

**Title: Baltimore City Department of Transportation (14)**

**Subtitle: Standard Operating Procedures (.01)**

**Chapter: Right of Way (.06)**

**.03 Developers Agreement**

**14.01.06.03**

**14.01.06.03.01 Scope**

- A. A Developer's Agreement is required for all work in the public right of way or which will be maintained by the City of Baltimore ("City") including:
  - (1) 3-inch or larger water services,
  - (2) Water mains,
  - (3) Developments which require ten (10) or more water supply services of any size;
  - (4) Sanitary or storm drain extensions;
  - (5) Conduit; or
  - (6) Road construction for private concerns; or
  - (7) To downsize water meters 2-inches and smaller in meter size, no Developer Agreement is required; a "Water Meter Downsize Request Form for Meters 2-Inches and Smaller" can be used instead.
- B. The Developer's Agreement will describe the type of work and location where it will be done;
  - (1) The Developer will have all work to be constructed in the right of way designed to City standards;
  - (2) An approved estimate of the construction costs will be used to base a 100% performance bond or irrevocable letter of credit to remain as surety for one year after completion;
  - (3) An inspection fee equal to 9% of the surety will be assessed for costs incurred by the City;
  - (4) The Developer will also be responsible for acquiring all other necessary or required permits; and
  - (5) Submit the as-built drawings at the end of the maintenance term upon final acceptance and prior to the release of the surety.
  - (6) The Developer shall certify all field changes are shown in the as-built drawings prior to the release of the surety.
- C. The City of Baltimore will not be liable for incorrectly sized services and meters, and will not assess adequate water supply;
  - (1) The City of Baltimore will make no representation as to the size of meter required for any application;
  - (2) Note that multistory buildings may require on site pumping.
- D. Please note that the Developer, his engineer, or representative will be responsible for selecting the location desired for the fire flow test;
  - (1) Fire flow tests shall be conducted on the same water main where the proposed water service connection will be made;

- (2) The Developer shall be required to arrange for a new fire flow test in order to determine if there is an adequate water supply for their project;
  - (3) Previous fire flow tests shall be rejected, a new test is required;
  - (4) The engineer shall prepare a sketch of and mail it along with the request for the fire flow test to the Department of Public Works, Ashburton Filtration Plant, 3001 Druid Park Drive, Baltimore, Maryland, 21215, Telephone No. 410-396-0239:
    - i. System configuration;
    - ii. Hydrant location; and
    - iii. Hydraulic zone.
- E. If any underground electrical services are part of the project, design of any needed conduit extension must be included as part of the Developer's Agreement, all conduit design and construction shall be completed in accordance with:
  - (1) the City of Baltimore Book Standard Details;
  - (2) Specifications; and
  - (3) the Conduits checklists included herein.
- F. The Developer must prepare plans and submit them to the Right of Way Section whereby they will be circulated for review and comments from all necessary agencies.
- G. Upon Approval of the plans by all agencies,
  - (1) the Developer's execution of the agreement, and the posting of the bond or letter of credit;
  - (2) The agreement will be submitted to the Board of Estimates for final execution;
  - (3) The estimated time for execution of the agreement is a minimum of one month.
- H. For the most part the approval time for the plans will be determined by the amount of time corrections or comments are addressed by the Developer's engineer;
- I. However, a minimum of three months should be anticipated for this entire process.
- J. To begin this process, you should make a request in writing to Mr. David Framm, Supervisor, Right of Way Section, for any 3-inch or larger meter services, 10 or more water supply services of any size, water main extensions, fire hydrants and/or related water appurtenances, sewer line, storm drain, conduit, or roadway work. For additional information, please contact Ms. Charlene Tyler at 410-396-3667.

#### **14.01.06.03.02 PROCEDURES**

- A. The Developer must verify through the Metered Accounts Division the service account numbers for all existing water services, and show them on the proposed construction plans.
- B. The Developer must request a fire flow test through the Department of Public Works, Ashburton Filtration Plant, 3001 Druid Park Drive, Baltimore, Maryland, 21215, Telephone No. 410-396-0239.
- C. The Developer must have the proposed construction within the right of way designed to City Standards by a Maryland Registered Professional Engineer;
- D. The Developer then submits the following under a cover letter to Mr. David Framm, Supervisor, Land Conveyance Section, The Harry S. Cummings Building, 401 East Fayette Street, Baltimore, MD 21202 a) a copy of the fire flow test results b) 30 copies of "Preliminary" plans and c) a non-refundable submittal fee in the amount of \$200.00 made payable to "Director of Finance".

