



1000 Maine Avenue, SW
Suite 700
Washington, DC 20024
www.washingtongas.com

cthurston-seignious@washgas.com

January 17, 2024

VIA ELECTRONIC FILING

Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1325 "G" Street, N.W., 8th Floor
Washington, D.C. 20005

**Re: Formal Case No. 1154
[Washington Gas – Response to Notice of Commissioner
Beverly]**

Dear Ms. Westbrook-Sedgwick:

Washington Gas Light Company hereby submits its Response to the January 8, 2024 Notice of Commissioner Beverly, issued in the above-referenced proceeding.

Sincerely,

Cathy Thurston-Seignious
Supervisor, Administrative and
Associate General Counsel

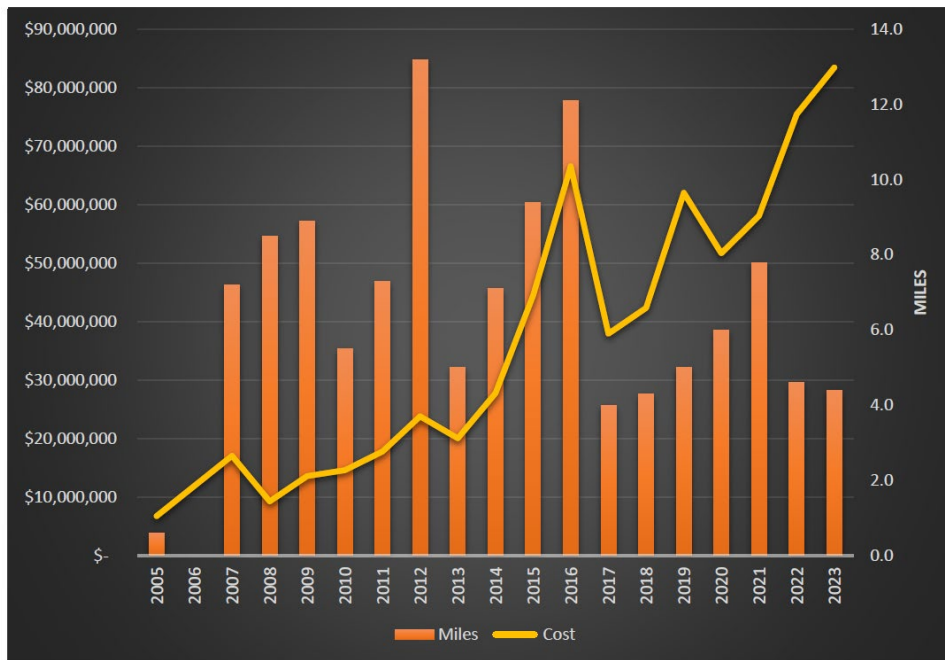
cc: Per Certificate of Service

Additional Information for FC 1154

Washington Gas Light Company (“Washington Gas” or “Company”) is responding to the Notice filed by Commissioner Beverly on January 8, 2024, in Formal Case No. 1154 (“Notice”) in which several graphs were provided.

First, Graph 1: Commissioner Beverly – Total Miles and Cost (see below) provided in the Notice combines the cost of both main replacement and service only replacement.

Graph 1: Commissioner Beverly – Total Miles and Cost



The Company is providing revised graphs that separate the main expenditures from the service only expenditures. Figure 1 shows the main retirement mileage and main related charges, and Figure 2 shows the number of affected services and service-related charges (see Figure 1 and Figure 2 below). Separating the spending in such a manner provides a more accurate depiction of costs and units delivered. The Company is also highlighting relevant Operating Restrictions that have impacted our ability to deliver main and service replacements over time (See green boxes on Figures 1 - 4 below).

Figure 1: WGL Total Miles and Total Main Spend (Nominal \$)

