



**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY**

BOARD OF DIRECTORS

***WATER QUALITY AND WATER SERVICES
COMMITTEE MEETING AGENDA***

**Thursday, January 21, 2016
11:00 a.m.**

**5000 Overlook Avenue, SW
Washington, DC 20032**

- | | |
|--|------------------------------------|
| 11:00 a.m. I. Call to Order | Rachna Butani-Bhatt
Chairperson |
| 11:05 a.m. II. Water Quality Monitoring | Charles Kiely |
| Coliform Testing
LCR Compliance Testing | |
| 11:15 a.m. III. Fire Hydrant Upgrade Program | David Wall |
| Status Report of Public Fire Hydrants
Out of Service Fire Hydrant Map | |
| 11:30 a.m. IV. Water and Sewer CIP Briefing | George Hawkins/Liliana Maldonado |
| 11:45 a.m. V. Large Valves Replacement Process for Complete Installation | George Hawkins/Liliana Maldonado |
| 12:15 p.m. VI. Large Valve Replacement at
14th Street, Between F and G Streets, NW | George Hawkins/Liliana Maldonado |
| 12:30 p.m. VII. Small Diameter Water Main Locations:
P Street between 26th to 28th Street NW and R Street between Wisconsin and
30th St NW | George Hawkins/Liliana Maldonado |

12:45 p.m. VIII. Non-Joint Use-

14-PR-CCO-06-Interim Positive Displacement Meters-Mueller Systems, LLC.

Modification – Contract Extension.

IFB No. 130040 - Water Main Infrastructure Repair and Replacement- Fort Myer Construction Corporation Contract for FY14-FY16. Change order #1

Charles Kiely

1:00 p.m. IX. Executive Session*

Adjournment

*The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(1); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10); proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.

Status Report of Public Fire Hydrants for DC Water Services Committee - January 11, 2016

	October Cmte. Report (Oct 08, 2015)	November Cmte. Report (Nov 03, 2015)	December Cmte. Report (Dec 04, 2015)	January Cmte. Report (Jan 11, 2016)
Public Fire Hydrants:	9,451	9,453	9,457	9,456
In Service:	9,392	9,395	9,397	9,405
Marked Out-of-Service (OOS)	59	58	60	51
OOS - defective requiring repair/replacement	42	43	48	31
% OOS requiring repair or replacement (DC Water goal is 1% or less OOS)	0.44%	0.45%	0.51%	0.33%
OOS - due to inaccessibility or temp construction work	17	15	12	20

Note: The number of public hydrants in the DC Water system fluctuates; this number fluctuates as hydrants are added and removed during development or construction activities as well as at the request of the Fire Dept.

Breakdown of Public Fire Hydrants Out-of-Service (OOS) as of January 11, 2016 51

Breakdown of Defective

	0-7 Days	8-14 Days	15-30 Days	31-60 Days	61-90 Days	91-120 Days	> 120 Days	Total
Hydrant Needs Repair/Investigation	1	0	0	1	2	0	5	9
Needs Valve Investigation for Low Flow/Pressure or Shut Test for Replacement	0	0	0	0	0	1	1	2
Needs Replacement	1	0	0	4	2	0	13	20

Defective

31

Breakdown of Others

	0-7 Days	8-14 Days	15-30 Days	31-60 Days	61-90 Days	91-120 Days	> 120 Days	Total
Temporarily OOS as part of operations such as a main repair	0	0	2	2	0	0	1	5
Construction* - OOS	0	0	1	4	1	0	4	10
Obstructed Hydrant – OOS hydrant due to operation impeded by an obstruction.	0	0	0	0	0	0	5	5

Others

20

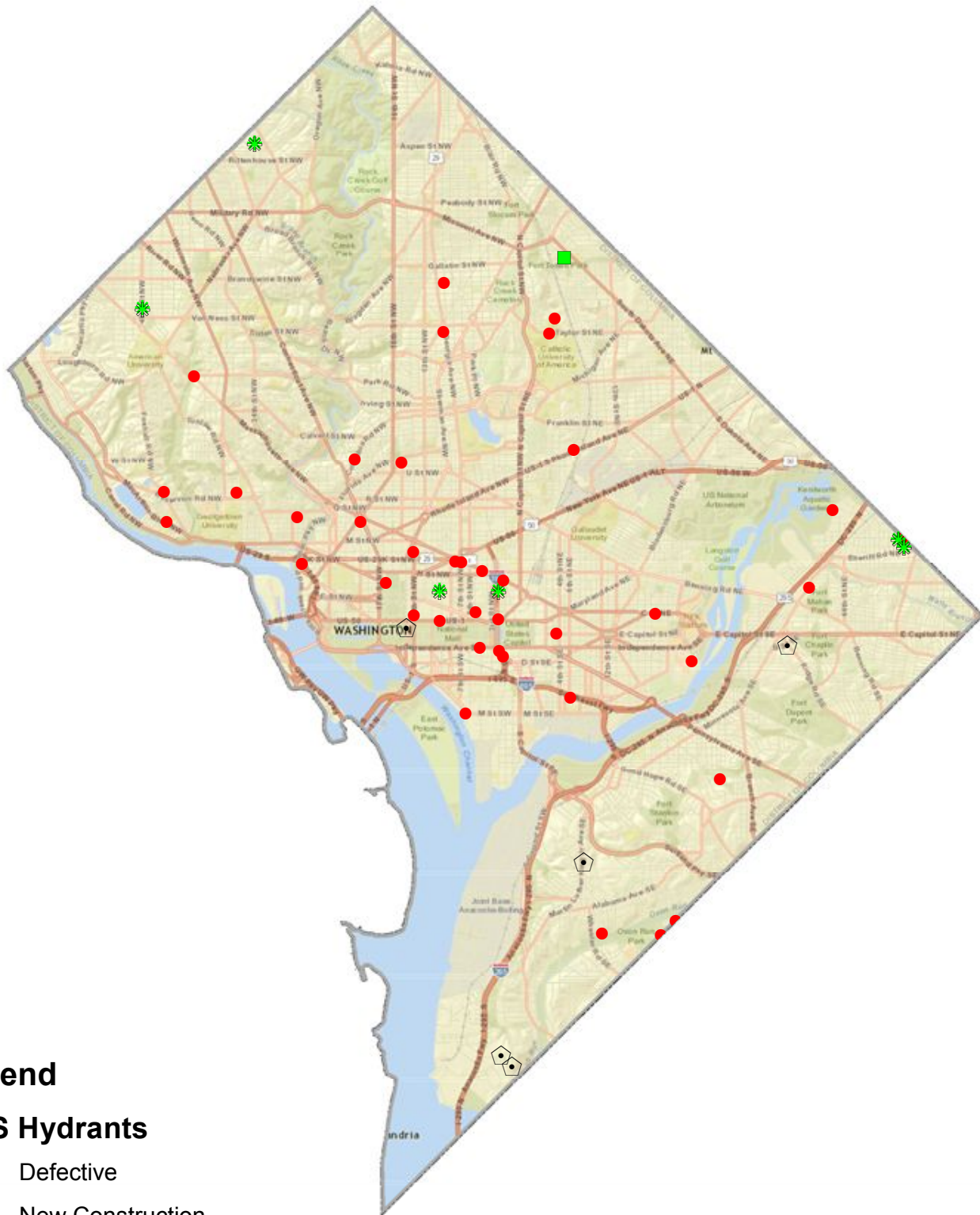
*Fire hydrants not accessible due to construction activities. Also includes new hydrants which have not yet been commissioned or old hydrants which will be abandoned as part of ongoing construction projects.

