

VILLAGE OF HUNTLEY APPROVED MATERIAL LIST

GENERAL ITEMS

1. **Bolts Placed Underground:** All below grade factory installed bolts and fasteners shall be Teflon coated 304-grade stainless steel
2. **Casing:**
 - A. Casing Spacers: Carrier pipe shall be centered within a casing by use of model CCS stainless steel Casing Spacers as manufactured by Cascade Waterworks Mfg.
 - B. Casing End Boots: Install model CCES End Boots as manufactured by Cascade Waterworks Mfg.
3. **Truncated Dome Detectable Warning Systems:**
 - A. Wet set reinforced polymer type; Brick red color homogeneous throughout
 - B. Meeting requirements of Americans with Disabilities Act Accessibility Guidelines, the Illinois Assembly Code and applicable IDOT Standard Details
 - C. Approved Model: as manufactured by ADA Solutions, Tuffile, and Armor-Tile (Herculite Series); Use same model throughout development/project
4. **Street Signs:**
 - A. Signs: High intensity prismatic meeting MUTCD requirements
 - B. Posts: Telescoping square galvanized tubing with 7/16" holes on all four sides; 10' height
5. **Approved Model:** as manufactured by Telespar
6. **Street Name Signs:**
 - A. Signs: High intensity prismatic meeting MUTCD requirements; White letters on green background
 - B. Posts: Round galvanized socket and wedge post; 2-3/8" outside diameter; 12' height
7. **Approved Model:** as manufactured by Telespar
8. **Reflective Pavement Markers:**
 - A. Type: Recession
 - B. Approved Model: R-100 as manufactured by Marker One
9. **Street Lighting:**
 - A. To be reviewed on a project by project basis

SANITARY SEWER SYSTEM

1. **Sanitary Sewer Pipe:**
 - A. PVC pipe (depths 15' and less):
 - i. Gravity Sewer: PVC SDR 26 in accordance with D-3034 for pipe diameter 15" and less and P679 for pipe diameter greater than 15". Joints shall be in accordance with ASTM D-3212
 - ii. Pressure Sewer Force Main: 4-inch through 12-inch shall be C900 DR-18; 14-inch through 18-inch shall be C905 DR-18. Elastomeric gasket joints shall be in accordance with ASTM D-3139
 - iii. Pressure Sewer Force Main (only as authorized by Director of Public Works): PVC SDR 26 in accordance with D-2241 for pipe diameter 16" and less. Elastomeric gasket joints shall be in accordance with ASTM D-3139
 - B. Ductile iron (depths greater than 15 feet):
 - i. Class 52 conforming to ANSI/AWWA C151/A21.51;
 - ii. Mechanical or push-on joints shall conform to ANSI/AWWA C111/A21.11
 - iii. All DIP sewer mains shall be encased in an 8 mil high density polyethylene encasement with its material specifications and installation method in accordance with ANSIAWWA C105/A21.5, ASTM A674, using "Method A" installation
 - iv. Brass wedges shall be installed to provide electrical conductivity
2. **Sewer Force Main Fittings:** All fittings shall be mechanical joint ductile iron and shall conform to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53. Fittings shall be U.L. Listed Class 350 and shall be manufactured in the United States
3. **Sewer Force Main Joint Restraint:**
 - A. All mechanical joint fittings shall have restraining glands installed:
 - i. DIP MJ restraint device shall be Mega-lug Series 1100 by EBAA Iron or Uni-flange Series 1400 by Ford Company
 - ii. PVC MJ restraint device shall be Mega-lug Series 2000PV by EBAA Iron or Uni-flange Series 1500 by Ford Company
 - B. DIP push joint pipe restraint shall be Field Lok® 350 gaskets by US Pipe or Series 1700 Mega-lug by EBAA Iron or Series 1390 Pipe Restraint by Ford
 - C. C900 PVC push joint pipe restraint shall be Series 1900 split serrated restraint harness by EBAA Iron or Series 1390 Pipe Restraint by Ford
 - D. C905 PVC push joint pipe restraint shall be Series 2800 Mega-lug restraint harness by EBAA Iron or Series 1390 Pipe Restraint by Ford