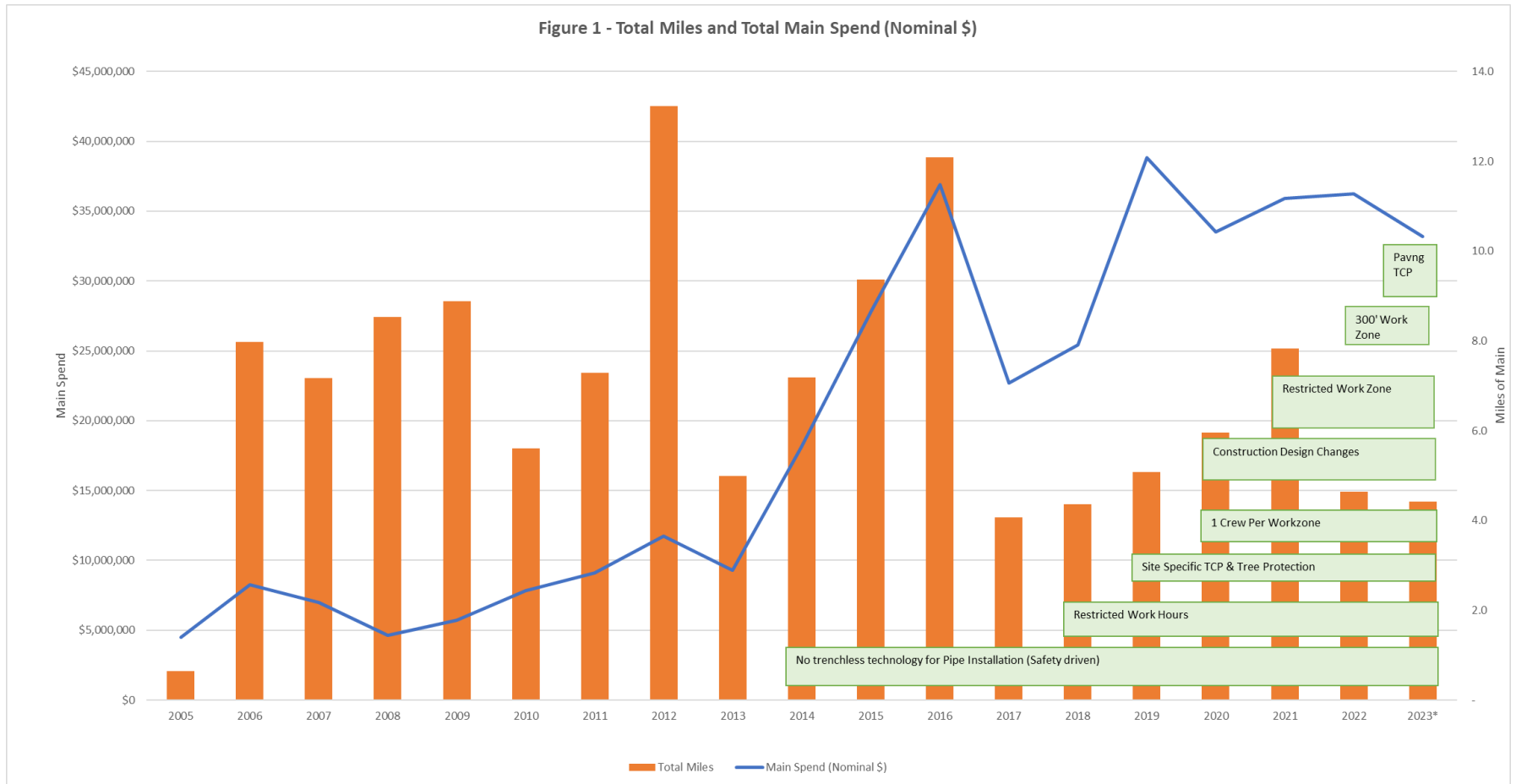
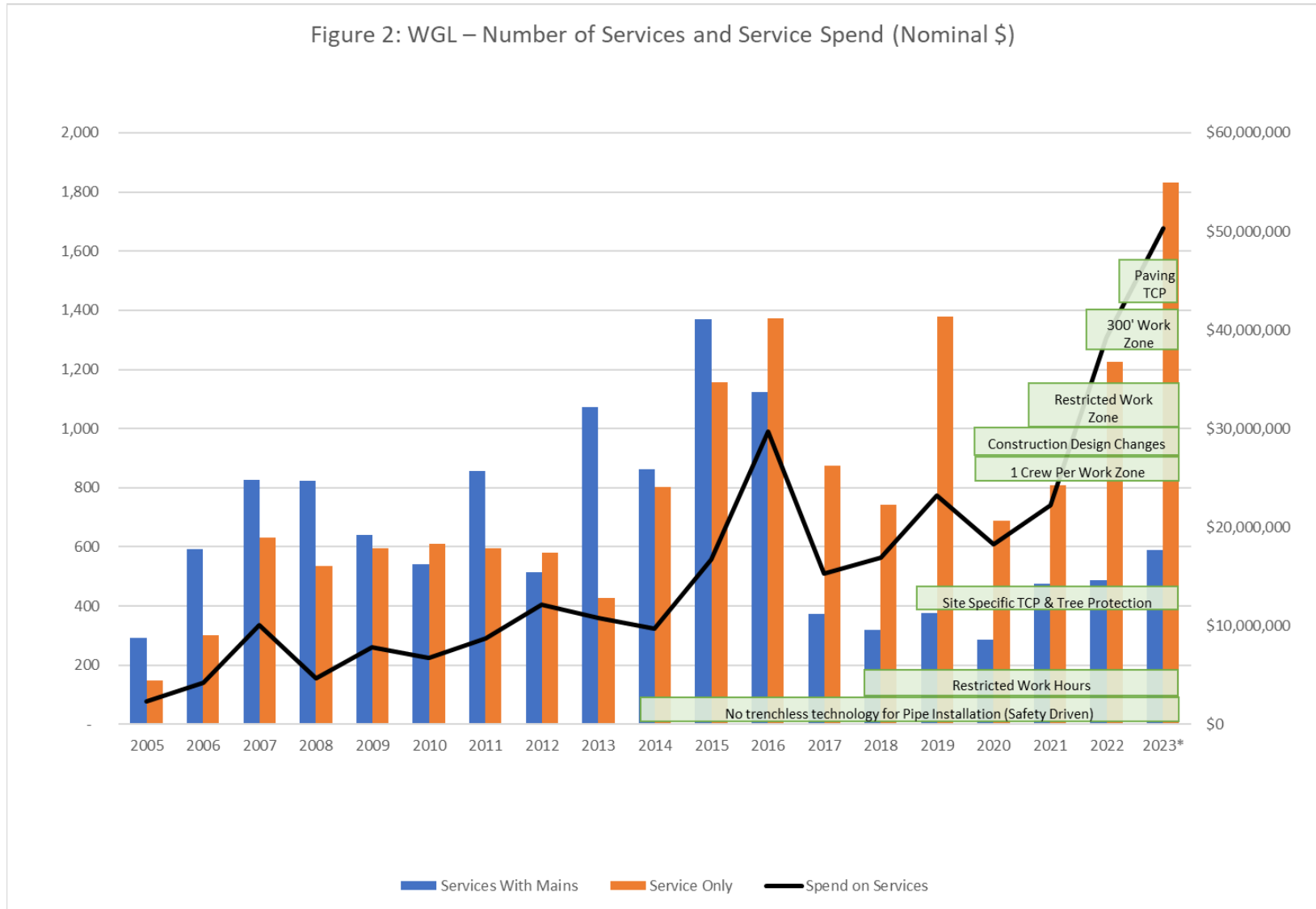
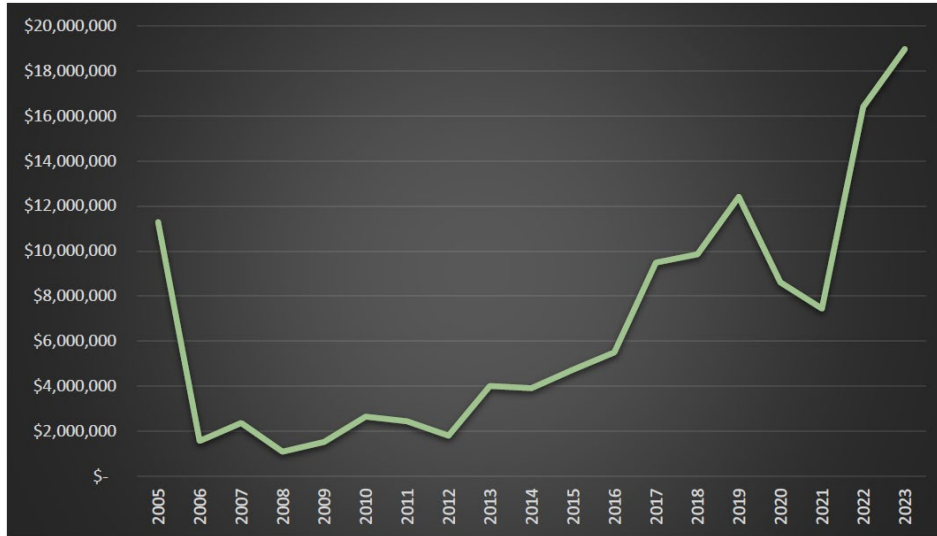


Figure 2: WGL Number of Services and Service Spend (Nominal \$)



Second, Graph 3 provided in the Commissioner's Notice displays a combined cost of main replacement and service only replacement.

