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TRANSPORTATION CABINET
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DESIGN MEMORANDUM NO. 02-15
CONSTRUCTION MEMORANDUM NO. CM 15-04
MAINTENANCE MEMORANDUM NO. 02-15
UTILITIES MEMORANDUM NO. 01-15

TO: Chief District Engineers
Project Development Branch Managers
Design Engineers
Design Consultants
District Utility Supervisors

FROM: Steve Waddle, P.E. *SKW*
State Highway Engineer, Department of Highways

DATE: June 30, 2015

SUBJECT: Standardized Bid Codes
Utility Relocations Incorporated Into Highway Project Bid Package

The Kentucky Transportation Cabinet prefers that utility relocation be incorporated into our highway construction contracts. Staff and consultants, representing the Cabinet are hereby directed to encourage utility companies to include their relocation work with our construction projects.

When successful in utilizing this methodology, the project plans and proposal must include the utility relocation plans, utility company supplied specifications, utility company approved subcontractors (if applicable), and a listing of utility line items and accompanying bid codes. Policies and procedures for including the utility relocation in the road construction project plans are defined in the KYTC Utility and Rail Manual, Chapter UR-1700. Supplementary to this defined procedure are the attached standardized bid codes and descriptions. These codes have been allocated for utility work included in road project bids. This list of bid codes includes items associated with water, sewer, gas, communication, and electric facility installation.

Effective September 25, 2015, all KYTC projects that include utility relocation work shall use the bid codes as defined. Any bid items that do not readily belong to a code on the standard bid code lists attached should be addressed as follows:

- Validate that the bid item in question is not incidental to a standardized code.
- Validate that the bid item cannot be listed as a 'special' item as described in the attachment for special bid items.



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In instances that a potential bid item is still not addressed, a new code may be requested from the Division of Construction Procurement.

The utility bid codes provided shall not be amended on a project by project basis but utility companies are encouraged to provide supplementary specifications that complement or otherwise enhance the KYTC Standard Specifications.

<http://transportation.ky.gov/Organizational-Resources/Policy%20Manuals%20Library/Utilities%20and%20Rails.pdf>

Standard Electric And Communications Bid Descriptions

EC DUCT These items shall include all labor, equipment, and material to excavate, install, and backfill the specified bank of duct at locations shown in the plans in accordance with the specifications and standard drawings complete and ready for use. These bid items shall include all necessary appurtenances, connections, fittings, plugs, tees, bends, collars, racks or spacers, pull string, granular or concrete encasement, compacted earth or flowable fill backfill, etc. Flowable fill, where specified on the plans and specifications, shall be considered incidental to the duct items. No separate payment will be made for flowable fill, unless directed to be used contrary to plans and specifications. All excavation shall be unclassified. No additional payment will be made for rock excavation. Duct shall be measured as the horizontal distance from outside face of structure to outside face of structure; or, to the point of duct termination at dead ends or poles. No additional payment will be made for vertical conduit. No separate bid items will be provided due to varying duct sizes. Any and all duct sizes and configurations shall be paid under these items. The only variations in bid items shall be in the number of duct in a bank and if the duct is or is not to be concrete encased. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF).

EC ELECTRIC MANHOLE, ELECTRIC PIT, ELECTRIC PULL BOX, COMMUNICATIONS MANHOLE, COMMUNICATIONS PULL BOX These items shall include all labor, equipment, excavation, materials, and backfill to install the specified manhole, pit, or pull box at the locations as shown on the plans in accordance with the specifications and standard drawings complete and ready for use. No separate bid items will be provided for varying sizes of structures. All structures shall be paid under the appropriate bid item regardless of size. Where structures are specified to be backfilled with flowable fill, the cost of the flowable fill shall be considered incidental to the bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

STANDARD ELECTRIC AND COMMUNICATIONS BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
17000	EC Communications Manhole	EA	
17001	EC Communications Pull Box	EA	
17002	EC Communications Structure Special	EA	
17003	EC Duct - 02 Bank	LF	
17004	EC Duct - 02 Bank Concrete Encased	LF	
17005	EC Duct - 03 Bank	LF	
17006	EC Duct - 03 Bank Concrete Encased	LF	
17007	EC Duct - 04 Bank	LF	
17008	EC Duct - 04 Bank Concrete Encased	LF	
17009	EC Duct - 05 Bank	LF	
17010	EC Duct - 05 Bank Concrete Encased	LF	
17011	EC Duct - 06 Bank	LF	
17012	EC Duct - 06 Bank Concrete Encased	LF	
17013	EC Duct - 07 Bank	LF	
17014	EC Duct - 07 Bank Concrete Encased	LF	
17015	EC Duct - 08 Bank	LF	
17016	EC Duct - 08 Bank Concrete Encased	LF	
17017	EC Duct - 09 Bank	LF	
17018	EC Duct - 09 Bank Concrete Encased	LF	
17019	EC Duct - 10 Bank	LF	
17020	EC Duct - 10 Bank Concrete Encased	LF	
17021	EC Duct - 11 Bank	LF	
17022	EC Duct - 11 Bank Concrete Encased	LF	
17023	EC Duct - 12 Bank	LF	
17024	EC Duct - 12 Bank Concrete Encased	LF	
17025	EC Duct - Single	LF	
17026	EC Duct - Single Concrete Encased	LF	
17027	EC Duct - Special	LF	
17028	EC Electric Manhole	EA	
17029	EC Electric Pit	EA	
17030	EC Electric Pull Box	EA	
17031	EC Electric Structure Special	EA	
17500	EC Communications Manhole Inst	EA	
17501	EC Communications Pull Box Inst	EA	
17502	EC Communications Structure Special Inst	EA	
17503	EC Duct - 02 Bank Inst	LF	
17504	EC Duct - 03 Bank Inst	LF	
17505	EC Duct - 04 Bank Inst	LF	
17506	EC Duct - 05 Bank Inst	LF	

STANDARD ELECTRIC AND COMMUNICATIONS BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
17507	EC Duct - 06 Bank Inst	LF	
17508	EC Duct - 07 Bank Inst	LF	
17509	EC Duct - 08 Bank Inst	LF	
17510	EC Duct - 09 Bank Inst	LF	
17511	EC Duct - 10 Bank Inst	LF	
17512	EC Duct - 11 Bank Inst	LF	
17513	EC Duct - 12 Bank Inst	LF	
17514	EC Duct - Single Inst	LF	
17515	EC Duct - Special Inst	LF	
17516	EC Electric Manhole Inst	EA	
17517	EC Electric Pit Inst	EA	
17518	EC Electric Pull Box Inst	EA	
17519	EC Electric Structure Special Inst	EA	

Standard Gas Bid Descriptions

G DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of gas main under streets, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall be for all sizes and not be size specific. No separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

G ENCASEMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, vents, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

G ENCASEMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, vents, labor, and equipment to open cut and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's

Specifications shall be referenced. Paid LINEAR FEET (LF)

G REGULATOR STATION Includes all labor, equipment, materials and restoration, to install a new gas regulator station as indicated on plans and on standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the locations shown on the plans. This bid item is to be used to relocate an existing gas main at point locations such as to clear a conflict at a proposed drainage structure, pipe or any other similar short relocation situation. All new materials are to be used. The materials provided shall be of the same type and specification as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case by case basis. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Main Point Relocate shall not be paid on a linear feet basis; but, shall be Paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

G PIPE This description shall apply to all polyethylene/plastic and steel pipe bid items of every size and type to be used as gas main, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), corrosion protective coatings of steel pipe and fittings, labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item shall also include material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

G SERVICE LONG SIDE This bid item description shall apply to all service line installations of every size bid up to and including 2 inch inside diameter, except those service bid items defined as "Special". This item includes the specified piping material, main tap, coupling for connecting the new piping to the surviving existing piping, encasement of 2 inches or less internal diameter (if required by plan or specification), labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where the ends of the service connection are on opposite sides of the public roadway and the service line crosses the centerline of the public roadway as shown on the plans. The length of the service line is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. This pay item does not include installation or relocation of meters. Meters will be paid separately. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. No additional payment will be made for rock excavation or for special bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G SERVICE SHORT SIDE This bid item description shall apply to all service line installations of every size up to and including 2 inch internal diameter, except those service bid items defined as "Special". This item includes installation of the specified piping material of the size specified on plans, encasement of 2 inches or less internal diameter (if required by plan or specification), main tap, coupling for connecting the new piping to the surviving existing piping, labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where both ends of the service connection are on the same side of the public roadway, or when an existing service crossing a public roadway will remain and is being extended, reconnected, or relocated with all work on one side of the public roadway centerline as shown on the plans. The length of the service line is not to be specified and shall not be restricted to any minimum or maximum length. Payment shall be made under this item even if the service crosses a private residential or commercial entrance; but, not a public roadway. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. This pay item does not include installation or relocation of meters. Meters will be paid separately. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G SERVICE RELOCATE This item is for the relocation of an existing gas service line where a meter is not involved, and where an existing service line can easily be adjusted by excavating alongside and moving the line horizontally and/or vertically a short distance without cutting the service line to avoid conflicts with road construction. This item shall include excavation, labor, equipment, bedding, and backfill to relocate the line in accordance with the plans and specifications complete and ready for use. Payment under this item shall be for each location requiring relocation. Payment shall be made under this item regardless of service size or relocation length. No separate pay items will be established for size or length variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G TIE-IN This bid description shall be used for all main tie-in bid items of every size except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, restoration, testing and backfill required to make the gas main tie-in as shown on the plans, and in accordance with the specifications complete and ready for use. Pipe for tie-ins shall be paid under separate bid items. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G VALVE This description shall apply to all valves of every size and type required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be for gas valves being installed with new main. This item includes the valve as specified in the plans and specifications, protective coating and corrosion protection, labor, equipment, excavation, valve box and valve stem extensions, backfill, restoration, testing, etc. required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G VALVE BOX ADJUST Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, etc. to adjust the top of the box to finished grade complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