- E. Lengths of pipe restraint shall be determined from manufacturer's installation specifications
4. **Manholes:**
 - A. Precast reinforced in accordance with ASTM C478. Eccentric cone type unless otherwise indicated on Drawings
 - B. Size:
 - i. through 21" sewer pipe Min. 4' inside diameter manhole
 - ii. 24" through 30" sewer pipe Min. 5' inside diameter manhole
 - iii. >30" through 48" sewer pipe Min. 6' inside diameter manhole
 - C. Manhole Frame & Lids:
 - i. Neenah R-1712, self-sealing Type B cover or East Jordan Iron Works 1050 with self-sealing cover
 - ii. The words "SANITARY" and "VILLAGE OF HUNTLEY" shall be cast into the surface of the lid
 - D. Manhole Seal:
 - i. Barrel sections shall be sealed using butyl rubber sealant and an external butyl joint wrap similar to Barrel Wrap as manufactured by Adaptor, Inc., EZ Wrap as manufactured Pre-Seal Gasket Corporation, Infi-Shield Gator Wrap as manufactured by Sealing Systems, Inc., or approved equal
 - ii. The chimney and adjusting rings shall be sealed using an external chimney seal as manufactured by Adaptor, Inc.
 - iii. A watertight flexible pipe-to-manhole connector shall be employed in the connection of the sanitary sewer pipe to precast manholes. The connector shall consist of a rubber gasket, an internal expansion sleeve, and one or more external compression take-up clamps. Approved materials for the connector shall be natural or synthetic rubber and Series 300 non-magnetic stainless steel. No plastic components shall be permitted. The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet/exceed the requirements of ASTM C 923

STORM SEWER SYSTEM

1. **Storm Sewer Pipe:**
 - A. Reinforced concrete Pipe (RCP):
 - i. Conforming to ASTM C-76
 - ii. Tongue and groove or bell & spigot joints using cement mortar, butyl sealant or o-ring gasket in accordance with ASTM C-351 or C-443
 - iii. Thickness class shall be in accordance with the IDOT Standard Specifications for a given pipe diameter and fill height over the top of pipe
 - B. PVC pipe (depths 15' and less):
 - i. PVC SDR 26 in accordance with D-3034 for pipe diameter 15" and less and P679 for pipe diameter greater than 15". Joints shall be in accordance with ASTM D-3212
 - ii. Pressure sewer for water main separation requirements: PVC SDR 26 in accordance with D-2241 for pipe diameter 16" and less. C905 DR-18 for 18-inch; C905 DR-25 for 20" and 24". Elastomeric gasket joints shall be in accordance with ASTM D-3139
 - C. Ductile iron pipe (DIP):
 - i. Class 52 conforming to ANSI/AWWA C151/A21.51;
 - ii. Mechanical or push-on joints shall conform to ANSI/AWWA C111/A21.11
 - iii. All DIP sewer mains shall be encased in an 8 mil high density polyethylene encasement with its material specifications and installation method in accordance with ANSIAWWA C105/A21.5, ASTM A674, using "Method A" installation
 - iv. Brass wedges shall be installed to provide electrical conductivity
 - D. High Density Polyethylene (HDPE):
 - i. FOR PRIVATE USE ONLY; NOT ALLOWED ON PUBLIC RIGHT-OF-WAY
 - ii. Smooth interior and annular exterior corrugations conforming to AASHTO M-294 and watertight flexible elastomeric seals conforming to ASTM D-3212 and F-477
2. **Manholes:**
 - A. Precast reinforced in accordance with ASTM C478. Eccentric cone type
 - B. Size:
 - i. through 21" sewer pipe Min. 4' inside diameter manhole
 - ii. 24" through 30" sewer pipe Min. 5' inside diameter manhole
 - iii. >30" through 48" sewer pipe Min. 6' inside diameter manhole
 - iv. greater than 48" sewer pipe Special design required

