

# **SPECIFICATIONS FOR CONSTRUCTION**

In general, unless specifically set forth herein, the work, materials, and methods of measurement and payment shall conform to the applicable divisions and paragraphs (as noted on the Bid Proposal or in the plans) of the most current edition of the:

**State of Ohio  
Department of Transportation**

1. Construction and Material Specifications
2. Construction and Material Supplemental Specifications
3. Standard Construction Drawings

## SCOPE OF WORK

Install construction signage in accordance with ODOT Item 614 Maintaining Traffic. A minimum of two-way traffic shall be maintained on one pavement lane at all times during construction utilizing flaggers, or portable traffic signals, in accordance with ODOT Item 614. Unobstructed, two-way traffic on two lanes shall be provided during all time periods of no construction activity. In-lieu of maintaining traffic on N Main St. the contractor may detour traffic via 15th Street, Washington Street, and Ninth Street. during hours of active construction only. Detour shall be properly signed in accordance with ODOT Item 614 and the Ohio Manual of Uniform Traffic Control Devices. No additional payment will be made if the contractor chooses this option.

- Task #1) Mill entire surface of Main Street pavement 1-1/2" deep from the north edge of the Ninth Street pavement to the south end of radius of the 15th Street pavement a distance of approximately 2,625 ft. Mill pavement of the intersecting side streets to the end of intersection radius of the intersecting street.
- Task #2) Proof roll areas of deteriorated pavement, with a fully loaded dump truck, in the presence of the Village representative and delineate areas of pavement for partial depth or full depth removal and replacement.
- Task #3) Neatly saw cut to the required depth, or remove with mill, those areas delineated for partial depth or full depth removal and replacement. Replace pavement as shown on repair details. Minimum depth of partial depth repairs below the milled surface shall be 1-1/2". Full depth repairs shall include removal of all existing asphalt concrete, aggregate base and soft subgrade. Removed subgrade and aggregate base shall be replaced with ODOT #304 Aggregate Base placed and compacted in accordance with the specifications. Asphalt base layers shall be replaced with ODOT 441 Asphalt Concrete Intermediate Course, Type 2 (448) PG64-22 placed and compacted in accordance with the specifications.
- Task #4) Apply tack coat to entire milled and repaired pavement surface.
- Task #5) Place 1-1/2" of ODOT 441 Asphalt Concrete Surface Course, Type 1, (448), PG64-22 and seal all joints with hot applied joint sealant in accordance with ODOT Item 409

The above scope of work is meant to convey the general work to be completed and is not a definitive listing of all required work nor is it meant to dictate the means and

## **SPECIAL PROVISIONS**

### **ITEM 207 - TEMPORARY SEDIMENT AND EROSION CONTROLS**

The Contractor shall take extreme care to prevent unnecessary erosion, water pollution and siltation at all points of the project. Inlet protection for catch basins and inlets, temporary seeding and mulching, straw bales, slope drains, etc., shall be used as necessary or as directed by the Engineer. The cost of all temporary erosion control measures shall be incidental to the Contract.

### **FULL-DEPTH PAVEMENT SAWING**

All existing pavement to be widened and/or removed shall be sawed full depth at the limits of removal, using a diamond saw blade to provide a uniform edge and prevent damage to pavement that is to remain in place. The cost of the sawing shall be incidental to the applicable pavement removal item.

### **ITEMS 251 / 253 - PAVEMENT REPAIR**

The final areas to be repaired under "Item 251, Partial Depth Pavement Repair" or "Item 253, Pavement Repair," will be designated in the field by the Engineer and the quantity of work to be covered under these items will be based upon the measurement of those designated areas.

The unit price bid for Item 251, Partial Depth Pavement Repair, shall include all the costs incurred in the removal of the existing asphalt concrete pavement to a depth specified by the Engineer, and the placing of the asphalt pavement as per plan.

The unit price bid for Item 253, Pavement Repair, shall include all the costs incurred in the removal of the existing asphalt pavement, full depth, the compaction of the subgrade as required, and the construction of the pavement courses as per plan.