STANDARD GAS BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
16000	G Directional Bore	LF	
16001	G Encasement Special	LF	
16002	G Encasement Steel Bored Range 1	LF	
16003	G Encasement Steel Bored Range 2	LF	
16004	G Encasement Steel Bored Range 3	LF	
16005	G Encasement Steel Bored Range 4	LF	
16006	G Encasement Steel Bored Range 5	LF	
16007	G Encasement Steel Bored Range 6	LF	
16008	G Encasement Steel Open Cut Range 1	LF	
16009	G Encasement Steel Open Cut Range 2	LF	
16010	G Encasement Steel Open Cut Range 3	LF	
16011	G Encasement Steel Open Cut Range 4	LF	
16012	G Encasement Steel Open Cut Range 5	LF	
16013	G Encasement Steel Open Cut Range 6	LF	
16014	G Main Point Relocate	EA	
16015	G Pipe Polyethylene/Plastic 02 Inch	LF	
16016	G Pipe Polyethylene/Plastic 03 Inch	LF	
16017	G Pipe Polyethylene/Plastic 04 Inch	LF	
16018	G Pipe Polyethylene/Plastic 06 Inch	LF	
16019	G Pipe Polyethylene/Plastic 08 Inch	LF	
16020	G Pipe Polyethylene/Plastic 10 Inch	LF	
16021	G Pipe Polyethylene/Plastic 12 Inch	LF	
16022	G Pipe Special	LF	
16023	G Pipe Steel 02 Inch	LF	
16024	G Pipe Steel 03 Inch	LF	
16025	G Pipe Steel 04 Inch	LF	
16026	G Pipe Steel 06 Inch	LF	
16027	G Pipe Steel 08 Inch	LF	
16028	G Pipe Steel 10 Inch	LF	
16029	G Pipe Steel 12 Inch	LF	
16030	G Regulator Station	EA	
16031	G Service Long Side 1 Inch	EA	
16032	G Service Long Side 1-1/2 Inch	EA	
16033	G Service Long Side 2 Inch	EA	
16034	G Service Long Side 3/4 Inch	EA	
16035	G Service Relocate	EA	
16036	G Service Short Side 1 Inch	EA	
16037	G Service Short Side 1-1/2 Inch	EA	
16038	G Service Short Side 2 Inch	EA	

STANDARD GAS BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
16039	G Service Short Side 3/4 Inch	EA	
16040	G Service Special	EA	
16041	G Tie-In 02 Inch	EA	
16042	G Tie-In 03 Inch	EA	
16043	G Tie-In 04 Inch	EA	
16044	G Tie-In 06 Inch	EA	
16045	G Tie-In 08 Inch	EA	
16046	G Tie-In 10 Inch	EA	
16047	G Tie-In 12 Inch	EA	
16048	G Tie-In Special	EA	
16049	G Valve Polyethylene/Plastic 02 In	EA	
16050	G Valve Polyethylene/Plastic 03 In	EA	
16051	G Valve Polyethylene/Plastic 04 In	EA	
16052	G Valve Polyethylene/Plastic 06 In	EA	
16053	G Valve Polyethylene/Plastic 08 In	EA	
16054	G Valve Polyethylene/Plastic 10 In	EA	
16055	G Valve Polyethylene/Plastic 12 In	EA	
16056	G Valve Special	EA	
16057	G Valve Steel 02 Inch	EA	
16058	G Valve Steel 03 Inch	EA	
16059	G Valve Steel 04 Inch	EA	
16060	G Valve Steel 06 Inch	EA	
16061	G Valve Steel 08 Inch	EA	
16062	G Valve Steel 10 Inch	EA	
16063	G Valve Steel 12 Inch	EA	
16064	G Valve Box Adjust	EA	
16500	G Directional Bore Inst	LF	
16501	G Encasement Special Inst	LF	
16502	G Encasement Steel Bored Range 1 Inst	LF	
16503	G Encasement Steel Bored Range 2 Inst	LF	
16504	G Encasement Steel Bored Range 3 Inst	LF	
16505	G Encasement Steel Bored Range 4 Inst	LF	
16506	G Encasement Steel Bored Range 5 Inst	LF	
16507	G Encasement Steel Bored Range 6 Inst	LF	
16508	G Encasement Steel Open Cut Range 1 Inst	LF	
16509	G Encasement Steel Open Cut Range 2 Inst	LF	
16510	G Encasement Steel Open Cut Range 3 Inst	LF	
16511	G Encasement Steel Open Cut Range 4 Inst	LF	
16512	G Encasement Steel Open Cut Range 5 Inst	LF	

STANDARD GAS BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
16513	G Encasement Steel Open Cut Range 6 Inst	LF	
16514	G Main Point Relocate Inst	EA	
16515	G Pipe Polyethylene/Plastic 02 Inch Inst	LF	
16516	G Pipe Polyethylene/Plastic 03 Inch Inst	LF	
16517	G Pipe Polyethylene/Plastic 04 Inch Inst	LF	
16518	G Pipe Polyethylene/Plastic 06 Inch Inst	LF	
16519	G Pipe Polyethylene/Plastic 08 Inch Inst	LF	
16520	G Pipe Polyethylene/Plastic 10 Inch Inst	LF	
16521	G Pipe Polyethylene/Plastic 12 Inch Inst	LF	
16522	G Pipe Special Inst	LF	
16523	G Pipe Steel 02 Inch Inst	LF	
16524	G Pipe Steel 03 Inch Inst	LF	
16525	G Pipe Steel 04 Inch Inst	LF	
16526	G Pipe Steel 06 Inch Inst	LF	
16527	G Pipe Steel 08 Inch Inst	LF	
16528	G Pipe Steel 10 Inch Inst	LF	
16529	G Pipe Steel 12 Inch Inst	LF	
16530	G Regulator Station Inst	EA	
16531	G Service Long Side 1 Inch Inst	EA	
16532	G Service Long Side 1-1/2 Inch Inst	EA	
16533	G Service Long Side 2 Inch Inst	EA	
16534	G Service Long Side 3/4 Inch Inst	EA	
16535	G Service Relocate Inst	EA	
16536	G Service Short Side 1 Inch Inst	EA	
16537	G Service Short Side 1-1/2 Inch Inst	EA	
16538	G Service Short Side 2 Inch Inst	EA	
16539	G Service Short Side 3/4 Inch Inst	EA	
16540	G Service Special Inst	EA	
16541	G Tie-In 02 Inch Inst	EA	
16542	G Tie-In 03 Inch Inst	EA	
16543	G Tie-In 04 Inch Inst	EA	
16544	G Tie-In 06 Inch Inst	EA	
16545	G Tie-In 08 Inch Inst	EA	
16546	G Tie-In 10 Inch Inst	EA	
16547	G Tie-In 12 Inch Inst	EA	
16548	G Tie-In Special Inst	EA	
16549	G Valve Polyethylene/Plastic 02 In Inst	EA	
16550	G Valve Polyethylene/Plastic 03 In Inst	EA	
16551	G Valve Polyethylene/Plastic 04 In Inst	EA	

STANDARD GAS BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
16552	G Valve Polyethylene/Plastic 06 In Inst	EA	
16553	G Valve Polyethylene/Plastic 08 In Inst	EA	
16554	G Valve Polyethylene/Plastic 10 In Inst	EA	
16555	G Valve Polyethylene/Plastic 12 In Inst	EA	
16556	G Valve Special Inst	EA	
16557	G Valve Steel 02 Inch Inst	EA	
16558	G Valve Steel 03 Inch Inst	EA	
16559	G Valve Steel 04 Inch Inst	EA	
16560	G Valve Steel 06 Inch Inst	EA	
16561	G Valve Steel 08 Inch Inst	EA	
16562	G Valve Steel 10 Inch Inst	EA	
16563	G Valve Steel 12 Inch Inst	EA	
16564	G Valve Box Adjust Inst	EA	

Standard Sanitary Sewer Bid Descriptions

S BYPASS PUMPING This item shall include all labor, equipment, and materials needed to complete a bypass pumping and/or hauling operation for diversion of sewage during sanitary sewer construction. Examples of such operations when bypass pumping and/or hauling may be necessary is during force main tie-ins, manhole invert reconstruction, insertion of new manholes into existing mains, or other similar construction. There may be more than one bypass pumping/hauling operation on a project. This item shall be paid for each separate bypass pumping/hauling operation occurrence as called out on the plans or directed by the engineer and actually performed. There will be no separate bid items defined for length, duration, or volume of sewage pumped or hauled in each occurrence. If a bypass pumping/hauling operation is called out on the plans; but, conditions are such that the bypass pumping/hauling operation is not needed or utilized, no payment will be made under this item. The contractor shall draw his own conclusions as to what labor, equipment, and materials may be needed for each bypass pumping/hauling occurrence. The contractor should be prepared to handle the maximum volume of the sewer being bypassed, even during a storm event. This item shall not be paid separately, but shall be considered incidental, when bypass pumping and/or hauling is needed during cast-in-place-pipe (CIPP) and/or point repair operations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA).

S CIPP LATERAL SERVICE INVESTIGATION This item shall include all equipment, materials, labor and incidentals necessary to enter the sewer in compliance with all safety/confined space requirements and perform the identification, assessment and pre-measurement of all existing and abandoned laterals for the placement of Cured-In-Place-Pipe lining. This item shall be in payment for all lateral service investigation for all sewer segments to be lined as a part of this contract. This bid item shall include bypass pumping when required. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be LUMP SUM (LS).

S CIPP LATERAL REINSTATEMENT This item is to pay for installing a Cured-In-Place-Pipe liner in service laterals and service/mainline connections to stabilize structural defects and construction inadequacies. This bid item shall include all labor, equipment, materials and incidentals necessary to perform the service lateral reinstatement in accordance with the plans and specifications. Work under this item shall include sewer flow control, pre-installation cleaning, sealing connections to existing sewer main, pre- and post- construction CCTV inspection and final testing of the CIPP system. This item shall also include the "top hat" required by the specifications. All CIPP lateral reinstatements shall be paid under this item regardless of the size or length of reinstatement. No separate bid items of varying sizes or length of CIPP lateral reinstatement will be provided in the contract. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be EACH (EA) for each CIPP lateral reinstatement complete and ready for use.

