

CITY OF HIAWATHA SUPPLEMENTAL SPECIFICATIONS TO SUDAS STANDARD DESIGN AND SPECIFICATIONS MANUAL

These Supplementary Specifications amend or supplement the Statewide Urban Design and Standards (SUDAS) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Specifications will have the meanings indicated in SUDAS.

DIVISION 1 – General Provisions and Covenants

Section 1010 - Definitions

1.03 Definitions and Terms

Add the following:

“SCHEDULE. A plan of procedure with reference to the sequence of and time allotted for each item or operation necessary for project, which is to be provided by the Contractor. The schedule shall clearly show start and end dates for major items and/or stages along with the critical path of the bid items and non-critical items. Upon submittal the schedule shall become the property of the City of Hiawatha. The City has the right to utilize the schedule as the City sees fit, including but, not limited to posting it on social media, website, and/or newsletters. The schedule at a minimum shall include, but is not limited to: Project name, Prime Contractor and contact information, Critical Path, noncritical items, starting and ending dates of major milestones and/or bid items broken down into at least weekly scope, holidays.

Controlling Item of Work. The unique activity of a contract that will determine the duration of the construction period or if a working day is charged. The character of this work may change during the project. It is the work that could be in progress at any time that would have the greatest influence on the duration of the project. It could also have the biggest influence on safety and providing the least impact to the public (Section 1070 2.01 C) i.e. pouring back an intersection to provide access. It shall be as determined by the Engineer.”

Section 1020 - Proposal Requirements and Conditions

1.03 Quantities and Unit Prices

Add item B.1. as follows: “When a lump sum bid is requested in the proposal form, and discrepancy occurs between the figures and words in a bidder’s proposal, the words shall govern.

1.09 B. Unit Price Attachment

Delete items 1-5 and replace with the following:

- “1. Unit price attachments, if used, shall be on the form provided by the City of Hiawatha. No other forms will be accepted as unit price attachments.
2. If a unit price attachment is submitted, it shall be attached to the proposal.

3. All information requested on the bid form shall be completed. If the information in the attachment is incomplete, the bid must be considered incomplete and be rejected.
4. The bidder's company name, the authorized person's signature, name and title shall be completed in ink.
5. In the case of discrepancy between the unit price and unit price extension on the proposal form, unit prices shall govern. "

Add item E. as follows: "When a lump sum bid is requested and a discrepancy occurs between the figures and words in a bidder's proposal, the words shall govern.

1.15 Limitation on Withdrawal of Proposals After Opening of Proposals

Delete item A and replace with the following: "If within 24 hours after bids are opened, any Bidder files a duly signed written notice with the Jurisdiction and demonstrates to the satisfaction of the Jurisdiction that a material and substantial error was made in the preparation of the bid, the Bidder may withdraw its bid and the Bid security will be returned. Thereafter, if the work is rebid, that Bidder will be disqualified from further bidding on that work.

Section 1030 - Approval for Award and Award of Contract

1.03 Award of Contract

Delete item C and replace with the following: "C. It is agreed by the bidder that upon its failure to enter into the contract and furnish the necessary insurance certificate and performance, payment and maintenance bond within 15 calendar days after notification by the Jurisdiction, the amount of the bidder's bid security may at the Jurisdiction's option be forfeited and shall become the property of the Jurisdiction, to be retained not as a penalty, but as liquidated damages. The award of the contract may then, at the discretion of the Jurisdiction, be made to the next lowest, responsive, responsible bidder, or the work may be re-advertised or may be constructed by the Jurisdiction in any legal manner.

Section 1040 - Scope of Work

1.06 Increase or Decrease of Work

Delete Item 10.6 B. and replace with the following: "B. Unless such alterations, increases or decreases materially change the character of the work to be performed or the cost thereof, the altered work shall be paid for at the same unit prices as other parts of the work. Quantity changes amounting to 25% or less of the total bid for an item shall not affect the unit price of that item. If, however, the character of the work or the unit costs thereof are materially changed, due to unforeseen events, an allowance shall be made on such basis as may have been agreed to in advance of the performance of the work."

1.09 Change Site Conditions**B. Compensation Add the following:**

“3. Under no circumstances will payment for down time be made by the City of Marion as project field issues are being resolved. The City of Hiawatha will take all necessary action to resolve issues in a timely manner.”

1.10 Disputed Claims for Extra Compensation

Add item A. 6 as follows: “6. Monetary compensation will not be made for time necessary to resolve disputed claims issues.”

1.11 Delays Caused by the Jurisdiction

Add the following paragraph: “Under no circumstances will payment for down time be made by the City of Marion as project field issues are being resolved. The City of Hiawatha will take all necessary action to resolve issues in a timely manner.”

Section 1050- Control of Work**1.10 Line and Grade Stakes**

Add item D. as follows: “D. On privately contracted projects, the Owner shall hire a Licensed Surveyor per Section 11010 for all survey work.”

2.13 Borrow and Waste Sites

Add item C. as follows: “The Contractor is required to obtain written authorization for use from the owner for all borrow and waste sites secured for use. A copy of the authorization shall be submitted to the Engineer prior to use of the site. Upon completion of the usage and restoration of the site, the Contractor shall also obtain written acceptance from the owner and submit a copy to the Engineer.”

Section 1070 Legal Relations and Responsibility to the Public**1.03 Permits and Licenses****Delete item 1.03 and replace with the following:**

“The Contractor shall procure all necessary permits for the construction of the work and for temporary excavations, obstruction, enclosures, and street openings arising from the construction and completion of the work described in the contract documents. The cost for all required Jurisdictional permits shall be paid by the Contractor unless otherwise provided in the contract documents. The Contractor shall be responsible for all violations of the law for any cause in connection with the construction of the work or caused by the obstruction of roads, streets, highways, or sidewalks and shall give all requisite notices to the Jurisdiction or other public authorities in connection therewith.”

Section 1080 – Prosecution and Progress**1.03 Work Progress and Schedule**

Delete item B. and replace with the following: “After being awarded the contract, the Contractor shall immediately prepare and submit to the Engineer for review and approval a progress schedule that will ensure the completion of the project within the

time specified. Said schedule shall include anticipated controlling items of work, contract specified milestones, and days and/or dates for starting and completing each stage of the work. The schedule shall be submitted to the Engineer prior to scheduling the preconstruction conference. Adequate equipment and forces shall be made available the Contractor to start work immediately upon the Notice to Proceed and to prosecute work to completion according to the schedule and within the time specified.”

Add the following:

“D. The contractor shall submit a schedule two (2) weeks prior to the preconstruction meeting/conference or the meeting will be rescheduled until an acceptable schedule has been provided. The schedule is subject to the Engineers approval. If the contractor varies from the approved project schedule and/or sequence, as submitted to and approved by the Engineer; a revised schedule shall be submitted, by the contractor, for approval by the Engineer. If public notification has been made prior to the submittal of the revised and approved scheduled and the public needs to be re-notified, the contractor shall pay for the re-notification of the public including, but not included to mailings, website and social media posts.”

“E. As long as work exists on the project, the Contractor shall remain on the project. If issues exist with a portion of the project which is beyond the Contractor’s control (such as obstructions or utility issues), the City has the option to revise the Contract Phasing and direct the Contractor to work on other “unaffected” Phases or areas of the project as shown within the Contract Documents, at no additional cost to the City. The City may provide additional working days to the Contractor based upon relocation efforts and scheduling justification as determined by the Engineer.”

1.04 Preconstruction Conference

Delete this paragraph and replace with the following: “A preconstruction conference shall be scheduled upon receipt of the work progress schedule from the Contractor. The Contractor and intended subcontractors shall attend and participate in this conference. The Engineer will invite representatives of railroads, utilities and others having responsibilities or interests in the work.”

1.07 Work on Sundays or Legal Holidays

Add item C. as follows: “C. Work on Saturdays, except for contracts specifying mandatory six-day work weeks, Sundays and City holidays requires written authorization by the Engineer and is contingent on City of Hiawatha Inspector and/or Engineer availability. A written request shall be submitted by the Contractor a minimum of two working days in advance of the days being requested to work. Work not requiring inspection may be performed with the permission of the City of Hiawatha. Inspection fees will be charged at the discretion of the Engineer. Cancellation of the scheduled work after approval may result in charges to the Contractor at a minimum of three hours of inspection time. Working day charges will be made for working day and calendar day contracts.”

1.09 Extension of Time**B. Request for Extension of Time**

1. Weather. Add item a. as follows: “a. Requests for extension of time due to excess precipitation will be considered on calendar day projects as follows:

Precipitation levels in excess of 10% of the average monthly rainfall as recorded by the National Weather Service over the last ten years, may be considered in an extension of contract time. The Contractor may request an extension of one calendar day for each 10% of precipitation above 110% of the monthly average (rounded up). Written requests for such time extensions shall be submitted to the Engineer within fourteen (14) calendar days following the end of each month. No consideration will be made for time extensions due to excess precipitation if written notification is not received within this time frame.

1.12 Liquidated Damages**Add the following:**

“D. Once work within a phase/project has begun, the Contractor shall continue work within that phase/project until all work within that phase/project has been completed. If work is not completed and the contractor removes their “normal” size crew and/or equipment from the project without written authorization from the Engineer for more than five (5) consecutive working days, then the Contractor will be charged a working day AND immediately assessed the liquidated damage rate for each working day the Contractor’s “normal” size crew and equipment are not working on the project.

“Normal” size crew and equipment is as determined by the Engineer and shall be the determined by the controlling operation. The Contractor will be notified within two (2) consecutive working days of being absent from the project that this clause will go into effect after three (3) additional consecutive working days of being absent from the project. Liquidated damages will be assessed at the time of monthly pay applications that cover any period during which the Contractor had unauthorized periods of work stoppages.

E. If vehicular access is restricted to a property identified on the plans as having ADA restrictions and the Contractor stops work as outlined in “D” above, the liquidated damages will accrue for each property AND for each working day that each property with ADA restrictions does not have vehicular access as determined by the Engineer.”

Section 1090 – Measurement and Payment**1.04 Payment for Change Orders****Add the following:**

“4. Extra work Markup: The Contractor shall submit equipment and labor rates for time and material change orders and the subcontractor markups and material markups for time and material shall be per Iowa DOT Standard Specifications for Highway and Bridge Construction Current Series, Section 1109.03, B. Extra Work.”

DIVISION 2 - Earthwork**Section 2010- Earthwork, Subgrade and Subbase****1.07 Special Requirements**

Add the following: “No earthwork shall proceed with or upon frozen materials.”