- E. The Right of Way Section will assign a Developer's Agreement # and circulate the plans for review and comments.
- F. The Right of Way Section will collect all comments and advise the Developer when they may pick up the "Preliminary" comments.
- G. The Preliminary Plan shall be consistent with the approved Subdivision Plan, if Applicable
- H. Hydraulic modeling of the proposed development will be required for large development;
  - (1) Large developments are the ones deemed to have material impacts to the existing water system;
  - (2) The Developer shall submit the total water demand based on full built-out.
- I. After Developer receives their "Preliminary" comments, they should then proceed to finalize their plans and address conflicts that might arise with the individual agencies;
  - (1) It is the intention that the Developer will contact the Design Review Personnel (list provided) to work out their conflicts, prior to their semi-final submittal;
  - (2) If an easement is required the Developer should contact the Right of Way Section and have proper surveys performed and deed recorded.
- K. The Developer shall then submit 30 copies of "Semi-Final" plans for review and comment, and a preliminary construction cost estimate for review and approval.
- L. The Right of Way Section will then collect all comments and advise the Developer that they may pick-up the 'Semi-Final' comments;
- M. Water Engineering Office comments will include an assigned CWO#, and a Drawing #.
- N. The Developer then submits original engineering plans, signed and sealed by a Maryland Registered Professional Engineer, on Mylar, along with three (3) paper sets of the plans, to the Right of Way Section.
- O. If all comments have been addressed, the Right of Way Section will then prepare five (5) copies of the Developer's Agreement and forward them to the Owner or Developer to be executed (signed and witnessed);
  - (1) The Owner or Developer will then return the executed agreements along with;
  - (2) Five (5) original Performance Bonds or one (1) original Letter of Credit in the amount of the approved estimated construction cost.
- P. The Right of Way Section will then concurrently route the plan(s) for signature, and begin the process of Board of Estimates execution of the agreements.
- Q. After the Agreement has received approval by the Board of Estimates and the original (Mylar) plans have been signed by the City agencies, and any easement properly recorded (when applicable), the copies of the executed agreement plans would be distributed to:
  - (1) Board of Estimates (1)
  - (2) Utility Engineering Section/Water Engineering (1)
  - (3) Utility Billing (1)
  - (4) Developer (1)
  - (5) Right of Way Section (1)
  - (6) Department of Transportation - TEC Division (1) - if needed.
- R. The Developer shall make application for his water services are we not allowing main extensions with the Customer Service and Support (Metered Accounts) Division (Room 404 Abel Wolman Municipal Building, 200 N. Holliday Street);

- S. The Metered Accounts Division will supply the Developer with a "Cash Slip" in order to release the water meter(s).
- T. After the Developer has been given their approved plan agreement, they must then submit a project schedule to the Office of Permits or Utility Maintenance Division and arrange for a Preconstruction Meeting, which shall include the Contractor and staff inspector;
- U. The Bureau of Water and Wastewater will inspect the water installations and the Department of Transportation will inspect all other construction in the public right of way.
- V. After all of the previous steps have been followed, the Developer will then be given official notice to proceed by the Right of Way Section.
- W. Upon completion of the construction, an inspection must be made and the inspector must make written acceptance.
- X. The Bond or Letter of Credit shall remain in effect for one year after the written acceptance. Following the one-year warranty period, the Developer shall request the Right of Way Section to have a final inspection performed;
  - (1) Only after the approval by the City inspector and as-built plan received by Right of Way Services Division, the surety will be released.
  - (2) All plans will require AS-BUILTS on Mylar that include revisions, signed and sealed by a Maryland Registered Professional Engineer, prior to the release of the surety.
- Y. The Bond is then released and a Letter of Release is sent to the Developer;
  - (1) If a Letter of Credit applied;
  - (2) then a letter and the original Letter of Credit are sent certified to the issuing Bank and a copy is mailed to the Developer.
- Z. The Right of Way agent files the Mylars in the office.
- AA. All Fees should be made payable to the Director of Finance

#### **14.01.06.03.03 REQUIREMENTS**

- A. Design, Review, Execution of Agreement
  - (1) Cover letter requesting a Developer's Agreement
  - (2) Preliminary plans - 15 sets, along with a digital version
  - (3) Submittal fee (\$200) (non-refundable)
  - (4) Copy of fire flow test
  - (5) Semi- Final Plans – 15 sets, along with a digital version
  - (6) If applicable Final Plans 15 sets, along with a digital version
  - (7) Preliminary construction estimate \*\*\*\*Material List shown on plans\*\*\*\*
  - (8) If applicable - approved easements and the approved Subdivision Plan
  - (9) Letter stating all conflicts have been addressed with one (1) original (Mylar) plans set and two (2) paper sets of the plans for approval routing. Engineering plans are to be signed and sealed.
  - (10) Five copies of executed agreement with Performance Bond (5 originals) or Letter of Credit (1 original).
- B. Pre-Construction
  - (1) Pay City Fixed Fees
  - (2) Meter applications, meter costs
  - (3) Construction schedule

- (4) Confirmation that the Contractor(s) that the Developer intends to utilize on the project are pre-qualified with Baltimore City.