S CIPP LINER This bid Item is to pay for rehabilitation of existing sanitary sewers using the Cured-In-Place-Pipe method. This bid item description applies to all CIPP sizes included in the contract. All CIPP Liner items of all varying sizes shall include all labor, materials, customer notification, testing, necessary permits, ingress and egress procedures, bypass pumping, pre-construction video, sediment and root removal, dewatering, traffic control, erosion and sediment control, excavation pits, removal and replacement of manhole frames and covers as necessary to facilitate the lining work, sealing at manholes and service connections, clearing and grubbing, pipeline cleaning, re-cleaning and video inspection as many times as necessary, debris collection and disposal, root removal, pre- and post-construction video inspection, all digital inspection footage, final report preparation and approval, the cost of potable water from the Owner, required compliance tests, site restoration, site cleanup, sealing of liner at manholes, acceptance testing and all other rehabilitation work and incidentals not included under other pay items necessary to complete the rehabilitation per the plans and specifications. There will be no separate payment for acceptance testing of the lined pipe; but shall be considered incidental to this item. Pay under this item shall be by each size bid in the contract. Pay measurement shall be from center of manhole to center of manhole. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF).

S CIPP PROTRUDING LATERAL REMOVAL This item includes all equipment, materials, labor and incidentals necessary to enter the sewer in compliance with all safety/confined space requirements, remove a sufficient amount of the protruding tap to insure a proper and safe Cured-In-Place-Pipe lining insertion and perform pre-installation CCTV. This bid item shall include bypass pumping when required. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be EACH (EA) for each protruding lateral removed.

S CONCRETE PIPE ANCHOR This item shall be constructed on the sewer pipe at the locations shown on the plans in accordance with sanitary sewer specifications and standard drawings. Payment for concrete anchors will be made at the contract unit price each in place complete and ready for use. Each concrete anchor of sewer pipe or force main shall be paid under one bid item per contract regardless of the sizes of carrier pipe being anchored in the contract. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of force main or gravity sewer under streets, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore when specified to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S ENCASEMENT CONCRETE Includes all labor, equipment, excavation, concrete, reinforcing steel, backfill, restoration, etc. to construct the concrete encasement of the sewer or force main as shown on the plans, and in accordance with the specifications and standard drawings. Payment under this item shall be in addition to the carrier pipe as paid under separate bid items. Carrier pipe is not included in this bid item. Any and all concrete encasement shall be paid under one bid item included in the contract regardless of the size of the carrier pipe or the volume of concrete or steel reinforcement as specified in the plans and specifications. No separate bid items will be established for size variations. Measurement of pay quantity shall be from end of concrete to end of concrete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF) when complete.

S ENCASEMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S ENCASEMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to open cut install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S FORCE MAIN This description shall apply to all PVC and ductile iron and polyethylene/plastic pipe bid items of every size and type, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item includes material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This item shall also include pipe anchors on polyethylene pipe runs as shown on the plans or required by the specifications to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S FORCE MAIN AIR RLS/VAC VLV This bid item description shall apply to all force main air release/vacuum valve installations of every size except those defined as "Special". This item shall include the air release/vacuum valve, main to valve connecting line or piping, manhole/vault/structure, access casting or doors, tapping the main, labor, equipment, excavation, proper backfill and restoration required to install the air release/vacuum valve at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. All air release/vacuum valves on a project shall be paid under one bid item regardless of size. No separate pay items will be established for size variations. Only in the case of the uniqueness of a particular air release/vacuum valve would a separate bid item be established. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S FORCE MAIN DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of sewer or force main under streets, buildings, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore when specified to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S FORCE MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the locations shown on the plans. This bid item is to be used to relocate an existing force main at point locations such as to clear a conflict at a proposed drainage structure, pipe or any other similar short relocation situation, and where the existing pipe material is to be reused. The contractor shall provide any additional pipe or fitting material needed to complete the work as shown on the plans and specifications. The materials provided shall be of the same type and specification as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case by case basis. New polyethylene wrap is to be provided (if wrap exists or is specified in the specifications to be used). If it is necessary that the pipe be disassembled for relay, payment under this item shall also include replacement of joint gaskets as needed. Bedding and backfill shall be provided and performed the same as with any other pipe installation as detailed in the plans and specifications. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Force Main Relocate shall not be paid on a linear feet basis; but, shall be Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) at each location when complete and placed in service.

S FORCE MAIN TAP SLEEVE/VALVERNG 1, OR 2 This item shall include the specified tapping sleeve, valve, valve box, concrete pad around valve box (when required in specifications or plans), labor, and equipment to install the specified tapping sleeve and valve, complete and ready for use in accordance with the plans and specifications. The size shall be the measured internal diameter of the live pipe to be tapped. The size tapping sleeve and valve to be paid under sizes 1 or 2 shall be as follows:

Range 1 = All live tapped main sizes up to and including 8 inches

Range 2 = All live tapped main sizes greater than 8 inches

Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S FORCE MAIN TIE-IN This bid description shall be used for all force main tie-in bid items of every size except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, blocking, anchoring, restoration, testing and backfill required to make the force main tie-in as shown on the plans and in accordance with the specifications complete and ready for use. This bid item shall include purge and sanitary disposal of any sewage from any abandoned segments of force main. Pipe for tie-ins shall be paid under separate bid items. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S FORCE MAIN VALVE This description shall apply to all force main valves of every size required in the plans and specifications, except those bid items defined as "Special". Payment under this description is to be for gate or butterfly force main valves being installed with new force main. This item includes the valve as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), valve box and valve stem extensions, backfill, concrete pad around valve box (if required by specification), restoration, testing, etc. required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. If required on plans and/or proposed adjoining DIP is restrained, force main valves shall be restrained. Force main valve restraint shall be considered incidental to the force main valve and adjoining pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S FORCE MAIN VALVE BOX ADJUST Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, etc. to adjust the top of the force main valve box to finished grade complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S LATERAL CLEANOUT This item shall be for payment for installation of a cleanout in a service lateral line. This item shall include furnishing and installation of a tee, vertical pipe of whatever length required, and threaded cap. The cleanout shall extend from the lateral to final grade elevation. The size of the cleanout shall be equivalent to the size of the lateral. The cleanout materials shall meet the same specification as those for the lateral. The cleanout shall be installed at the locations shown on the plans or as directed by the engineer. Only one pay item shall be established for cleanout installation. No separate pay items shall be established for size or height variances. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S LATERAL LONG SIDE This bid item description shall apply to all service lateral installations of every size up to and including 6 inch internal diameter, except those lateral bid items defined as "Special". This item includes the specified piping material, main tap, bends, clean outs, labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service lateral installations where the ends of the lateral connection are on opposite sides of the public roadway. The new lateral must cross the centerline of the public roadway to qualify for payment as a long side lateral. The length of the service lateral is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service lateral across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S LATERAL SHORT SIDE This bid item description shall apply to all service lateral installations of every size up to and including 6 inch, except those lateral bid items defined as "Special". This item includes the specified piping material, main tap tee, bends, clean outs, labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for lateral installations where both ends of the lateral connection are on the same side of the public roadway, or when an existing lateral crossing a public roadway will remain and is being extended, reconnected, or relocated with all work on one side of the public roadway centerline as shown on the plans. The length of the service lateral is not to be specified and shall not be restricted to any minimum or maximum length. Payment shall be made under this item even if the lateral crosses a private residential or commercial entrance; but, not a public roadway. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE Payment under this item is for the installation of new 4 foot interior diameter sanitary sewer manhole. Payment for manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup in accordance with the specifications and standard drawings. All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE ABANDON/REMOVE Payment under this item is for the partial removal and/or filling of any sanitary sewer manhole regardless of size or depth that no longer serves any purpose. Payment shall be made regardless of whether the manhole is or is not in conflict with other work. Any manhole requiring partial removal, but not total removal, in order to clear a conflict with other work shall be paid under this item. All manholes partially removed shall be removed to a point at least one foot below final grade, one foot below roadway subgrade, or one foot clear of any other underground infrastructure, whichever is lowest. If partial removal of an abandoned manhole is elected by the contractor, the remaining manhole structure shall be refilled with flowable fill. Payment for disposal of a sanitary sewer manhole will be made under this item only. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE ADJUST TO GRADE Payment under this item is for the adjustment of sanitary sewer casting elevation on all sizes of existing sanitary manholes. This work shall be performed in accordance with the sanitary sewer specifications. Payment shall be made under this bid item regardless of the amount of adjustment necessary to a sanitary sewer manhole casting or diameter of the manhole. Work under this pay item may be as simple as placing a bed of mortar under a casting; but, shall also be inclusive of installation of adjusting rings, and /or addition, removal, or replacement of barrel sections. The existing casting is to be reused unless a new casting is specified on the plans. New casting, when specified, shall be paid as a separate bid item. Anchoring of the casting shall be incidental to this item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE CASTING STANDARD Payment under this bid items is for furnishing of a new standard traffic baring casting for sanitary manholes meeting the requirements of the sanitary sewer specifications and standard drawings. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when installed.

S MANHOLE CASTING WATERTIGHT Payment under this bid item is for furnishing of a new watertight traffic baring casting for sanitary manholes meeting the requirements of the sanitary sewer specifications and standard drawings. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when installed.