1.08 Measurement and Payment**D. Topsoil****1. On-site Topsoil, 2. Compost-amended Topsoil, 3. Off-Site Topsoil**

Delete measurement and payment for each item and replace with the following:

“a. Measurement: Measurement will be the plan quantity in cubic yards without final field measurement. Adjustments may be made to the plan quantities if agreed to by both the Engineer and Contractor.

b. Payment: Payment will be at the unit price per cubic yard.

c. Includes: Work includes but is not limited to, stripping, excavating, furnishing, hauling, placing and incorporating materials. Overhaul will not be paid. “

L. Compaction Testing:

Delete item 1 and item 2 and replace with the following:

“1. The Contractor will be responsible for compaction testing unless otherwise specified in the contract documents.

2. Testing shall be performed by an independent testing laboratory hired by the Contractor. Payment will be incidental to related bid items. “

2.04 Foundation Materials**D. Subbase**

1. Special Backfill Delete item 1-Special Backfill in its entirety.

3.02 Stripping, Salvaging, Spreading Topsoil**C. Topsoil Spreading**

Delete Item 2 and replace with the following: “Place topsoil at least 4 inches deep; smooth and finish grade according to the contract documents. If topsoil is amended with compost, thoroughly blend compost with onsite topsoil at the rate specified in Section 2010, 2.01.”

3.06 Subgrade Preparation

A. Uniform Composition Add the following: “A disk or plow shall be used for scarification of materials for drying. If conditions do not allow enough space for a disk or plow, the material shall be scarified by other methods, proposed by the Contractor, with the approval of the Engineer.”

2. Subgrade Compaction in Cut Sections

Delete items b. and c. in their entirety and replace with the following:

“b. Disk, scarify, mix and recompact the next 6 inches of subgrade.

c. Replace, disk, mix and compact the top 6 inches of subgrade.”

3.09 FIELD QUALITY CONTROL

B. Moisture Content and Density

1. Replace with the following:

“Ensure that moisture content fall within a range of optimum moisture of -1% to +4% of optimum moisture”

DIVISION 3 - Trench and Trenchless Excavation

Section 3010 Trench Excavation and Backfill

1.08 Measurement and Payment

B. Rock Excavation

1. Measurement: Delete item 1 and replace with the following: “Measurement will be by cubic yards of rock removed to the limits of the trench bedding and backfill zones.

2.01 Materials Excavated from a Trench

C. Add the following:

“No additional compensation will be made for minor adjustments to elevations due to field conditions.”

Section 3020 Trench Excavation and Backfill

1.08 Special Requirements

Add the following:

“A. Contractor shall provide as-constructed record of plan and profile.

B. Contractor shall:

1. Pig all 12” diameter and larger water main
2. Pig any smaller water main when a velocity of 2fps cannot be maintained when flushing.

DIVISION 4 - Sewers and Drains

Section 4010 Sanitary Sewers

1.08 H. Removal of Sanitary Sewer

3. Includes: Delete item 3 and replace with the following: “Unit price includes, but is not limited to, removal, disposal, capping (if specified), and backfilling of pipe.”

2.01 Sanitary Sewer (Gravity Mains)

A. Solid Wall Polyvinyl Chloride Pipe (PVC) 8 inch to 15 inch:

Delete item 1 and replace with the following: “Comply with ASTM D 3034, SDR 26”

Delete item 2.b

Delete the following items:

- B. Solid Wall Polyvinyl Chloride Pipe (PVC) 18 inch to 27 inch
- C. Corrugated Polyvinyl Pipe (PVC) 8 inch to 36 inch
- D. Closed Profile Polyvinyl Pipe (PVC) 21 inch to 36 inch.

- I. Double Walled Polypropylene Pipe 12 inch to 30 inch.
- J. Triple Walled Polypropylene Pipe 30 inch to 36 inch.

2.01 B. Solid Wall Polyvinyl Chloride Pipe (PVC) 18 inch to 27 inch.

Delete Items 1 and 2 and replace with the following: “1. Comply with ASTM D 3034, SDR 26. 2. Pipe stiffness per ASTM D 2412, 115 psi. ”

Add Item 2.01 K. as follows:

“2.01 K. Polyvinyl Chloride Pipe (PVC) 8 inch to 24 inch

- 1. Comply with AWWA C900.
- 2. Minimum wall thickness: DR 18.
- 3. Joint type: Certa-Lok ® or approved equal.”

2.02 Sanitary Sewer Force Mains

B. Polyvinyl Chloride Pipe (PVC): Comply with the requirements in Section 2.01 K. for PVC pipe. Provide restrained joints where specified.

Add the following:

“F. Sanitary sewer Gravity Main, Trenchless

A: Material shall be SDR-18 CERTA-LOC Pipe or approved equal”

2.04 Sanitary Sewer Services

Add: All service connections to main shall be wye fittings or saddles.

3.02 Gravity Sewer Installation

A. General Add item 8 as follows: “Construct waterstops at nominal 800-foot intervals or as directed in the contract documents. Waterstops shall be constructed per Figure 310.105.”

3.06 Sanitary Sewer Service Stubs

Add the following to item B.: “All service connections to sewer mains shall be with factory wyes”.

Section 4020 Storm Sewers

1.08 Measurement and Payment

A. Storm Sewer

1.c. Add the following: “For those storm sewers lines along the back of curb or under the Street the granular backfill shall be filled to the bottom of the granular subbase.”

C. Removal of Storm Sewer

3. Includes Delete item 3 and replace with the following: “Unit price includes, but is not limited to, removal, disposal, capping (if specified), and backfilling of pipe.”

Section 4030 Pipe Culverts**2.01 Pipe Culverts**

A. Roadway Pipe Culverts Delete the first sentence and replace with the following:
 “All storm sewer pipe materials specified for use in the right-of-way in Section 4020 may be used within the right-of-way as roadway pipe culvert subject to approval of the Engineer.”

B. Entrance Pipe Culverts Delete the following items:

5. Corrugated Metal Pipe (CMP)
6. Spiral Rib Pipe
7. Coated Corrugated Metal Pipe
8. Corrugated Metal Arch Pipe

C. Structural Plate Culverts Delete this item.

D. Aluminum Structural Plate Culverts Delete this item.

3.01 Pipe Culvert Installation

A. Trenched Delete item 2 and replace with the following: “Culvert pipe installed in the embankment shall be Reinforced Concrete Pipe (circular, arched and elliptical) meeting the specifications of Iowa DOT Specification Section 2416.”

Section 4040 Subdrains and Footing Drain Collectors**2.02 Type 1 Subdrains (Longitudinal Subdrain)**

D. Corrugated Polyethylene Tubing and Fittings (Corrugated PE) Delete this item.

2.06 Subdrain or Footing Drain Cleanouts**B. Type B Cleanouts**

Delete Item 2. Polyvinyl Chloride

Add the following:

“C: Nyloplast Cleanout. Install per manufacturer specifications. Includes casting. Ductile iron frame (28.50) and solid grate (24.75) or approved equal. Inlet and outlet shall be 6”. Fill bottom of structure with concrete to flowline. Nyloplast shall be used unless otherwise specified in the contract documents.”

Section 4050 Pipe Rehabilitation**1.08 Measurement and Payment**

Add the following: “General. By-passing sewage as necessary is incidental to related bid items unless otherwise specified.

Add the following:**“1.08. D. Trimming of Protruding Sanitary Sewer Services**

1. Measurement: Each sanitary sewer service with ½ inch or greater protrusion into the

sanitary sewer main which is trimmed will be counted.

2. Payment: Payment will be made at the unit price for each service trimmed.

3. Includes: Unit price includes but is not limited to identification of services protruding ½ inch or greater into the sewer main and trimming.

Section 4060 Cleaning, Inspection and Testing of Sewers

3.01 Cleaning: Add the following to item A: “A root saw or other approved means may be used to remove roots. Use of a flail-type device to trim protruding services or remove roots is prohibited. “

3.03 Video Inspection: Add the following to item 3. to C. Inspection Reporting:

“**3.02. C.3.** Written report shall be on forms provided by the Engineer. Obtain structure identification references from the Engineer. “

3.04 Sanitary Sewer Leakage Testing: Add the following statement: “If not specified, testing shall be per the exfiltration method. “

ADD New Section CR-4910 Pipe Bursting - See City of Cedar Rapids Supplemental Specification

DIVISION 5 - Water Mains and Appurtenances

Section 5010 Pipe and Fittings

2.01 Water Mains

Replace Item 1.a with the following: “Up to 12 inches - Special thickness Class 52 according to AWWA. Over 12 inches – Class 50 per ANSI/AWWA C151/A21.51.”

2.05 Pipeline Accessories

Add the following:

“A.3 Use polyethylene wrap on all fittings in buried service.”

“B.6 Install stainless steel hydrant strap obtained from Hiawatha Water Department, to be installed at all fire hydrants.”

3.10 Water Service Stub

Add the following:

“D. Coordination

1. Water main to be in service and all tests passed prior to ordering taps.
2. Lot pins to be placed prior to making taps.
3. Call at least 24 hours ahead of need for taps for all locations.”

“E. Additional Guidelines

1. Taps 2 inches and smaller are made by the Hiawatha Water Department or by the Contractor, upon approval.
2. Taps larger than 2 inches shall be made by the Contractor.”

Section 5020 Pipe and Fittings

2.01 Valves, Fire Hydrants and Appurtenances

Add the following to paragraph B:

"4. Body, bonnet and operating hold down bolts and nuts shall be stainless steel.

5. Operating nut to be attached to valve stem by bolt or nut type connection.

6. Valve stem shall be removable without removing valve bonnet"

Add the following to paragraph C:

"6. Exterior finish shall be bonded epoxy coating meeting ANSI/AWWA C550."

Modify D.2.b to read "Stainless steel, cast or ductile iron (use stainless steel on PVC)."

Add the following to paragraph D.2:

"f. Approved sleeves: Romac SST, Mueller or approved equal"

***See Appendix for City of Hiawatha Appendix for Approved Manufacturers and Materials list for water main and water service lines**

DIVISION 6 -Structures for Sanitary and Storm Sewers

Section 6010 Structures for Sanitary and Storm Sewers

1.08 Measurement and Payment

Delete Item 1.08 D Casting Extension Rings in its entirety.

2.08 Pipe Connections

Add: "E. Connection to sanitary sewer manhole shall be A-Lock or approved equal"

2.10 Castings (Ring, Cover, Grate, and Extensions)

C.2. Intakes Delete item b. and replace with the following: "b. Castings shall include the message "DUMP NO WASTE, DRAINS TO RIVER" with a "fish" symbol."

