construction. All traffic control devices and placement shall be in accordance with the current MDOT Standards and Specifications for Construction or as directed by engineer.

During the progress of work, the Contractor shall accommodate vehicular traffic in road rights-of-way as provided in these specifications. Access to fire hydrants, water and gas valves shall be maintained at all times during construction.

Where streets and driveways are obstructed, the contractor shall place and maintain temporary driveways, ramps, etc., which, in the opinion of the Engineer, are necessary to accommodate the public. The Contractor shall provide access at night and on weekends for all properties in the immediate construction area. Emergency vehicle access shall be maintained at all times.

The Contractor shall be required to keep the surface of the roadway in a smooth, dust free and accessible condition for adjoining properties at all times. Dust control shall also apply to paved roads in the project area and are to be kept clean by the use of a mechanical sweeping device. Maintenance shall consist of grading the disturbed or graveled surface and maintaining the surface free of “wash-boards” and “chuck-holes”, suitable for traffic.

The Contractor shall inform the schools, local police, ambulance services and fire department in advance of his program of street obstruction and detours. Detouring

and construction signing shall be in accordance with Michigan Manual of Uniform Traffic Control at the direction of the Owner.

Prior to construction the Contractor shall submit and obtain Owner approval for his traffic control plans, including detour plans and schedules.

The Owner must approve all detours. The Contractor shall pay for all costs of detours. All costs shall be included under proposal item "Traffic Control".

Cost of maintaining traffic including detouring, construction signing and traffic control shall be paid as specified in UNIT PRICES - MEASUREMENT AND PAYMENT.

7. LIMITATION ON OPERATIONS

The Contractor shall at all times conduct his work so that there is a minimum of inconvenience to the residents, businesses and industries within the project area.

8. PROTECTION OF WORK

The Contractor shall protect the work until it is accepted by the Engineer and Owner. Any part of the completed work that is damaged prior to acceptance by Engineer and Owner shall be replaced at the Contractor's expense.

9. DUST CONTROL

All haul roads, detour roads and other public and private roads (including backfilled trenches), driveways and parking lots used by the Contractor must be maintained in a dust free condition during the life of this Contract. The control of dust shall be accomplished by sweeping and by the application of dust control materials. The materials and methods of application shall be approved by the Engineer and shall be applied as often as is necessary to control the dust, or if directed to do so by the Owner's representative. If directed to do so, the Contractor shall complete the dust control measures within 24 hours. All spillage on public roadways used as haul routes shall be cleaned daily.

Costs of providing dust control shall be included in the major items of construction. Therefore, no additional payment shall be made.

10. MATERIAL HAUL ROADS

Any spillage on public roadways used as haul routes shall be cleaned daily.

Use of gravel roads is prohibited. Permission to use gravel roads shall be given to Contractor only if Contractor assumes responsibility of maintenance, dust control and restoration of the gravel roads to the satisfaction of the Owner.

11. DIGITAL PHOTOGRAPHS

The entire project area has been digitally photographed. These photographs will be available to the Contractor, Engineer, and Owner during construction of the project.

12. TOPSOIL STRIPPING

The Contractor shall perform clearing, grubbing and stripping of topsoil. Stripped topsoil shall be stockpiled on the site. The Contractor shall be allowed to use this stockpiled material when placing topsoil on the site and shall provide additional screened topsoil as necessary to meet the thickness specified. No fill shall be placed over topsoil or organic material. At completion of construction, topsoil shall be spread uniformly over the disturbed areas. Any excess topsoil shall become the property of the Contractor and properly disposed of off site.

#### 13. PROTECTION OF NATURAL RESOURCES

The Contractor shall take all necessary steps to prevent damage to fish and game habitats and to preserve the natural resources of the State. Excavation and backfill shall be carried out to minimize discharge of damaging material into any stream, lake, or reservoir.