Status of Private Fire Hydrants-Based on FEMS Inspection Reporting

Private Hydrants:	1,318
• In Service:	1,189
• Out-of-Service (OOS):	129

Map of Public Out-of-Service Hydrants

Jan. 7, 2016



Legend

OOS Hydrants

- Defective
- ✱ New Construction
- ⬠ Obstructed
- Temporary



District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Water and Sewer CIP Briefing

Presented to:

Water Quality and Sewer Services Committee Meeting

Chairperson: Rachna Butani

January 21, 2016



CIP Overview

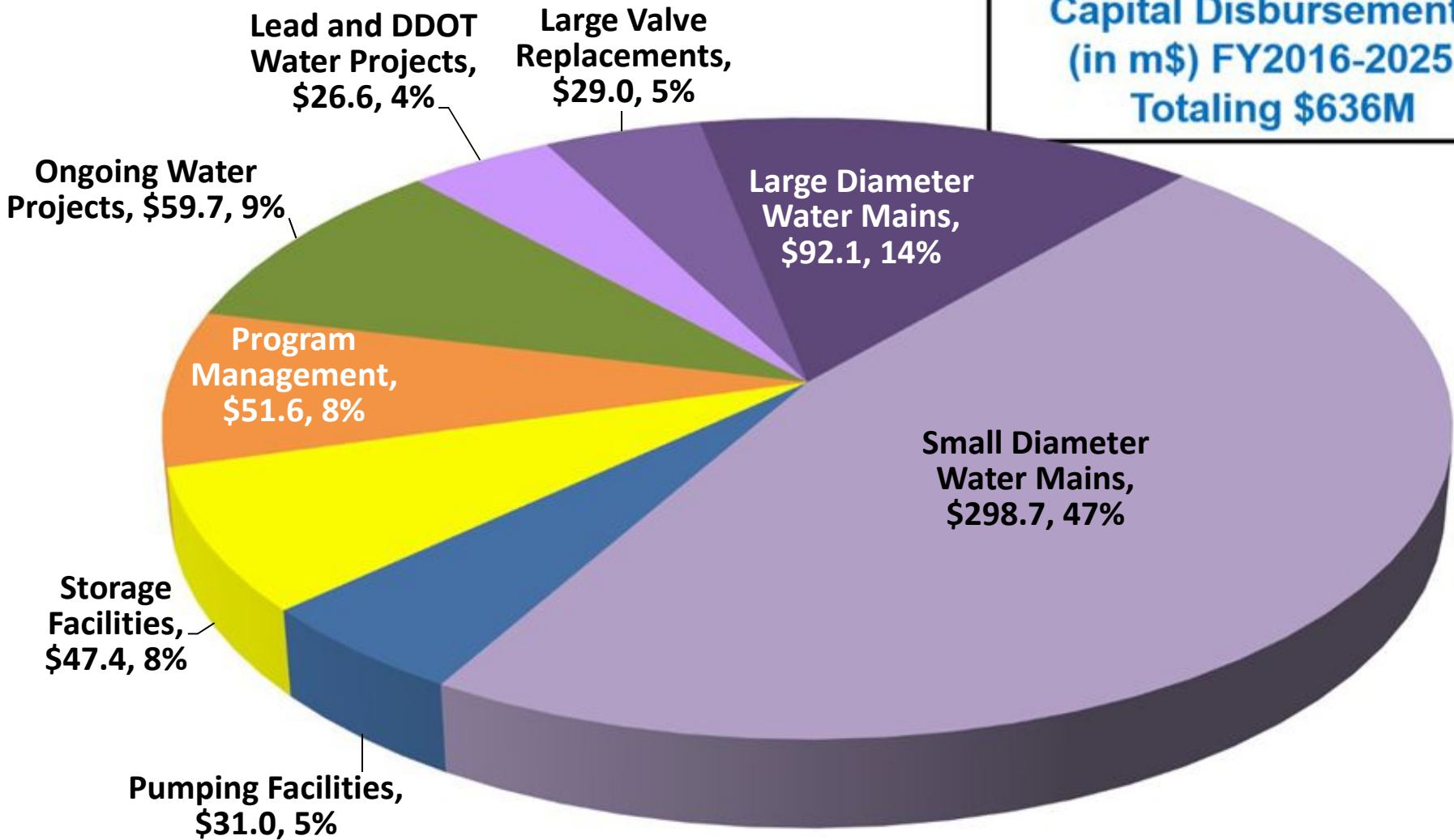
DC Water's Drinking Water CIP projects will improve water quality & increase system reliability

- Small-diameter water mains
 - Replacement and rehabilitation
- Large-diameter water mains
 - Rehabilitation and replacement
 - Large valve replacements
- Drinking water storage
 - Cleaning and Inspection
 - Improvement Upgrades, Repairs and New Storage Tanks
- Pumping station improvements
 - Upgrades & Optimization



10-Yr Capital Disbursement in the Drinking Water System

Water CIP Program 10-Year Capital Disbursements (in m\$) FY2016-2025, Totaling \$636M





Active Large Valve Replacements

Contract Number	Title	Start Date	Finish Date	Contract Amount
090110	Large Valve Replacements Contracts 7	1/6/2011	9/30/2016	\$2,998,137.50
140070	Large Valve Replacement Contract 11R	8/1/2014	8/29/2016	\$3,935,950.00
130210	Large Valve Replacements Contract 12(R3)	11/2/2015	4/24/2017	\$1,944,928.00
140200	Large Valve Replacements Contract 13	8/20/2015	8/19/2016	\$1,874,965.00

Total dollar value = \$10,753,980.50

Total number of locations in these 4 contracts = 53



Active Small Diameter Water Main Replacements

Contract Number	Title	Start Date	Finish Date	Contract Amount
130050	Small Diameter Water Main Replacement 9a	11/12/2013	7/24/2016	\$10,512,544.00
130120	Small Diameter Water Main Replacement 9b	3/31/2014	3/25/2016	\$ 6,956,349.00
130200	Small Diameter Water Main Replacement 10a	8/6/2014	2/7/2016	\$13,542,445.00
140010	Small Diameter Water Main Replacement 10b	12/16/2014	6/17/2016	\$10,190,671.00
140210	Small Diameter Water Replacement 11A(R3)	10/29/2015	5/1/2017	\$10,709,591.00