**The Contractor shall mill off the existing pavement as shown on the typical details. Areas of distressed pavement will be proof-rolled with a fully loaded dump truck. The Owner/Engineer will then mark the location, size and type of repair to be made. Weather permitting, the Contractor shall complete the pavement repairs within five (5) working days from when the planing operations have been completed.**

**All curb repairs, asphalt repairs and utility adjustments are to be completed before the asphalt surface work begins.**

**ITEM 254 - PAVEMENT PLANING**

The work of this item consists of removing the existing asphalt wearing surface to the depths and limits specified or as directed by the Engineer, the intent of which is to restore adequate curb height and/or to remove deteriorated portions or irregularities in the existing wearing surface. Removal shall be by the method of cold surface planing, as described in Item 254.

The Contractor shall be responsible for notifying all residents of parking restrictions 24 hours in advance of any and all planing operations. Care shall be exercised during planing operations so as not to damage manhole covers, grates, chambers, valves, valve boxes, etc. Any utility castings damaged by the Contractor's operations shall be replaced by the Contractor at his expense.

After removing the wearing course, the Contractor shall immediately clean and tack coat an area at least four feet (4') in radius around all utility castings within the removal area and place an asphalt concrete wedge, thoroughly compacted in accordance with Item 401, around the castings in the four-foot (4') radius area. As an alternate method, the Contractor may choose at the time the wearing course is removed to leave a four-foot radius wedge of existing surface course around the utility casting to protect traffic, but will not be allowed to remove these wedges until the day previous to placing asphalt concrete surfacing on the street. Where manholes or valve chambers within an area where wearing course is removed have previously been adjusted with adjusting rings, the Contractor shall also have the option of removing the adjustment ring.

If the Contractor chooses to remove the adjustment rings, he shall re-install the rings immediately prior to resurfacing the street. No additional compensation will be paid for the placing of asphalt wedges, the removal and re-installation of adjustment rings, or the separate removal of existing wearing course left around the castings. These costs shall be included in the cost of removing the wearing course. All material removed shall be the property of the Contractor.

The Contractor shall note that the maintenance of proper drainage patterns will be of special concern, especially where proposed work is to meet existing pavement. The Contractor may be required to survey areas in question, using an automatic level or other appropriate equipment to assure proper grade and cross-slope. The cost of all operations required to assure and to demonstrate that proper drainage patterns have been maintained shall be included in the unit price bid for the pertinent pavement removal item.

**During the pavement planing process, should circumstances arise where more existing pavement is being removed than specified, the Contractor SHALL notify the Owner immediately and stop work until the Owner arrives on-site and the issue is discussed and resolved. Due to past experiences, including, but not limited to, air temperature, pavement temperature and/or failure of bonding agent, substantial increase in the pavement planing has occurred without the Village's approval or insight into existing conditions. Should overages to the Contract occur that are associated with pavement planing not completed per the drawings and specifications AND the continued pavement planing by the Contractor without notifying the Owner and stopping work, then the Contractor shall be**

**responsible for all additional work associated with the pavement planing not being completed per the drawings and specification, including but not limited to the additional work or quantities needed to complete the paving specification.**

#### **ITEM 401 - SEALING EDGES**

All edges of the asphalt concrete surface course constructed under this Contract shall be sealed with asphalt cement as directed by the Engineer, the cost of same to be included in the unit price bid for Item 441 Asphalt Concrete. After completion of the surface course, gutters shall be sealed with **hot applied rubberized joint sealer** as directed by the Engineer. The material shall be applied at a uniform width of approximately 4 inches and at a rate just sufficient to fill surface voids. Sealing edges at building walls, foundations, or other visible surfaces shall be done neatly and without more than one-half (1/2) inch of the sealant being visible on the surface. Any extra sealant applied to visible surfaces shall be carefully and thoroughly removed by the Contractor at no additional cost to the Owner.

#### **ITEM 446 / 448 - MEETING EXISTING PAVEMENT**

Where an asphalt concrete resurfacing project begins or ends, the surface course shall meet the existing on a neat, straight line. Unless otherwise directed by the plans, the Contractor shall construct a ten- foot (10') long butt joint (see detail). This is to be incidental to Item 441 Asphalt Concrete.