C. Construction

- (1) Notification to Water and Wastewater Maintenance Division (410-396-7870) at least 2 weeks prior to start-up of construction.
- (2) Notification to Water and Wastewater Maintenance Division at least 3 working days prior to inspection of 4" and larger meter installations.
- (3) Notification to Water and Wastewater Maintenance Division at least 7 working days prior to the need for any valve operations.
- (4) Notification to Water and Wastewater Maintenance Division at least 5 working days prior to the inspection of meters smaller than 4" in the yokes.
- (5) Notification to Permits Inspection Section (410-396-1675) to arrange a preconstruction conference.

**14.01.06.03.04 SCHEDULING**---The following is a list of City agencies for the coordination of schedules, etc.

A. Routing status, review and design, agreement---

- (1) Right of Way Services Division, Land Conveyance Section
- (2) Location: The Councilman Harry S. Cummings Building, Lower Level 401 East Fayette Street, Baltimore Maryland 21202
- (3) Telephone Number: 410-396-5023
- (4) Contact Person: Mr. David Framm

B. Fire Flow Tests----

- (1) Water Analysis Office
- (2) Location: 3001 Druid Park Drive
- (3) Telephone Number: 410-396-0239
- (4) Contact Person: Staff

C. Customer Service and Support----

- (1) Utility Billing Section
- (2) Location: 200 N. Holliday St. Room 404 Abel Wolman Municipal Building
- (3) Telephone Number: 410-396-5533
- (4) Contact Person: Staff

D. Contractors Pre-qualifications----

- (1) Baltimore Office of Boards & Commissions
- (2) Location: 4 South Frederick Street
- (3) Telephone Number: 410-396-6883
- (4) Contact Person: Staff

E. Meter Pick-Ups----

- (1) Location: 2331 N. Fulton Street
- (2) Telephone Number: 410-396-7870
- (3) Contact Person: Staff

F. Inspection - Water Mains/Meter Installations----

- (1) Water and Wastewater Maintenance
- (2) Telephone Number: 410-396-1317

- (3) Contact Person: Staff
- G. Valve Operations----
- (1) Water and Wastewater Maintenance
- (2) Location: 2331 N. Fulton Street
- (3) Telephone Number: 410-396-7870
- (4) Contact Person: Staff

#### **14.01.06.03.05 GENERAL DRAWING REQUIREMENTS**

- A. Drawing sizes shall be limited to the City's standard of 24"x 36".
- B. An example of a blank plan sheet can be supplied to show how the signature and record block should be shown.

#### **14.01.06.03.06 WATER DRAWING REQUIREMENTS**

- A. All water plan drawings must contain:
  - (1) Shutoff diagram
  - (2) North arrow
  - (3) Minimum of three (3) coordinate tic marks
  - (4) All existing or proposed valves, reducers, hydrants and bends must be detailed and the references must be made to the applicable Baltimore City Standard Detail numbers for the proposed water appurtenances. The method of the proposed connections and proposed tie-ins have to be shown and labelled on the Plan. Plan shall include and label all proposed restraints and thrust blocks if applicable.
  - (5) Profiles based on City data (showing relation to other underground utilities). The Profile shall also show the existing and the proposed grades and the vertical clearances with any other utilities.
  - (6) Accurate standard plate numbers.
  - (7) A sequence of construction with valves numbered on the shutoff diagram (if applicable).
  - (8) Standard notes as shown on the blank plan sheet.
  - (9) Developers name and address
  - (10) Tax address (Ward, Section, Block, and Lot)
  - (11) Size of domestic meter and service size
  - (12) Fire line size, FM meter or Detector check meter, also if DC is it to be a turbo or compound? Show the applicable Baltimore City Standard Detail number(s) on Plan(s).
  - (13) All abandoned meters size, service and meter number.
  - (14) For all proposed multiple service(s) - a list of service type and size, meter size, and address.
  - (15) An assigned Developer's Agreement Number.
- B. Utility Clearances for Water Work:
  - a. Horizontal Clearances
    - i. When available, a minimum 5-foot horizontal clearance is requested between water facilities including appurtenances and other utilities; 3-foot clearances are required.

- ii. Water mains installed parallel with sanitary sewer mains require a minimum 10-foot clearance unless waived by the State of Maryland.
  - iii. Service installations and all water appurtenances are required to have a minimum 5-foot clearance from sanitary sewers and their appurtenances.
- b. Vertical Clearances
  - i. A vertical clearance of 12 inches is requested between utilities; 6-inch clearances are required.
  - ii. 12-inch clearances are required on water mains larger than 12-inches in diameter and when crossing sanitary sewers.