Total dollar value = \$51,911,600.00

Total number of locations in these 5 contracts = 38

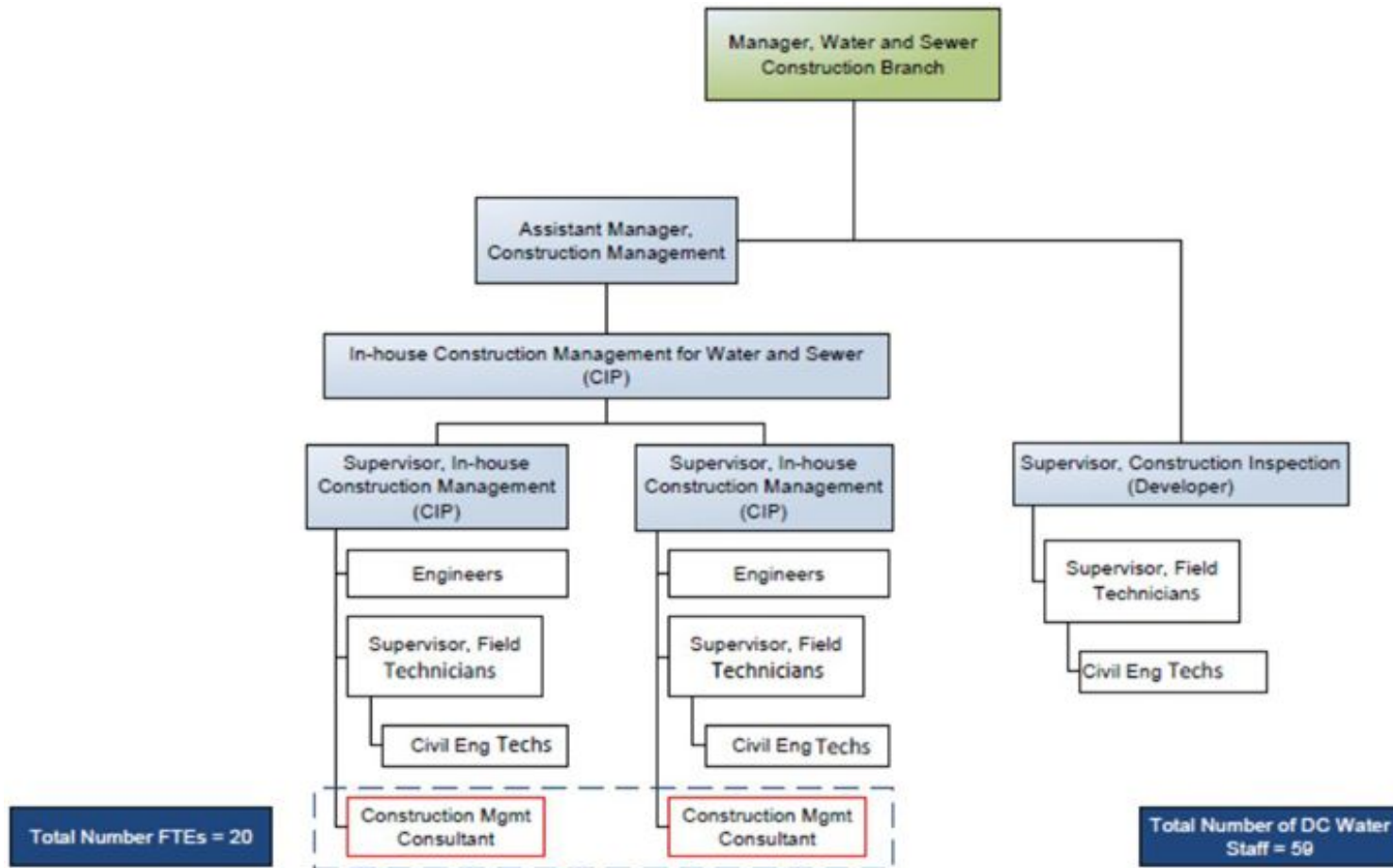


CIP Management Approach

- Increased in-house staff for linear construction
- Hired Consultant management staff to augment in-house resources to handle CIP workload peaks and specialty projects
- Increased proactive dialogue with Contractors on key issues
- Increased Contractor outreach



CIP Management Approach





Questions?



water is life

District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Large Valve Replacements Process for Complete Installation

Presented to:
Water Quality and Sewer Services Committee Meeting
Chairperson: Rachna Butani
January 21, 2016

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Contract Administration

Contract Award:

- Contract Pre-qualified Contractors (up to 4 years), lowest bid procurement
- NTP is issued, pre-construction meeting held
- Bi-weekly project meetings conducted to monitor Contractor and coordinate with internal & external stakeholders
- Scope includes associated paving, sidewalk and curb and gutter



Scope of Work

General scope of work:

- Installation of large valves, associated water mains and fire hydrants
- Multiple valve installations throughout the city
- Valve replacements range in size from 16 inches to 72 inches in diameter
- Scope includes associated paving, sidewalk and curb and gutter

•3

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Critical Activities

- Material Submittal approval (2-step)
 - Fabrication & Delivery of Valves (step 1)
- Test Pit for existing conditions & maintain site
 - Fabrication & Delivery of Couplings (step 2)
- Inspect & verify material upon delivery & prior to installation
- Prepare for valve Installation
- Shutdown preparation in coordination with DWS
- Valve installation & temporary restoration
- Final restoration
- Final walk through & site demobilization

•4

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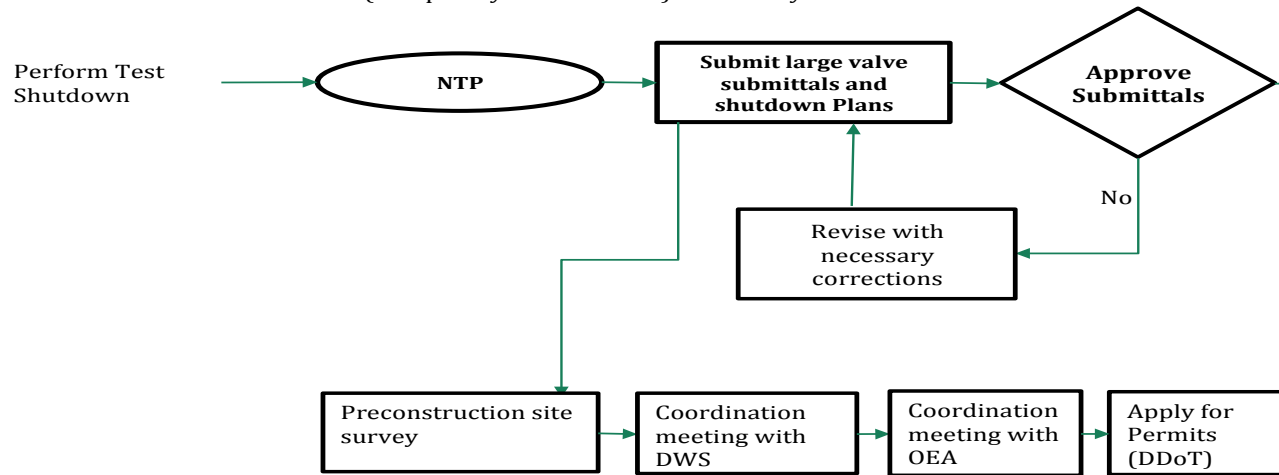


