

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR  
LIVE TAP**

Wightman/PMH

1 of 2

12/29/2023

**a. Description**

For the unit prices bid for the various live tap connections to existing mains as defined below under the heading "Measurement and Payment", the CONTRACTOR shall do all work necessary to connect the proposed mains to the existing mains as shown on the plans and as herein specified.

**Scope**

1. This Section includes installing water main systems.
2. Connection of proposed water main to existing water main shall be in conformance with requirements of this Section.
3. This Section shall include excavating, installing, testing, disinfecting, and backfilling all required water main pipe, water service pipes, water main appurtenances, water service, and other work incidental to the water main unless specifically included under other Items.
4. This work shall also consist of providing as-constructed plans of the completed work as detailed in the special provision for Water Main and Fittings.
5. Minimum 72 hour advance notice to the City's Project Manager is required prior to live tapping existing water mains.

**Work Included Under Other Contract Items**

Water Main and Fittings  
Valves and Boxes  
Fire Hydrants

**b. Materials**

Provide materials in accordance with section 823 of the MDOT Standard Specifications for Construction and the "City of Kalamazoo Standard Specifications for Water Main and Service Installation 2021".

**c. Construction**

Complete the live tap in accordance with the "City of Kalamazoo Standard Specifications for Water Main and Service Installation 2021" and as specified herein. The work under the various live tap items shall include all work required to connect the proposed main to the existing main (ductile iron, cast iron, or plastic) as shown on the plans. Included shall be furnishing and installing any required fittings, including but not limited to tapping sleeves, adjacent tapping valves, and any other work and materials between the tapping sleeve and valve required to tap the existing main without shutting down the existing main. The installation of all pipe, valves and fittings beyond the tapping valve shall be paid for under their respective bid items.

The existing and required fittings shown on the plans are based upon available information. The CONTRACTOR shall expose the existing main and fittings at the proposed connection and shall determine the actual fittings required.

**d. Measurement and Payment**

The CONTRACTOR will be paid his unit price for each existing water main live tap, regardless of main material, as shown on the plans.

The Contract Items included under this category of "Live Tap", are defined as follows:

<u>Pay Item</u>	<u>Pay Unit</u>
Live Tap, 6 inch x 6 inch	Each
Live Tap, 8 inch x 8 inch	Each

The item for **Live Tap, \_\_ inch x \_\_ inch** shall include furnishing and installing fittings, tapping sleeves, tapping valve, and mechanical joints required to connect the proposed main to the existing main. It also includes all labor, equipment and materials required to connect the proposed main to the live existing main and any excavation, dewatering, backfill, compaction and testing required to complete work as described herein.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**INSULATION BOARD**

Wightman/PMH

1 of 2

12/29/2023

**a. Description**

This work consists of insulating the proposed or existing sanitary sewer, water main, or service lines at locations shown on the plans, or determined at the time of construction, to protect against the penetration of frost. This work includes furnishing and placing insulation board to the prepared grade. It also includes excavating, backfilling, shaping, and compaction necessary to install the insulation board.

**b. Materials**

Furnish insulation that is rigid, extruded polystyrene board meeting *ASTM C578, Type VII*, having a nominal board thickness of 2 inches, minimum compressive strength of 60 psi (*ASTM D1621*), minimum R value of 5.0 degree Fahrenheit square-foot hour per British thermal unit ( $^{\circ}\text{F ft}^2 \text{ h/BTU}$ ) per inch and 0.1 percent max water absorption (*ASTM C272/C272M*). Furnish the board in minimum 4 foot by 8 foot sheets unless otherwise approved by the Engineer, and of the cumulative thickness as indicated on the plans or as determined at the time of construction and approved by the Engineer. Trim the edges square and ensure there is not more than 1/4-inch bow measured against a straightedge.

Furnish Class II granular backfill in accordance with subsection 902.07 of the Standard Specifications for Construction.