**14.01.06.03.07 STANDARD WATER NOTES ON WATER PLANS**

- A. The Contractor must notify "Miss Utility" at 1-800-257-7777 at least five (5) days prior beginning work
- B. Notify Water and Wastewater Maintenance Division (410-396-7870) at least two (2) weeks prior to startup of construction on the water service. For Sanitary, Conduit, Storm Water Services, contact the Permit Inspection Section (410-396-4059);
- C. The Contractor must receive written notice to proceed from Water and Wastewater Maintenance Division or the Permit Inspection Section prior to performing any work.
- D. For meter installation, Contractor must notify Baltimore City, Bureau of Water and Wastewater (410-396-1663) 72 hours before starting work;
- E. Complete meter installation to be inspected by the Water and Wastewater Maintenance Division representative prior to placement of top slab.
- F. The Contractor shall arrange to pick up Meter at the Department of Public Works Meter Shop on Franklinton Road.
- G. All existing water valves shall be operated by Water and Wastewater Maintenance Division forces only;
- H. Notify Mr. Anthony Stevenson (410-978-5981) at least seven (7) working days in advance of any necessary valve operations.
- I. All work shall be done in accordance with the Public Works Developer's Agreement and the City of Baltimore Book of Standards, City of Baltimore Manual of Design Procedure and Criteria
- J. The Contractor shall use extreme caution when working near or over existing water facilities.
- K. All services must be flushed prior to setting meters.
- L. Service must be capped and the completed service will be visually inspected for leaks.
- M. All services to be abandoned must be abandoned at the mains and all meters must be returned to Baltimore City.
- N. The Developer must verify through the Utility Billing Section (410-396-5533) the service account and meter numbers for all existing water services to remain or to be abandoned and shown on the proposed plans.
- O. Meters are not permitted to be installed in the roadway or driveways.
- P. Contractor must notify BGE (410-281-3507) at least two (2) days prior to construction.
- Q. Ductile Iron pipe shall be Class 54.
- R. The Contractor shall notify the Bureau of Water and Wastewater, Meter Repair Shop (410-396-0170). For meters 1-1/2" and larger notify at least one (1) week prior to pickup of meters.

- S. Meters designated for a specific location or address shall not be relocated without the written permission of the Bureau of Water and Wastewater.
- T. The proposed water service connection will be installed a minimum of five (5) feet from sanitary sewer house connection.
- U. Standard buttresses for vertical bends and caps shall conform B.C. 837.06 and 837.22.
- V. The Contractor shall confirm invert elevations of existing water mains and all utility crossings prior to any new construction;
- W. An information will require Red Line revised plans approved by the Utility Engineering Section prior to any new construction.

#### **14.01.06.03.08 STANDARD CONDUIT NOTES ON PLANS**

- A. In addition to those developed by the designer, the following notes shall be placed on the conduit design document (picture)
- B. When Conduit exists within the work area, Contractor shall notify the following at least 14 days prior to starting work:
  - i. Miss Utility 800-257-7777
  - ii. Street Light Maintenance 410-396-1311
  - iii. Conduit Maintenance 410-396-1515
- B. The Contractor shall use extreme caution when excavating and installing new utilities. In the event portions of the existing Baltimore City Conduit System are damaged as a result of project construction, repair or replacement of the damaged section shall be in accordance with the latest edition of Baltimore City Standards and Specifications;
- C. For Split Duct refer to Baltimore City Detail 802.03-4;
- D. Repairs will be at the Contractor's expense and approved by a conduit inspector.
- E. Contractor to notify all conduit leasees three (3) days prior to performing work.
- F. All ducts and manholes must be constructed to conform as close as possible to the standard duct formation called in profiles. All duct bank conduits shall be DB-120 with a wire temperature rating of 90 degrees per Baltimore City specification (26 07 01.1) except on bridges (Schedule 40) and where the duct bank crosses a steam line (fiberglass.)
- G. All ducts must leave at 90 degrees to the manhole wall and will proceed at the angle for the minimum of 5'-0" unless otherwise shown.
- H. Horizontal bends and sweeps in the conduit shall be a minimum radius of 35' or as otherwise noted if duct sections are to be installed with a radius less than 35', the duct shall be composed of preformed factory-fabricated segmental sections with radii greater than 3', and approved by conduit inspection as per the Baltimore Specifications (26 07 01.04) All vertical bends shall have a minimum radius of 20'
- I. Horizontal bends and sweeps in the secondary or uniform size duct system shall be as follow unless noted otherwise on the plans:
- J. For 5" ID PVC: All sweeps shall have a minimum 35' radius. All bends shall have a minimum 5' radius,
- K. For 4" ID PVC: All sweeps shall have a minimum 18' radius. All bends shall have a minimum 3.5' radius; or
- L. For 3" ID PVC: All sweeps shall have a minimum 15' radius. All bends shall have a minimum 1.5' radius;