Detail SW-301

Remove: "Flexible Pipe Connection (typ)"

Add: "A-Lok or approved equal by Engineer (typ)"

DIVISION 7 - Streets and Related Work

Section 7010 Portland Cement Concrete Pavement

1.05 Delivery, Storage, Handling, and Salvaging

Add the following item:

"E. Ready- Mix Concrete Ready-mix concrete may be used only if the producer is approved per the IDOT Ready Mix Concrete Producer Program. Verification of approval will be required. "

1.07 Special Requirements.

Add the following:

“A. Contractor shall provide a minimum of 24-hour advance notice (excluding weekends and holidays) to the Engineer for pavement pours.

B. Contractor shall notify Engineer of pavement joint sawing operations which must be performed during the Hiawatha Noise Ordinance period of 10:00 pm -7:00 am.

B. When placing PCC, the Contractor shall protect adjacent fixtures from concrete splatter or direct contact with concrete. Fixtures shall include but are not limited to light poles, light pole bases, controller cabinets, hand holes, buildings, manhole lids, water valve lids and fire hydrants.”

1.08 Measurement and Payment

A. PCC Pavement

Delete item 3. and replace with the following: “Unit price includes, but is not limited to, final trimming of subgrade or subbase, integral curb, bars and reinforcement, joints and sealing, surface curing, safety fencing, concrete for rigid headers, boxouts for fixtures, and pavement smoothness testing.”

I. PCC Pavement Samples and Testing

Remove 1, 2 & 3 and replace with:

“1. Maturity testing is incidental to pavement items and no separate payment will be made for these tests. Pavement smoothness shall be required on all nonlocally classified streets or if specified by contract documents and shall be incidental to pavement items and no separate payment will be made for testing or corrective actions required. Pavement thickness cores will be required if yields do not check per section D and is incidental to the pavement items. Certified plant inspection, if specified in the construction documents, is also incidental to the pavement items.”

3.02 Pavement Construction.

Add the following:

“**3.02 E. Utility Crossing Reinforcement:** Reinforcement shall be required at all storm sewer crossings and all sanitary sewer crossings that have less than 5 feet of cover between the top of the pipe and the bottom of the proposed pavement or as specified on the contract documents. Reinforcement shall be #5 epoxy coated bars, 15 foot long at 18” on center. Tied chairs supports and anchors shall be used. Bars shall be set and supported before paving. Overlaps will not be measured for payment. If there is no contract bid item this shall be incidental to other items.”

3.04 Pavement Protection.

A. Weather Conditions

“B. When cold weather protection is required it shall be paid per Iowa Department of Transportation standard specifications for Highway and Bridge Construction Section 2301.05 park K. Heating Water for Concrete Mix shall be \$2.00 per CY if ordered by the

Engineer and under the same conditions of 2301.05 Part K, if Contractor elects to do work without Engineer direction no payment will be made for cold weather protection.”

C. Protection from Traffic

“4. Minimum Cure Time: Regardless of maturity method of TTF value achieve, no PCC pavement shall have loadings applied to it, including but not limited to a paving machine, other than saw and sealing trucks until a minimum of 72 hours after pavement of a continuous pour was placed.”

3.07 Quality Control Add the following:

“3.08 D. 5. Core samples will be required if deficiencies are determined in concrete yields or thickness deficiencies are suspected by the Engineer.

Detail PV-103

Modify:

“Thickness of boxout shall be 10 inches minimum”

“Joint between boxout and mainline shall be KT-2 or BT-3”

“Secure tie reinforcement bars to pavement dowels”

“#5 epoxy coated bar 5’ long in diamond and square pattern, to fit boxout size”

Section 7030 Sidewalks, Shared Use Paths, and Driveways

1.08 Measurement and Payment

Delete Item 1.08 F Brick Sidewalk in its entirety.

2.01 Portland Cement Concrete

Delete Item A and replace with the following: “Class C concrete with materials complying with Section 7010. Use coarse aggregate of Class 2 durability or better.”

2.03 Brick Pavers Delete this item in its entirety.

3.04 PCC Sidewalks, Shared Use Paths, and Driveways

F. Jointing

2. Transverse Contraction Joints: Add “General: Construct a ½ inch expansion joint every 75 feet or at nearest joint for all PCC sidewalks and shared use paths.”

4. Isolation Joints: Delete item

b. and replace with the following: “For a sidewalk constructed with a driveway, install an isolation joint on all sides of the sidewalk through the driveway.”

5. Joint Sealing: Delete item b and replace with the following: “All expansion and isolation joints shall be sealed. Trim preformed joint material to ½ inch below the concrete surface. Ensure the joint is clean and dry. Install joint sealant per manufacturer’s recommendations.”

Section 7040 Pavement Rehabilitation

1.01 Section Includes:

Add the following:

"I. Crack and Seating PCC Pavement.

1.08 Measurement and Payment:

Add the following:

"L. Crack and Seating PCC Pavement

1. Measurement: Measurement will be in square yards for area cracked and seated. Curb and gutter sections separated from pavement by full depth saw cuts will not be included.

2. Payment: Payment will be made at the unit price per square yard for cracked and seated PCC pavement.

3. Includes: Unit price includes, but is not limited to, full depth saw cutting at limits as described on plans, removal and disposal of debris, and furnishing and application of water as necessary."

2.01 Materials

A. PCC: Delete item 1 in its entirety and replace with the following: "**A. PCC:** All concrete shall be Class M complying with Section 7010 unless otherwise specified."

Add the following section:

"3.11 Crack and Seating PCC Pavement

A. Before cracking, remove all asphalt and other bituminous material existing on the pavement surface from the area to be cracked. Removal of full depth HMA patches is not required. Remove existing joint sealers.

B. Locate all utilities within affected pavement areas. Saw full depth along perimeter of existing utility boxouts and create boxouts around utility fixtures to be separated from pavement.

C. Separate curb and gutter sections from pavement at distance designated with full depth saw cut.

D. Crack pavement with equipment capable of producing desired cracking pattern by providing a broad striking surface. Do not use equipment that punches holes in the pavement or results in excessing spalling of otherwise sound sections. A blade or spade type breaker is recommended.

1. Crack pavement to produce full depth, transverse hairline cracks at a nominal spacing of 1 ½ - 3 feet. Avoid inducing cracks closer than 2 ½ feet from an existing crack or joint or deteriorated concrete. Prevent the formation of a continuous longitudinal crack.

2. A section of approximately 100 feet in length shall be designated as a test section in which varying energy and striking patterns of the breaker are applied to determine a satisfactory cracking pattern. The approved method shall be used for the remainder of the project, unless the Engineer determines that a satisfactory pattern

is no longer being produced.3. Following cracking of the test section, apply water to dampen the pavement to enhance the visual determination of the cracking pattern. Water shall be applied as directed by the Engineer during cracking operations to verify that the specified cracking pattern is being maintained.

4. Do not operated cracking equipment on a bridge or within 3 feet of a fixed object.

E. Seat the cracked pavement by rolling with a pneumatic rubber-tired roller.

1. Roller shall have four rubber tires, equally spaced across the full width and mounted in line on a rigid steel frame such that all wheels carry equal loads regardless of surface irregularities. Roller tires shall be capable of satisfactory operation at a minimum inflation pressure of 100 psi. Tires may contain liquid.

2. Roller shall have a weight body suitable for ballasting to a gross load of 50 tons and ballast shall allow gross roller weight to be readily determined and controlled to maintain a gross roller weight of 50 tons.

3. Roller shall be weighted to complete seating on one pass to provide aggregate Interlock at the cracks with minimal damage.

F. After Engineer's approval of seating, pavement surface shall be cleaned of loose material by hand tools, brooming and/or light air blasting. The Engineer will determine if patching is necessary prior to HMA resurfacing.

G. HMA resurfacing shall be per SUDAS Section 7020.

DIVISION 8 - Traffic Control

Section 8020 Pavement Markings

1.07 Special Requirements Add item as follows:

"Thermoplastic reflectorized pavement markings and installation shall be warranted to the Owner against peeling, chipping, flaking, delamination, and shoving for a period of one year. Thermoplastic material shall be accepted on the basis of sampling and inspection at the place of manufacture or in warehouse lots as determined by the Engineer. In addition, all samples shall be accompanied with the manufacturer's certified identification of the binder formulation. Batch size for testing shall not be less than 3000 lbs. unless the total order is less than that amount. Type III primers used for installation of thermoplastic pavement markings will be subject to approval by the Engineer."

1.08 Measurement and Payment

A. General Delete item 1. In its entirety and replace with the following: "Pavement marking lines will be measured on a lineal basis for each size of line, with the exception of crosswalk markings which will be measured on an area basis." Delete item 4 in its entirety.

B., C., D., E., F. Painted and Tape Markings

Delete item **1. Measurement** for each of these and replace with the following:

“Each type of pavement marking will be measured on a lineal basis for each size of line, with the exception of crosswalk markings which will be measured on an area basis.”

K. Pavement Markings Removed: Delete item **1. Measurement** in its entirety and replace with the following: “Pavement markings remove will be measured on a lineal basis for each size of line or on a lump sum basis. Removal marking tape or markings obliterated during construction will not be measured. “

M. Grooves Cut for Pavement Markings: Delete item **1. Measurement** in its entirety and replace with the following: “Measurement will be on a lineal basis equivalent to the quantity of the pavement markings associated with the grooving.”

2.01 Materials:

Add the following: “B.11. Preformed thermoplastic marking tape. Material shall be PREMARK® ViziGrip manufactured by Ennis-Flint, or approved equal.”

Section 8030 Temporary Traffic Control

1.08 Measurement and Payment:

Add item B as follows:

“B. Flaggers: 1. Measurement: Measurement will be in days for each flagger used as approved by the Engineer. A day is considered a minimum of 6 hours. Half days are considered to be greater than 2 hours and less than 6 hours. Flaggers used less than 2 hours will not be measured for payment.

2. Payment: Payment will be at the unit price per day for each flagger.

3. Includes: Unit price includes provision of certified flaggers for direction of traffic and protection of construction zone as approved by the Engineer. “

DIVISION 9 - Site Work and Landscaping

Section 9030 Plant Material and Planting

3.01 Allowable Planting Dates

A. Evergreen Plants: Delete item A. in its entirety and replace with the following:

“A. Evergreen Plants: September 15 to November 15 and prior to June 1, but not after candles exceed 1 inch.”

B. Deciduous Plants (Balled and Burlapped and Container): Delete item B. in its entirety and replace with the following: “Deciduous **Plants (Balled and Burlapped and Container):** September 15 to November 15 and prior to June 1.”