Graph 3: Commissioner Beverly – Cost Per Mile of Pipe Replacement



The Company is providing revised graphs that separate the cost per mile of main replacement in Figure 3 and cost per service replacement in Figure 4, see below.

Figure 3: WGL Cost Per Mile of Main (Nominal \$)

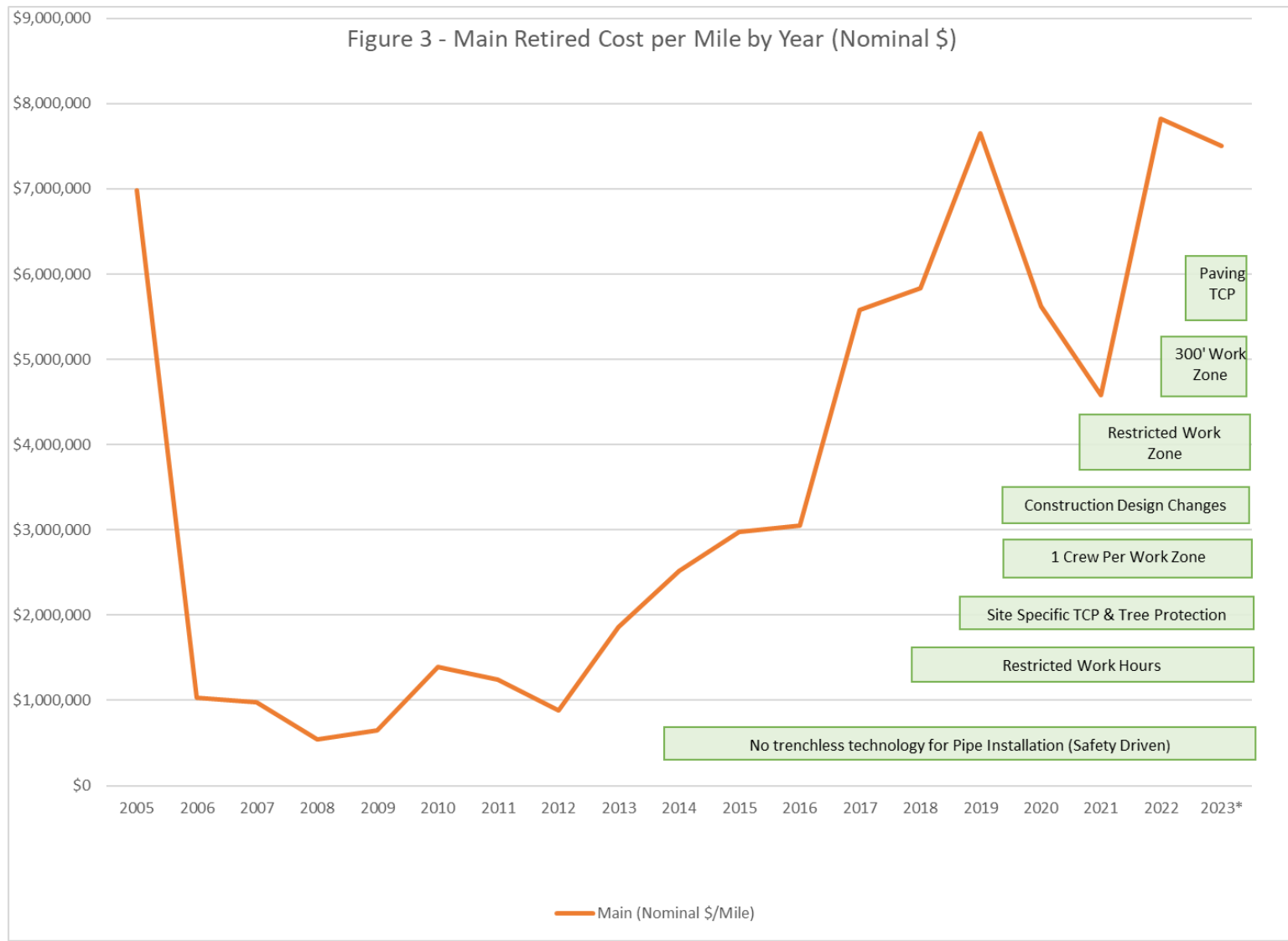
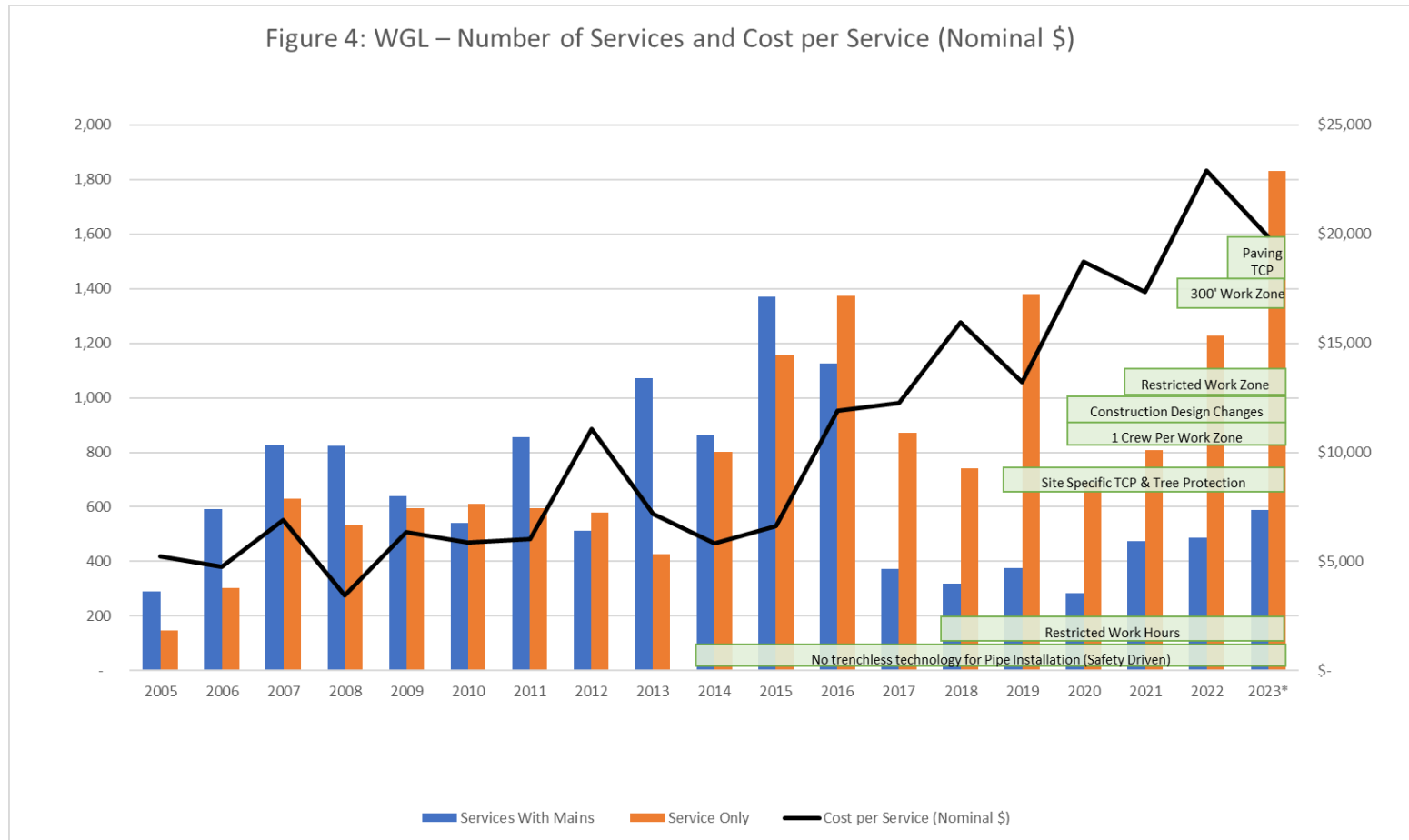