Large Valve Replacement Process Flowchart

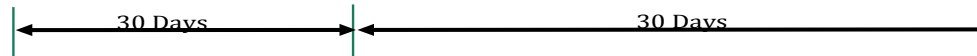
Functional Task Duration: 285 Days (Assumes all valves are ordered at the same time)

Estimated duration of one valve installation: 30-45 Days

Estimated Duration of Restoration (Temporary & Permanent): 60-90 Days

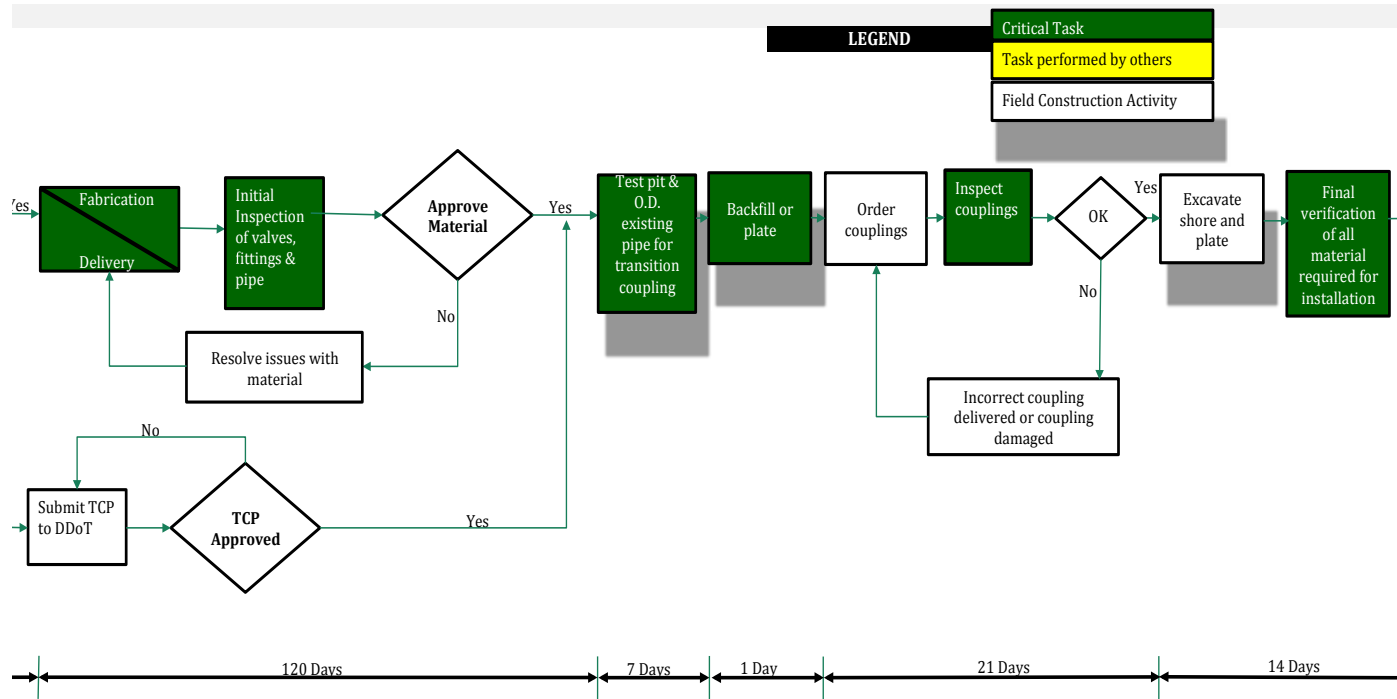


Typical Durations Observed: (NOT TO SCALE)



