1. GENERAL
   A. Related sections:
      i. 01 41 26.02 – Utility Information & Locate
      ii. 23 05 19 – Meters and Gages
      iii. 33 10 00 - Water Utilities – Public Water Distribution System
      iv. 33 12 13.13 – Water Supply Backflow Preventer Assemblies
      v. 33 30 00 – Sanitary Sewerage Utilities – Sanitary Sewer Collection Systems
      vi. 33 60 00 – Hydronic and Steam Energy Utilities
      vii. 33 71 19 – Electrical Underground Ducts & Manholes
      viii. 33 80 00 – Communications Utilities
   B. Accessible isolation valves, identified as to function, shall be provided at new taps from existing utilities.
   C. Provide detectable aluminum foil plastic backed tape or detectable magnetic plastic tape manufactured specifically for warning and identification of buried utility.
   D. Existing services and equipment shall be specified to be removed from site and not be abandoned in place except with the written approval of FMD.
   E. The Contractor shall adjust all existing and new utility structures (manholes, valve boxes, etc.) to meet new grades as required to complete this project at part of the Cost of the Work or Base Bid.
1. **GENERAL**
   A. Related Section:
      i. 01 41 26.02 – Local Utility Information & Locate
1. **GENERAL**
   A. Related Section:
      i. 01 41 26.02 – Local Utility Information and Locate
   B. Building backflow preventers shall be designed and installed so that two backflow preventers are in parallel. This will allow for annual maintenance to occur without disruption of service.
1. GENERAL
   A. Related Section:
      i. 01 41 26.02 – Local Utility Information and Locate
   B. Prior to Material Completion, the Contractor shall camera all new sanitary sewer pipe
      installed exterior to the building perimeter, and 10’ beyond the connection point with
      existing pipe. The Contractor shall provide the Design Professional and Project Manager
      with an electronic copy of the video footage for review. Cost of videoing the system
      shall be included in the Cost of the Work or Base Bid.
1. **GENERAL**
   A. Related sections:
      i. 23 00 00 General Mechanical Requirements
      ii. 23 21 13 Hydronic Piping
      iii. 23 22 13 Steam & Condensate Heating Piping
      iv. 33 00 00 General Utilities Requirements
   B. Design Professional shall specify fiber reinforced polymer composite, traffic rated, secure locking lids for heavy electrical manhole covers. New cast iron covers will not be accepted.

2. **PRODUCTS**
   A. Steam manhole cover equal to McGard, LLC FiberShield Manhole with lock
      i. Fiber reinforced polymer
      ii. H-20 and AASHTO HS-25 load rating for 80,000 lb.
      iii. Self-containing locking system that provides cover to frame retention and security from unauthorized entry and uses a multipurpose T-Key.
      iv. Egress handle:
         a. Provide a manual pull handle for use by individual inside the manhole a means to exit
         b. All plastic construction to resist corrosion, parts molded in high visibility yellow
         c. Pulling the handle will latch open one of the cartridge assemblies and allow the person to push the cover out of the frame and then exit.
      v. Ultraviolet radiation will not affect long term performance of composite manhole cover.
      vi. Logo Plate: Stainless Steel plate 1/8” thick that says “STEAM”.
1. GENERAL
   A. Related sections:
      i. 26 00 00 General Electrical Requirements
      ii. 33 00 00 General Utilities Requirements
   B. Design Professional shall specify fiber reinforced polymer composite, traffic rated, secure locking lids for heavy electrical manhole covers. New cast iron covers will not be accepted.

2. PRODUCTS
   A. Electrical manhole cover equal to McGard, LLC FiberShield Manhole with lock
      i. H-20 and AASHTO HS-25 load rating for 80,000 lb.
      ii. Self-containing locking system that provides cover to frame retention and security from unauthorized entry and uses a multipurpose T-Key.
      iii. Fiber reinforced polymer
      iv. Egress handle:
          a. Provide a manual pull handle for use by individual inside the manhole a means to exit
          b. All plastic construction to resist corrosion, parts molded in high visibility yellow
          c. Pulling the handle will latch open one of the cartridge assemblies and allow the person to push the cover out of the frame and then exit.
      v. Ultraviolet radiation will not affect long term performance of composite manhole cover.
      vi. Logo Plate: Stainless Steel plate 1/8” thick that as appropriate says “ELECTRIC” or “HIGH VOLTAGE”.

1. **GENERAL**
   A. Related sections:
      i. 27 00 00 – General Communications Requirements
      ii. 27 05 43 – Underground Ducts & Raceways for Communications