Figure 4: WGL Cost Per Service (Nominal \$)



Washington Gas has faced operating restrictions and work modifications over recent history driven by changes from District Department of Transportation (“DDOT”), Urban Forestry, and others when working in the District of Columbia (see list below).

Operating Restrictions Impacting WGL

- 2014 No Trenchless Pipe Installation – WGL pipeline safety decision.
- 2018 DDOT Restricting Work Hours 9:30am – 3:30pm
- 2019 DDOT Site Specific Traffic Control Plan (“TCP”)
- 2019 DDOT 1 Crew Per Work Zone
- 2019 Urban Forestry Main install in Roadway Mandate
- 2019 Urban Forestry Chain Linked Fence and Hand Digging Around Trees Mandate
- 2020 DDOT Construction Drawing Detail Requirements
- 2021 DDOT Traffic Control Plan 6-Month Term Requirement
- 2021 DDOT 1,200 Foot Trench Restriction
- 2022 DDOT 300 Foot Work Zone Requirement
- 2022 DDOT Page Limits on Traffic Control Plan(s)
- 2023 DDOT Ended Use of Construction Traffic Control Plans for Paving

WGL Modifications on Risk Remediation

- 2017 OPTIMAIN Top 3 Requirement
- 2020 Service Only Replacement Acceleration
- 2021 Removal of OPTIMAIN Top 3 Requirement

Exogenous Impacts

2020 COVID-19 Global Pandemic and Resulting Supply Chain Disruptions

Many of these factors were discussed in detail in the Technical Conference Report on Lowering PROJECT*pipes* Unit Costs filed in Formal Case No. 1154 on May 19, 2021 (see Attachment A).

Third, Graph 4 and Graph 5, provided in the Commissioner's Notice, provide leak data in Year 2023. Washington Gas would like to highlight that these units are not yet final and are subject to change upon finalization of the Pipeline and Hazardous Materials Safety Administration ("PHMSA") DOT report filing in March 2024.



May 19, 2021

VIA ELECTRONIC FILING

Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1325 "G" Street, N.W., 8th Floor
Washington, D.C. 20005

**Re: Formal Case No. 1154
[Technical Conference Report on Lowering PROJECTpipes
Unit Costs]**

Dear Ms. Westbrook-Sedgwick:

Pursuant to Public Service Commission of the District of Columbia Order No. 20671, transmitted for filing is the Technical Conference Report on Lowering PROJECTpipes Unit Costs.

If you have any questions regarding this matter, please feel free to contact me.

Sincerely,

Cathy Thurston-Seignious
Supervisor, Administrative and
Associate General Counsel

cc: Per Certificate of Service

**BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA**

IN THE MATTER OF)
)
APPLICATION OF WASHINGTON GAS)
LIGHT COMPANY FOR APPROVAL OF) Formal Case No. 1154
PROJECTPIPES 2 PLAN)
)
_____)

**TECHNICAL CONFERENCE REPORT ON
LOWERING PROJECTPIPES UNIT COSTS**

Pursuant to Public Service Commission of the District of Columbia (“Commission”) Order No. 20671, issued on December 11, 2020 in the above-captioned proceeding, Washington Gas Light Company (“Washington Gas” or “Company”) hereby submits the Technical Conference Report on Lowering PROJECT*pipes* Unit Costs. This report summarizes the topics discussed at the Technical Conference and identifies actionable items that are designed to help mitigate PROJECT*pipes* (“PIPES”) costs.

On April 22, 2021, Commission Staff convened a Technical Conference to discuss actions Washington Gas could take to lower PIPES unit costs. Washington Gas, the Office of the People’s Counsel for the District of Columbia, the Apartment and Office Building Association of Metropolitan Washington and Sierra Club were represented at the Technical Conference. Washington Gas gave a presentation on current cost drivers; changes in costs as compared to prior years; actions the Company has taken to reduce costs; and recommendations to further reduce program costs (see Attachment). The participants asked questions and engaged in constructive dialog.