- C. Manhole Frame & Lids:
 - i. Neenah R-1772, Type B cover (cover may be open Type D when specified on drawings) or East Jordan Iron Works 1022
 - ii. The words "STORM" and "VILLAGE OF HUNTLEY" shall be cast into the surface of the lid
3. **Inlet and Catch Basin Frame & Lids:**
 - A. Frame & grates: Neenah R-1772, Type D open cover or East Jordan Iron Works 1022
 - B. Combination frame, grate and barrier curb box: Neenah R-3281-A with standard Type C grate
 - C. Combination frame, grate and mountable curb box: Neenah R-3501-TR (flow right) or TL (flow left) with standard Type 1 grate; alternate to be reviewed on case by case basis to match curb dimensions
 - D. Beehive frame & grates: Neenah R-4340-B
4. **Storm Sewer Structure Seal:**
 - A. Precast sections shall be sealed using butyl rubber sealant.
 - B. When storm sewer structure is installed in pavement, the chimney and adjusting rings shall be sealed using heat activated Wrapseal as manufactured by Adaptor, Inc.
 - C. When storm sewer structures are placed within curb lines, the chimney and adjusting rings shall be sealed using heat activated Wrapseal An external chimney seal as manufactured by Canusa-CPS

WATER DISTRIBUTION SYSTEM

1. **Water Main Pipe:**
 - A. Ductile Iron Class 52, conforming to ANSI/AWWA C151/A21.51:
 - i. Cement Lining, conforming to ANSI/AWWA C104/A21.4
 - ii. Mechanical or push-on joints shall conform to ANSI/AWWA C111/A21.11
 - iii. All DIP water mains shall be encased in an 8 mil high density polyethylene encasement with its material specifications and installation method in accordance with ANSIAWWA C105/A21.5, ASTM A674, using "Method A" installation
 - iv. Brass wedges shall be installed to provide electrical conductivity
 - B. PVC pipe:
 - i. 8-inch through 12-inch shall be C900 DR-18
 - ii. 14-inch through 18-inch shall be C900 DR-18
 - iii. 20-inch and 24-inch shall be C900 DR-25
 - iv. All PVC water main shall be installed with a minimum 10 gauge solid copper tracer wire. The wire shall be continuous through the valve vaults and boxes and shall be accessible at grade within the vault frame or box
2. **Water Main Fittings:**
 - A. All fittings shall be mechanical joint ductile iron and shall conform to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 and cement lined in accordance with ANSI/AWWA C104/A21.4. Fittings shall be U.L. Listed Class 350 and shall be manufactured in the United States
3. **Fire Hydrants:**
 - A. Approved Model:
 - i. Shall meet AWWA C-502
 - ii. Mueller Super Centurion A-423 break away style traffic design
 - B. All hydrants shall include (Refer to standard Fire Hydrant Detail)
 - i. 6" mechanical joint connection with retainer glands
 - ii. 5 1/2" valve opening
 - iii. One 4 1/2" pumper nozzle and two 2 1/2" hose nozzles
 - iv. 6" auxiliary valve and box with valve box stabilizer on lateral
 - v. Standard "Hydra-Finder" hydrant locator including 3/8" white laminar matrix fiberglass 5' long corrosion and UV resistant shaft with 6" wide red reflective tape, flag and spring
 - C. Fire Hydrant Paint: All publicly owned hydrants shall be painted red. All privately owned hydrants shall be painted yellow
4. **Valves:**
 - A. 6" through 10" diameter: Cast iron body, bronze fitted, resilient wedge gate valve with non-rising stem, standard operating nut and open in a counter clockwise direction. Resilient wedge gate valves shall be Mueller A-2361 Series in accordance with AWWA C-515
 - B. 12 inches and larger: Cast iron body, rubber seat type butterfly valves. All valves shall open counter clockwise with non-rising stem. Butterfly valves shall be Class 150B Mueller B-3211 in accordance with AWWA C-504
5. **Valve Box:**
 - A. Valve boxes shall be cast iron, two (2) piece 5/8" shafts screw type Tyler Model 6850 and installed on the valve with an Adaptor II valve box stabilizer as manufactured by Adaptor, Inc. Lids shall be marked "Water"
6. **Valve Vaults:**