- M. The contractor shall use only factory-preformed bends.
- N. Upon completion of conduit installation, contractor shall clear conduit of dirt, debris, etc. and test adequacy of conduit with an approved mandrel device;
- O. Upon correction of deficiency, if any, the contractor shall install in each duct, a braided nylon line having a minimum tensile strength of four hundred (400) pounds.
- P. Plug conduit open ends. For Duct Plugs refer to Baltimore City Detail 802.03-3.
- Q. Full trench compaction of suitable backfill material will be required for all proposed duct banks.
- R. The contractor shall temporarily support all excavations as necessary to protect existing utilities and structures to meet OSHA requirements and the Baltimore City Book of Standards (31 23 16.10).
- S. The duct section shall have a minimum cover of three feet six inches (3'-6") under roadways and four (4'-0") under sidewalks;
- T. The contractor may be required to adjust the depth of the conduit to avoid conflicts with existing or proposed utilities;
- U. Where it is possible to adhere to the minimum cover specified because of an underground obstruction, a protective slab will be needed and the engineer shall give approval before the configuration of the duct section or depth of cover is revised.
- X. The City of Baltimore conduit inspection & approval is required prior to BGE & cable installation.
- Y. All conduit sections shall be per Baltimore City Detail BC 824.01 (Standard Duct Sections) unless otherwise noted.
- Z. All plans should follow the Conduit Checklist.
- AA. Contractor shall use extreme caution when working over or near existing utilities;
  - (1) Existing utilities shown on the plans are for the convenience of the contractor;
  - (2) The City does not warrant or guarantee the completeness of the information given;
  - (3) It shall be the responsibility of the Contractor to verify the exact locations to his own satisfaction, prior to commencing work.
- BB. Should the Contractor discover any discrepancies between the plans and field conditions, the engineer shall be notified immediately;
  - (1) Any deviations from the plans without written authorization from the engineer shall be the responsibility of the contractor;
  - (2) Contractor may be required to adjust the conduit alignment as shown on the plans to avoid conflicts with existing utilities.
- CC. At all entrances into manholes, the contractor shall furnish and install duct terminators in accordance with Baltimore City Standards.
- DD. The Contractor shall maintain one complete set of contract prints on which they shall note, in red, the horizontal locations and elevations of all utilities and appurtenances installed;
- EE. This "As-Built" set of prints shall become property of the City of Baltimore at the termination of the project.
- FF. Contractor to remove existing conduit to be abandoned as necessary to perform new construction and plug existing conduit with Mix No. 2 Concrete;
- GG. Price and payment shall be incidental to the installation of new conduit and manholes.
- HH. All proposed manholes will be designed for HS-25 loading. Proposed manholes are required to have a minimum of two (2) feet of cover from the proposed ground line to the top of the manhole roof slab Baltimore City Detail 825.11.

- II. Furnish and maintain all necessary pumps, flumes, gutters, etc., to keep the excavation free from water at all times during the progress of work. Water shall be directed to a point approved by the city.
- JJ. Trenches for underground duct bank shall be excavated to a uniform grade and braced and sheathed. Water shall be removed as necessary. No conduit shall be laid in water.
- KK. The contractor shall submit shop drawings of any precast manholes meeting HS-25 load requirements;
- LL. The shop drawings shall be sealed, dated and signed by a professional engineer registered in the State of Maryland.
- MM. All concrete duct encasement shall be Mix. No. 1.
- NN. All underground duct banks shall have magnetically detectable plastic warning taper installed 12" about the duct for the entire length of the duct.

#### **14.01.06.03.09 CONDUITS CHECKLIST**

- A. Developer's Agreement vs. Permit –
  - (1) Generally, utility permits are only allowed for cable pulls or other conduit work that does not require excavation;
  - (2) Otherwise a Developer's Agreement will be required;
  - (3) On a case by case basis, some minor expansions or alterations to existing conduit systems are allowed under a permit;
    - i. for example, a single short duct run to be used for an electric service.
  - (4) The DOT Conduit's Section (443-984-0098) shall decide.
- B. Duct Lease and Franchise Agreements – A Developer's Agreement allows for the construction of a conduit system by a private party in the public right-of-way;
  - (1) The conduit system in the public right-of-way is to be dedicated to the City of Baltimore. A Duct Lease Agreement with that party must be completed before they can put cable in the system;
  - (2) All "private" structures in the public right-of-way need to have a Franchise Agreement or Minor Privilege. Companies that get a Franchise Agreement or Minor Privilege do not get the Duct Lease Agreement.
- C. Spare ducts requirement – For DOT Conduit, the Developer must supply spare ducts for future use. A minimum of two (2) spare ducts shall be required;
  - (1) The size and number of required spare ducts shall be determined by the DOT Conduit Engineering Section on a project by project basis;
  - (2) Note that lateral connections to private properties usually do not require additional spare ducts;
  - (3) However, the applicant or Developer may be required to apply for a minor privilege agreement for the lateral connections;
  - (4) All other conduit required outside of the lateral connection(s) will require the two (2) additional spare ducts, as the proposed conduit is in the public right of way and will consequently become DOT conduit;