#### **ITEM 441 - BROOMING AND CLEANING**

The existing surface shall be cleaned and prepared in accordance with Item 401.12. The cost for such work is to be included in the unit price bid for Item 441, Asphalt Concrete.

#### **ITEM 603 - REVIEW OF DRAINAGE FACILITIES**

Before any work is started on the project and again before final acceptance by the Owner, the Contractor, with the Engineer, shall make an inspection of the existing sewers within the work limits, which are to remain in service and which may be affected by the work. The condition of the existing conduits and their appurtenances shall be determined from field observations. Written records of the inspection and/or photographic documentation shall be kept by the Engineer.

All existing sewers inspected initially by the above-mentioned parties shall be maintained and left in a condition reasonably comparable to that determined by the original inspection. Any change in the condition resulting from the Contractor's operations shall be corrected by the Contractor to the satisfaction of the Engineer. All existing and/or new conduits, inlets, catch basins, and manholes constructed and/or cleaned as a part of the project shall be free of all foreign matter and in a clean condition before the project will be accepted by the Owner.

Payment for all operations described above shall be included in the unit prices bid for the pertinent item.

### **ITEM 611 - STORM MANHOLES, CATCH BASINS AND INLETS**

All castings for manholes, catch basins and inlets shall conform to those specified in the standard construction drawings. Grated inlet tops shall be placed as specified on the plans. Tops of casting elevations are subject to final adjustments as approved by the Engineer. All castings used shall be subject to the final approval of the Engineer.

### **ITEM SPL - SANITARY MANHOLE ADJUSTED TO GRADE**

The unit price for Item SPL, “Manhole Adjusted to Grade,” shall include the cost of furnishing adjustment rings and installing said rings at the required locations. The Contractor shall contact the Division of Sewer Maintenance, Metropolitan Sewer District, to arrange for the furnishing of the required rings.

This includes sanitary sewer manhole adjusted to grade with precast concrete ring, labor and materials and sanitary sewer manhole adjusted to grade with shim ring, labor, and materials.

This work consists of adjusting manholes to grade with using precast concrete shim rings, brick and mortar, or mortar only adjustments. If necessary, these items also include minor repairs to the top sections of the manhole. The repairs are limited to the top 6 inches of the dome as measured below the casting.

For sanitary, storm and combined sewer manholes, in lieu of concrete shim rings, the use of the following products is permitted.

1. Injection molded high density polyethylene (HDPE) adjustment rings as manufactured by Ladtech, Inc. The HDPE adjustment rings must be manufactured from polyethylene plastic as identified ASTM Designation D-1248 (Standard Specification for Polyethylene Plastic Molding and Extrusion materials.) The adjustment rings must be tested to assure compliance with the impact and loading requirements per the ASSHTO Standard Specifications for Highway Bridges. The maximum height adjustment with the HDPE rings is 6 inches.

Install per the manufacturers recommendations and per the following:

For the HDPE adjusting ring installation, all concrete and metal surfaces must be clean of sand grit and loose rust. Between all HDPE plastic rings, concrete and metal surfaces, spread a 3/8-inch continuous seal of Sikaflex 11FC or approved equal to each surface in contact with the rings. The contractor must ensure the seal between the cone, rings and metal casting have a continuous bead of sealant to ensure a complete and waterproof seal.

Utilize a molded and indexed slope ring for all adjustments for matching sloped or crowned road grade.

ALL HDPE adjusting rings must be covered by a manufacturer's five-year warranty.

1. Infra-Riser® rubber composite riser rings as manufactured by East Jordan Iron Works. These rings must be installed per all manufacturers' recommendations including the use of a joint sealer. Place the ring just below the casting. Do not stack more than two rings high. The rings must not exceed a total height of 3 inches.

For adjustment of sewer manholes, refer to Manhole Adjustment Detailed Drawing.