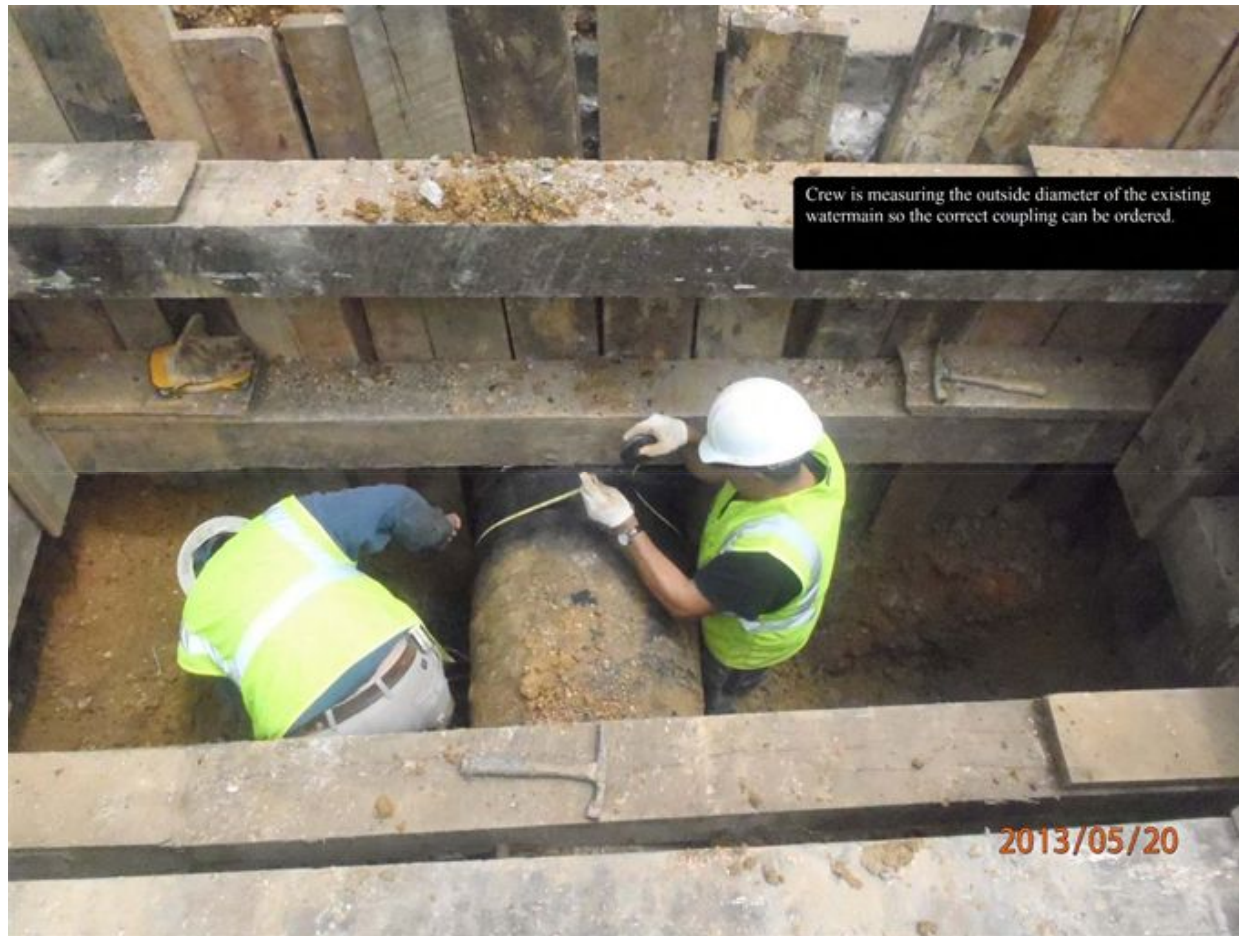


Large Valve Replacement Process Flowchart





Obtaining OD's



7

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Backfill & Compaction





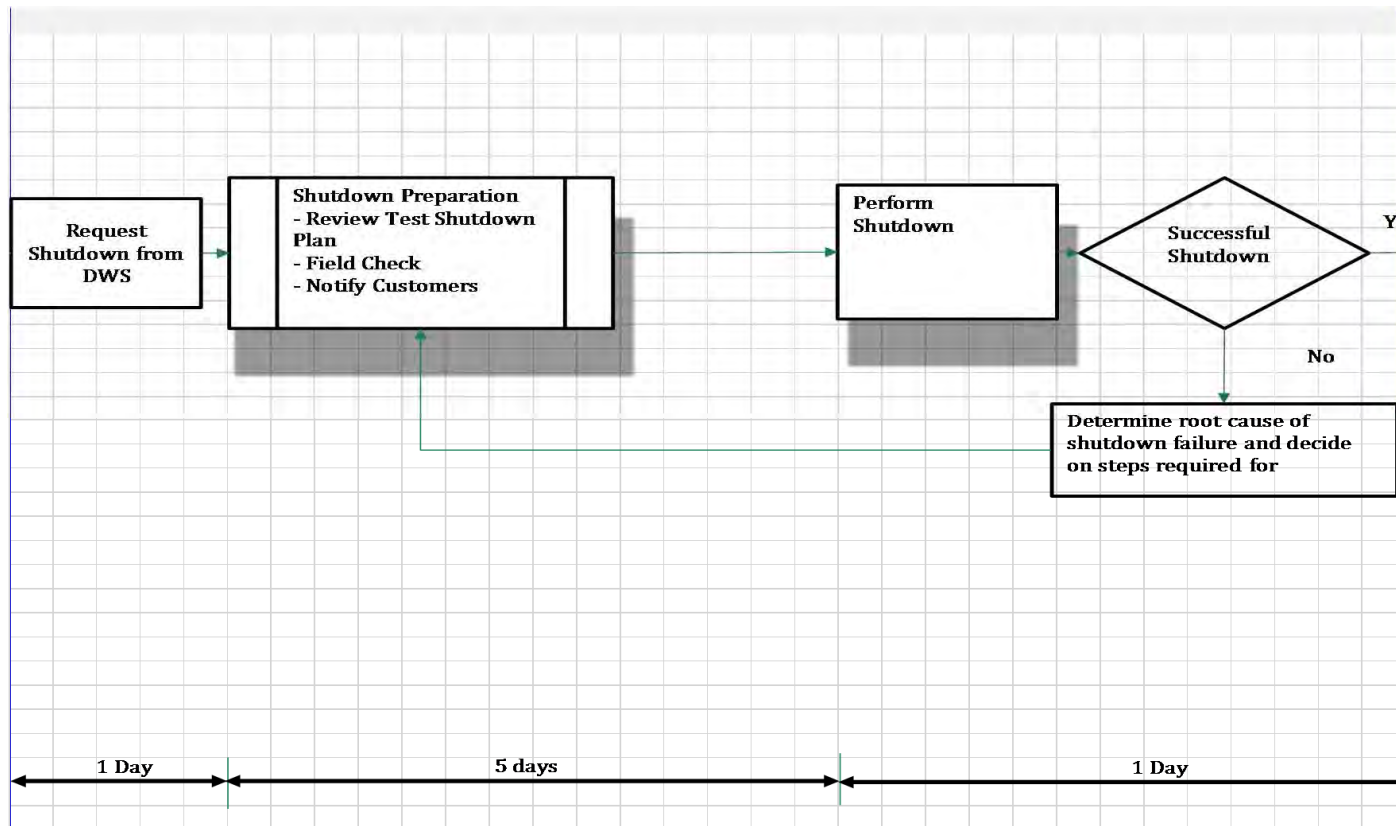
Excavation & Preparation for Valve Replacement



Crew is hand digging around the existing utilities preparing for the proposed valve installation.