The Company described a number of changes in policy and regulation at the District Department of Transportation (“DDOT”) which have had a significant impact on the level of productivity and costs associated with the construction work under PIPES, including restrictions on work hours resulting from a typical 10-hour work day to a 6-hour work day. The imposition of DDOT’s mandate to remove spoils at every job site requires a truck to haul the spoils, as well as additional dump fees. Prior to this change, the Company was able to keep the spoils at the work site and re-use suitable spoils to backfill the excavation. Other DDOT changes include a requirement for multiple occupancy permits, smaller scope per permit, and shorter permit durations, as well as the requirement to arrange for bicycle and pedestrian traffic flow on the same side of the roadway as the construction site. Washington Gas explained that all of these measures have resulted in increased costs to the Company, reduced productivity of work crews and longer time periods to complete required PIPES work.

Significant changes have also been imposed by DDOT to increase protection of trees in proximity to a construction work area. Chain link fences, rather than the previously used orange flexible fencing, are now required for all trees in a work zone, necessitating additional equipment for set up and removal which in many cases is performed by a separate crew. This requirement not only increases costs for the equipment but adds additional labor costs to the project. Crews are also compelled to hand-dig or vacuum excavate around tree roots near a drip line, and these more stringent rules have increased the amount of time it takes to complete the work and added costs

for the specialized vacuum excavation equipment, thereby reducing productivity and increasing project costs.

Moreover, changing permit requirements to avoid installing facilities in the green space behind the curve have caused crews to perform pipe replacements in the roadway, which the Company explained has considerably raised costs associated with increased saw-cutting preparations, spoils, traffic control and restoration. DDOT also requires 100% select backfill in the roadway, which increases costs, compared to allowing facilities to be installed in the green space and utilizing suitable excavated material for backfilling.

In recent years, Washington Gas has changed some of its operating procedures due to pipeline safety concerns, such as suspending the use of trenchless technology, which eliminated the need for hard surface excavation and restoration and the associated costs. This change in procedure reduces the potential for cross-bores which inadvertently intersect gas lines with sewer lines that can lead to potential migration of natural gas into buildings, if these facilities are disturbed. This safety-related change, however, has increased the amount of hand-digging and vacuum excavation that are now required, which has increased both construction installation costs as well as restoration costs.

Also, a shift from small diameter main replacements being prioritized in prior years of the PIPES program to more large diameter main replacements has necessitated larger excavations that typically require additional shoring and have slower installation rates. As a result of this change in work mix, program costs have increased in recent years.

The Company detailed the measures it is taking to control costs, including its enhanced cost management, tracking and reporting methods, implementation of quality

controls associated with paving and restoration, as well as aggressive construction contract negotiations and approaches, notwithstanding the District of Columbia minimum wage increase recently adopted. To address concerns regarding the impact of DDOT's policy and operational changes on the Company's construction activities, Washington Gas advised that its representatives have met with DDOT and its Urban Forestry Division ("Urban Forestry") on several occasions, with limited success in curbing DDOT's costly mandates. For example, Washington Gas has made consistent efforts to obtain authorization from DDOT to extend crew working hours in the District of Columbia. Washington Gas has had some success in receiving authorization for extended working hours, and discussions continue with DDOT in an effort to reach a reasonable resolution as DDOT has recently assigned dedicated staff to Washington Gas's work.

The Technical Conference participants discussed actions that may be taken to further mitigate PIPES costs. Washington Gas solicited stakeholder involvement to work with DDOT to effectuate changes in rules and regulations that would lead to lower costs, allow for longer crew work hours and improve productivity for the benefit of District of Columbia ratepayers. The Company's specific recommendations were as follows:

1. Develop a committee comprised of affected utilities and interested stakeholders to present a cost and impact analysis of DDOT's current requirements and propose changes to DDOT's regulations to the D.C. Council.
2. Enhance the Utility Coordination Committee, which includes utilities operating in the District of Columbia and DDOT, to allow for discussion on expanded issues affecting all participants, such as proposed DDOT regulation changes and impacts

on ratepayers; better coordination on projects; and comparison of permit approval requirements.

3. Conduct a study on permitting and D.C. Code and regulation requirements to find ways to streamline the permitting process.

Other topics and suggestions discussed during the Technical Conference included:

1. The importance of Commission involvement in discussions with DDOT, affected utilities and stakeholders.
2. Continued dialog with Urban Forestry regarding the chain link fence requirement, locating facilities in the roadway rather than behind the curb, and other requirements.
3. Enhanced customer communication and engagement regarding the cost impact of DDOT changes on PIPES construction work and how that impacts customers.
4. Examination of installation requirements in other jurisdictions to determine best practices.
5. Restoration timing and responsiveness.
6. Qualitative v. quantitative assessment of PIPES costs.

The recommended actions discussed herein to mitigate PIPES costs should be evaluated, prioritized and pursued through stakeholder collaboration and engagement in the interest of District of Columbia ratepayers.

UNIT COST TECHNICAL CONFERENCE

FC1154 *PROJECT*pipes

WAYNE JACAS

APRIL 22, 2021

AGENDA

TIME	TOPIC	PRESENTER(S)
	Purpose	
	Cost Drivers	
	Main Replacement Mix of Work	
	Service Replacement	
	Spoils Removal: Select Backfill, Trucking & Dump Fees	
	Tree Protection	
	Design and Oversight	
	Labor Costs	
	Paving Limit Requirements	
	Permitting Restrictions	
	Permitting Design Requirements	
	Traffic Control	
	Current Cost Controls	
	Company Recommendations	
	Closing Remarks	

PURPOSE

In Order No. 20671 The District of Columbia Public Service Commission ordered:

(Paragraph 91)

The Commission also directs WGL to hold a technical conference with stakeholders and Commission Staff within 60 days of the date of this order to review actions the Company could take to lower unit costs. The Company shall file a report on its efforts to coordinate on the actionable items within 90 days of the date of this order.