S MANHOLE RECONSTRUCT INVERT This bid item is to pay for all labor, equipment, and material for rework of the manhole bench to redirect or eliminate flow, such as when the flow of a pipe or pipes are being removed or redirected. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in elimination or redirect of flow. This item shall also include providing and placement of a rubber seal or boot as required by utility specification, standard drawing or plan. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. No payment shall be made under this bid when MANHOLE TAP EXISTING, or MANHOLE TAP EXISTING ADD DROP are being paid at the same location, as this type of work is included in those items. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE TAP EXISTING This bid item is to pay for all labor, equipment, and material for coring one opening in an existing manhole base, addition of a rubber seal as specified, and rework of the manhole bench to direct the additional pipe flow. The bid item shall be paid for each core opening added to a single manhole. This bid item shall also include any rework of the existing manhole bench due to the elimination of other existing pipes and flow. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in the addition, elimination, or redirect of flow. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE TAP EXISTING ADD DROP This bid item is to pay for all labor, equipment, and material for coring one opening in an existing manhole base, addition of a rubber seal as specified, addition of a vertical drop pipe to the outside of the manhole, placement of reinforcing steel and concrete to encase vertical pipe, and rework of the manhole bench to direct the additional pipe flow. The bid item shall be paid for each drop added to a single manhole. This bid item shall also include any rework of the existing manhole bench due to the elimination of other existing pipes and flow. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in the addition, elimination, or redirect of flow. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE WITH DROP Payment under this item is for the installation of new 4 foot interior diameter sanitary sewer manhole with drop. Payment for drop manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Drop manholes shall include concrete base, barrel sections, drop materials, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup. All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE WITH LINING Payment under this item is for the installation of new 4 foot interior diameter sanitary sewer manhole with corrosion resistant lining. Payment for manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, lining, excavation, backfilling, air testing, restoration, and cleanup in accordance with the standard drawings. All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S MANHOLE WITH TRAP Payment under this item is for the installation of a new manhole with trap. Payment for trap manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Trap manholes shall include concrete base, manhole structure and trap materials, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup. All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S PIPE This description shall apply to all PVC and ductile iron gravity sewer pipe bid items of every size and type 8 inches internal diameter and larger, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, tap tees and couplings for joining to existing similar or dissimilar pipes), polyethylene wrap (if required by specification), labor, equipment, excavation, bedding, restoration, pressure or vacuum testing, temporary testing materials, video inspection, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. This bid item shall include material and placement of flowable fill under existing and proposed pavement, and wherever specified on the plans or in the specifications. No additional payment will be made for rock excavation. Measurement of quantities under this item shall be through fittings and encasements to a point at the outside face of manhole barrels, or to the point of main termination at dead ends or lamp holes. Carrier pipe placed within an encasement shall be paid under this item and shall include casing spacers and end seals. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S PIPE POINT REPAIR This item is to be used to pay for repair of short lengths of existing sanitary sewer pipe that, through prior video inspection or other means, are known to have pre-existing failure. Pipe Point Repair may be needed in preparation for installation of cured-in-place-pipe (CIPP) lining or other instances where failure is known and repair is prudent. The size of pipe shall not be defined in separate bid items. All diameter sizes of point repair shall be paid under this one item. The materials to be used to make the repair shall be as defined on the plans or in the specifications. This bid item shall include all excavation, pipe materials, joining materials to connect old and new pipe, bedding, and backfill to complete the repair at the locations shown on the plans or as directed by the engineer, complete and ready for use. This bid item shall include bypass pumping when required. Measurement shall be from contact point to contact point of old and new pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF).

S PUMP STATION This item is for payment for installation of sanitary pump stations including above or below ground structure for housing of the pumps. This item shall include all pumps, piping, fittings, valves, electrical components, building materials, concrete, any other appurtenances, labor, equipment, excavation, and backfill, to complete the pump station installation as required by the plans, standard drawings, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LUMP SUM (LS) for each when complete.

S STRUCTURE ABANDON This item is to be used to pay for abandonment of larger above or below ground sewer structures such as air release/vacuum valve vaults, pump stations, tanks, etc. Payment under this time shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to sewer construction. (i.e. abandonment of standard air release/vacuum valves up to and including 2 inches would not be paid under this item.) Payment under this item shall include all labor, equipment, and compacted fill or flowable fill for abandonment of the structure in place and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S STRUCTURE REMOVAL This item is to be used to pay for removal of larger above or below ground sewer structures such as air release/vacuum valve vaults, pump stations, tanks, etc. Payment under this time shall not be limited to size or scope; however, structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to sewer construction. (i.e. removal of standard air release/vacuum valves and their structure up to and including 2 inches would not be paid under this item.) Payment under this item shall include all labor, equipment, and compacted backfill for removal of the structure and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

STANDARD SANITARY SEWER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
15000	S Bypass Pumping	EA	
15001	S CIPP Lateral Service Investigation	LS	
15002	S CIPP Lateral Reinstatement	EA	
15003	S CIPP Liner 08 Inch	LF	
15004	S CIPP Liner 10 Inch	LF	
15005	S CIPP Liner 12 Inch	LF	
15006	S CIPP Liner 16 Inch	LF	
15007	S CIPP Liner 24 Inch	LF	
15008	S CIPP Liner Special	LF	
15009	S CIPP Protruding Lateral Removal	EA	
15010	S Concrete Pipe Anchor	EA	
15011	S Directional Bore	LF	
15012	S Encasement Concrete	LF	
15013	S Encasement Special	LF	
15014	S Encasement Steel Bored Range 1	LF	
15015	S Encasement Steel Bored Range 2	LF	
15016	S Encasement Steel Bored Range 3	LF	
15017	S Encasement Steel Bored Range 4	LF	
15018	S Encasement Steel Bored Range 5	LF	
15019	S Encasement Steel Bored Range 6	LF	
15020	S Encasement Steel Open Cut Range 1	LF	
15021	S Encasement Steel Open Cut Range 2	LF	
15022	S Encasement Steel Open Cut Range 3	LF	
15023	S Encasement Steel Open Cut Range 4	LF	
15024	S Encasement Steel Open Cut Range 5	LF	
15025	S Encasement Steel Open Cut Range 6	LF	
15026	S Force Main Air Rls/Vac Vlv 02 In	EA	
15027	S Force Main Air Rls/Vac Vlv 03 In	EA	
15028	S Force Main Air Rls/Vac Vlv 04 In	EA	
15029	S Force Main Air Rls/Vac Vlv Spcl	EA	
15030	S Force Main Directional Bore	LF	
15031	S Force Main Ductile Iron 03 Inch	LF	
15032	S Force Main Ductile Iron 04 Inch	LF	
15033	S Force Main Ductile Iron 06 Inch	LF	
15034	S Force Main Ductile Iron 08 Inch	LF	
15035	S Force Main Ductile Iron 10 Inch	LF	
15036	S Force Main Ductile Iron 12 Inch	LF	
15037	S Force Main Ductile Iron 16 Inch	LF	
15038	S Force Main Ductile Iron 20 Inch	LF	

STANDARD SANITARY SEWER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
15039	S Force Main Ductile Iron 24 Inch	LF	
15040	S Force Main Dctl Iron Rstrnd 03 In	LF	
15041	S Force Main Dctl Iron Rstrnd 04 In	LF	
15042	S Force Main Dctl Iron Rstrnd 06 In	LF	
15043	S Force Main Dctl Iron Rstrnd 08 In	LF	
15044	S Force Main Dctl Iron Rstrnd 10 In	LF	
15045	S Force Main Dctl Iron Rstrnd 12 In	LF	
15046	S Force Main Dctl Iron Rstrnd 16 In	LF	
15047	S Force Main Dctl Iron Rstrnd 20 In	LF	
15048	S Force Main Dctl Iron Rstrnd 24 In	LF	
15049	S Force Main PE/Plastic 02 Inch	LF	
15050	S Force Main PE/Plastic 03 Inch	LF	
15051	S Force Main PE/Plastic 04 Inch	LF	
15052	S Force Main PE/Plastic 06 Inch	LF	
15053	S Force Main PE/Plastic 08 Inch	LF	
15054	S Force Main PE/Plastic 10 Inch	LF	
15055	S Force Main PE/Plastic 12 Inch	LF	
15056	S Force Main PE/Plastic Special	LF	
15057	S Force Main PVC 02 Inch	LF	
15058	S Force Main PVC 03 Inch	LF	
15059	S Force Main PVC 04 Inch	LF	
15060	S Force Main PVC 06 Inch	LF	
15061	S Force Main PVC 08 Inch	LF	
15062	S Force Main PVC 10 Inch	LF	
15063	S Force Main PVC 12 Inch	LF	
15064	S Force Main PVC 16 Inch	LF	
15065	S Force Main PVC 20 Inch	LF	
15066	S Force Main PVC 24 Inch	LF	
15067	S Force Main Point Relocate	EA	
15068	S Force Main Special	LF	
15069	S Force Main Tap Sleeve/Valve Rng 1	EA	
15070	S Force Main Tap Sleeve/Valve Rng 2	EA	
15071	S Force Main Tie-In 02 Inch	EA	
15072	S Force Main Tie-In 03 Inch	EA	
15073	S Force Main Tie-In 04 Inch	EA	
15074	S Force Main Tie-In 06 Inch	EA	
15075	S Force Main Tie-In 08 Inch	EA	
15076	S Force Main Tie-In 10 Inch	EA	
15077	S Force Main Tie-In 12 Inch	EA	

STANDARD SANITARY SEWER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
15078	S Force Main Tie-In 16 Inch	EA	
15079	S Force Main Tie-In 20 Inch	EA	
15080	S Force Main Tie-In 24 Inch	EA	
15081	S Force Main Tie-In Special	EA	
15082	S Force Main Valve Box Adjust	EA	
15083	S Force Main Valve Butterfly	EA	
15084	S Force Main Valve Gate	EA	
15085	S Force Main Valve Special	EA	
15086	S Lateral Cleanout	EA	
15087	S Lateral Long Side 04 Inch	EA	
15088	S Lateral Long Side 06 Inch	EA	
15089	S Lateral Short Side 04 Inch	EA	
15090	S Lateral Short Side 06 Inch	EA	
15091	S Lateral Special	EA	
15092	S Manhole	EA	
15093	S Manhole Abandon/Remove	EA	
15094	S Manhole Adjust To Grade	EA	
15095	S Manhole Casting Standard	EA	
15096	S Manhole Casting Watertight	EA	
15097	S Manhole Reconstruct Invert	EA	
15098	S Manhole Special	EA	
15099	S Manhole Tap Existing	EA	
15100	S Manhole Tap Existing Add Drop	EA	
15101	S Manhole With Drop	EA	
15102	S Manhole With Lining	EA	
15103	S Manhole With Trap	EA	
15104	S Pipe Ductile Iron 08 Inch	LF	
15105	S Pipe Ductile Iron 10 Inch	LF	
15106	S Pipe Ductile Iron 12 Inch	LF	
15107	S Pipe Ductile Iron 16 Inch	LF	
15108	S Pipe Ductile Iron 20 Inch	LF	
15109	S Pipe Ductile Iron 24 Inch	LF	
15110	S Pipe Ductile Iron 36 Inch	LF	
15111	S Pipe Point Repair	EA	
15112	S Pipe PVC 08 Inch	LF	
15113	S Pipe PVC 10 Inch	LF	
15114	S Pipe PVC 12 Inch	LF	
15115	S Pipe PVC 16 Inch	LF	
15116	S Pipe PVC 20 Inch	LF	