3.10 Pruning

B. Deciduous Trees: Delete Items 1-3 in their entirety and replace with the following:

1. Prune broken, damaged, or otherwise defective branches. Eliminate competing leaders.

2. Prune to develop an upright leader that will promote the symmetry of the tree. “

D. Deciduous Shrubs: Delete item and replace with the following: “**D. Deciduous Shrubs:** Remove dead or broken branches”

3.12 Establishment and Warranty Periods and Acceptance

C. Maintenance: Delete item 1 in its entirety.

D. Plant Condition: Delete item in its entirety and replace with the following: “**D. Plant Condition:** Ensure all plants are in a live, healthy, vigorous, and growing condition with canopy density and color representative of the species at the date of acceptance of the installation by the Engineer, at the end of the plant establishment period and at the end of the warranty period.”

DIVISION 10 - Demolition

Section 10,010 Demolition of Building Structures

1.07 Special Requirements

Add item C.1 as follows: “C.1. Notify Linn County Public Health Department prior to plugging abandoned wells.

Add item C.2 as follows: “C.2. Notify Linn County Public Health Department of septic tank abandonment for inspection and recording.”

3.02 Utility Disconnections

A. Sanitary Sewer: Delete this section in its entirety and replace with the following: “**Sanitary Sewer: 1.** Prior to the demolition of any structure, the sanitary sewer service serving it shall be temporarily plugged with a friction-type plug or cap to prevent storm water and debris from entering the line during demolition prior to the construction of the permanent plug.

2. The sanitary sewer service shall be cut off at the sanitary sewer main and shall be tightly and permanently sealed with a plug of mortar. “

B. Water Service: Delete this section in its entirety and replace with the following: “Disconnect all water service connections at the main in accordance with Hiawatha Municipal Code, Chapter 12. Coordinate a minimum of 48 hours in advance with the Water Meter Shop (319-393-5556) to schedule inspection. NOTE: Some water service disconnections will require the water main to be shut-down, requiring notice to affected customers. Inspection is required.”

C. Storm Sewer: Delete this section in its entirety and replace with the following: “Disconnect all sump pump and area drain connections to the storm sewer at the back of curb. Permanently seal the branch of the sewer with a plug of mortar.”

3.06 Well Pugging and Abandonment

Add to item the following: “Contact Linn County Public Health Department prior to abandonment and plugging wells for procedural and recording requirements.”

Delete the following sections:

- A. Plugging Procedures, All Wells
- B. Plugging Procedures, Class 1 Wells
- C. Plugging Procedures, Class 2 Wells

DIVISION 11 Miscellaneous

Section 11,010 Construction Survey

1.03 Submittals: Add the following:

"4. After award of the contract and prior to the preconstruction meeting, the Contractor shall locate and examine the survey control points noted in the contract documents.

The Contractor shall provide a signed statement to the Engineer regarding the sufficiency of the control points for construction survey.

After award of the contract and prior to the preconstruction meeting, the Contractor shall locate and determine conditions where new construction will match existing features and determine the location and elevation of said features. The Contractor shall provide a signed statement to the Engineer regarding the accuracy and sufficiency of locations and elevations of existing features as noted in the contract documents for use in construction survey.

Failure to provide these statements may result in delays in the commencement of construction. The Contractor will have no claim for damages or extension of time for these delays. "

1.07 Special Requirements Add Item E. as follows: "E. For usage of electronic files refer to Division 1, Section 1040 1.05."

F. The Jurisdiction shall not be required to provide electronic AutoCAD files or electronic files including but not limited to surfaces. The contractor shall perform the work via the survey stakes provided by the Jurisdiction. At the discretion of the engineer a limited electronic file may be provided given the contractor signs the Electronic Media Release."

1.08 Measurement and Payment

A. Construction Survey: Add to item 3 the following: "Also includes verification of control

points and existing feature locations and elevations and submittals per Section 11,010 1.03."

3.04 Disturbed Monuments

Remove and Replace with:

"Replace land corners, property corners, permanent reference markers, and benchmarks specified in the contracts documents, or if disturbed during construction by a Licensed Surveyor in the State of Iowa at the cost of the contractor and is incidental to other bid items."

Appendix A

Hiawatha Water Department Standard Specification for Water Main Improvements

Approved Manufacturers and Materials List for water main and water service lines

A.01 – Corporation Stop

1. AY McDonald NL Ball Style 74701BQ is preferred
 - a. 74701B and 74701B-33 are acceptable
2. Mueller 300 Ball Style B-25008N is preferred
 - a. 25000N and P-25008N are acceptable
3. Ford Ballcorp F1000-G NL is preferred
 - a. F600NL and F1000-4 NL are acceptable

A.02 – Curb Stop

1. AY McDonald NL Ball Style 76100Q is preferred
 - a. 76100 and 76100-22 are acceptable
2. Mueller 300 Ball Style B-25209N is preferred
 - a. B-25204N and P-25209N are acceptable
3. Ford Ball Style B44-433-Q-NL is preferred
 - a. F600NL and F1000-4 NL are acceptable

A.03 – Curb Box

1. AY McDonald 5601 with Stainless Steel valve rod and Erie Pattern lid – to be used on Copper Services only
2. AY McDonald 5601 with Stainless Steel valve rod and 5607TW lid – to be used on all services that require a tracer wire (i.e. non-metallic)
3. AY McDonald curb boxes are preferred
 - a. Mueller H-10314 and Ford EM2-60-56 are acceptable

A.04 – Service Saddles (tapping)

1. Smith Blair Model 317
2. Romac 202N
3. Ductile Iron MJ Tapped Tee (2-inch services)

A.05 – Meter Valves

1. All valves must be No Lead.
2. AY McDonald Ball Style Model 6100 W's and 4602 W's with lock wings are preferred.
 - a. Ford Ball meter valves straight and angled with padlock wings are acceptable.
 - b. Mueller 300 Ball meter valves straight and angled with lock wing are acceptable.

A.06 – Water Service

1. Copper pipe: Conforms to ASTM B88. Wall thickness: K Type
2. Plastic pipe: Conforms to ASTM D2737. Wall thickness SDR9 CTS

- a. Plastic Tubing or Pipe must have a Stainless Steel Liner used with all compression type fittings.
 - b. All plastic service lines must have tracer wire installed with each service from the water main into the water meter.
3. Ductile Iron Pipe: Class 52 per ANSI/AWWA C151/A21.51
4. Polyvinyl Chloride Pipe: Conform to ANSI/AWWA C900, C905 DR18

Appendix B

Hiawatha Water Department Accepted Products for Water Distribution

PVC Water Pipe: AWWA C-900, C905 Pressure Class 150, DR19

- JM Eagle AWWA C90 DR18 4"-12" and DR14 16" and up
- CertainTeed Certa-Lok C900/RJIB for directional bored piping
- North American Pipe Corporation

Ductile Iron Water Pipe: ANSI/AWWA-A21.51/C151

- American, Clow, Griffin, McWane, US Pipe

Fittings: Ductile Iron Standard, ANSI/AWWA-A21.10C110, 350 psi

Ductile Iron Compact, AWWA C153, 350 psi

- Clow, US Pipe, Tyler/Union, Romac (ALPHA Restrained Joint), Sigma

Tapping Sleeve: Full Body Ductile Iron with Stainless Steel and/or NSS Cor-Blue Nuts and Bolts

- American Flow Control – Series 2800, Kennedy, Mueller – H615, Tyler/Union 25-U

Tapping Sleeve: Stainless Steel with 304 Stainless Steel Flange

- Ford FAST, Mueller H-304SS, Romac SST, Smith Blair 665

Mechanical Joint Restraint Device: With NSS Cor-Blue Nuts & Bolts

- EBAA 1100, EBAA 2200PV, Tyler/Union TUFGRIP 1000 & 1000S, TURFGrip 1500, TUFGRIP 2000 & 2000S

Valve: Resilient Seated Gate Valve, ANSI/AWWA C509, C515, Open Counter-Clockwise

- Clow 2640 & 2639, Kennedy 8571SS, Mueller 2300 Series, US Pipe A-USPO-20, Mueller 2300 series Aqua-Grip System, American Flow Control 2500 Series

Tapping Valve: ANSI/AWWA C509, C515 Open Counterclockwise

- Clow F-2640, Kennedy 8950 SS, Mueller T-2361, US Pipe A-USPO-16, American Flow Control 2500 Series

Butterfly Valve (16" and larger): ANSI/AWWA C504, Class 150B or Class 250B, Open Counterclockwise

- Clow, DeZurik, GAV 800 Series, Kennedy, M&H, Mueller, Pratt, Valve-Matic

Valve Box (Slip Type): for areas where valve is located in pavement

- Tyler Union - Series 6850 & 666S, Tyler Union #69-A Riser, Sigma Corp VB-4621 & VB-4622, Riser ring VB-2601-2608, 2615 and 2625

Valve Box (Screw Type): for all non-paved areas

- Tyler Union - Series 6850 & 666S; #69 Riser, Sigma Corp VB-2611 & VB-2612 Riser ring VB-2601-2608, 2615 and 2625

Fire Hydrant: AWWA C502, Open Counterclockwise, 5 ¼", Pumper nozzle to 5" Storz Connection. **See Hydrant Characteristics**

- Mueller Super Centurion 250, Clow Medallion F-2545, Waterous Pacer WB67-250

Stainless Steel Repair Clamp: With Stainless Steel Nuts & Bolts

- Ford FS1, Romac SS1, Smith-Blair 261, TPS Quick Cam

Sleeve Type Coupling: With Stainless Steel Nuts & Bolts, MJ Solid Ductile Iron Sleeve, AWWA C153

- Tyler Union, Clow, US Pipe, Romac Alpha Wide Range Restraint Coupling

Tracer Wire Terminal: Stainless Steel Hydrant Strap

- Straps can be obtained from the Water Department

Tracer Wire: Blue in Color

- Copperhead, Kris Tech, Approved Equal

Tracer Wire Connect: Blue in Color

- Copperhead Industries Snake Bite Corrosion Proof Wire Connector #SCB-01, Ideal 30-160

Service Saddle / Service Connection*: ANSI/AWWA C800 with double Stainless Steel Bands

- Brass: AY McDonald 3855, Ford 2020 BS (for PVC pipe only), Smith Blair 325
- *Tyler Union MJ C152 Tapped Tee (2" tap); Clow MJ Class 350 Tapped Tee (2" tap)