The Contractor shall exercise caution in the discharge of waters from pumps, deep wells, or well point systems in order that such discharges do not cause erosion, siltation, soil depositions, etc., in sewers, streams or other water courses or drainage structures.

The Contractor shall not permit any sand or debris of any kind to enter the existing ditches, streams, storm sewers or culverts.

The rules and regulations of all work shall comply with Part 301 (Inland Lakes and Streams Act), Part 91 (Soil Erosion and Sedimentation Control Act), and Part 303 Wetlands Protection Act) of Michigan Public Act 451, 1994.

#### 14. SOIL EROSION AND SEDIMENTATION CONTROL (Part 91, P.A. No. 451)

All work shall comply with the rules and regulations of the Michigan Soil Erosion and Sedimentation Control Act (Part 91, Michigan Public Act No. 451, 1994). These measures have been developed from the Michigan Unified Keying System, described in "Michigan Soil Erosion and Sedimentation Control Guide Book" published by the Land and Water Management Division of MDEQ.

All of these measures shall be in place prior to excavating where required and shall be maintained until construction is complete except, "seeding with mulch matting" or aggregate cover, shall be done immediately after the pipe installation, where possible.

#### 15. EXCESS DIRT

The Contractor shall remove all excess material resulting from construction and arrange for disposal at a suitable site. Excess material shall be the property of the Contractor and shall be disposed of properly by the Contractor.

#### 16. USE OF SLAG

No slag shall be permitted.

#### 17. EXISTING UTILITIES

As an aid to the Contractor, various utilities and underground structures are shown on the plans. All information concerning shown utilities were taken from field topo and from available records, but the Owner and the Engineer do not guarantee that the location shown on the plans is accurate, nor that additional underground utilities or structures may not be encountered.

The Contractor shall notify Miss Dig and Utility Companies for utility locations before starting any open cut or tunnel construction or before drilling holes for construction purposes. Contractor shall cooperate with the utility companies in any repair, relocation or other work to be performed on the utility caused by the construction of the contract.

The Contractor shall be fully responsible for locating, protecting, supporting and repairing all existing public and private utilities. Items in this category shall include, but are not limited to; water mains and services, gas mains and services, storm sewers and catch basins, telephone, electric, and cable TV wire, septic systems and plumbing, etc. Such work shall be considered incidental to the major items of construction unless otherwise noted on the construction drawings.

A. Contractor shall coordinate access to private property with the Owner or Engineer to locate all private utilities.

B. Sewers (Storm, Culverts, and Under drains)

City of Kalamazoo provides storm sewer service in the project area.

C. Sanitary Sewer  
City of Kalamazoo

D. Water Main  
City of Kalamazoo

E. Cable  
Charter and/or Xfinity provides cable service in the project area.

F. Electric Services  
Consumers Energy operates the electrical system in the project area.

G. Gas  
Consumers Energy provides natural gas service in the project area.

H. Telephone  
AT&T Michigan provides telephone service in the project area.

I. Miss Dig

The Contractor shall contact "MISS DIG" not less than 72 hours before starting construction for assistance in locating utilities or for any work to be done on utilities. The toll free phone number is (800) 482-7171.

#### 18. PROTECTION OF UTILITIES

The Contractor shall furnish, install, use, and maintain adequate sheeting, shoring, bracing, and stabilization methods required to insure the integrity of existing underground utilities both during and after completion of construction. When necessary, the Contractor shall shore and brace existing utility poles which interfere with construction.

The Contractor shall be responsible for repairing all cracks, leaks, breaks, and defects in the utilities during the standard contract guarantee period of two years after acceptance of construction, at no additional cost either to the project owner or the owner of the utility.

Should service provided by public utilities be interrupted by the Contractor, the Contractor shall be responsible for returning all public utilities to normal working order.

Locations of existing utilities are shown using available records. The Owner and the Engineer do not guarantee that the locations shown on the plans are accurate. Additional underground utilities or structures may be encountered. No additional payment will be made due to unknown or inaccurately located utilities.