Casting Adjustment Requirements:

1. Perform utility casting adjustments after the placement of the intermediate (leveling) course of asphalt pavement or after planning the surface course if no intermediate course is stipulated.
2. Saw cut a square area of pavement full depth around the casting a minimum of two feet beyond the edge of the casting to accommodate suitable mechanical compaction equipment.
3. Adjust castings to the proper height using precast concrete shims. Brick and mortar adjustments only possible with permission of the engineer.
4. After the casting has been adjusted to grade, restore the entire void in the pavement by tacking around the perimeter of the casting and saw cut edges and filling the opening around the casting with compacted Item 301 Asphalt Concrete base. The maximum compacted depth of any one layer of the 301 material for these adjustments is 4 inches. Compact the final lift of 301 base flush with the surface of the intermediate course or the planed surface if no intermediate course is used. The minimum depth of 301 material is **12 inches**.
5. The use of dry mix concrete to fill the void around the casting is not permitted.
6. Upon completion of the adjustment work, immediately place a compacted 448 Type 1 hot-mix asphalt wedge around the raised casting. **For castings exposed up to one inch, place a wedge with a minimum diameter of four feet around the casting. For castings greater than one inch, place a wedge with a minimum diameter of six feet around the casting. Asphalt wedges must extend up to and be flush with the top of the casting.** Install wedges by the end of the workday in which the casting is raised.

Remove wedges immediately prior to the machine paving. The cost of wedging castings is considered incidental to the Contract.

**ITEM SPL - MANHOLE REPAIRED AND ADJUSTED TO GRADE**

This work consists of repairing the upper sections of manhole and adjusting the castings to grade using precast concrete shim or the use of injection-molded high density polyethylene (HDPE) adjustment rings, as manufactured by Ladtech Inc. and Infra-Riser® rubber composite riser rings to adjust sanitary, storm and combined manholes. (See Manhole, Adjusted to Grade) The scope of repair extends from a length greater than 6 inches below the casting to 18 below the casting.

Manhole repairs below the 18-inch mark will be paid by item Brick Masonry, Manhole.

**ITEM 611 - CATCH BASIN ADJUSTMENT**

Payment for "Item 611, Catch Basin Adjusted to Grade," shall include all labor, equipment and materials necessary to raise catch basin frame and grate with brick and mortar to proper elevation when roadway is resurfaced.

**ITEM 608 - WALKS, CURB RAMPS, AND STEPS**

The unit price bid for Item 608 shall include all labor, material, and equipment necessary for the removal and disposal of the existing concrete walk, the replacement of the concrete walk, and the restoration of the grass areas adjacent to the walk with topsoil and seed. **All restoration work is to be completed within one (1) week of the completion of the construction of the new concrete walk.** The walk shall be five (5) inches in thickness, except in walk areas through the driveway aprons, and at curb ramps where the thickness shall be increased to six (6) inches.

Replacement walk shall be limited to that needed to transition between new curb ramps and existing walk and shall be installed in accordance with the standard drawings and specifications. Item 705.03, preformed one-piece expansion joint material, 1/2-inch thick, shall be placed adjacent to all existing remaining walk or structures. Where integral lug curb is a part of the walk to be repaired, the cost of replacement of the curb shall be included in the price bid for the walk.

The estimate quantity for the replacement of the existing concrete walk is approximate only and could increase or decrease from time to time during the progress of the work.

**Any replacement concrete walk not constructed as per detail will be removed and replaced.**

**Any additional walk replacement must be approved by the City Inspector before removal/replacement.**

Curb ramp construction shall conform to Item 608.07. Curb ramp standard dimensions will be adjusted as required by the Owner in the field to provide adequate access for handicapped persons in the vicinity of poles or other fixed objects behind the curb. Curb ramps in both new



and existing concrete walks will be measured by square footage complete. Payment shall include the cost for saw cutting, excavation, disposal of material, backfill, base course material, reinforcing steel, expansion joint material, grading, forming, all materials, finishing of the curb and walk of the ramp, restoration, and incidentals necessary to complete the specified items. The furnishing and installation of truncated domes is to be completed under a separate pay item and will be measured by square footage installed.

It is the Contractor's responsibility to protect the new surface until it cures.