Corporation Valve: ANSI/AWWA C800, Compression Ball Valve

- AY McDonald 74701BQ, Mueller B-25008N, Ford F1000-G-NL

Curb Valve: ANSI/AWWA C800, Compression Ball Type Connection, for CTS OD Tubing (both ends)

- AY McDonald 76100Q, Mueller 300 B-25209N, Ford B44-333-Q-NL

Curb Box: ANSI/AWWA C800, Arch Patten, 5-foot Length (telescope 1-foot), Slide Style. With 42" Stainless Steel Rod & Cotter Pin

- AY McDonald 5601, 5603 with 5660 SS, Mueller H-10314, Ford EM2-60-56

Curb Box Lid: "W" or "WATER" label on lid

- AY McDonald 5601 used with all Copper Services
- AY McDonald 560TW used with all non-metallic Services that require tracer wires or Equal

Straight 3-part Coupling: ANSI/AWWA C800

- AY McDonald 74758Q, Mueller 110 H-15403N, Ford C44-44-Q, Universal Cambridge Coupler

Meter Valve: ANSI/AWWA C700

- AY McDonald Ball Style Model 76100WW and 74602WW, with locking wings are preferred
- Ford and Mueller Ball style meter valves with lock wings may be used

Water Service Material:

- Copper Pipe: Conforms to ASTM B88 Wall Thickness: K type
- Plastic Pipe: Conforms to ASTM D2737, Wall thickness SDR9 CTS
 - Plastic tubing/pipe must have stainless steel liner/stiffeners used with all compression type fittings
 - Plastic tubing/pipe service line shall be installed with approved compression style fittings
 - All Plastic (non-metallic) services must have tracer wire installed with each service from the main to the meter
- Ductile Iron Pipe: Class 52 per ANSI/AWWA C151.A21.51
- Polyvinyl Chloride (PVC): Conform to ANSI/AWWA C900,905 DR18

Fire Hydrant Characteristics: AWWA Standard C502

Main Valve Size:	5 ¼"
Inlet Connection:	6" MJ
Direction to open:	Left (counter clockwise)
Pumper Nozzle Size:	5" Storz Connection
Pumper Nozzle Thread:	5.7659" Diameter NST
Hose Nozzle Number/Size:	2 each 2 ½"
Hose Nozzle Thread:	3.0686" OD Male, NST 7 ½ tpi
Operating Nut Size:	1 ¼" pentagon
Bury Depth:	6'-0" (Six feet)

Remarks: Word "OPEN" and arrow to be cast on top. Two coats of fire hydrant red paint. Dry top design with provisions for lubricating operating mechanism. Bronze seat/seating ring. Weather cap for operating nut.

FIGURES – Specifications Manual

Division 4- Sewers and Drains

HI 4040.231 Subdrains (delete 4040.231)

Division 5- Water Mains and Appurtenances

Figure 9.1 Typical Pavement Utility Section

Water Service Detail

Water Service Layout Details 1 & 2

Water Main Clearance Detail

DIVISION 6 – Structures for Storm and Sanitary Sewer

HI 6010.990 Sanitary Manhole Over Existing Sewer – Alternative Method

HI 6010.991 Sanitary Sewer Connection to Existing Manhole

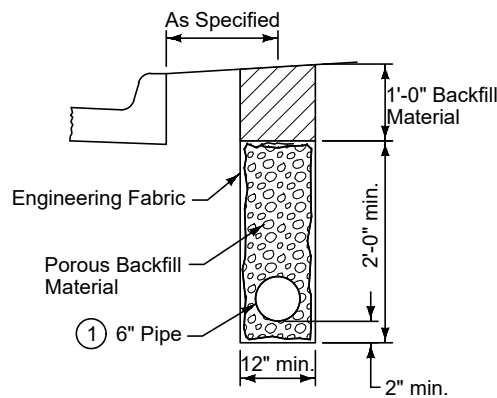
HI 6010.992 Internal Drop Connection for Sanitary Sewer Manhole

HI 6010.993 Internal Service Drop

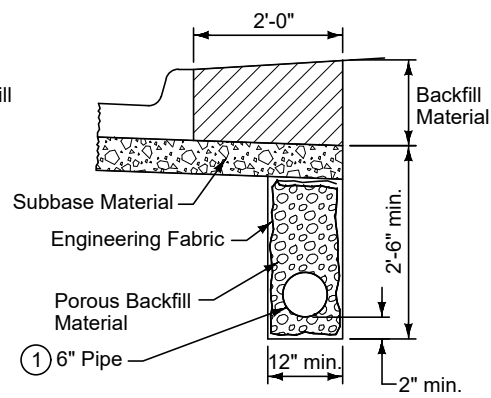
End of Section

Adopted January 20, 2021

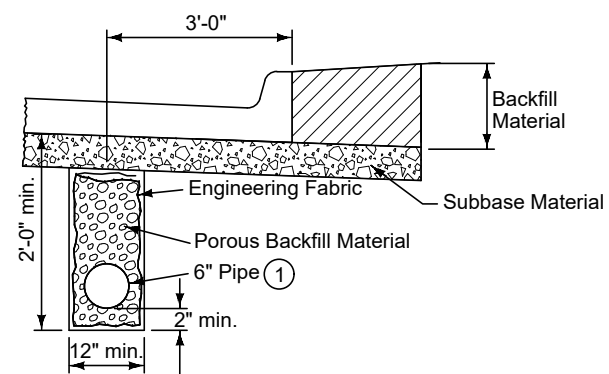
City of Hiawatha Resolution #21-



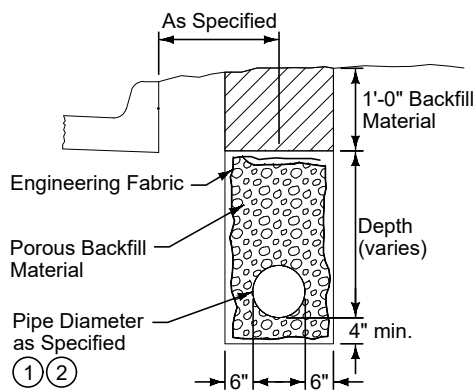
CASE A
TYPE 1



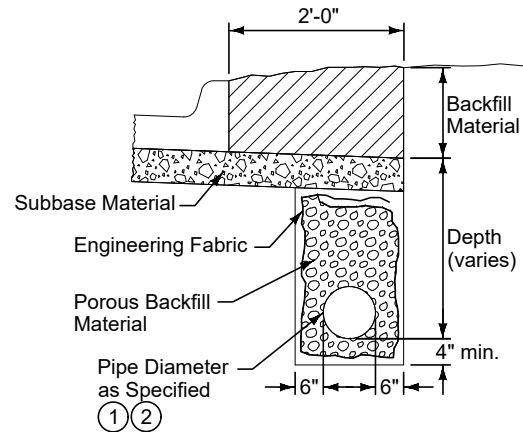
CASE B
TYPE 1



CASE C
TYPE 1



CASE D
TYPE 2



CASE E
TYPE 2

Type 1 installation is for longitudinal subdrain only. Type 2 installation is for combination subdrain/footing drain collectors.

- ① Place perforations down for all installations.
- ② When concrete pipe is specified, wrap pipe joints with engineering fabric. Do not apply joint sealant. Comply with Figure 4020.211