**c. Construction**

It is necessary to insulate the sanitary sewer, water main, or service lines wherever indicated on the plans or determined at the time of construction. Hand dig as necessary to verify the location of the sanitary sewer and water main. Place the insulation board on a prepared grade 6 inches above the top of the pipe, or a minimum of 2.5 feet below finished grade and fastened with skewers or other means approved by the Engineer, so that backfill compaction requirements of the trench can be met. Trim the surface of the grade to a smoothness of  $\pm 3/4$  inch per 10 feet. With approval of the Engineer, the specified smoothness may be obtained by the placement of a thin layer of granular material Class II. Ensure where necessary to place more than one layer of insulation board, the joints are staggered. Ensure backfill and compaction equipment is approved by the Engineer.

Asphalt or other material having a temperature exceeding 150 °F must not be placed in direct contact with the insulation board.

**d. Measurement and Payment**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
Insulation Board, 2 Inch	Square Foot

**Insulation Board, 2 inch** includes furnishing, cutting and installing the insulation board complete including fasteners and any required granular material Class II. Also, the Contractor is responsible for hand digging to verify the location and elevation of the water main or service line.

**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**GATE VALVE AND BOX, 8 INCH, MODIFIED**

Wightman/PMH

1 of 1

01/03/2025

**a. Description**

This work consists of furnishing, installing and adjusting to finished grade gate valve and boxes in accordance with Subsection 403.03C and 823.03 of the 2020 MDOT Standard Specifications for Construction and the 2021 City of Kalamazoo Standard Specifications for Water Main and Service Installation.

**b. Materials**

Valves and valve boxes shall be supplied new by the Contractor, unless otherwise specified. No second hand or salvaged materials shall be permitted. Valves and valve boxes shall conform to the City of Kalamazoo Standard Specifications for Water Main and Service installation as mentioned above.

Use MDOT P-NC Concrete without fly ash and coarse aggregate 6AA meeting the requirements of section 1006.

**c. Construction**

Install gate valves on the new water main per City of Kalamazoo specifications in locations as shown on the plans or as directed by the engineer.

Adjust gate boxes to finish grade after top course HMA paving using the Mr. Manhole Method or approved equal. Concrete shall be uniformly placed around the valve box to a depth specified by the Engineer with the top of the concrete flush with the top of the final course of HMA. Concrete collar thickness shall be 6-inches minimum.

**d. Measurement and Payment**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
Gate Valve and Box, 8 inch, Modified	Each

The Unit price for **Gate Valve and Box, 8 inch, Modified** includes saw cutting using the Mr. Manhole Method or other City approved method; removing and replacing existing pavement, curb, or curb and gutter; adjusting the water shutoff or gate box to final grade, and placing the concrete collar.

**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**CONNECT TO EXISTING MAIN, \_ INCH**

Wightman/PMH

1 of 2

12/29/2023

**a. Description**

For the unit prices bid for the various connections to existing mains as defined below under the heading "Measurement and Payment", the CONTRACTOR shall do all work necessary to connect the proposed mains to the existing mains as shown on the plans and as herein specified.

Scope

1. This Section includes installing water main systems.
2. Reconnection of proposed water main to existing water main shall be in conformance with requirements of this Section.
3. This Section shall include excavating, installing, testing, disinfecting, and backfilling all required water main pipe, water service pipes, water main appurtenances, water service, and other work incidental to the water main and/or water service installation unless specifically included under other Items.
4. This work shall also consist of providing as-constructed plans of the completed work as detailed in the special provision for Water Main and Fittings.
5. Minimum 72 hour advance notice to the City's Project Manager is required prior to connecting to existing water mains.

Work Included Under Other Contract Items

Water Main and Fittings  
Valves and Boxes  
Fire Hydrants

**b. Materials**

Provide materials in accordance with section 823 of the MDOT Standard Specifications for Construction and the "City of Kalamazoo Standard Specifications for Water Main and Service Installation 2021".

**c. Construction**

The work under the various connection items shall include all work required to connect the proposed main to the existing main (ductile iron, cast iron, or plastic) as shown on the plans. Included shall be removing any existing plugs or fittings, furnishing and installing any required fittings, including but not limited to cut-in-tees, cut-in-sleeves, and any other work and materials required to switch over to the new main. The installation of all valves and fittings other than those required to connect to the existing main shall be paid for under their respective bid items.