### **ITEMS 608 / 452 - SIDEWALK AND/OR DRIVE APRON FINISH**

The finish applied to the Portland Cement concrete surface used as a sidewalk or driveway apron shall be a broom finish. All joints and outside edges of the pavement shall be tooled with an edger or joint tool after brooming the final finish. **Apply clear curing compound to all new sidewalk and drive aprons.** Final finish, joints, and edges shall be subject to the approval of the Engineer.

**It is the Contractor's responsibility to protect the new surface until it cures.**

### **ITEM 608 - SIDEWALK WITH INTEGRAL CURB**

The spacing of Contraction joints for the curb shall be five (5) feet to match walk joint spacing. Expansion joints shall be constructed on a maximum spacing of forty (40) feet.

It is the Contractor's responsibility to protect the new surface until it cures.

### **ITEM 614 - MAINTAINING TRAFFIC**

The Contractor shall maintain traffic through the project at all times in conformance with Item 614.

During the removal of the asphalt wearing course, the repair of the base pavement and/or the construction of the asphalt courses for the roadway, the Contractor will be permitted to close one lane of pavement while maintaining traffic in the other lane on an alternating flow basis. The Contractor will be held strictly to the flagging requirements listed under Item 614.03d. The closing of the lane to traffic will be permitted during the above operations and for the periods of time consistent with the requirements of the specifications for the protection of the completed asphalt concrete courses.

In lieu of maintaining traffic on North Main Street, the Contractor may detour traffic via 15th Street, Washington Street, and Ninth Street during hours of active construction only. Detour shall be properly signed in accordance with ODOT Item 614 and the Ohio Manual of Uniform Traffic Control Devices. No additional payment will be made if the Contractor chooses this option.

If, at the completion of the normal working day, any trench for pavement construction has not been completely backfilled and restored, a temporary cover, such as a metal plate or another approved device, shall be placed over that portion of the trench remaining open.

**All** driveways shall be accessible to the residents between the hours of 6:30 - 8:30 AM and 4:30 - 6:30 PM. The **only** exception shall be during curb and apron replacement construction at the drive entrances. Should work that may block the driveway be necessary, the Contractor must notify the residents or businesses at least two (2) working days prior to closing driveways. If the residents and businesses have not been notified two (2) working days in advance of the anticipated drive closures, the Contractor will be prohibited from making these closures until such time as the proper advance notification is made.

In addition to driveway blockage notification provided and distributed by the Contractor, the City shall prepare and the Contractor shall immediately distribute (hand deliver) up to four (4) public notices to each resident or business during the job in order to keep the residents informed throughout the project.

The maximum time period for driveway closure shall be 96 hours. The Contractor shall place new curbs within 48 hours of removal. The Contractor shall keep driveways closed for a 48-hour period after concrete placement to permit the curing of concrete curbs, driveway aprons, or sidewalk across driveways.

The Contractor shall note that any interim material used for providing driveway ingress and egress will not be a separate pay item, and the cost of said interim material shall be included in the lump-sum price bid for Item 614.

In those areas where existing pavement is to be resurfaced or removed and replaced, the Contractor shall conduct his operations so as to maintain driveway traffic through the construction area. If two approved access points serve the same parking area, the Contractor will be permitted to close one access at a time. The Contractor will be permitted to close paved areas to traffic for a minimum period of time, consistent with the requirements of the specifications for the protection of completed asphalt concrete courses. If business property is involved, an alternate access must be provided if blockage exceeds one (1) hour. Repeated blocking must allow at least a 15-minute interval of traffic access every hour. Time period of residential driveway closures shall be kept to a minimum, but no more than the maximum time period stated in the above paragraphs.

#### **ITEM 659 - SEEDING AND MULCHING**

A Class1 – lawn mixture shall be used for the areas that need to be restored with seed and mulch.

#### **ITEM 659 - COMMERCIAL FERTILIZING**

All areas to be seeded and mulched under Item 659 shall have commercial fertilizer (12-12-12) applied to the rate of 20 pounds per 1000 square feet, the cost of which shall be incidental to the Contract.