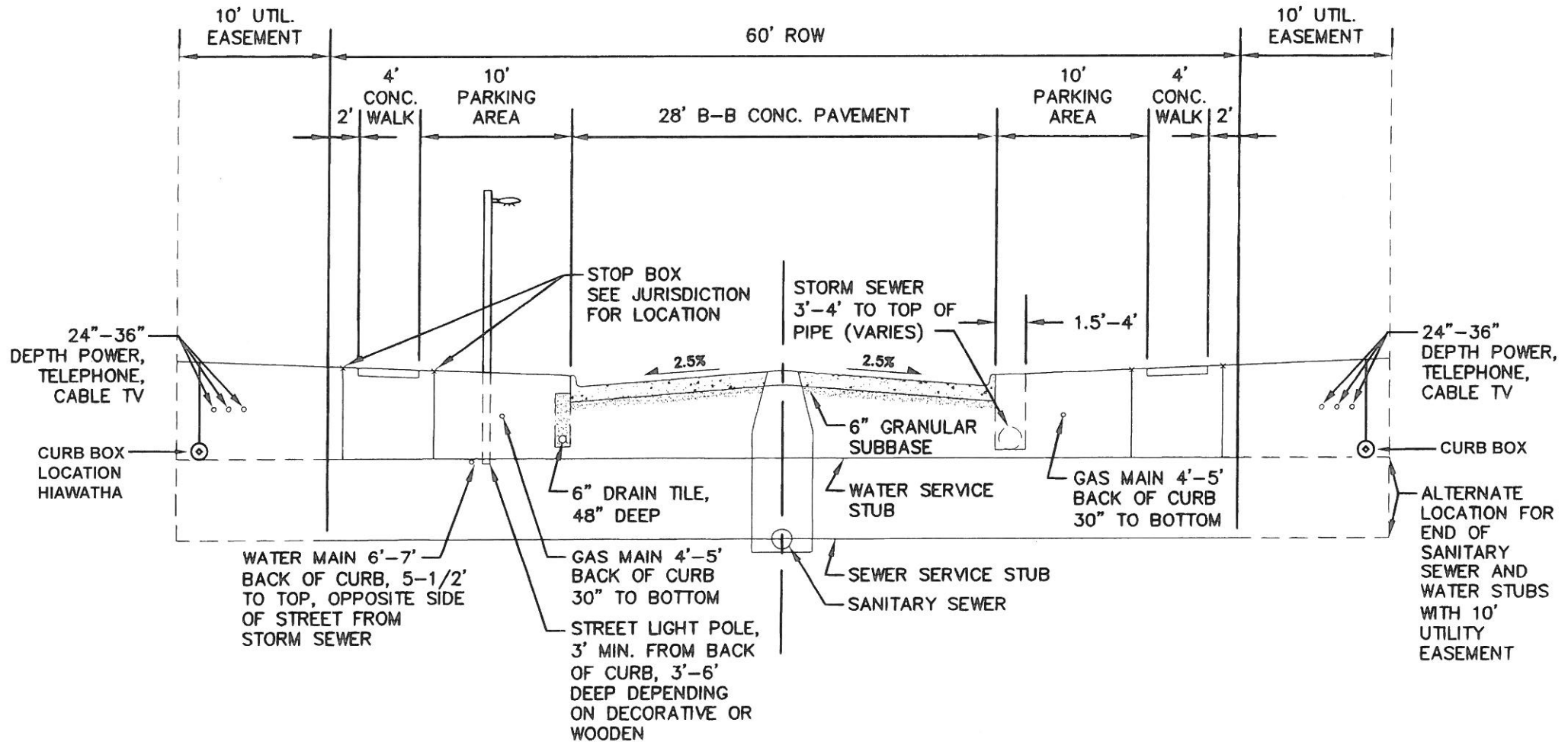
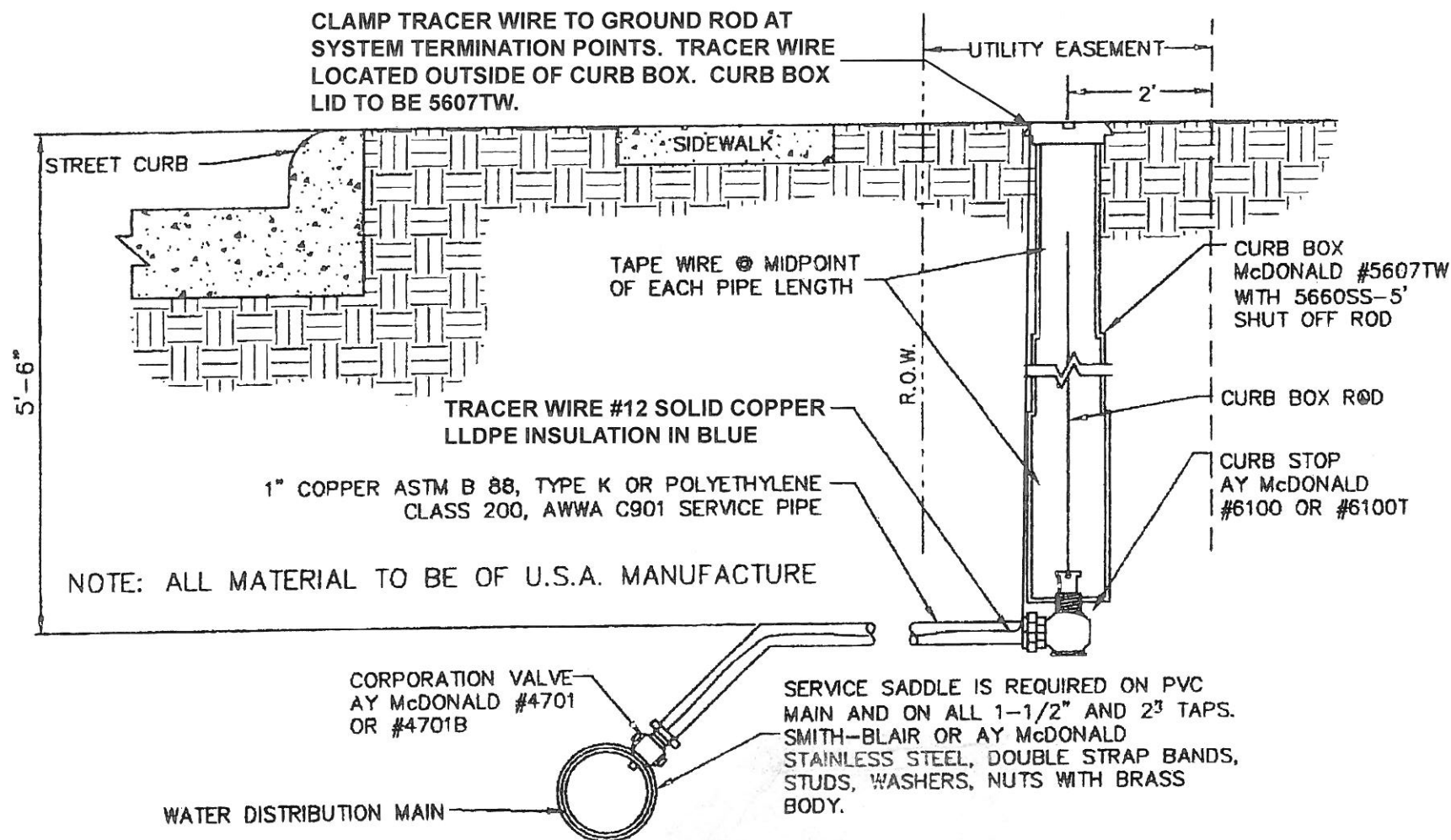
 Hiawatha!™	REVISION	
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	HI 4040.231	
	SHEET 1 of 1	
Hiawatha General Supplemental Specifications to SUDAS		
SUBDRAINS		

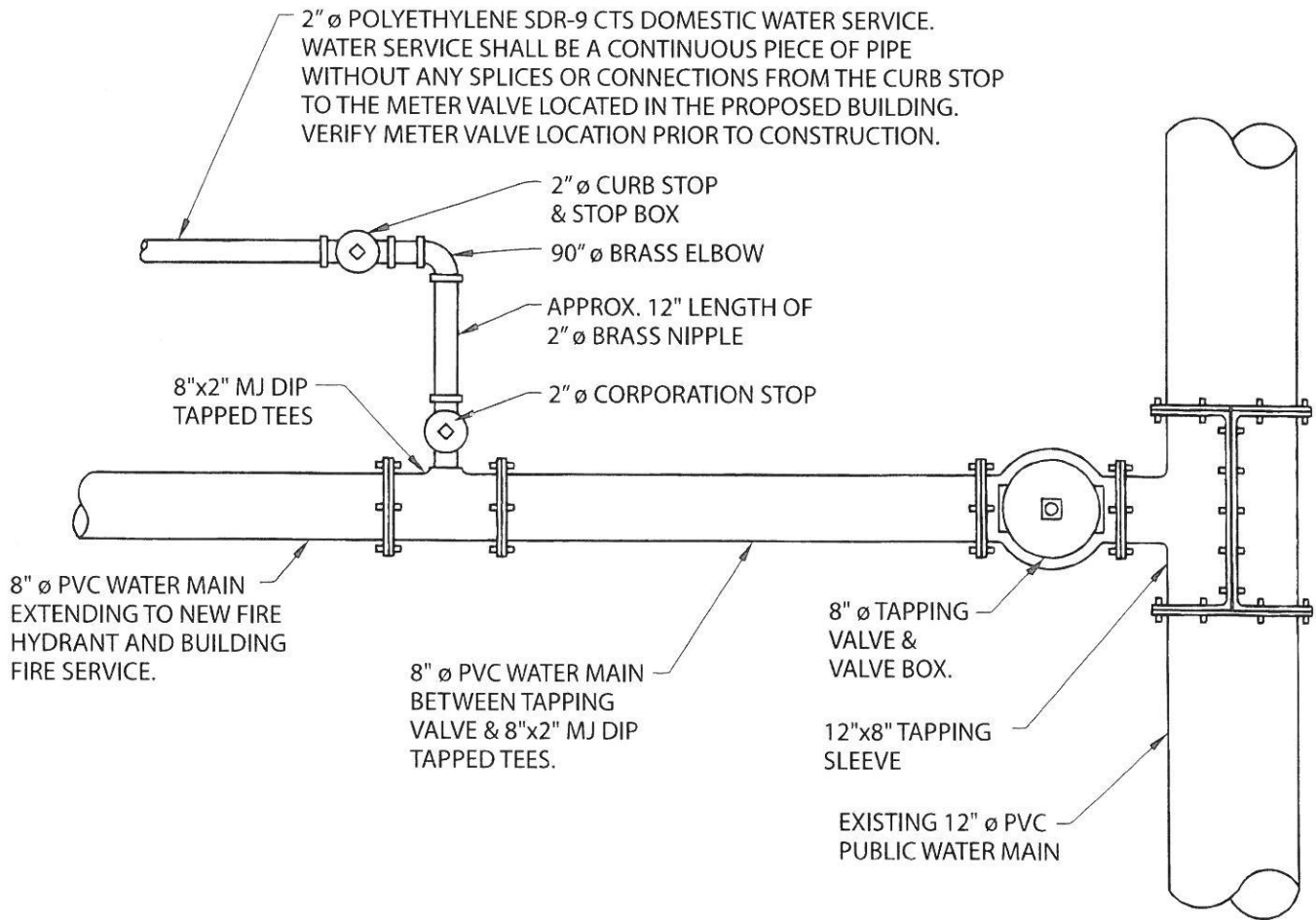
FIGURE 9.1 TYPICAL PAVEMENT/UTILITY SECTION
LOCAL RESIDENTIAL STREET



WATER SERVICE DETAIL

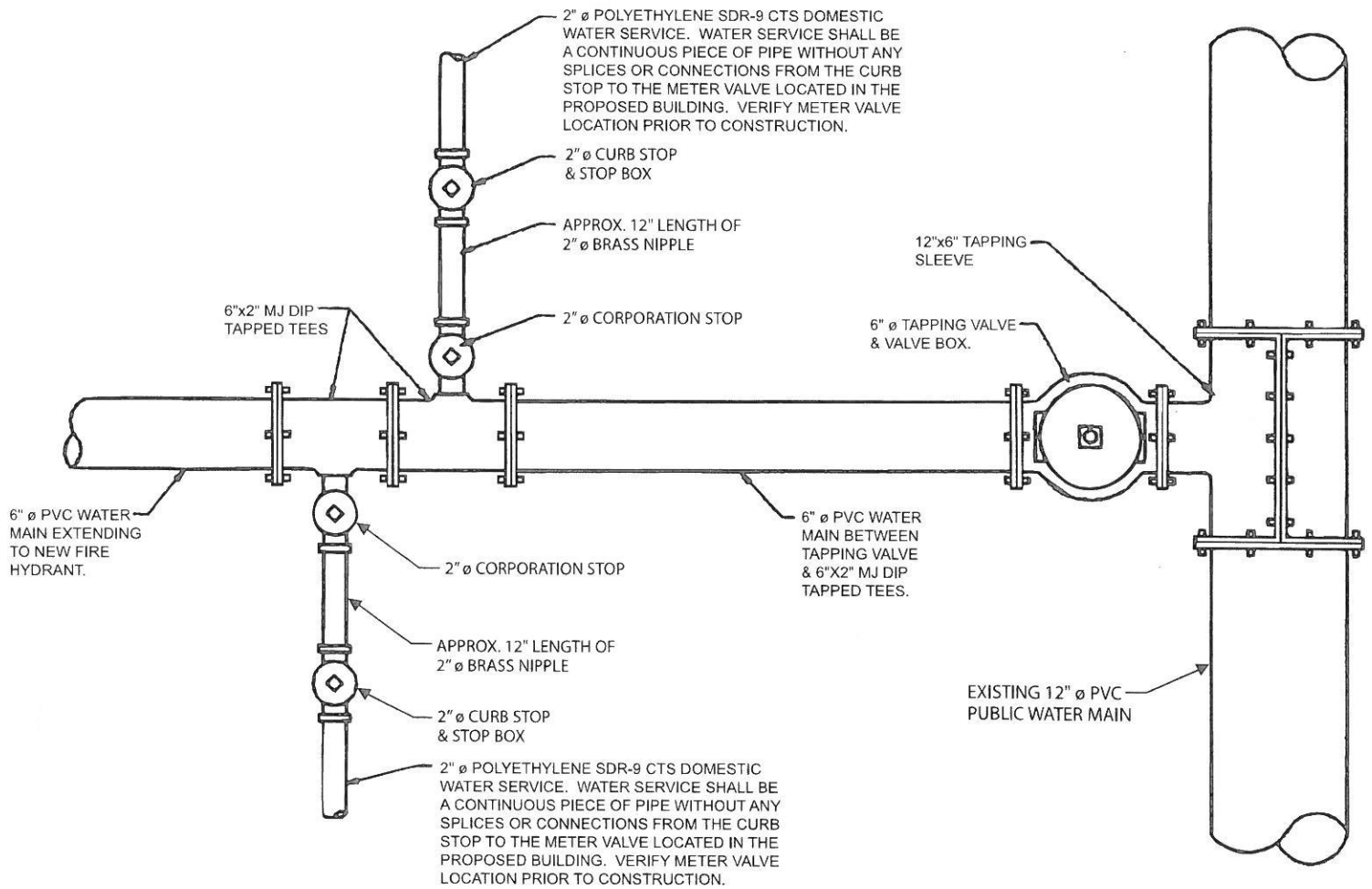
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1 WATER SERVICE LAYOUT DETAIL