- (5) The lateral connections will be evaluated on a case by case basis, as it is preferred to run DOT conduit to a manhole near the private property and to keep the lateral connections short.
- D. Directional Boring Policy- this is decided upon on a case by case basis.

#### **14.01.06.03.010 CONDUIT PLANS**

- A. Station the horizontal conduit alignment from manhole to manhole or from manhole to end of run.
- B. Plans should have general notes and construction notes for the conduit and manholes.
- C. Show stations for PC's & PT's on conduit.
- D. Show radius bends on conduit. 35' Typical (12' minimum radius for 5" conduit)
- E. All conduits should enter the manhole perpendicular with a minimum of 3 feet of tangent at the manhole.
- F. Label conduit for type and size.
- G. Number each proposed and existing manhole.
- H. Show all existing and proposed utilities (screened) and check for conflicts with new conduit line.
- I. Show plus and offsets from base line to conduit PC's & PT's for ties.
- J. Show north arrow and street name
- K. Provide construction notes.
- L. Provide reference notes
- M. Show manhole schedule for number, size, type and location.
- N. Dimensions to the manhole are to the center. When the manhole lid has to be offset a detail of the roof slab should be shown showing the lib offset.
- O. Maximum distance between manholes should not exceed 500'.
- P. Where new conduit is constructed in the roadway a minimum of 3'-6" of cover should be maintained over the conduit. If the conduit has less than 3'-6" of cover, a protective slab for shallow conduit may be required. See 26 07 01.04 3.1, I.
- Q. If existing curb line is moved back and as a result it puts the existing conduit or manhole in the roadway, the depth of conduit should be checked for adequate cover (3'-6" min. cover). The manhole should slab is not traffic bearing, it will need replacing.
- R. DB-120 PVC should be used for all concrete encased conduit, except on bridges (Sch 40) and where the duct bank crosses a high-pressure stream line (Use Fiberglass). See 26 07 01.04 2.1, B.
- S. Show all test pits on the conduit plans. Add a test pit chart or add a note (For test pit information see specifications).
- T. No bend in a conduit run shall be greater than 90 degrees and only two 90-degree bends should be allowed per run. See 26 07 01.04 3.1, H.
- U. When possible keep the proposed manholes out of the roadway;
  - (1) When the manholes are constructed in the roadway they should be placed in the center of the travel lane and not in the wheel path.
- E. Avoid placing manhole in the parking lanes.

#### **14.01.06.03.011 CONDUIT PROFILES**

- A. Profiles required from manhole to manhole or manhole to end.
- B. Show all proposed and existing utility crossings and label.
- C. Call out all radii on vertical bends. (12' Minimum)
- D. All 5" & 6" conduit should enter in the bottom half of the proposed and existing manholes.
- E. All 3" and 4" should enter in the top half of manhole.
- F. Where proposed conduit enters in the long side of the manhole and has more than two 5" or 6" conduits, a recessed extension should be used.
- G. A clearance of 8" should be maintained from the top, bottom and sides of manhole when conduit enters the manhole.
- H. Station profiles in accordance with plan stationing.
- I. Where proposed conduit (5" or larger) crosses an existing steam line fiberglass pipe should be used and 5' clearance maintained.
- J. Show a floor elevation for the proposed manhole.
- K. Two feet (2') minimum cover should be maintained from proposed grade to top of proposed manhole roof slab.
- L. Provide stations and elevations along conduit line for construction purposes.
- M. All proposed conduits should enter manhole at 90 degrees and have 3' minimum tangent.
- N. Label conduit for size and type.
- O. Show proposed and existing manhole numbers.
- P. Show proposed and existing grades/ground lines.
- Q. Show cross section of conduit where rollovers occur and number the ducts.
- R. Show all street crossing.
- S. Maintain 3'-6" cover in roadway and 4' cover in sidewalks for proposed conduit when possible.