The existing and required fittings shown on the plans are based upon available information. The CONTRACTOR shall expose the existing main and fittings at the proposed connection and shall determine the actual fittings required. The CONTRACTOR shall be responsible, with the aid of the OWNER and the ENGINEER, for determining the location of any existing valves necessary to isolate and shut down the existing main for the connections. The CONTRACTOR shall have all required fittings and equipment ready for installation prior to shutting off the existing main to minimize the shut down period. The CONTRACTOR shall coordinate with the Department of Public Services and the Engineer to determine the timing for the connections.

Do not disturb or cut into existing in-service water mains. If the operation of valves on existing water mains is required, notify the City of Kalamazoo a minimum of 3 working days in advance. CONTRACTOR shall not operate existing valves without the City's Project Manager's approval. Coordinate scheduling of water main connections with the City of Kalamazoo. Secure the ENGINEER or authorized representative's approval of the schedule before beginning the work. Connections to existing water mains shall be performed between 8:00 AM and 4:00 PM Monday through Friday. Water shall be turned on by 4:00 PM on the day of the connection.

1. The plans show the locations of existing utilities in accordance with available data. If the work requires precise information on the location of existing utilities, the Contractor shall expose existing utilities to determine the actual locations.
2. Minimize the out of service time for existing water mains to a maximum of 4 hours. Minimize interference with the water supply if abandoning existing water mains and incorporating new water mains into the water system.
3. Disinfect all pipe and fittings with 1% chlorine solution prior to installation.
4. If required and directed by the City, installation of one corporation stop and copper tubing to facilitate flushing and sampling when placing the water main back into service. Upon receipt of acceptable sample results, the copper tubing shall be removed and a copper disc shall be installed in the corporation stop.

**d. Measurement and Payment**

The CONTRACTOR will be paid his unit price for each proposed water main connected to existing water main, regardless of main material, as shown on the plans.

The Contract Items included under this category of "Connection to Existing Mains", are defined as follows:

<u>Pay Item</u>	<u>Pay Unit</u>
Connect to Existing Main, 8 inch	Each

The item for **Connect to Existing Main, \_\_ inch** shall include furnishing and installing caps, plugs, fittings, sleeves, and mechanical joints required to connect the proposed main to the existing main. It also includes all labor, equipment and materials required to connect the proposed main to the existing main and any excavation, dewatering, backfill, compaction and testing required to complete work as described herein.

**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**MAINTAINING TRAFFIC**

Wightman/PMH

1 of 6

01/03/2025

**a. Description.** This work consists of all labor, materials, and equipment required for maintaining traffic in accordance with this special provision for water main extension and roadway resurfacing on Riverview Drive in the City of Kalamazoo, Kalamazoo County.

**b. General.** Maintain traffic according to Sections 104.11, 812 and 922 of the Michigan Department of Transportation *2020 Standard Specifications for Construction*, the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), including any Supplemental Specifications, and as specified herein.

1. The Contractor shall notify the Engineer, the City of Kalamazoo, the City of Parchment, Road Commission of Kalamazoo County (RCKC), Metro Transit, local police department, local fire department, and other emergency response units a **minimum of 10 business days** prior to the implementation of any detours, road closures, lane closures, or major traffic shifts.
2. Coordinate operations with Contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA) as described below. The Contract Maintenance Agency will coordinate their operations with the Engineer to minimize the interference with the Contractor. No additional payment will be made to the Contractor for the joint use of the traffic control items.
3. During all times of construction, access to local businesses and drives for emergency vehicles shall be maintained by the Contractor until the project is completed unless a temporary closure is approved in writing by the Engineer. This work will not be considered for additional payment but shall be included in the payment for Minor Traf Devices.
4. The Contractor shall conduct their work in such a manner so no excavations are left open overnight. If this is not possible, the Contractor shall provide and install a temporary fence to protect the excavation at their own expense. Whenever possible, the Contractor shall use a trench box and backfill all excavations and/or trenches and cover or protect the trench box at the end of each work day. No excavations and/or trenches are to be left open overnight unless a full closure is in place. Payment for this work shall be included in Minor Traf Devices.