COMMERCIAL

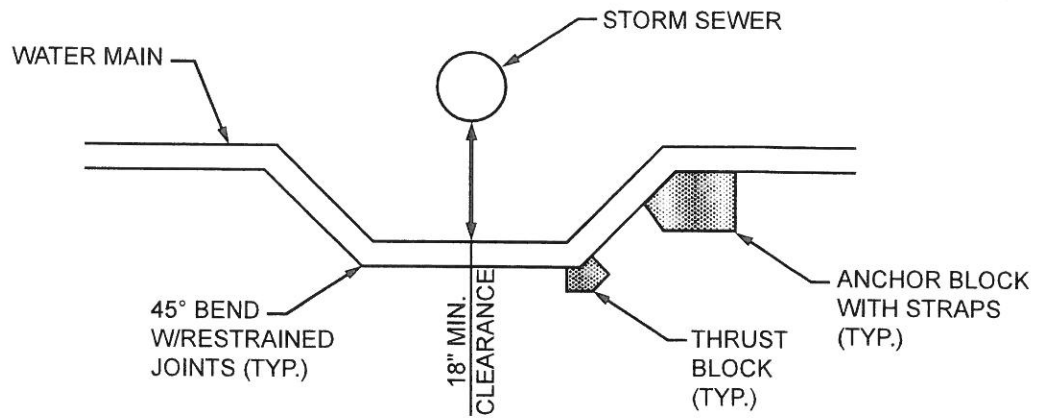


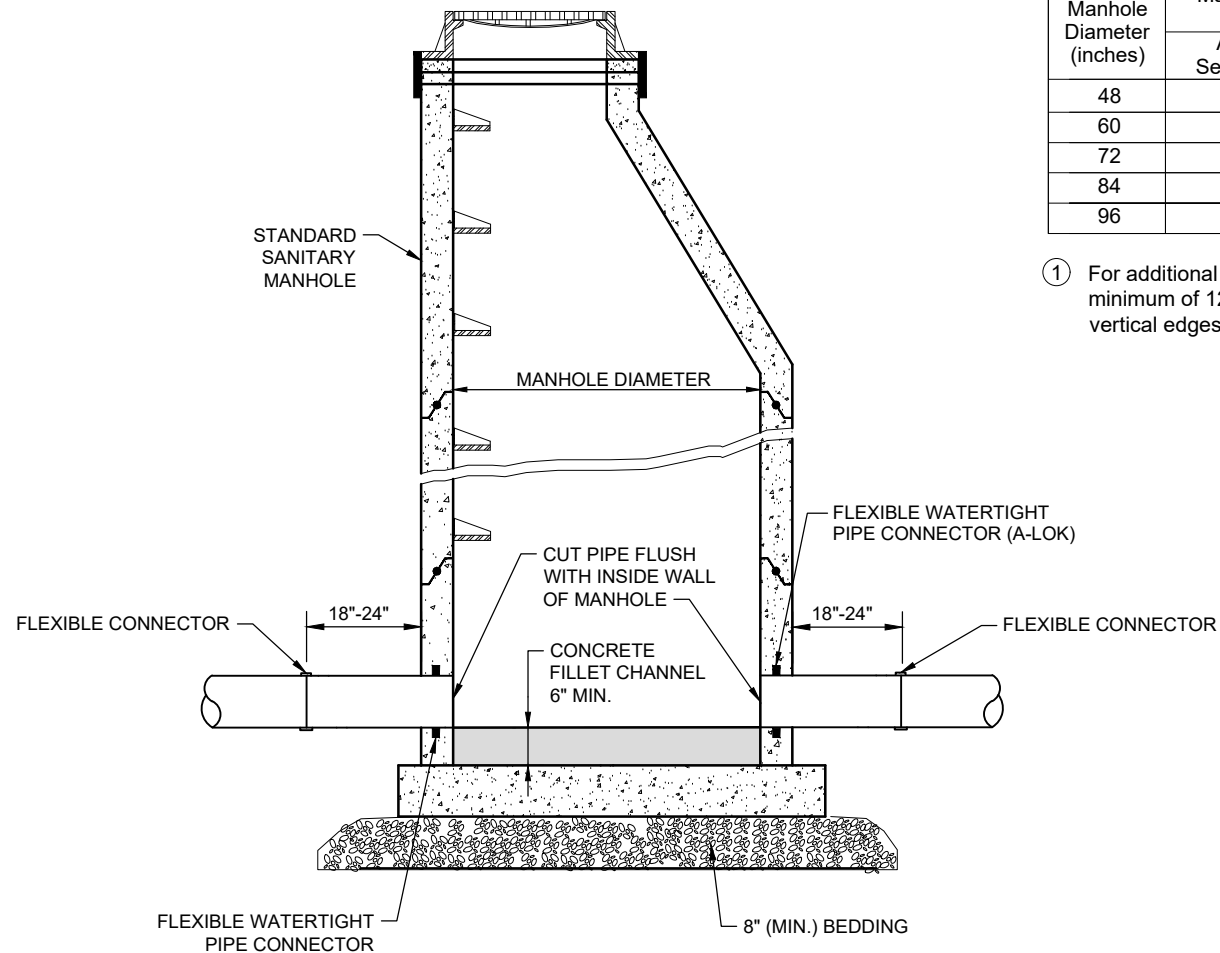
2 WATER SERVICE LAYOUT DETAIL

COMMERCIAL

WATER MAIN CLEARANCE DETAIL

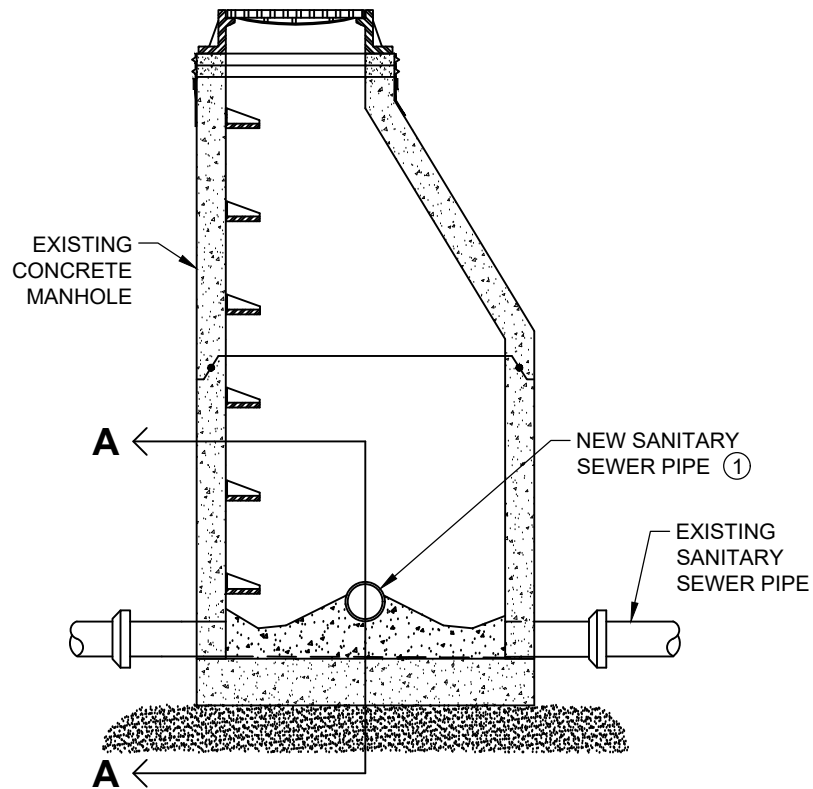
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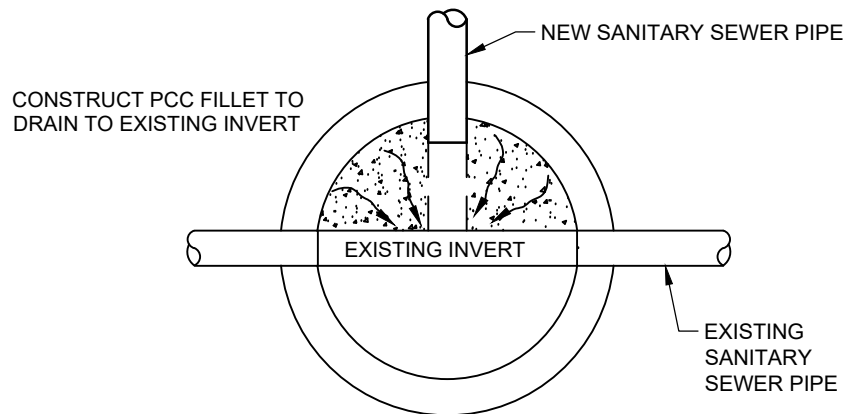


Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes ^①	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