STANDARD SANITARY SEWER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
15117	S Pipe PVC 24 Inch	LF	
15118	S Pipe Special	LF	
15119	S Pump Station	EA	
15120	S Special Item	EA	
15121	S Structure Abandon	EA	
15122	S Structure Removal	EA	
15500	S Encasement Special Inst	LF	
15501	S Encasement Steel Open Cut Range 1 Inst	LF	
15502	S Encasement Steel Open Cut Range 2 Inst	LF	
15503	S Encasement Steel Open Cut Range 3 Inst	LF	
15504	S Encasement Steel Open Cut Range 4 Inst	LF	
15505	S Encasement Steel Open Cut Range 5 Inst	LF	
15506	S Encasement Steel Open Cut Range 6 Inst	LF	
15507	S Force Main Air Rls/Vac Vlv 02 In Inst	EA	
15508	S Force Main Air Rls/Vac Vlv 03 In Inst	EA	
15509	S Force Main Air Rls/Vac Vlv 04 In Inst	EA	
15510	S Force Main Air Rls/Vac Vlv Spcl Inst	EA	
15511	S Force Main Ductile Iron 03 Inch Inst	LF	
15512	S Force Main Ductile Iron 04 Inch Inst	LF	
15513	S Force Main Ductile Iron 06 Inch Inst	LF	
15514	S Force Main Ductile Iron 08 Inch Inst	LF	
15515	S Force Main Ductile Iron 10 Inch Inst	LF	
15516	S Force Main Ductile Iron 12 Inch Inst	LF	
15517	S Force Main Ductile Iron 16 Inch Inst	LF	
15518	S Force Main Ductile Iron 20 Inch Inst	LF	
15519	S Force Main Ductile Iron 24 Inch Inst	LF	
15520	S Force Main Dctl Iron Rstrnd 03 In Inst	LF	
15521	S Force Main Dctl Iron Rstrnd 04 In Inst	LF	
15522	S Force Main Dctl Iron Rstrnd 06 In Inst	LF	
15523	S Force Main Dctl Iron Rstrnd 08 In Inst	LF	
15524	S Force Main Dctl Iron Rstrnd 10 In Inst	LF	
15525	S Force Main Dctl Iron Rstrnd 12 In Inst	LF	
15526	S Force Main Dctl Iron Rstrnd 16 In Inst	LF	
15527	S Force Main Dctl Iron Rstrnd 20 In Inst	LF	
15528	S Force Main Dctl Iron Rstrnd 24 In Inst	LF	
15529	S Force Main PE/Plastic 02 Inch Inst	LF	
15530	S Force Main PE/Plastic 03 Inch Inst	LF	
15531	S Force Main PE/Plastic 04 Inch Inst	LF	
15532	S Force Main PE/Plastic 06 Inch Inst	LF	

STANDARD SANITARY SEWER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
15533	S Force Main PE/Plastic 08 Inch Inst	LF	
15534	S Force Main PE/Plastic 10 Inch Inst	LF	
15535	S Force Main PE/Plastic 12 Inch Inst	LF	
15536	S Force Main PE/Plastic Special Inst	LF	
15537	S Force Main PVC 02 Inch Inst	LF	
15538	S Force Main PVC 03 Inch Inst	LF	
15539	S Force Main PVC 04 Inch Inst	LF	
15540	S Force Main PVC 06 Inch Inst	LF	
15541	S Force Main PVC 08 Inch Inst	LF	
15542	S Force Main PVC 10 Inch Inst	LF	
15543	S Force Main PVC 12 Inch Inst	LF	
15544	S Force Main PVC 16 Inch Inst	LF	
15545	S Force Main PVC 20 Inch Inst	LF	
15546	S Force Main PVC 24 Inch Inst	LF	
15547	S Force Main Special Inst	LF	
15548	S Force Main Tap Sleeve/Valve Rng 1 Inst	EA	
15549	S Force Main Tap Sleeve/Valve Rng 2 Inst	EA	
15550	S Force Main Tie-In 02 Inch Inst	EA	
15551	S Force Main Tie-In 03 Inch Inst	EA	
15552	S Force Main Tie-In 04 Inch Inst	EA	
15553	S Force Main Tie-In 06 Inch Inst	EA	
15554	S Force Main Tie-In 08 Inch Inst	EA	
15555	S Force Main Tie-In 10 Inch Inst	EA	
15556	S Force Main Tie-In 12 Inch Inst	EA	
15557	S Force Main Tie-In 16 Inch Inst	EA	
15558	S Force Main Tie-In 20 Inch Inst	EA	
15559	S Force Main Tie-In 24 Inch Inst	EA	
15560	S Force Main Tie-In Special Inst	EA	
15561	S Force Main Valve Butterfly Inst	EA	
15562	S Force Main Valve Gate Inst	EA	
15563	S Force Main Valve Special Inst	EA	
15564	S Lateral Cleanout Inst	EA	
15565	S Lateral Long Side 04 Inch Inst	EA	
15566	S Lateral Long Side 06 Inch Inst	EA	
15567	S Lateral Short Side 04 Inch Inst	EA	
15568	S Lateral Short Side 06 Inch Inst	EA	
15569	S Lateral Special Inst	EA	
15570	S Manhole Inst	EA	
15571	S Manhole Casting Standard Inst	EA	

STANDARD SANITARY SEWER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
15572	S Manhole Casting Watertight Inst	EA	
15573	S Manhole Special Inst	EA	
15574	S Manhole Tap Existing Inst	EA	
15575	S Manhole Tap Existing Add Drop Inst	EA	
15576	S Manhole With Drop Inst	EA	
15577	S Manhole With Lining Inst	EA	
15578	S Manhole With Trap Inst	EA	
15579	S Pipe Ductile Iron 08 Inch Inst	LF	
15580	S Pipe Ductile Iron 10 Inch Inst	LF	
15581	S Pipe Ductile Iron 12 Inch Inst	LF	
15582	S Pipe Ductile Iron 16 Inch Inst	LF	
15583	S Pipe Ductile Iron 20 Inch Inst	LF	
15584	S Pipe Ductile Iron 24 Inch Inst	LF	
15585	S Pipe Ductile Iron 36 Inch Inst	LF	
15586	S Pipe Point Repair Inst	EA	
15587	S Pipe PVC 08 Inch Inst	LF	
15588	S Pipe PVC 10 Inch Inst	LF	
15589	S Pipe PVC 12 Inch Inst	LF	
15590	S Pipe PVC 16 Inch Inst	LF	
15591	S Pipe PVC 20 Inch Inst	LF	
15592	S Pipe PVC 24 Inch Inst	LF	
15593	S Pipe Special Inst	LF	
15594	S Pump Station Inst	EA	
15595	S Special Item Inst	EA	

Standard Water Bid Descriptions

W AIR RELEASE VALVE This bid item description shall apply to all air release valve installations of every size except those defined as "Special". This item shall include the air release valve, main to valve connecting line or piping, manhole, vault, structure, access casting or doors, tapping the main, labor, equipment, excavation, proper backfill and restoration required to install the air release valve at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. All air release/vacuum valves on a project shall be paid under one bid item regardless of size. No separate pay items will be established for size variations. Only in the case of the uniqueness of a particular air release valve would a separate bid item be established. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W CAP EXISTING MAIN This item shall include the specified cap, concrete blocking and/or mechanical anchoring, labor, equipment, excavation, backfill, and restoration required to install the cap at the location shown on the plans or as directed in accordance with the specifications. This item is not to be paid on new main installations. This pay item is only to be paid to cap existing mains. Caps on new mains are incidental to the new main. Any and all caps on existing mains shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of water main under streets, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore when specified to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W ENCASEMENT CONCRETE Includes all labor, equipment, excavation, concrete, reinforcing steel, backfill, restoration, etc. to construct the concrete encasement of the water main as shown on the plans, and in accordance with the specifications and standard drawings. Payment under this item shall be in addition to the carrier pipe as paid under separate bid items. Carrier pipe is not included in this bid item. Any and all concrete encasement shall be paid under one bid item included in the contract regardless of the size of the carrier pipe or the volume of concrete or steel reinforcement as specified in the plans and specifications. No separate bid items will be established for size variations. Measurement of pay quantity shall be from end of concrete to end of concrete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF) when complete.

STANDARD WATER BID ITEMS

W ENCASEMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W ENCASEMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to open cut and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W FIRE HYDRANT ADJUST Includes all labor, equipment, excavation, materials, and backfill to adjust the existing fire hydrant using the fire hydrant manufacturer's extension kit for adjustments of 18" or less. Adjustments greater than 18" require anchoring couplings and vertical bends to adjust to grade. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, restoration, granular drainage material, etc, needed to adjust the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. This also includes allowing for the utility owner inspector to inspect the existing fire hydrant prior to adjusting, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete and ready for use.

STANDARD WATER BID ITEMS

W FIRE HYDRANT ASSEMBLY Includes all labor, equipment, new fire hydrant, isolating valve and valve box, concrete pad around valve box (when specified in specifications or plans), piping, anchoring tee, anchoring couplings, fire hydrant extension, excavation, concrete blocking, granular drainage material, backfill, and restoration, to install a new fire hydrant assembly as indicated on plans and on standard drawings complete and ready for use. No additional payment will be made for rock excavation. –Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W FIRE HYDRANT RELOCATE This item includes all labor and equipment to remove the existing fire hydrant from its existing location and reinstalling at a new location. This item shall include a new isolating valve and valve box, concrete pad around valve box (when required in specifications or plans), new piping, new anchoring tee, anchoring couplings, fire hydrant extensions, concrete blocking, restoration, granular drainage material, excavation, and backfill as indicated on plans, specifications, and on standard drawings complete and ready for use. This item shall also include allowing for utility owner inspector to inspect the existing fire hydrant prior to reuse, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant for use, if the existing fire hydrant is determined unfit for reuse. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W FIRE HYDRANT REMOVE This bid item includes removal of an abandoned fire hydrant, isolating valve, and valve box to the satisfaction of the engineer. The removed fire hydrant, isolating valve and valve box shall become the property of the contractor for his disposal as salvage or scrap. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W FLUSH HYDRANT ASSEMBLY This item shall include the flushing hydrant assembly, service line, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the flush hydrant at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W FLUSHING ASSEMBLY This item shall include the flushing device assembly, service line, meter box and lid, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the flushing device at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the locations shown on the plans. This bid item is to be used to relocate an existing water main at point locations such as to clear a conflict at a proposed drainage structure, pipe or any other similar short relocation situation, and where the existing pipe material is to be reused. The contractor shall provide any additional pipe or fitting material needed to complete the work as shown on the plans and specifications. The materials provided shall be of the same type and specification as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case by case basis. New polyethylene wrap is to be provided (if wrap exists or is specified in the specifications to be used). If it is necessary that the pipe be disassembled for relay, payment under this item shall

STANDARD WATER BID ITEMS

also include replacement of joint gaskets as needed. Bedding and backfill shall be provided and performed the same as with any other pipe installation as detailed in the plans and specifications. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Water Main Relocate shall not be paid on a linear feet basis; but, shall be Paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER This item is for payment for installation of all standard water meters of all sizes 2 inches ID or less as specified on the plans. This item shall include all labor, equipment, meter, meter box, casting, yoke, and any other associated material needed for installation of a functioning water meter in accordance with the plans and specifications, complete and ready for use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item paid EACH (EA) when complete.