#### **14.01.06.03.012 CONDUIT DETAILS**

- A. All appropriate details should be shown.
- B. Blowdowns for all proposed and existing manholes affected should be shown.
- C. Dimension location of proposed conduit in existing and proposed manholes;
  - (1) 8" minimum should be maintained from the proposed conduit to the bottom, top, and sides of the manhole.
- F. Label all proposed conduit on blowdown.
- G. 5" and 6" conduit should enter in bottom half of manholes and be stacked vertically when possible;
  - (1) Example 2 wide by 3 high
- H. The 3" and 4" conduit should enter manhole in the top half when possible. The 3" and 4" duct should stay above the 5" and 6" ducts.
- I. Show all lighting and signal conduit on blowdowns and label as appropriate.
- J. Need note to add bell end adapters where appropriate.
- K. Cross check blow downs to see if conduit agrees with plan and profile.

#### **14.01.06.03.013 STANDARD STREET LIGHTING NOTES ON PLANS**

- A. Unless otherwise noted, all street lighting related work shall be in accordance with:
  - (1) the City of Baltimore's Department of Public Works (DPW) Specifications for Materials, Highways, Bridges, Utilities, and Incidental Structures ("Green Book");
  - (2) the City's Book of Standards;
  - (3) the Building Code of Baltimore City; and
  - (4) the utility Developer's Agreement.
- B. For work within the public right-of-way, the Contractor must obtain permits from the Department of Transportation Right of Way Services Division, Permits Section, the Councilman Harry S. Cummings Building, 401 East Fayette Street, Lobby, phone 410-396-6865 or 410-396-4508.
- C. Baltimore City's Department of Transportation (DOT) Maintenance Division maintains street lighting poles and the Baltimore Gas and Electric company (BGE) maintains street light cables in the area;
  - (1) During construction, The Contractor is required to protect and maintain all existing:
    - (a) lighting infrastructure;
    - (b) circuit continuity; and
    - (c) conduit facilities.
- D. The Contractor is required to notify BGE at 410-281-3507 and the Baltimore City DOT Street Lighting Maintenance Engineering Section at 410-396-4446 two (2) weeks prior to starting any work.
- E. If the Contractor uncovers or damages a street light, conduit or cable during construction, the Contractor is required to notify Street Lighting Maintenance Inspections at 410-396-4446 and BGE immediately;
  - (1) Street Lighting Maintenance would affect repairs or direct BGE to make safe conditions and/or replace cables prior to resuming construction;
  - (2) All such repairs shall be made at the Contractor's expense.
- F. If the existing lighting system cannot be maintained in service during construction, the Contractor is required to provide temporary lighting in accordance with Baltimore City standards until the permanent lighting is installed and in satisfactory operation;
  - (1) The total cost of materials and labor for street lighting work, including BGE cable connection work;
  - (2) shall be borne by the Contractor.
- G. In areas where the Contractor is to remove the footway where buried cable is present, the Contractor shall notify and coordinate with BGE (410-470-6744);
- H. BGE may elect to install new cable prior to the installation of the new footway.
- I. Coordination for BGE street lighting construction services requires that the latest Red-Lined or updated drawings (as it pertains to street lighting infrastructure) are provided electronically to Baltimore City's Transportation Maintenance Division;
  - (1) If applicable, the marked-up drawings submitted will serve as the basis for determining the probable cost estimate for BGE services;
  - (2) The Contractor shall contact Street Lighting Maintenance (410-396-4446) at least 10 work days prior to starting any work.
- J. The Contractor shall contact the Conduit Maintenance Inspections at 410-396-1515 three (3) days before the start of construction;

- K. Cable installation by BGE will not be carried out without completion of an inspection by Conduit Maintenance.

#### **14.01.06.03.014 STANDARD HIGHWAY NOTES ON PLANS**

- A. All traffic control must be in accordance with the current edition of the Federal Highway M.U.T.C.D., the Maryland S.H.A. work zone traffic control standards and details, and the City of Baltimore work zone traffic control standards and details;
  - (1) It is the responsibility of the Contractor to supply, install, and maintain all traffic control equipment for the duration of this contract.
- B. Pavement repair in (insert street name) shall be in accordance with (insert B.C Standard).
- C. Disturbed curbs shall be repaired in-kind to the nearest joint.
- D. Sidewalks shall be repaired joint-to-joint with 5 inches of Mix No. 2 concrete on 3 inches of CR-6. See City Standard #'s BC 655.01, BC 655.05, and BC 655.10 for sidewalk standard details.
- E. Contractor shall maintain a minimum four (4) foot wide pedestrian footway or implement an appropriate pedestrian detour while actively working in the sidewalk.
- F. All excavations and trenches shall be plated at the end of each workday and "Steel Plates Ahead" warning signs displayed in advance;
  - (1) Plates are to be recessed per BC 576.17-2 in the winter to avoid snow plows knocking them out of position.
- G. The Contractor must contact the Department of Transportation Staff (410-396-6875) two (2) weeks prior to the start of construction and one (1) week prior to any changes to the Maintenance of Traffic (M.O.T.) plan.
- H. The Contractor must obtain permits from the Department of Transportation Right of Way Services Division, Permits Section, the Councilman Harry S. Cummings Building, 401 East Fayette Street, Lobby, phone 410-396-6865 or 410-396-4508;
  - (1) The Contractor may be billed additional traffic inspection fees not related to previous costs.
- I. No work or disruptions to traffic between the hours of 7:00 a.m. – 9:00 a.m. and 4:00 p.m. – 6:00 p.m. on weekdays. The Contractor must get approval from the Department of Transportation in writing for any work on Holidays or weekends.
- J. Additional notes may be required on a project by project basis. The Engineer should consult with the appropriate agency for further information.