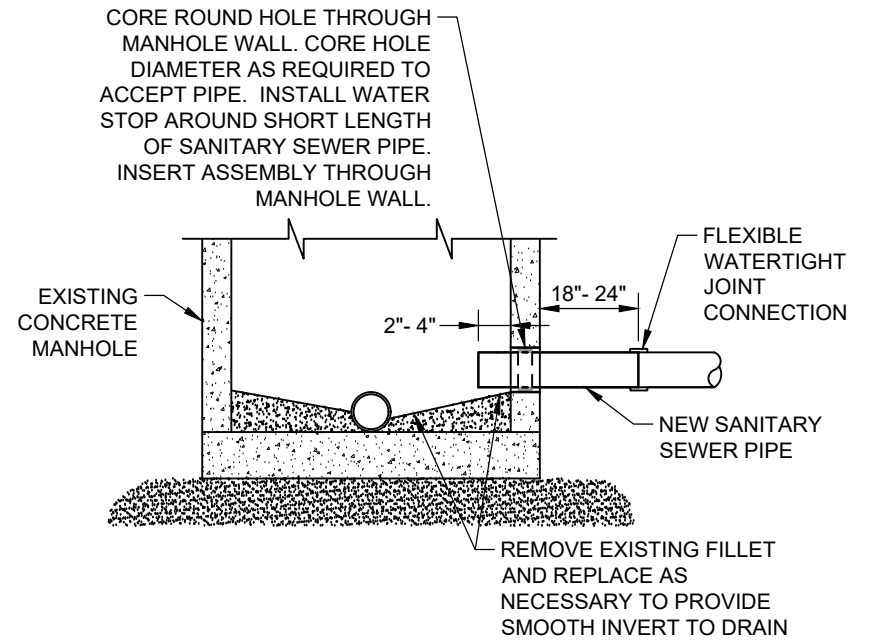
- ① For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.



ELEVATION




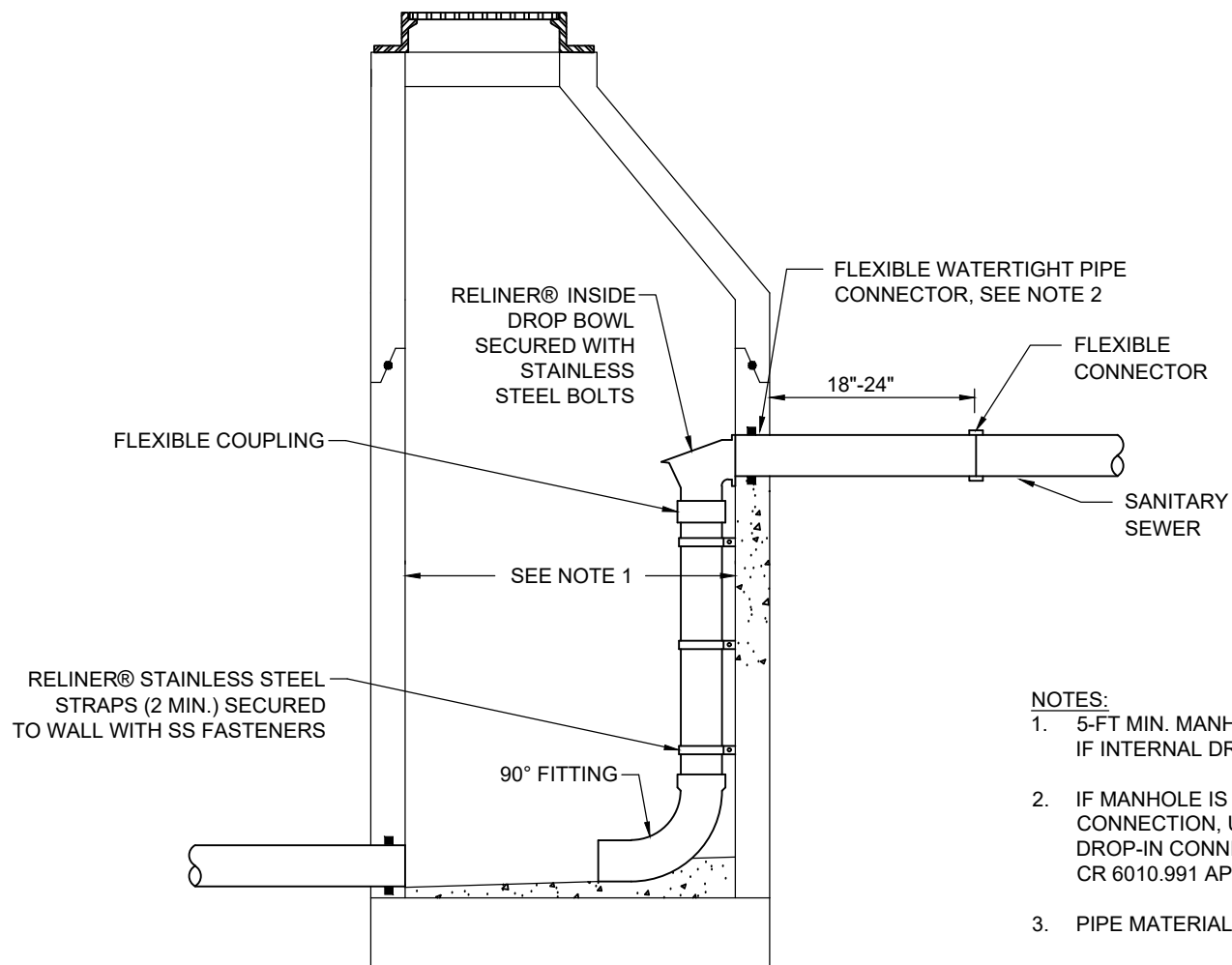
PLAN



SECTION A-A


- ① MAINTAIN A MINIMUM OF 12 INCHES OF CONCRETE BETWEEN VERTICAL EDGES OF PIPE OPENINGS.

	REVISION	
	New	01.20.21
	HI 6010.991	
	SHEET 1 of 1	
Hiawat□a General Supplemental Specifications to SUDAS		
SANITARY SEWER CONNECTION TO EXISTING MANHOLE		



NOTES:

1. 5-FT MIN. MANHOLE DIAMETER REQUIRED IF INTERNAL DROP INSTALLED.
2. IF MANHOLE IS BUILT NEW WITH DROP-IN CONNECTION, USE A-LOK CONNECTOR, IF DROP-IN CONNECTION IS RETRO-FITTED, CR 6010.991 APPLIES.
3. PIPE MATERIAL PER SUDAS SECTION 4010.

	REVISION	
	New	01.20.21
	HI 6010.992	
	SHEET 1 of 1	
Hiawat□a General Supplemental Specifications to SUDAS		
INTERNAL DROP CONNECTION FOR SANITARY SEWER MANHOLE		

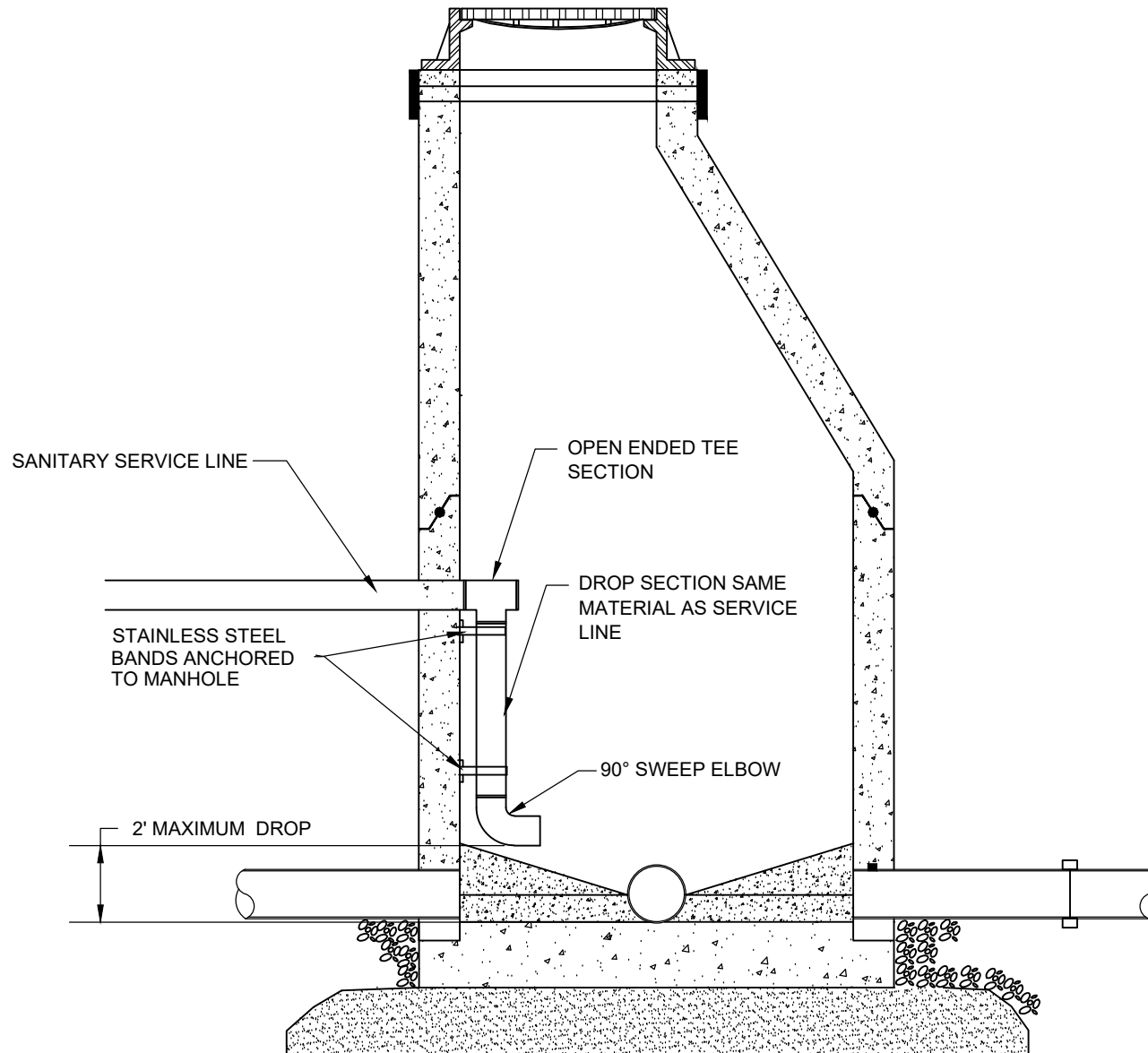



FIGURE HI 6010.993 SHEET 1 OF 1

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INTERNAL SANITARY SERVICE DROP		