W METER ADJUST This item includes all labor, equipment, excavation, materials, backfill, restoration, etc. to adjust the meter casting to finished grade (whatever size exists) at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W METER RELOCATE This item includes all labor, equipment, excavation, additional fittings, disinfection, testing, restoration, etc. to relocate the existing water meter (whatever size exists), meter yoke, meter box, casting, etc. from its old location to the location shown on the plans or as directed, in accordance with the specifications and standard drawings complete and ready for use. The required new service pipe (if required) will be paid under short side or long side service bid items. Any and all meter relocations of 2 inches or less shall be paid under one bid item included in the contract regardless of size. Each individual relocation shall be paid individually under this item; however, no separate bid items will be established for meter size variations of 2 inches ID or less. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W METER VAULT SIZE RANGE 1 OR 2 This item is for payment for installation of an underground structure for housing of a larger water meter, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s) valve(s), all piping, and fitting materials associated with installing a functioning meter and vault in accordance with the plans, standard drawings, and specifications, complete and ready for use. The size shall be the measured internal diameter of the meter and piping to be installed. The size meter vault to be paid under size 1 or 2 shall be as follows:

Size Range 1 = All meter and piping sizes greater than 2 inches up to and including 6 inches

Size Range 2 = All meter and piping sizes greater than 6 inches This item shall be paid EACH (EA) when complete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

STANDARD WATER BID ITEMS

W METER/FIRE SERVICE COMBO VAULT This item is for payment for installation of an underground structure for housing of a water meter and fire service piping, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s), valve(s), all piping, and fitting materials associated with installing a functioning meter and fire service vault in accordance with the plans and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W PIPE This description shall apply to all PVC, ductile (dctl) iron, and polyethylene/plastic pipe bid items of every size and type to be used as water main, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item includes material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This item shall also include pipe anchors, at each end of polyethylene pipe runs when specified to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W PLUG EXISTING MAIN This item shall include the specified plug, concrete blocking and/or anchoring, labor, equipment, excavation, backfill, and restoration required to install the plug at the location shown on the plans or as directed in accordance with the specifications. This item is not to be paid on new main installations. This pay item is to plug existing mains only. Plugs on new mains are incidental. Any and all plugs on all existing mains shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W PUMP STATION This item is for payment for installation of pumps and an above or below ground structure for housing of the pumps. This item shall include all pumps, piping, fittings, valves, electrical components, building materials, concrete, any other appurtenances, labor, equipment, excavation, and backfill, to complete the pump station installation as required by the plans, standard drawings, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LUMP SUM (LS) when complete.

STANDARD WATER BID ITEMS

W REMOVE TRANSITE (AC) PIPE This item shall include all labor, equipment, and materials needed for removal and disposal of the pipe as hazardous material. All work shall be performed by trained and certified personnel in accordance with all environmental laws and regulations. Any and all transite AC pipe removed shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W SERVICE LONG SIDE This bid item description shall apply to all service line installations of every size bid up to and including 2 inch inside diameter, except those service bid items defined as "Special". This item includes the specified piping material, main tap, tapping saddle (if required), and corporation stop materials, coupling for connecting the new piping to the surviving existing piping, encasement of 2 inches or less internal diameter (if required by plan or specification), labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where the ends of the service connection are on opposite sides of the public roadway and the service line crosses the centerline of the public roadway as shown on the plans. The length of the service line is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for special bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W SERVICE SHORT SIDE This bid item description shall apply to all service line installations of every size up to and including 2 inch internal diameter, except those service bid items defined as "Special". This item includes installation of the specified piping material of the size specified on plans, encasement of 2 inches or less internal diameter (if required by plan or specification), main tap, tapping saddle (if required), corporation stop, coupling for connecting the new piping to the surviving existing piping, labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where both ends of the service connection are on the same side of the public roadway, or when an existing service crossing a public roadway will remain and is being extended, reconnected, or relocated with all work on one side of the public roadway centerline as shown on the plans. The length of the service line is not to be specified and shall not be restricted to any minimum or maximum length. Payment shall be made under this item even if the service crosses a private residential or commercial entrance; but, not a public roadway. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

STANDARD WATER BID ITEMS

W SERVICE RELOCATE This item is for the relocation of an existing water service line where a meter is not involved, and where an existing service line can easily be adjusted by excavating alongside and moving the line horizontally and/or vertically a short distance without cutting the service line to avoid conflicts with road construction. This item shall include excavation, labor, equipment, bedding, and backfill to relocate the line in accordance with the plans and specifications complete and ready for use. Payment under this item shall be for each location requiring relocation. Payment shall be made under this item regardless of service size or relocation length. No separate pay items will be established for size or length variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W STRUCTURE ABANDONMENT This item is to be used to pay for abandonment of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, etc. Payment under this time shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to water construction. (i.e. abandonment of standard water meters up to and including 2 inches would not be paid under this item.) Payment under this item shall include all labor, equipment, and compacted fill or flowable fill for abandonment of the structure in place and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W STRUCTURE REMOVAL This item is to be used to pay for removal of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, etc. Payment under this time shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to water construction. (i.e. removal of standard water meters up to and including 2 inches would not be paid under this item.) Payment under this item shall include all labor, equipment, and compacted backfill for removal of the structure and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W TAPPING SLEEVE AND VALVE SIZE 1, OR 2 This item shall include the specified tapping sleeve, valve, valve box, concrete pad around valve box (when required in specifications or plans), labor, and equipment to install the specified tapping sleeve and valve, complete and ready for use in accordance with the plans and specifications. The size shall be the measured internal diameter of the live pipe to be tapped. The size tapping sleeve and valve to be paid under sizes 1 or 2 shall be as follows:

Size 1 = All live tapped main sizes up to and including 8 inches

Size 2 = All live tapped main sizes greater than 8 inches

Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W TIE-IN This bid description shall be used for all main tie-in bid items of every size except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, blocking, anchoring, restoration, disinfection, testing and backfill required to make the water main tie-in as shown on the plans, and in accordance with the specifications complete and ready for use. Pipe for tie-ins shall be paid under separate bid items. Paid EACH (EA) when complete.

STANDARD WATER BID ITEMS

W VALVE This description shall apply to all valves of every size required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be for gate or butterfly valves being installed with new main. This item includes the valve as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), valve box and valve stem extensions, backfill, concrete pad around valve box (if required by specification), restoration, testing, disinfection, etc. required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. If required on plans and/or proposed adjoining DIP is restrained, valves shall be restrained. Valve restraint shall be considered incidental to the valve and adjoining pipe. This description does not apply to cut-in valves. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W VALVE ANCHOR EXISTING This bid item is intended to pay for installation of restraint hardware on an existing valve where no restraint exists to hold the valve in place to facilitate tie-ins and other procedures where restraint is prudent. This work shall be performed in accordance with water specifications and plans. This bid item shall include all labor equipment, excavation, materials and backfill to complete restraint of the designated valve, regardless of size, at the location shown on the plans, complete and ready for use. Materials to be provided may include, but is not limited to, retainer glands, lugs, threaded rod, concrete, reinforcing steel or any other material needed to complete the restraint. Should the associated valve box require removal to complete the restraint, the contractor shall reinstall the existing valve box, the cost of which shall be considered incidental to this bid item. No separate bid items are being provided for size variations. All sizes shall be paid under one bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W VALVE BOX ADJUST Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, etc. to adjust the top of the box to finished grade complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W VALVE CUT-IN This bid description is for new cut-in valve installations of all sizes where installation is accomplished by cutting out a section of existing main. This item shall include cutting the existing pipe, supplying the specified valve, couplings or sleeves, valve box, concrete pad around valve box (when required in specifications or plans), labor, equipment, and materials to install the valve at the locations shown on the plans, or as directed by the engineer, complete and ready for use. Any pipe required for installation shall be cut from that pipe removed or supplied new by the contractor. No separate payment will be made for pipe required for cut-in valve installation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE VAULT This item is for payment for installation of an underground structure for housing of specific valve(s) as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or doors, the specified valve(s), all piping, and fitting materials associated with installing a functioning valve vault in accordance with the plans, standard drawing, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

STANDARD WATER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
14000	W Air Release Valve 1 Inch	EA	
14001	W Air Release Valve 3/4 Inch	EA	
14002	W Air Release Valve Special	EA	
14003	W Cap Existing Main	EA	
14004	W Directional Bore	LF	
14005	W Encasement Concrete	LF	
14006	W Encasement Steel Bored Range 1	LF	
14007	W Encasement Steel Bored Range 2	LF	
14008	W Encasement Steel Bored Range 3	LF	
14009	W Encasement Steel Bored Range 4	LF	
14010	W Encasement Steel Bored Range 5	LF	
14011	W Encasement Steel Bored Range 6	LF	
14012	W Encasement Steel Open Cut Range 1	LF	
14013	W Encasement Steel Open Cut Range 2	LF	
14014	W Encasement Steel Open Cut Range 3	LF	
14015	W Encasement Steel Open Cut Range 4	LF	
14016	W Encasement Steel Open Cut Range 5	LF	
14017	W Encasement Steel Open Cut Range 6	LF	
14018	W Fire Hydrant Adjust	EA	
14019	W Fire Hydrant Assembly	EA	
14020	W Fire Hydrant Relocate	EA	
14021	W Fire Hydrant Remove	EA	
14022	W Flush Hydrant Assembly	EA	
14023	W Flushing Assembly	EA	
14024	W Main Point Relocate	EA	
14025	W Meter 1 Inch	EA	
14026	W Meter 1-1/2 Inch	EA	
14027	W Meter 2 Inch	EA	
14028	W Meter 3/4 Inch	EA	
14029	W Meter Adjust	EA	
14030	W Meter Relocate	EA	
14031	W Meter Vault	EA	
14032	W Meter/Fire Service Combo Vault	EA	
14033	W Pipe Ductile Iron 02 Inch	LF	
14034	W Pipe Ductile Iron 03 Inch	LF	
14035	W Pipe Ductile Iron 04 Inch	LF	
14036	W Pipe Ductile Iron 06 Inch	LF	
14037	W Pipe Ductile Iron 08 Inch	LF	
14038	W Pipe Ductile Iron 10 Inch	LF	
14039	W Pipe Ductile Iron 12 Inch	LF	
14040	W Pipe Ductile Iron 16 Inch	LF	