Large Valve Replacement Process Flowchart





Performing Shutdown

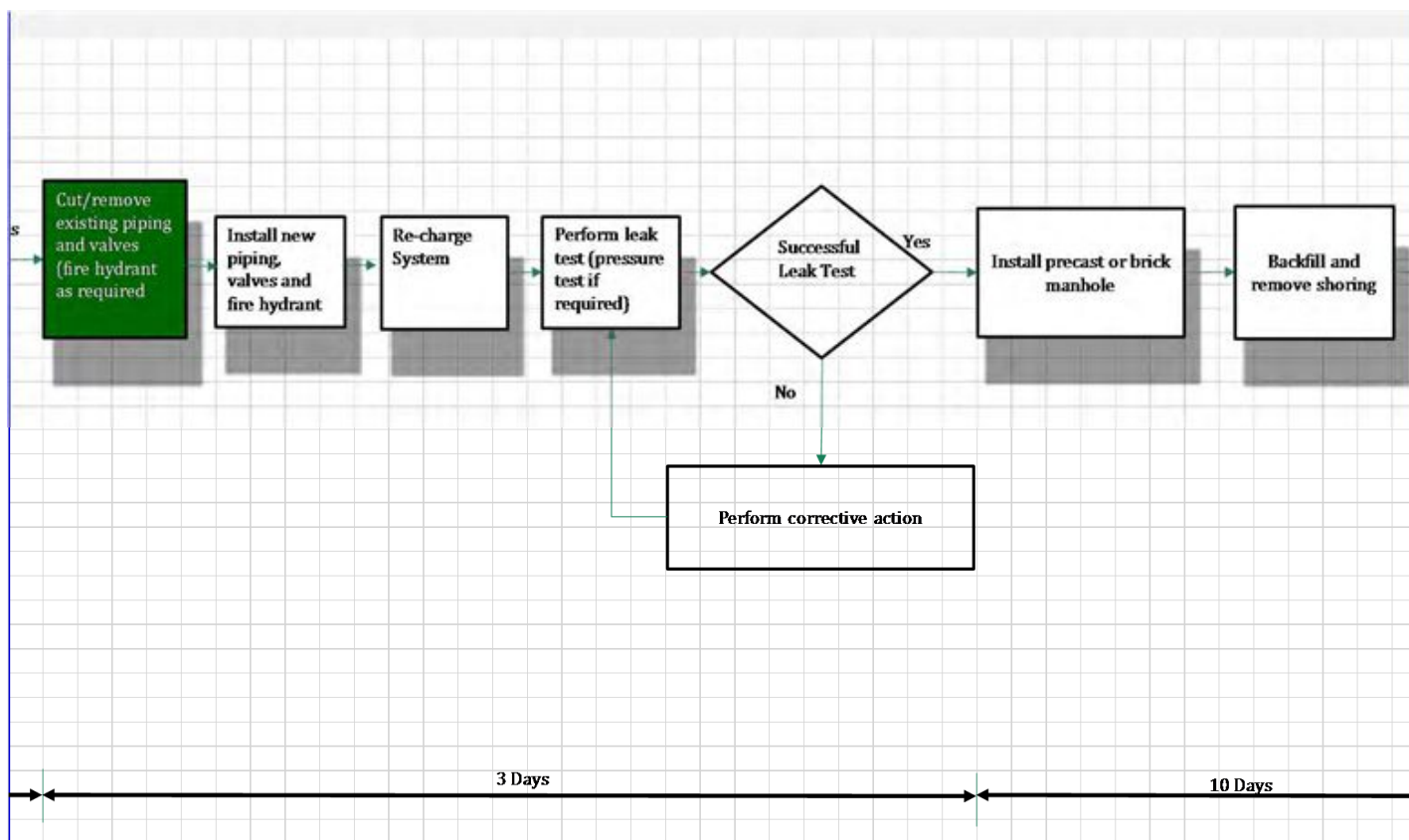


11

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Large Valve Replacement Process Flowchart





Removal of Existing Valve

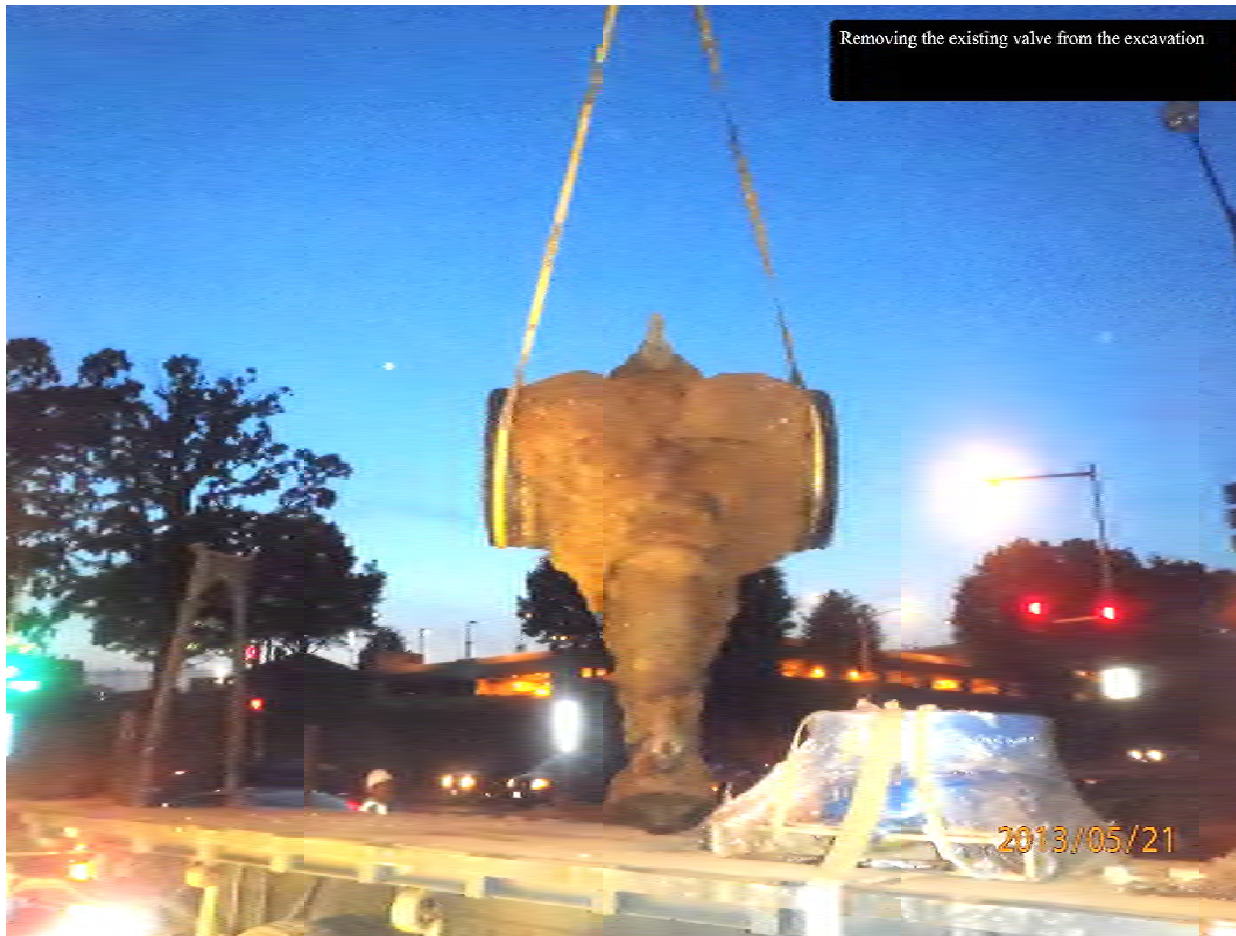


13

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Removal of Existing Valve



Removing the existing valve from the excavation.

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Fire Hydrant Installation



15

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Installing New Brick Manhole