**c. Relations and Responsibility to the Public.**

1. Notification shall be provided to residents/businesses directly affected by the proposed work via door hanger notices no less than 72 hours before the portion of the road where their property is located is planned to receive work. The Contractor will provide a pre-printed door hanger to carry the Contractor's message to the residents/businesses. Message content must be approved by the Engineer prior to printing and distribution. The responsibility for filling out the door hangers and distributing them will be the Contractor's. Payment for this work will be paid separately, but payment will be included in the item for

Minor Traf Devices. No work shall be performed in each section of the project prior to the affected residents/businesses have been notified via distribution of door hangers.

2. 24 hours before every construction operation that will substantially affect a resident or business adjacent to the project site, (such as driveway closures, mailbox relocation, etc.) the Contractor will notify affected residents or businesses. The Contractor shall assist the Engineer and/or Owner in coordinating work and mitigating impacts to the extent possible while maintaining construction schedules.

**d. Construction Influence Area (CIA).** The CIA includes the right-of-way of the following roadways, within the approximate limits described below:

1. Riverview Drive from E Mosel Avenue to Espanola Avenue.
2. In addition, the CIA shall include the rights-of-way of any intersecting roads adjacent to the work zone for a distance of approximately 1,000 feet in advance of Riverview Drive. These roads include Commerce Lane, Espanola Avenue and E Mosel Avenue.

**e. Traffic Restrictions.**

1. No work shall be performed during the Memorial Day, Independence Day, or Labor Day holiday periods as defined by MDOT and the City of Kalamazoo.
2. The City of Kalamazoo observes additional internal holidays defined in the table below. The Contractor may perform work on these Holidays but is advised City Staff will be unavailable. An extension of time or additional payment will not be granted for delays due to being unable to contact City Staff on these days.

<i>Good Friday</i>	<i>Juneteenth</i>	<i>Veteran's Day</i>
April 18th	June 19th	November 11th

3. All work shall be done between the hours of 7 a.m. to 7 p.m. (Monday – Saturday) unless otherwise specified herein. Work done outside of the times specified herein will be at the discretion of the Engineer and any additional cost for maintaining traffic shall be borne by the Contractor.
4. No work shall be done on Sunday unless otherwise specified herein or approved by the Engineer in writing. The Contractor shall request permission to work no later than 12:00 p.m. the Wednesday prior to the weekend they are requesting to work.
5. The arrow board, signs, and channelizing tapers for any flag control operations shall be placed at locations approved by the Engineer for adequate visibility to oncoming traffic.
6. The minimum lane width throughout the CIA shall be 10 feet.
7. Maintain access to commercial and residential properties at all times. Part-width driveway construction will be required. All driveway closures must be approved by the Engineer. Where a driveway is closed or partially closed, the adjacent driveway must remain open to traffic. The Contractor shall coordinate their work with the impacted property owners and give a minimum of 3 days' notice prior to closing a driveway.

8. Utilize intermediate traffic regulators during the reconstruction of driveways with commercial traffic. The cost of all required traffic regulators is included in the payment for Traffic Regulator Control.
9. Maintain access for pedestrians to all commercial and residential properties.
10. Cover all existing regulatory, warning, and construction signs that are not applicable during construction.
11. The Contractor must submit a work zone traffic control plan to the Engineer in accordance with section 104 of the 2020 MDOT Standard Specifications for Construction and a haul route plan. The Engineer will have seven (7) calendar days to review the plan for acceptance or provide comments for plan revisions required to obtain acceptance.
12. The Contractor shall comply with local noise ordinances, which are available on the City of Kalamazoo's website, except for any night work specified herein.

**f. Traffic Control.** The traffic control required by this Special Provision for work on Riverview Drive is to erect and maintain signs for through traffic when specified. Maintain local traffic as provided herein. An alternate traffic control plan may be used by the Contractor, subject to review and approval by both the Engineer and the Local Agency. The Contractor shall provide access to all properties within the Construction Zone for the duration of the project.