STANDARD WATER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
14041	W Pipe Ductile Iron 20 Inch	LF	
14042	W Pipe Ductile Iron 24 Inch	LF	
14043	W Pipe Ductile Iron 36 Inch	LF	
14044	W Pipe Dctl Iron Rstrnd Joint 02 In	LF	
14045	W Pipe Dctl Iron Rstrnd Joint 03 In	LF	
14046	W Pipe Dctl Iron Rstrnd Joint 04 In	LF	
14047	W Pipe Dctl Iron Rstrnd Joint 06 In	LF	
14048	W Pipe Dctl Iron Rstrnd Joint 08 In	LF	
14049	W Pipe Dctl Iron Rstrnd Joint 10 In	LF	
14050	W Pipe Dctl Iron Rstrnd Joint 12 In	LF	
14051	W Pipe Dctl Iron Rstrnd Joint 16 In	LF	
14052	W Pipe Dctl Iron Rstrnd Joint 20 In	LF	
14053	W Pipe Dctl Iron Rstrnd Joint 24 In	LF	
14054	W Pipe Dctl Iron Rstrnd Joint 36 In	LF	
14055	W Pipe Ductile Iron Special	LF	
14056	W Pipe PVC 02 Inch	LF	
14057	W Pipe PVC 03 Inch	LF	
14058	W Pipe PVC 04 inch	LF	
14059	W Pipe PVC 06 Inch	LF	
14060	W Pipe PVC 08 Inch	LF	
14061	W Pipe PVC 10 Inch	LF	
14062	W Pipe PVC 12 Inch	LF	
14063	W Pipe PVC 16 Inch	LF	
14064	W Pipe PVC 20 Inch	LF	
14065	W Pipe PVC 24 Inch	LF	
14066	W Pipe PVC Special	LF	
14067	W Pipe Polyethelene/Plastic 03 Inch	LF	
14068	W Pipe Polyethelene/Plastic 04 Inch	LF	
14069	W Pipe Polyethelene/Plastic 06 Inch	LF	
14070	W Pipe Polyethelene/Plastic 08 Inch	LF	
14071	W Pipe Polyethelene/Plastic 10 Inch	LF	
14072	W Pipe Polyethelene/Plastic 12 Inch	LF	
14073	W Pipe Polyethelene/Plastic Special	LF	
14074	W Plug Existing Main	EA	
14075	W Pump Station	EA	
14076	W Remove Transite (AC) Pipe	LF	
14077	W Service Long Side 1 Inch	EA	
14078	W Service Long Side 1-1/2 Inch	EA	
14079	W Service Long Side 2 Inch	EA	
14080	W Service Long Side 3/4 Inch	EA	
14081	W Service Relocate	EA	

STANDARD WATER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
14082	W Service Short Side 1 Inch	EA	
14083	W Service Short Side 1-1/2 Inch	EA	
14084	W Service Short Side 2 Inch	EA	
14085	W Service Short Side 3/4 Inch	EA	
14086	W Service Special	EA	
14087	W Structure Abandonment	EA	
14088	W Structure Removal	EA	
14089	W Tapping Sleeve and Valve Size 1	EA	
14090	W Tapping Sleeve and Valve Size 2	EA	
14091	W Tie-In 02 Inch	EA	
14092	W Tie-In 03 Inch	EA	
14093	W Tie-In 04 Inch	EA	
14094	W Tie-In 06 Inch	EA	
14095	W Tie-In 08 Inch	EA	
14096	W Tie-In 10 Inch	EA	
14097	W Tie-In 12 Inch	EA	
14098	W Tie-In 16 Inch	EA	
14099	W Tie-In 20 Inch	EA	
14100	W Tie-In 24 Inch	EA	
14101	W Tie-In Special	EA	
14102	W Valve 02 Inch	EA	
14103	W Valve 03 Inch	EA	
14104	W Valve 04 Inch	EA	
14105	W Valve 06 Inch	EA	
14106	W Valve 08 Inch	EA	
14107	W Valve 10 Inch	EA	
14108	W Valve 12 Inch	EA	
14109	W Valve 16 Inch	EA	
14110	W Valve 20 Inch	EA	
14111	W Valve 24 Inch	EA	
14112	W Valve Anchor Existing	EA	
14113	W Valve Box Adjust	EA	
14114	W Valve Cut-In 02 Inch	EA	
14115	W Valve Cut-In 03 Inch	EA	
14116	W Valve Cut-In 04 Inch	EA	
14117	W Valve Cut-In 06 Inch	EA	
14118	W Valve Cut-In 08 Inch	EA	
14119	W Valve Cut-In 10 Inch	EA	
14120	W Valve Cut-In 12 Inch	EA	
14121	W Valve Cut-In 16 Inch	EA	
14122	W Valve Cut-In 20 Inch	EA	

STANDARD WATER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
14123	W Valve Cut-In 24 Inch	EA	
14124	W Valve Special	EA	
14125	W Vault Special	EA	
14500	W Air Release Valve 1 Inch Inst	EA	
14501	W Air Release Valve 3/4 Inch Inst	EA	
14502	W Air Release Valve Special Inst	EA	
14503	W Cap Existing Main Inst	EA	
14504	W Encasement Steel Open Cut Range 1 Inst	LF	
14505	W Encasement Steel Open Cut Range 2 Inst	LF	
14506	W Encasement Steel Open Cut Range 3 Inst	LF	
14507	W Encasement Steel Open Cut Range 4 Inst	LF	
14508	W Encasement Steel Open Cut Range 5 Inst	LF	
14509	W Encasement Steel Open Cut Range 6 Inst	LF	
14510	W Fire Hydrant Assembly Inst	EA	
14511	W Flush Hydrant Assembly Inst	EA	
14512	W Flushing Assembly Inst	EA	
14513	W Main Point Relocate Inst	EA	
14514	W Meter 1 Inch Inst	EA	
14515	W Meter 1-1/2 Inch Inst	EA	
14516	W Meter 2 Inch Inst	EA	
14517	W Meter 3/4 Inch Inst	EA	
14518	W Meter Vault Inst	EA	
14519	W Meter/Fire Service Combo Vault Inst	EA	
14520	W Pipe Ductile Iron 02 Inch Inst	LF	
14521	W Pipe Ductile Iron 03 Inch Inst	LF	
14522	W Pipe Ductile Iron 04 Inch Inst	LF	
14523	W Pipe Ductile Iron 06 Inch Inst	LF	
14524	W Pipe Ductile Iron 08 Inch Inst	LF	
14525	W Pipe Ductile Iron 10 Inch Inst	LF	
14526	W Pipe Ductile Iron 12 Inch Inst	LF	
14527	W Pipe Ductile Iron 16 Inch Inst	LF	
14528	W Pipe Ductile Iron 20 Inch Inst	LF	
14529	W Pipe Ductile Iron 24 Inch Inst	LF	
14530	W Pipe Ductile Iron 36 Inch Inst	LF	
14531	W Pipe Dctl Iron Rstrnd Joint 02 In Inst	LF	
14532	W Pipe Dctl Iron Rstrnd Joint 03 In Inst	LF	
14533	W Pipe Dctl Iron Rstrnd Joint 04 In Inst	LF	
14534	W Pipe Dctl Iron Rstrnd Joint 06 In Inst	LF	
14535	W Pipe Dctl Iron Rstrnd Joint 08 In Inst	LF	
14536	W Pipe Dctl Iron Rstrnd Joint 10 In Inst	LF	
14537	W Pipe Dctl Iron Rstrnd Joint 12 In Inst	LF	

STANDARD WATER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
14538	W Pipe Dctl Iron Rstrnd Joint 16 In Inst	LF	
14539	W Pipe Dctl Iron Rstrnd Joint 20 In Inst	LF	
14540	W Pipe Dctl Iron Rstrnd Joint 24 In Inst	LF	
14541	W Pipe Dctl Iron Rstrnd Joint 36 In Inst	LF	
14542	W Pipe Ductile Iron Special Inst	LF	
14543	W Pipe PVC 02 Inch Inst	LF	
14544	W Pipe PVC 03 Inch Inst	LF	
14545	W Pipe PVC 04 inch Inst	LF	
14546	W Pipe PVC 06 Inch Inst	LF	
14547	W Pipe PVC 08 Inch Inst	LF	
14548	W Pipe PVC 10 Inch Inst	LF	
14549	W Pipe PVC 12 Inch Inst	LF	
14550	W Pipe PVC 16 Inch Inst	LF	
14551	W Pipe PVC 20 Inch Inst	LF	
14552	W Pipe PVC 24 Inch Inst	LF	
14553	W Pipe PVC Special Inst	LF	
14554	W Pipe Polyethelene/Plastic 03 Inch Inst	LF	
14555	W Pipe Polyethelene/Plastic 04 Inch Inst	LF	
14556	W Pipe Polyethelene/Plastic 06 Inch Inst	LF	
14557	W Pipe Polyethelene/Plastic 08 Inch Inst	LF	
14558	W Pipe Polyethelene/Plastic 10 Inch Inst	LF	
14559	W Pipe Polyethelene/Plastic 12 Inch Inst	LF	
14560	W Pipe Polyethelene/Plastic Special Inst	LF	
14561	W Plug Existing Main Inst	EA	
14562	W Pump Station Inst	EA	
14563	W Service Long Side 1 Inch Inst	EA	
14564	W Service Long Side 1-1/2 Inch Inst	EA	
14565	W Service Long Side 2 Inch Inst	EA	
14566	W Service Long Side 3/4 Inch Inst	EA	
14567	W Service Relocate Inst	EA	
14568	W Service Short Side 1 Inch Inst	EA	
14569	W Service Short Side 1-1/2 Inch Inst	EA	
14570	W Service Short Side 2 Inch Inst	EA	
14571	W Service Short Side 3/4 Inch Inst	EA	
14572	W Service Special Inst	EA	
14573	W Tapping Sleeve and Valve Size 1 Inst	EA	
14574	W Tapping Sleeve and Valve Size 2 Inst	EA	
14575	W Tie-In 02 Inch Inst	EA	
14576	W Tie-In 03 Inch Inst	EA	
14577	W Tie-In 04 Inch Inst	EA	
14578	W Tie-In 06 Inch Inst	EA	