16

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Backfill & Compaction

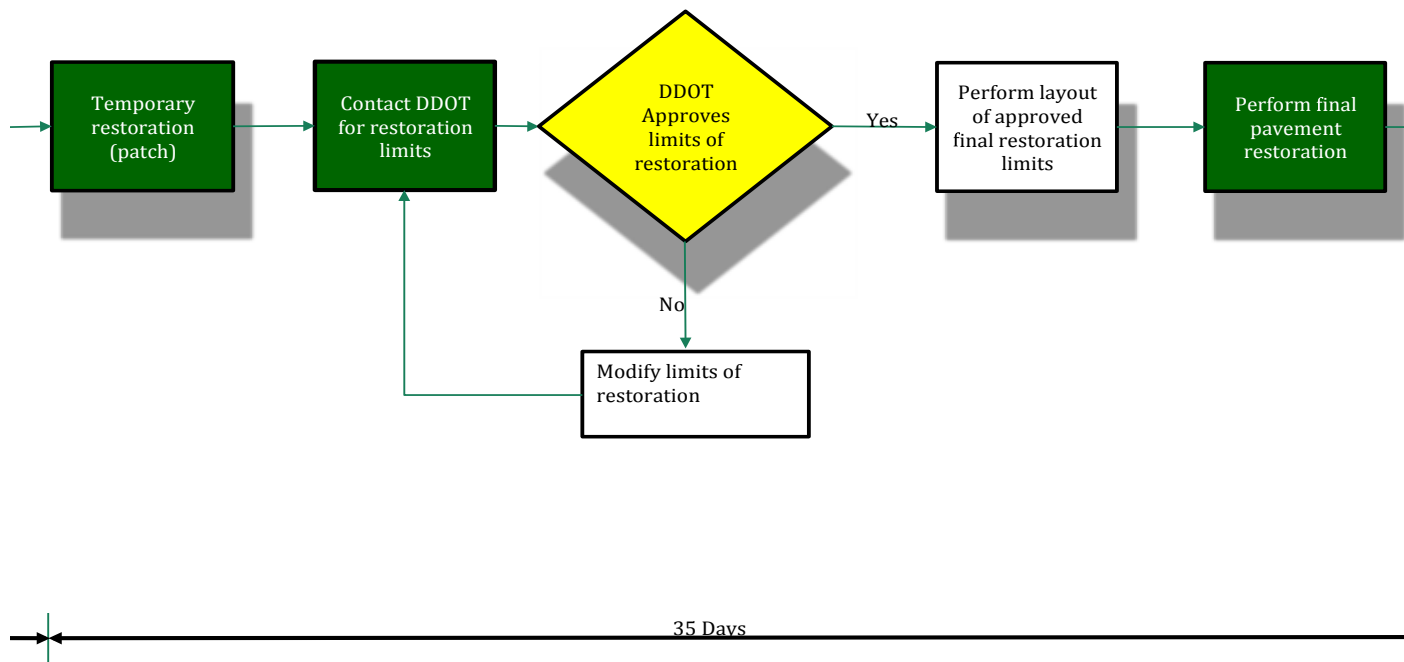


17

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Large Valve Replacement Process Flowchart





Time and Cost Considerations for Sensitive Locations

- Eliminating Temporary Restoration could reduce time to complete final paving from 35 days to 14 days
- DDOT responsiveness on “Limits of Restoration” impedes overall project duration (potential to reduce 14 days further)
- Implications of potential process change
 - Reduction in permit fees for DDOT
 - Increased DC Water project costs due to increased Limits of Restoration
 - Prescribe final restoration for Sensitive Locations (increased DC Water project cost)



DDOT Layout for Final Restoration



20

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PCC Base Restoration



21

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Milling & Overlay



22

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Final Restoration



23

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Temporary Restoration Final Restoration

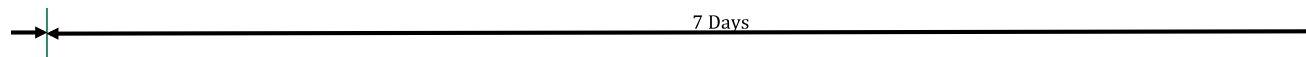
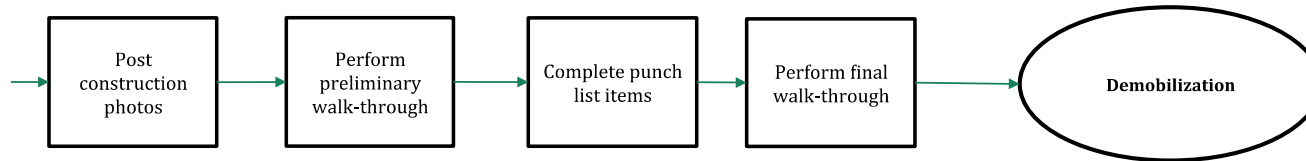


24

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Large Valve Replacement Process Flowchart





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District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Questions?



District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Large Valve Replacement and Pressure Reducing Valves Installation

at

14th Street, Between F & G Streets, NW

Presented to:

Water Quality and Sewer Services Committee Meeting

Chairperson: Rachna Butani

January 21, 2016



Site Background

- Site specific scope of work
 - Remove and replace two(2) 24-Inch valves
 - Install two(2) blow-off valves (air & drain)
 - Install a brick manhole
 - Restoration
- Contractor: Flippo Construction Company, Inc.
 - Local utility contractor with prior experience working in the Washington, DC Metropolitan area
 - Excellent past performance working on water and sewer projects at DC Water
 - Successfully completed several Large Valve Replacements projects for the Authority



Site Background

ACTIVITY	DATE
Submittal for valves approved – released for fabrication	1/16/2015
Mobilization to site	5/11/2015
OD’s obtained for couplings	5/29/2015
Couplings delivered and inspected	6/30/2015
Re-mobilization to site to begin valve replacement	7/2/2015
Differing Site Condition encountered	8/24/2015
Issue resolved (Contractor returns to site)	9/28/2015
Valve installation completed	10/23/2015
Manhole installation completed	10/27/2015
Backfill and temporary restoration completed	11/6/2015
DDOT approved limits of restoration	12/8/2015
PCC base poured	12/11/2015
Permanent restoration performed	1/4/2015



Final Restoration: Setting up Traffic Control



12-11-15
Fort Myer is on-site saw cutting the South Excavation. South side work consisted of installing a new 24" Butterfly Valve, 1-Air blowoff assembly and 1-Drain blowoff assembly. Crew will be removing the temporary asphalt to the marked limits as discussed with DDOT inspector.



Final Restoration: Setting up Traffic Control



12-11-15
Fort Myers preparing to Saw cut the North excavation per the approved limits discussed with the DDOT inspector. North side work consisted of disassembling and removing the existing 2 EA 24" couplings, 24" Butterfly valve , 2EA 2" air taps and existing manhole. Crew then installed 2EA 24" couplings and a 3' piece of DIP



Final Restoration: Setting up Traffic Control



FMCC setting up additional traffic control on the North side excavation.



Final Restoration: Temporary Paving Removal



12-11-15
Fort Myers Crew is starting the removal of the temporary asphalt in preparation for the concrete base pour. Above, the Hoeram is removing the temporary asphalt within the saw cut limits. Once complete the Backhoe will load the debris onto the dump truck for site removal.