- A. Precast reinforced vaults in accordance with ASTM C478 are required for all valves greater than 10" and all valves located in pavement
- B. Size:
 - i. through 8" valves Min. 4' inside diameter
 - ii. 10" and larger valves Min. 5' inside diameter
 - iii. Pressure Taps Min. 5' inside diameter
- C. Valve Vault Frame & Lids:
 - i. Neenah R-1712, self-sealing Type B cover or East Jordan Iron Works 1050 with self-sealing cover
 - ii. The words "WATER" and "VILLAGE OF HUNTLEY" shall be cast into the surface of the lid
- D. Valve Vault Seal:
 - i. Barrel sections shall be sealed using butyl rubber sealant
 - ii. The chimney and adjusting rings shall be sealed using an external chimney seal as manufactured by Adaptor, Inc.
 - iii. A watertight flexible pipe-to-manhole connector shall be employed in the connection of the water main pipe to precast vaults. The connector shall consist of a rubber gasket, an internal expansion sleeve, and one or more external compression take-up clamps. Approved materials for the connector shall be natural or synthetic rubber and Series 300 non-magnetic stainless steel. No plastic components shall be permitted. The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet/exceed the requirements of ASTM C 923
7. **Joint Restraint:**
 - A. All mechanical joint fittings shall have restraining glands installed:
 - i. DIP MJ restraint device shall be Mega-lug Series 1100 by EBAA Iron or Uni-flange Series 1400 by Ford Company
 - ii. PVC MJ restraint device shall be Mega-lug Series 2000PV by EBAA Iron or Uni-flange Series 1500 by Ford Company
 - B. DIP push joint pipe restraint shall be Field Lok® 350 gaskets by US Pipe or Series 1700 Mega-lug by EBAA Iron or Series 1390 Pipe Restraint by Ford Company
 - C. 900 PVC push joint pipe restraint shall be Series 1900 split serrated restraint harness by EBAA Iron or Series 1390 Pipe Restraint by Ford Company
 - D. Lengths of pipe restraint shall be determined from manufacturer's installation specifications
8. **Copper Service Lines:**
 - A. 1.5-inch diameter minimum
 - B. Type K soft copper tubing in accordance with ANSI H23.1
 - C. Compression fittings only
9. **Service Line Taps:**
 - A. Service taps of 1 1/2" & 2" require the use of a tapping saddle. Saddles shall be full circle, fusion bonded flex coat epoxy ductile iron body (per ASTM A536) with double 304-grade stainless steel straps and hardware, and NSF 61 listed TaperSeal Nitrile gasket as manufactured by Smith-Blair, model #317
 - B. Existing service connections less than 1 1/2" may be re-connected upon the authorization of the Director of Public Works utilizing the direct tap method to 6-inch mains and larger only
10. **Corporation Stops:**
 - A. Compression fittings
 - i. Mueller B-25008-N (1 1/2-inch and 2-inch)
11. **Curb Stops:**
 - A. Compression fittings
 - i. Mueller B-25155-N 300 Ball (1 1/2-inch and 2-inch)
12. **Curb Box:**
 - A. Extension type arch pattern Mueller H-10310 with stationary rod
 - B. Lid marked "WATER"
13. **Pressure Tapping:**
 - A. Tapping Sleeves:
 - i. Stainless steel meeting AWWA C223 and NSF 61; Mueller H-304, Smith - Blair 665, or Cascade Waterworks CST-EX
 - ii. Flange fasteners shall be 304-grade stainless steel
 - B. Tapping Valve:
 - i. Cast iron body, bronze fitted, resilient wedge gate valve with non-rising stem, standard operating nut and open in a counter clockwise direction. Resilient wedge tapping valves shall be Mueller T-2361 Series in accordance with AWWA C-515 and NSF 61
14. **Sampling Station:**
 - A. Unit shall be designed specifically for collecting bacteriological and other water samples at a designated point directly from the water main and shall be model Eclipse No. 88 with cold climate protection package as manufactured by Kupferle Foundry



STANDARD DETAILS - APPROVED MATERIAL LIST

SCALE: NTS	DRAWN/CHECKED CBEL/TPF	DRAWING NUMBER
DATE: 1/11/2016	REVISED: 10/21/2021	-/-