COST DRIVERS

COST DRIVERS

CATEGORIZING COSTS

The company has previously testified in Formal Cases Nos. 1137, 1154 and 1162 as cost drivers being summarized as Controllable or Uncontrollable. In this context:

Controllable are the items directed or influenced by the Company's pipe installation regardless of jurisdictional requirements

Uncontrollable are items directed or influenced by external factors (i.e., jurisdictional requirements) that dictate the Company incur additional expenses

Price (P) x Quantity and type work (Q) = Total Cost

MAIN REPLACEMENT MIX OF WORK



BEGINNING OF PIPES

- Majority of work was small diameter main replacement and was estimated for WG to install approximately 60' - 70' per day of 2" diameter main
- Rental of steel plates and shoring were paid under negotiated payments

RECENT YEARS OF PIPES

- Due to the project prioritization in PIPES, more large diameter main replacements, necessitating larger excavations typically requiring additional shoring and slower installation rates
- WG only able to install approximately 30' – 35' per day of 2" diameter main

SERVICE REPLACEMENT



BEGINNING OF PIPES

- Crews were completing a typical service in a single day
- Service replacements were completed using trenchless technology (moling) that allowed the Company to trench under retaining walls, tree roots, landscaping, paved areas, etc. thus avoiding hard-surface restoration and some soft surface restoration



RECENT YEARS OF PIPES

- Suspended the use of moling due to industry issues related to cross bores – required additional labor for added hand digging and vacuum excavation
- Best alternative is insertion of new service in old. Impacted by 2014 PSC directive that requires 24” depth of cover on all facilities, including services, limiting the Company’s ability to insert
- Service replacements now average 2 working days rather than 1 increasing support costs such as traffic control

RESTRICTIONS ON WORK HOURS (BY PERMIT)

10-HOUR WORKDAY

TIME	WORK TYPE
7:00 AM	Traffic Control Set Up
7:45 AM	Mobilize Crew Equipment
8:15 AM	Productive Time
9:00 AM	Productive Time
10:00 AM	Productive Time
11:00 AM	Productive Time
12:00 PM	Productive Time
1:00 PM	Productive Time
2:00 PM	Productive Time
3:00 PM	Productive Time
3:45 PM	Demobilize Crew Equipment
4:30 PM	Traffic Control Break Down



6-HOUR WORKDAY

TIME	WORK TYPE
7:00 AM	Non-Permit Hours
8:00 AM	Non-Permit Hours
9:30 AM	Traffic Control Set Up
10:15 AM	Mobilize Crew Equipment
10:45 AM	Productive Time
11:00 AM	Productive Time
12:00 PM	Productive Time
1:00 PM	Productive Time
2:00 PM	Demobilize Crew Equipment
3:00 PM	Traffic Control Break Down
3:30 PM	Non-Permit Hours
4:00 PM	Non-Permit Hours
5:00 PM	Non-Permit Hours

BEGINNING OF PIPES

- Shorter project durations due to longer working hours – up to 7am to 7pm on local roadways (approximately 8 crew productive hours per day)
- Crews able to complete more work in the same day

RECENT YEARS OF PIPES

- Longer project durations due to restricted working hours 9:30 am - 3:30 pm (approximately 4 crew productive hours per day)
- Service replacements now average 2 working days rather than 1 increasing support costs such as traffic control.



SPOILS REMOVAL: SELECT BACKFILL, TRUCKING & DUMP FEES



BEGINNING OF PIPES

- Spoils were able to remain onsite and could be used to backfill the excavation
- Main was able to be installed behind the curb, not requiring full select backfill
- Trenchless technology decreased the amount of excavation and spoils required to complete the installation

RECENT YEARS OF PIPES

- Spoils cannot remain on-site, requiring a truck to haul them as well as additional dump fees
 - ▶ increased the number of trucks required to maintain productive work
- DDOT requires 100% select backfill in the roadway



TREE PROTECTION



BEGINNING OF PIPES

- Able to use orange flexible fencing around the trees (15 – 30 min install per tree, easy removal – not charged by the contractor)
 - ▶ Included only trees within close proximity of excavation



RECENT YEARS OF PIPES

- Chain link fencing required around trees per Urban Forestry (30 mins to install per tree, additional separate crew and equipment for install and removal of chain link fencing)
 - ▶ Expanded to include all trees in the work zone, not just at excavation location

TREE PROTECTION (CONT.)



BEGINNING OF PIPES

- Able to use mechanized equipment within tree space as long as roots 2" or larger were not broken (15' of excavation in approx. 20 mins – 1 Operator and 1 Spotter)



RECENT YEARS OF PIPES

- Hand digging or vacuum excavation is required around tree roots within the drip line of the tree per Urban Forestry DDOT permit requirement (10' - 15' of hand excavation in approx. 1 – 2 hours – 2 Laborers)

TREE PROTECTION (CONT.)



BEGINNING OF PIPES

- Company was able install main behind the curb in the green space



RECENT YEARS OF PIPES

- Urban Forestry has driven replacements into the roadway increasing spoils, traffic control, and restoration

DESIGN AND OVERSIGHT

598' of 8" Steel Replacement on Residential Road TCP



547' of 4" Cast Iron Replacement on Residential Road TCP



BEGINNING OF PIPES

- The Company did not have a dedicated Project Management group
- The Company did not have a dedicated program management group (Construction Program and Strategy Management (CPSM))
- Permits required standard Traffic Control Plans (TCPs) Drawings
- Project estimates were created using a standard unit cost estimate

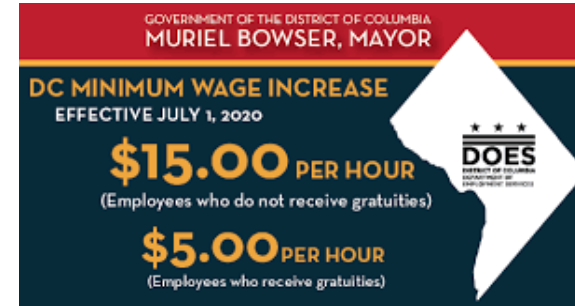


RECENT YEARS OF PIPES

- Company added Construction Management function and Project Management Staff, including a Project Manager position dedicated to PROJECTpipes and customer escalation line
- Established the CPSM group responsible for the program management of ARP Programs
- Site-specific TCPs required by DDOT
 - ▶ TCPs require significant number of detailed pages requiring 4 hours of design work per sheet
- Class III Estimates established as a requirement by the Commission in Order No. 18815

LABOR COSTS

Labor is a Substantial Input to Construction Costs



dc paid family leave 



D.C. FMLA

- 8 weeks Parental leave
- 4 weeks Family leave
- 2 weeks medical leave
- Available every 24 months

BEGINNING OF PIPES

- Minimum Wage \$9.50/hour
- Union presence primarily in skilled trades (operator, pipe fitting, welding, etc.)