#### **14.01.06.03.015 DESIGN REVIEW CONTACTS**

- A. DOT Right of Way Section---Mr. David Framm 410-396-5023
- K. DOT Right of Way Permits Section--- Ms. Sarena Washington 410-396-4508
- L. DOT Engineering and Construction Division
  - (1) Street Lighting ---Mr. Suresh Bhatt 410-396-6946
  - (2) Design Engineering---Mr. Alvaro Lozano 410-396-6946
  - (3) Signal Engineering ---Mr. Raj Sharma 443-984-2158
  - (4) Traffic Engineering ---Mr. John Malinowski 443-984-2150

- (5) Bridge Engineering ---Mr. Greg Bauer 410-396-6935
- (6) Conduit Engineering ---Mr. Reginald Gresham 443-984-0098
- M. DOT Maintenance Division--- Staff 410-396-1686
- N. DOT Permits Inspection Section ---Mr. Tim Knight 410-396-1675
- O. DPW Environmental Compliance and Laboratory Service ---Nathaniel Krause, PE 410-396-0732
- P. DPW Water and Wastewater Maintenance ---Staff 410-396-7870
- Q. Utility Billing ---Staff 410-396-5533
- R. Erosion and Sediment Control ---Nathaniel Krause, P.E. 410-396-0732
- S. Baltimore Development Corp---Staff 410-837-9305
- T. Verizon ---Mr. Bill Blomeier 410-393-6370
- U. Vicinity/Veolia ---Ms. Pamela Clark 410-649-2459
- V. BGE – Ken Garvey ---Mr. Kenneth Garvey 410-291-3094
- W. BGE Gas ---Mr. Thomas Mitchell 410-470-7863
- X. Parking Authority ---Mr. Stanford Leach 443-573-2800

**14.01.06.03.016** WATER METER PRICING FOR CONTRACT INSTALLATIONS--- The meter prices for new applications effective July 1, 1995 are as follows:

- (2) 5/8" meter \$50.00
- (3) 3/4" meter \$60.00
- (4) 1" meter \$80.00
- (5) 1 1/2" meter \$220.00
- (6) 2" meter \$280.00
- (7) 3" compound \$1,100.00
- (8) 4" compound \$1,600.00
- (9) 6" compound \$2,800.00
- (10) 4" MFM-MVR \$3,700.00
- (11) 6" MFM-MVR \$5,100.00
- (12) 8" MFM-MVR \$7,700.00
- (13) 10" MFM-MVR \$12,975.00
- (14) 12" MFM-MVR \$13,500.00
- (15) 4" detector check \$675.00
- (16) 6" detector check \$930.00
- (17) 8" detector check \$1,430.00
- (18) 10" detector check \$2,720.00

**14.01.06.03.017** EASEMENTS

- A. If an easement is required the developer/owner will be required to prepare and execute the City's standard Right-of-Way Agreement and descriptive plat for attachment;
  - (1) Easements are required in the event the proposed public utility will encroach on the private property of the developer/owner;
  - (2) The easement will assure the City an unencumbered right to access and maintain the proposed construction.

- B. The developer/owner should contact the Right-of Way Section, 410-396-3667, to obtain an example of a recently approved easement plat, a copy of the standard agreement and any additional information or clarification.

#### **14.01.06.03.018 RIGHT OF ENTRY AGREEMENTS**

- A. Right of Entry Agreement is an optional agreement, which can be request by the Developer, in order to allow construction to begin prior to Board of Estimates approval.
- B. Any Right of Entry Agreement is strictly at the pleasure of the Department of Transportation. At minimum, the following items MUST be completed prior to the release of a Right of Entry:
  - (1) Mylar plans fully approved;
  - (2) Developer's Agreement fully executed with 5 Bonds or 1 Letter of Credit;
  - (3) All fees submitted;
  - (4) The fee for a Right of Entry is \$750.00; and
  - (5) Execution of a Right of Entry is not guaranteed.
- C. This SOP is a documented general policy that is to be followed;
  - (1) However, it is left to the Director's discretion to make exceptions to this policy from time to time under special circumstances without prior notice or approval; and
  - (2) To update this SOP as needed without prior notice.