STANDARD WATER BID ITEMS

BID ITEM CODE	ITEM DESCRIPTION	UNIT	COMMENTS
14579	W Tie-In 08 Inch Inst	EA	
14580	W Tie-In 10 Inch Inst	EA	
14581	W Tie-In 12 Inch Inst	EA	
14582	W Tie-In 16 Inch Inst	EA	
14583	W Tie-In 20 Inch Inst	EA	
14584	W Tie-In 24 Inch Inst	EA	
14585	W Tie-In Special Inst	EA	
14586	W Valve 02 Inch Inst	EA	
14587	W Valve 03 Inch Inst	EA	
14588	W Valve 04 Inch Inst	EA	
14589	W Valve 06 Inch Inst	EA	
14590	W Valve 08 Inch Inst	EA	
14591	W Valve 10 Inch Inst	EA	
14592	W Valve 12 Inch Inst	EA	
14593	W Valve 16 Inch Inst	EA	
14594	W Valve 20 Inch Inst	EA	
14595	W Valve 24 Inch Inst	EA	
14596	W Valve Cut-In 02 Inch Inst	EA	
14597	W Valve Cut-In 03 Inch Inst	EA	
14598	W Valve Cut-In 04 Inch Inst	EA	
14599	W Valve Cut-In 06 Inch Inst	EA	
14600	W Valve Cut-In 08 Inch Inst	EA	
14601	W Valve Cut-In 10 Inch Inst	EA	
14602	W Valve Cut-In 12 Inch Inst	EA	
14603	W Valve Cut-In 16 Inch Inst	EA	
14604	W Valve Cut-In 20 Inch Inst	EA	
14605	W Valve Cut-In 24 Inch Inst	EA	
14606	W Valve Special Inst	EA	
14607	W Vault Special Inst	EA	

Special Utility Bid Item Descriptions

Water Special Utility Items

W AIR RELEASE VALVE SPECIAL This item is to be used for those air release valve installations that are unique in type, scope, size, and/or feature and were an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W ENCASEMENT SPECIAL This item is to be used for those encasement installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The sanitary sewer relocation designer shall provide the description for this item on a project by project basis. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid Linear Feet (LF).

W PIPE DUCTILE IRON SPECIAL This item is to be used for those ductile iron pipe installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis. This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item shall also include material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W PIPE POLYETHELENE/PLASTIC SPECIAL This item is to be used for those Polyethylene/Plastic pipe installations that are unique in scope and/or size and were an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis. This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item shall include material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This item shall also include pipe

SPECIAL UTILITY BID ITEMS

anchors, at each end of polyethylene pipe runs when specified to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF).

W PIPE PVC SPECIAL *This item is to be used for those PVC pipe installations that are unique in scope and/or size and were an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis.* This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item shall also include material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

W SERVICE SPECIAL *This item is to be used for those service line installations that are unique in scope and/or size and were an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W TIE-IN SPECIAL *This item is to be used for those main tie-in installations that are unique in scope and/or size and were an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

W VALVE SPECIAL *This item is to be used for those valve installations that are unique in type of valve, scope, and/or size and were an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

SPECIAL UTILITY BID ITEMS

W VAULT SPECIAL *This item is to be used for those underground vault installations that are unique in type, scope and/or size and where an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

Sewer Special Utility Items

S CIPP LINER SPECIAL *This item is to be used for those Cured-In-Place-Pipe lining installations that are unique in scope, material, and/or size and where an appropriate bid item is not otherwise established. The sewer relocation designer shall provide the description for this item on a project by project basis.* This bid Item is to pay for rehabilitation of existing sanitary sewers using the Cured-In-Place-Pipe method. This bid item shall include all labor, materials, customer notification, testing, necessary permits, ingress and egress procedures, bypass pumping, pre- construction video, sediment and root removal, dewatering, traffic control, erosion and sediment control, excavation pits, removal and replacement of manhole frames and covers as necessary to facilitate the lining work, sealing at manholes and service connections, clearing and grubbing, pipeline cleaning, re-cleaning and video inspection as many times as necessary, debris collection and disposal, root removal, pre- and post-construction video inspection, all digital inspection footage, final report preparation and approval, the cost of potable water from the Owner, required compliance tests, site restoration, site cleanup, sealing of liner at manholes, acceptance testing and all other rehabilitation work and incidentals not included under other pay items necessary to complete the rehabilitation per the plans and specifications. There will be no separate payment for acceptance testing of the lined pipe; but shall be considered incidental to this item. Pay under this item shall be by each size bid in the contract. Pay measurement shall be from center of manhole to center of manhole. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF).

S ENCASEMENT SPECIAL *This item is to be used for those encasement installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The sanitary sewer relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid Linear Feet (LF).

S FORCE MAIN AIR RLS/VAC VLV SPCL *This item is to be used for those air release/vacuum valve installations that are unique in type, scope, size, and/or feature and where an appropriate bid item is not otherwise established. The sewer relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

SPECIAL UTILITY BID ITEMS

S FORCE MAIN SPECIAL *This item is to be used for those force main pipe installations that are unique in scope, material, and/or size and where an appropriate bid item is not otherwise established. The sewer relocation designer shall provide the description for this item on a project by project basis.* This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item includes material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This item shall also include pipe anchors, at each end of polyethylene pipe runs when specified to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

S FORCE MAIN TIE-IN SPECIAL *This item is to be used for those force main tie-in installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The force main relocation designer shall provide the description for this item on a project by project basis.* This bid item shall include purge and sanitary disposal of any sewage from any abandoned segments of force main. Pipe for tie-ins shall be paid under separate bid items. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S FORCE MAIN VALVE SPECIAL *This item is to be used for those force main valve installations that are unique in type of valve, scope, and/or size and where an appropriate bid item is not otherwise established. The sewer relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S LATERAL SPECIAL *This item is to be used for those service lateral installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The water main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

SPECIAL UTILITY BID ITEMS

S MANHOLE SPECIAL *This item is to be used for those manhole installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. Some examples of use of this item may be for payment of vortex manholes, oversize diameter manholes, etc.... The sanitary sewer relocation designer shall provide the description for this item on a project by project basis.* All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

S PIPE SPECIAL *This item is to be used for those gravity main pipe installations that are unique in scope, material, and/or size and where an appropriate bid item is not otherwise established. The sewer relocation designer shall provide the description for this item on a project by project basis.* This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, tap tees and couplings for joining to existing similar or dissimilar pipes), polyethylene wrap (if required by specification), labor, equipment, excavation, bedding, restoration, pressure or vacuum testing, temporary testing materials, video inspection, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. This bid item shall include material and placement of flowable fill under existing and proposed pavement, and wherever specified on the plans or in the specifications. No additional payment will be made for rock excavation. Measurement of quantities under this item shall be through fittings and encasements to a point at the outside face of manhole barrels, or to the point of main termination at dead ends or lamp holes. Carrier pipe placed within an encasement shall be paid under this item and shall include casing spacers and end seals. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

S SPECIAL ITEM *This item is to be used for those sanitary sewer specialty items that are unique and likely to have limited future bidding potential. Such items may be flow meters, telemetry, special structures, etc., and where an appropriate bid item is not otherwise established. The sanitary sewer relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

Gas Special Utility Items

G ENCASEMENT SPECIAL *This item is to be used for those encasement installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The sanitary sewer relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid Linear Feet (LF).

SPECIAL UTILITY BID ITEMS

G PIPE SPECIAL *This item is to be used for those gas pipe installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The gas main relocation designer shall provide the description for this item on a project by project basis.* This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), corrosion protective coatings of steel pipe and fittings, labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item shall also include material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF)

G SERVICE SPECIAL *This item is to be used for those service line installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The gas main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G TIE-IN SPECIAL *This item is to be used for those main tie-in installations that are unique in scope and/or size and where an appropriate bid item is not otherwise established. The gas main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

G VALVE SPECIAL *This item is to be used for those valve installations that are unique in type of valve, scope, and/or size and where an appropriate bid item is not otherwise established. The gas main relocation designer shall provide the description for this item on a project by project basis.* Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

Electric and Communications Special Utility Items

EC DUCT SPECIAL *This item is to be used for those duct installations that are unique in scope, material, and/or size and where an appropriate bid item is not otherwise established. The duct designer shall provide the description for this item on a project by project basis.* This item shall include all labor, equipment, and material to excavate, install, and backfill the specified duct at locations shown in the plans in accordance with the specifications and standard

SPECIAL UTILITY BID ITEMS

drawings complete and ready for use. These bid items shall include all necessary appurtenances, connections, fittings, plugs, tees, bends, collars, racks or spacers, pull string, sand or concrete encasement, compacted earth or flowable fill backfill, etc. Flowable fill, where specified on the plans and specifications, shall be considered incidental to this item. No separate payment will be made for flowable fill, unless directed to be used contrary to plans and specifications. All excavation shall be unclassified. No additional payment will be made for rock excavation. Duct shall be measured as the horizontal distance from outside face of structure to outside face of structure; or, to the point of duct termination at dead ends or poles. No additional payment will be made for vertical conduit. No separate bid items will be provided due to varying duct sizes. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid LINEAR FEET (LF).

EC ELECTRIC STRUCTURE SPECIAL *This item is to be used for those underground utility structure installations that are unique in scope, material, and/or size and where an appropriate bid item is not otherwise established. The duct designer shall provide the description for this item on a project by project basis.* This item shall include all labor, equipment, excavation, materials, and backfill to install the specified structure at the locations as shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Where structures are specified to be backfilled with flowable fill, the cost of the flowable fill shall be considered incidental to the bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

EC COMMUNICATIONS STRUCTURE SPECIAL *This item is to be used for those underground utility structure installations that are unique in scope, material, and/or size and where an appropriate bid item is not otherwise established. The duct designer shall provide the description for this item on a project by project basis.* This item shall include all labor, equipment, excavation, materials, and backfill to install the specified structure at the locations as shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Where structures are specified to be backfilled with flowable fill, the cost of the flowable fill shall be considered incidental to the bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.