RECENT YEARS OF PIPES

- Minimum Wage \$15/hour
- DC Paid Family Leave
- Additional Unionized/prevaling wage roles
- Enhanced OQ training/testing requirements

PAVING LIMITS



BEGINNING OF PIPES

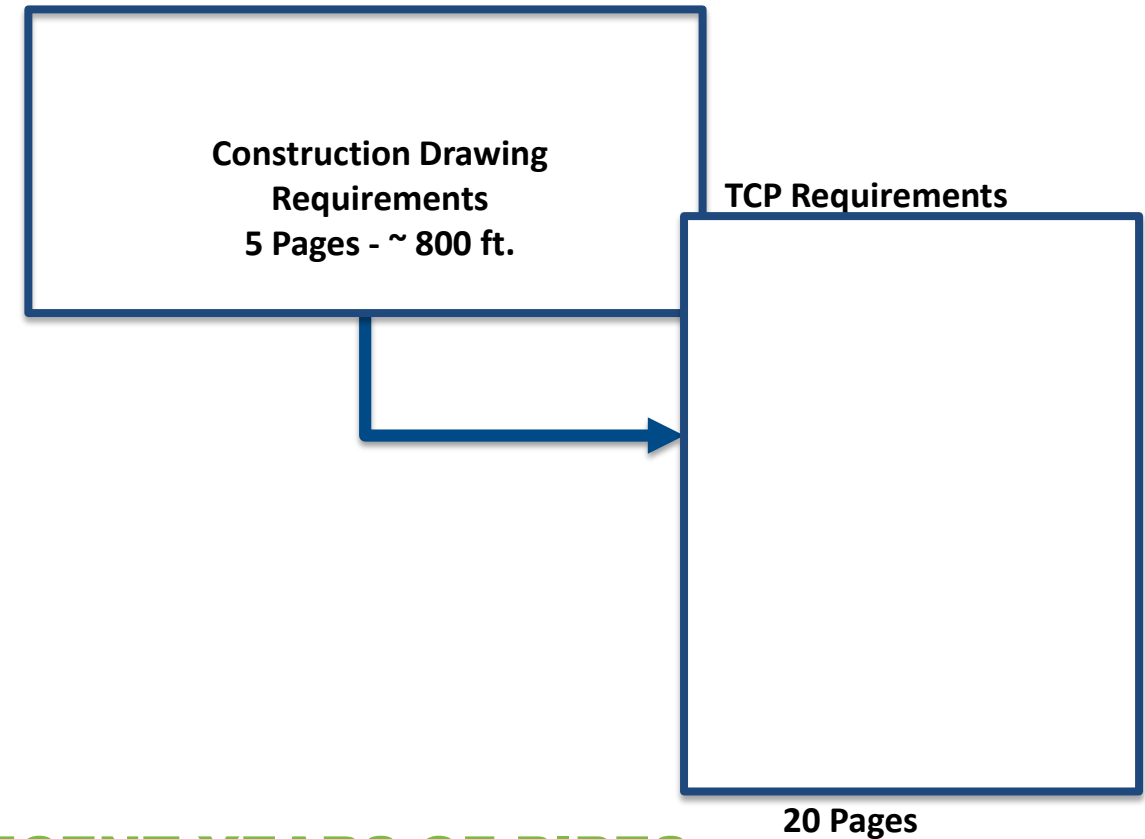
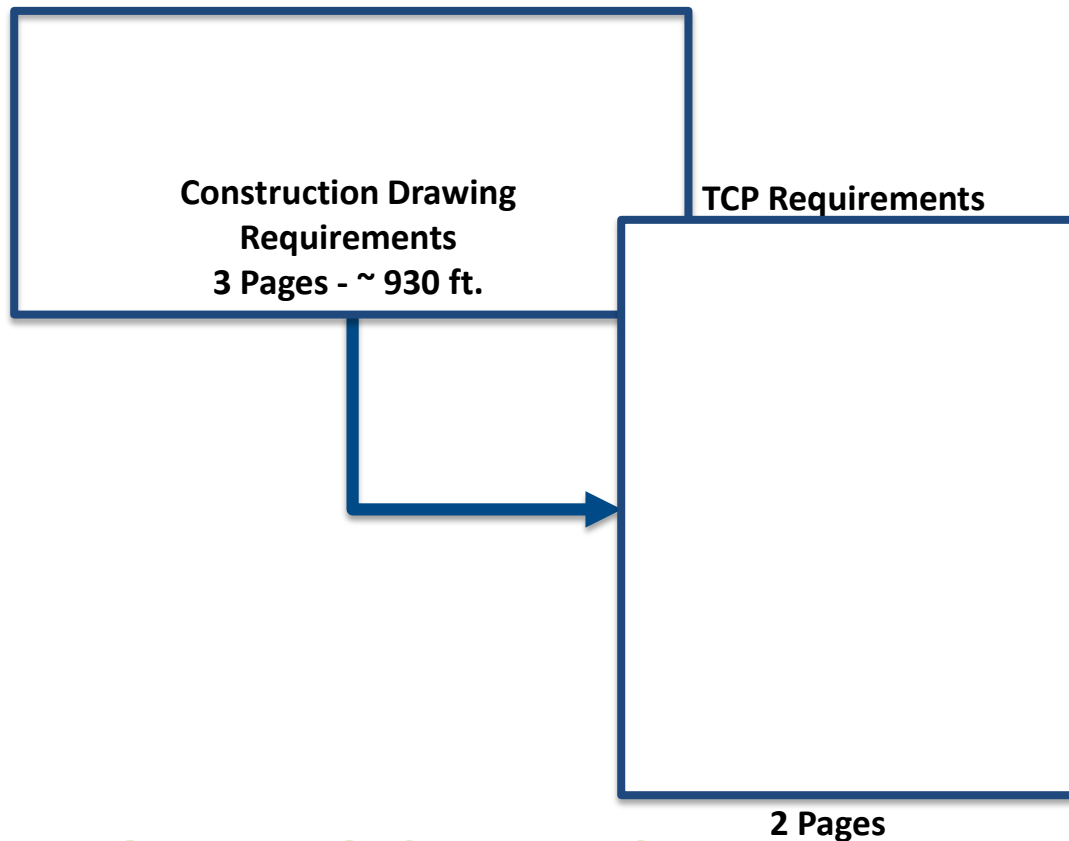
- Relaxed enforcement of restoration requirements from written requirements
- Mix of work was more geared to smaller diameter mains thus smaller excavations, less pavement disturbed
- Company utilized moling which reduced the need to open cut across yards and hard surfaces avoiding additional restoration costs