The proposed staging is to consist of three (3) phases. Phase I and Phase II described in this Special Provision is depicted on plan sheets C008 and C009. Phase III is for cold milling and HMA paving.

*Phase I: Riverview Drive Water Main Crossing*

Prior to beginning contract work for Phase I, set up traffic control as depicted on sheet C008 of the plans. Contract work for Phase I includes:

1. Sawcutting and removing existing HMA surface and concrete curb and gutter.
2. Installing proposed water main crossing of Riverview Drive.
3. Live tapping existing 6" water main adjacent to Shoppers Lane.
4. Backfilling water main trench.
5. Installing sand subbase and aggregate base.
6. Installing 3" HMA base course in water main trench.
7. Installing 4" of HMA hand patching as necessary in water main trench to facilitate maintenance of traffic in Phase II.

Phase I water main installation is shown on sheet C006 of the plans. Phase I proposed water main is from approximately Sta. 30+65 to Sta. 31+80. After completing proposed water main installation, the water main trench should be backfilled, sand subbase and aggregate base should be installed, and 3" of HMA base should be installed. 4" of HMA hand patching will be installed in the Phase I water main trench (limits to be determined by the engineer in the field) to facilitate maintaining traffic in Phase II.

Phase II: Riverview Drive Mainline Water Main

Prior to beginning contract work for Phase II, set up traffic control as depicted on sheet C009 of the plans. Contract work for Phase II includes:

1. Sawcutting and removing existing HMA surface, concrete curb and gutter, and sidewalk.
2. Installing proposed mainline water main along Riverview Drive.
3. Live tapping and connecting to existing water main where noted on the plans.
4. Backfilling water main trench.
5. Installing sand subbase and aggregate base.
6. Installing 3" HMA base course in water main trench.
7. Installing HMA hand patching as necessary in the water main trench to maintain driveway access.

Phase II water main installation is shown on sheets C004, C005 and C006 of the plans. Phase II proposed water main is from approximately Sta. 31+80 to Sta. 32+05 and Sta. 14+30 to Sta. 23+45. After completing proposed water main installation, the water main trench should be backfilled, sand subbase and aggregate base should be installed, and 3" of HMA base should be installed. HMA hand patching will be needed in the water main trench at select locations to maintain access to driveways. Hand patching limits to be determined by the engineer in the field.

Phase III: Cold Milling, HMA Paving, Pavement Markings and Restoration

Contract work for Phase III shall be completed one half of the roadway at a time using lane shifts / tapers and traffic regulators as needed. Contract work for Phase III includes:

1. Cold milling existing HMA pavement to an average depth of 4".
2. Installing 2" HMA leveling course.
3. Installing 2" HMA top course.
4. Proposed pavement markings.
5. Restoration.

Cold milling and HMA paving should be completed one half of the roadway at a time. Traffic shall not be maintained on the milled surface. Cold milling, HMA leveling course and HMA top course shall be completed for one half of the roadway prior to switching traffic and beginning cold milling on the other half of the roadway.

**g. Pedestrian or Non-Motorized Facilities.**

1. Maintain all facilities in accordance with *The Americans with Disability Act (ADA)* requirements. Provide facilities equivalent to or better than the route a person would have encountered prior to construction activities.
2. Close and detour any sidewalk ramps and crosswalk areas to pedestrian traffic that are impacted by the work. Cover pedestrian signal heads when the crosswalk or ramp is affected. This work will be for as "TS, Bag" and "TS, Bag Rem." Close sidewalks with Pedestrian Type II barricades and 'Sidewalk Closed' signs.
3. Keep sidewalk areas clear of any equipment or materials at all times the sidewalks are open to pedestrian traffic.