The Contractor shall notify Miss Dig and Utility Companies for utility locations before starting any earth moving operations.

The Contractor shall coordinate daily construction activities with that of utility companies which may be relocating some of their facilities as required by the project. No claim for additional compensation will be allowed based on delays caused by utility relocations.

Cost for complying with this specification shall be included in major items of work in the proposal. Therefore, no additional payment for these items shall be made.

#### 19. UTILITY POLES

When necessary, the Contractor shall shore and brace utility poles that interfere with construction. Shoring and bracing shall be such that sinking or excessive tilting does not take place. All relocation or removing and replacing of power poles, light poles and telephone poles shall be done in accordance with Utility Owners Standards and all expenses shall be paid for by the Contractor. All arrangements for relocations with the Utility Company Owners shall be done by the Contractor at least 72 hours prior to need for relocations.

## 20. TELEPHONE

An emergency telephone system (listing of number) shall be set up and given to the Engineer and Owner so that the Contractor may be immediately notified of any unsafe conditions or emergencies encountered during times that the Contractor is not working on the project.

The Contractor shall provide a local number and a local employee so that he may be contacted at any time (including weekends and holidays) 24 hours a day.

## 21. EXISTING PRIVATE FACILITIES

Existing wells, septic tank, tile field, lawn sprinklers or other facilities disturbed or damaged by the Contractor shall be repaired and restored to working condition before the end of that working day. Under no circumstances will such interruptions be extended overnight. The Contractor shall take necessary precautions not to allow any discharge from the above to enter any lake, stream or canal along the line of work. Costs for repairs or temporary service caused by the Contractor shall be at his own expense and no claims for extra work will be allowed.

All precautions necessary shall be taken to insure no damage occurs to homes, including basements.

## 22. MAIL BOXES

The Contractor shall temporarily relocate mailboxes interfering with construction so that mail service is not interrupted. Mailboxes shall be replaced in a condition, elevation and location equal to that existing prior to construction in accordance with U.S. Post Office requirements. Costs are incidental.

## 23. MATERIAL TESTING

The Owner reserves the right to sample and test any of the materials required for the proposed construction, either before or after delivery to the project and to reject any material represented by any sample which fails to comply with the minimum requirements specified.

The Contractor shall furnish all materials reasonably required for sample testing and analysis necessary for the testing of materials as required by these specifications.

The cost of the above testing shall be paid for by the Owner. If any pipe fails to meet the specified requirements, all pipe represented by the sample shall be rejected unless the Contractor can demonstrate through additional tests, at his own expense, that the remainder of the pipe is satisfactory.

Contractor to contract for third party material density testing which shall be paid for under the allowance bid item "Testing".

## 24. COORDINATION

The Contractor shall coordinate construction with the Owner and Engineer. Contractor shall attend periodic coordination meetings scheduled by the Engineer as necessary.

## 25. RECORD PLANS

The Contractor shall maintain a set of record drawings throughout the project. The Contractor shall make the drawings available to the Owner and Engineer in a timely manner upon request. A set of record drawings shall be submitted to the Engineer at the completion of the project.

## 26. PAYMENT

Payment shall be made for the proposal items only. All of the work specified above, in UNIT PRICES - MEASUREMENT AND PAYMENT, and/or indicated on the Plans shall be considered included in the unit prices shown on the proposal. Work covered by the Prescriptive Work Allowance shall be performed only after Contractor has received written notice by Engineer and/or Owner to perform said work.

Work which, in the opinion of the Engineer or Owner, is considered incidental to or is required as a result of Contractor's operations in performance of the project covered by designated work items will not be considered for payment under the Prescriptive Work Allowance item.

Definitions of abbreviations for measurement/payment:

LF	=	Lineal Foot
EA	=	Each
VF	=	Vertical Foot
LS	=	Lump Sum
CY	=	Cubic Yard
SY	=	Square Yard
SF	=	Square Foot
TON	=	Tonnage