RECENT YEARS OF PIPES

- Urban Forestry has driven replacements into the roadway requiring more expensive hard surface restoration
- Increased DDOT enforcement of restoration requirements
- Due to the project prioritization in PIPES, more large diameter main replacements, necessitating larger excavations, shoring, and larger trenches to be repaired
- Suspending the use of moling resulting in the need to open trench across yards including landscaping and hard surfaces that needed to be replaced

PERMITTING DESIGN REQUIREMENTS



BEGINNING OF PIPES

- Standard TCPs
- Basic designs required as attachment to application
- Longer permit durations, less permit renewals
- Fewer types of permits required

RECENT YEARS OF PIPES

- Site-specific TCPs
- Enhanced design requirements (cover page updates, pressure warnings, regulator awareness zone, sequence of operations, DTOPs review, tree identification)
- DDOT policy changes – multiple occupancy permits, smaller scope per permit, shorter permit duration



TRAFFIC CONTROL



BEGINNING OF PIPES

- Shorter project durations due to longer working hours (7am to 7pm on local roadways (8 crew productive hours per day)
- Use of just cones and arrow boards was an accepted means of traffic control



RECENT YEARS OF PIPES

- Longer project durations due to restricted working hours 9:30 am - 3:30 pm (approximately 4 crew productive hours per day)
- Bicycle and pedestrian traffic cannot be deferred across the roadway
- Additional use of Flaggers are now required as a typical requirement of the TCPs

CURRENT COST CONTROLS

CURRENT COST TRACKING METHODS

- Cost Management Procedure
- Monthly Variance Meetings
- Bi-Monthly ARP Governance Meetings
- Monthly Executive Governance Meetings
- Dedicated resource for PROJECT*pipes* Project Management
- Construction Pay Item Approval Log
- Merger Commitment No. 72 in FC 1142
- Annual Lessons Learned Meetings

REPORTING TOOLS

**WR
Aging
Report**

**Pipe
Complete
Report**

**EAC
Graph**

**Spend and
Units
Report**

**Monthly
Dashboard
(Page 1)**

**Monthly
Dashboards
(Page 2)**

COMPANY MITIGATION EFFORTS

The Company continues to maintain and enhance its:

1. Cost management and oversight functions
2. Employing the most efficient construction methodology
3. Contracting Approaches
4. Contract unit rate alignment with current requirements

EXTERNAL PARTY ASSISTANCE

1. Coordinate with other utilities and vested partners who are similarly impacted by DDOT regulations and assemble a blue-ribbon committee to provide impact and constituent costs analysis to the D.C. Council directly on any proposed DDOT regulations as well as to suggest improvements to existing regulations.
 - Complete study of Permitting and District Code language
 - Ways to streamline permitting process
2. Enhance the Utility Coordination Committee with utilities operating in the District of Columbia and the District Department of Transportation (“DDOT”)
 - Discuss pending regulation changes and impacts with feedback to DDOT and City Counsel
 - Allow for better coordination on projects
 - Engage with other utilities to compare permit approval requirements

RECOMMENDATION IMPACTS ON THE 15% REDUCTION GOAL

1. Obtaining extended working hours on all projects
2. Removal of the chain link fence tree protection requirement, allowing the previously used orange flexible fence
3. Allow the Company to install facilities behind the curb
4. Reasonable traffic control requirements in line with the federal manual on uniform traffic control devices (MUTCD)
5. Allow the Company to stock pile materials.

WE ARE



CERTIFICATE OF SERVICE

I, the undersigned counsel, hereby certify that on this 19th day of May 2021, I caused copies of the foregoing to be hand-delivered, mailed, postage-prepaid, or electronically delivered to the following:

Thaddeus Johnson, Esquire
Office of the People's Counsel
of the District of Columbia
1133 - 15th Street, NW, Suite 500
Washington, DC 20005
tjohnson@opc-dc.gov

Frann G. Francis, Esquire
Apartment and Office Building
Association of Metro. Washington
Suite 300, 1050 - 17th Street, NW
Washington, DC 20036
ffrancis@aoba-metro.org

Nina Dodge
DC Climate Action
6004 34th Place, NW
Washington, DC 20015
ndodge432@gmail.com

Brian Caldwell, Esquire
Office of the Attorney General
for the District of Columbia
441 4th Street, NW, Suite 600-S
Washington, DC 20001
brian.caldwell@dc.gov

Erin Murphy, Esquire
Environmental Defense Fund
1875 Connecticut Ave., NW, Suite 600
Washington, DC 20009
emurphy@edf.org

Brian J. Petruska, General Counsel
LIUNA Mid-Atlantic Region
11951 Freedom Drive, Suite 310
Reston, VA 20190
bpetruska@maliuna.org

Susan Stevens Miller, Esquire
Earthjustice
1001 G Street, NW, Ste. 1000
Washington, DC 20001
smiller@earthjustice.org



CATHY THURSTON-SEIGNIOUS

CERTIFICATE OF SERVICE

I, the undersigned counsel, hereby certify that on this 17th day of January 2024, I caused copies of the foregoing to be hand-delivered, mailed, postage-prepaid, or electronically delivered to the following:

Kimberly Lincoln-Stewart, Esquire
Public Service Commission
of the District of Columbia
1325 G Street, NW, 8th Floor
Washington, DC 20005
kstewart@psc.dc.gov

Ankush Nayar, Esquire
Office of the People's Counsel
of the District of Columbia
655 15th Street, NW, Suite 200
Washington, DC 20005
anayar@opc-dc.gov

Frann G. Francis, Esquire
Apartment and Office Building
Association of Metro. Washington
Suite 300, 1050 - 17th Street, NW
Washington, DC 20036
ffrancis@aoba-metro.org

Nina Dodge
DC Climate Action
6004 34th Place, NW
Washington, DC 20015
ndodge432@gmail.com

Brian Caldwell, Esquire
Office of the Attorney General
for the District of Columbia
441 4th Street, NW, Suite 600-S
Washington, DC 20001
brian.caldwell@dc.gov

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1875 Connecticut Ave., NW, Suite 600
Washington, DC 20009
emurphy@edf.org

Brian J. Petruska, General Counsel
LIUNA Mid-Atlantic Region
11951 Freedom Drive, Suite 310
Reston, VA 20190
bpetruska@maliuna.org

Susan Stevens Miller, Esquire
Earthjustice
1001 G Street, NW, Ste. 1000
Washington, DC 20001
smiller@earthjustice.org



CATHY THURSTON-SEIGNIOUS