## **h. Traffic Control Devices**

1. *General.* Conform all traffic control devices and their usage to Part 6 of the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). This document can be found at the following website:

<http://mdotjboss.state.mi.us/TSSD/tssdHome.htm>

- a. During construction, maintain access to all business and residential drives.
2. Temporary Signs
    - a. Place temporary sign spacing and taper lengths as shown on the attached Typical 101-GEN-SPACING-CHARTS.
    - b. Utilize MDOT Typical 102-GEN-NOTES if called for on the MDOT Maintaining Traffic Typicals included in the Special Provision.
    - c. Utilize signs identified in the MDOT Maintaining Traffic Typical 103-GEN-SIGN unless otherwise specified on the plans or in this Special Provision.
    - d. Place temporary advance signing treatments and signing for lane closures and lane shifts on the project as shown on the attached MDOT Typical 124-NFW-2(R+L)LC-SHIFT.
    - e. Fabricate all temporary signs with legends and symbols flush to the sign's face and do not extend beyond the sign borders or edges.
    - f. Mount all temporary signs that will be in place for more than 14 days on driven posts.
    - g. When a portable construction sign is no longer applicable, remove it or lay the sign down with legs pointed in the same direction as traffic flow, with its feet off and laid flat.
  3. Channelizing Devices
    - a. Channelizing devices required shall be **Channelizing Device, 42 inch, Fluorescent, Furn.**
  4. Lighted Arrows
    - a. **Lighted Arrow, Type C, Furn** shall be used whenever closing a traffic lane or shoulder and as called for on the traffic control plans.
    - b. The quantity of channelizing devices required for the lighted arrows are already included in the quantity for **Channelizing Device, 42 inch, Fluorescent, Furn.**
  5. Permanent Pavement Markings.
    - a. Permanent pavement markings consist of the following:  
**Pavt Mrkg, Waterborne, 6 inch, White**

**Pavt Mrkg, Waterborne, 6 inch, Yellow**  
**Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar**  
**Pavt Mrkg, Ovly Cold Plastic, Only**  
**Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym**  
**Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym**

- b. Fabricate all pavement markings per MDOT Pavement Marking Standards and Special Details PAVE-900 through PAVE-985.

**j. Measurement and Payment.** Maintain traffic according to sections 812 and 922 of the 2020 Standard Specifications for Construction:

1. Estimated quantities for maintaining traffic on this project are based on the suggested sequence of operations contained in the staging plans and described in this special provision. Payments for these devices are in accordance with the 2020 Standard Specifications for Construction unless otherwise specified.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**EROSION CONTROL, INLET PROTECTION, FABRIC DROP, MODIFIED**

Wightman/PMH

1 of 1

01/03/2025

**a. Description.** This work consists of furnishing and installing acceptable inlet protection devices (devices) listed in the *Soil Erosion and Sedimentation Control Manual* when the pay item Erosion Control, Inlet Protection, Fabric Drop, Modified is included in the contract.

**b. Materials.** The following devices are approved for use, or approved equal:

1. Siltsack Type B, Regular Flow with or without Curb Deflector, by ACF Environmental, Inc.
2. Inlet Pro Sediment Bag, Standard Flow, with or without foam deflector by Hanes Geo Components.
3. Dandy Curb Bag, Dandy Bag, Dandy Curb Sack, Dandy Sack, or Dandy Pop by Dandy Products, Inc.
4. Flexstorm Catch-It and Flexstorm Pure used with filter bag types FX, FX+, FXO, PC, PC+ or IL.

Fabric drops installed in curb inlets shall have a curb filter or deflector integrated into the product that fits across the curb back opening.

Ensure provided devices are sized appropriately for the drainage structures in which they will be installed.

**c. Construction.** Install, maintain and remove the devices in accordance with the manufacturer's guidelines. Remove material collected by the devices in accordance with the manufacturer's guidelines or as directed by the Engineer.

Dispose of collected material in accordance with subsection 205.03.P of the 2020 MDOT Standard Specifications for Construction. Those devices that are no longer needed and have been removed may be reused elsewhere on the project as approved by the Engineer.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item

Pay Unit

Erosion Control, Inlet Protection, Fabric Drop, Modified

Each

**Erosion Control, Inlet Protection, Fabric Drop, Modified** will be paid for as one each for each time the device listed herein is installed, maintained, and removed at a separate location within the project limits.