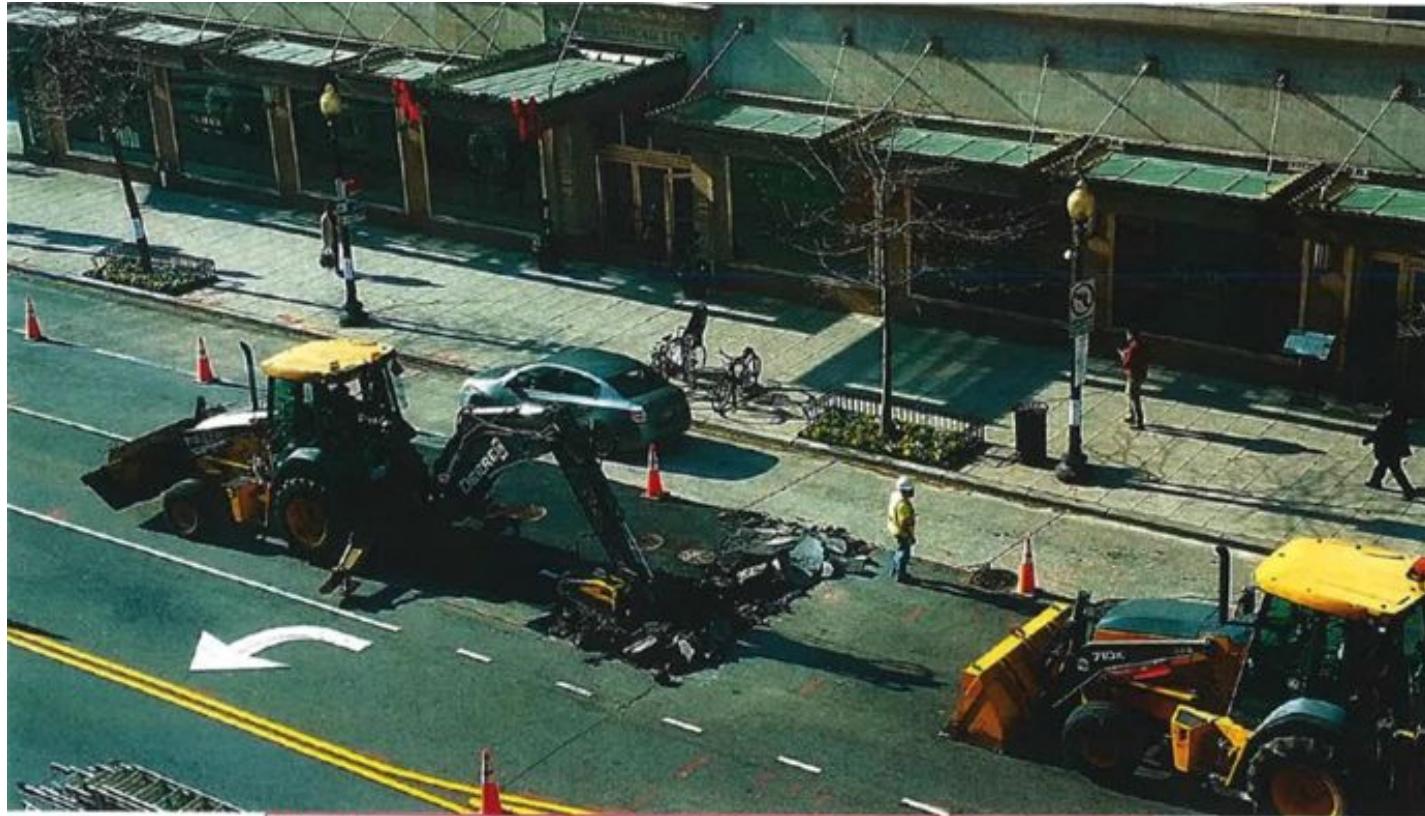
Final Restoration: Temporary Paving Removal



12-11-15
Fort Myer is removing the temporary asphalt debris from the South excavation in preparation for the concrete base pour (pcc). Crew will compact the base soil and place the required wire mesh and dowels prior to the concrete pour.



Final Restoration: Removing Temporary Asphalt



12-11-15

Temporary asphalt debris is being broken away by the hoeram from the South excavation area. Once completed the Backhoe will load the debris onto the dump truck for site removal. Crew will then prepare the excavation for concrete base pour.



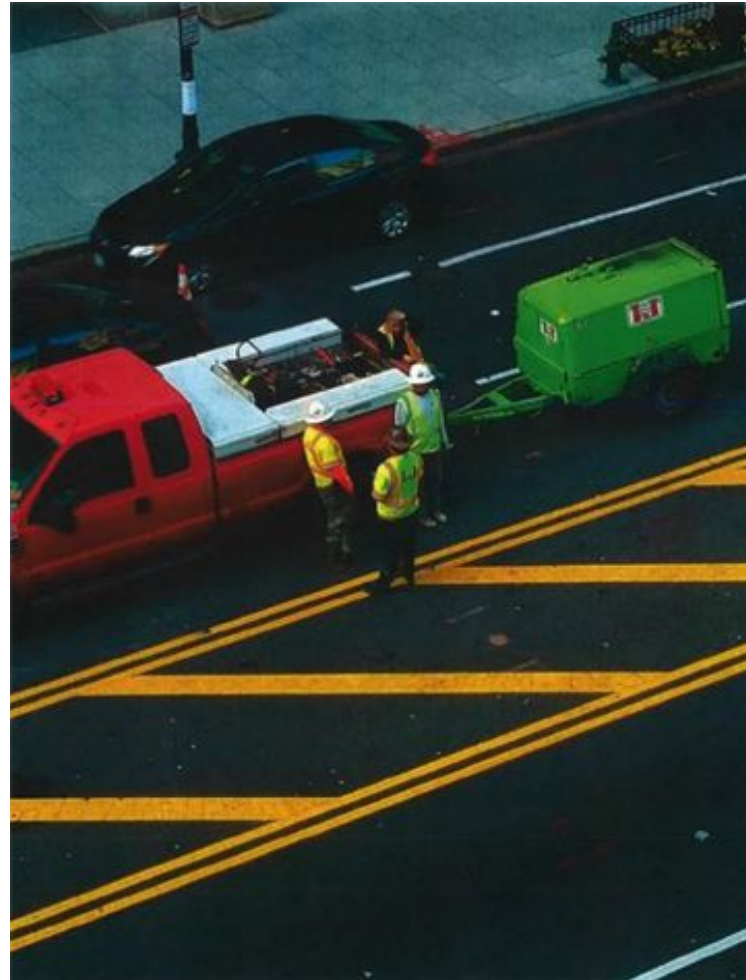
Final Restoration: Concrete Base



12-11-15
Fort Myers has poured the concrete base around the north excavation and have poured the majority of the South excavation. 2nd concrete truck is needed to pour the remaining concrete pad on the South excavation. First truck arrived on-site at 2:30pm and the last truck arrived at 4:22pm.



Final Restoration: Waiting on Concrete





Final Restoration: Second Concrete Delivery



12-11-15
Second concrete truck has arrived at 4:22pm to complete the remaining concrete pour on the South excavation.



Final Restoration: Complete Base Poured



12-11-15
Both the North and South Excavation base pours have been completed. Crews are waiting for the steel roadway plates to cover both excavation. The concrete will be ready for traffic by Monday morning.



Final Restoration: Cured Concrete



12-14-15
PCC base has cured for traffic use and edges have been tapered with asphalt for a smooth transition for vehicles.



Challenges Encountered

- Restricted work hours
- Congested traffic corridor
- Hand excavation required due to existing significant utilities in close proximity to the proposed installation
 - 27” Western Union Ductbank
 - 18” Sewer
- Differing Site Condition encountered – insufficient space for a standard brick manhole



Contractor Performing Hand Excavation (Existing Utilities)



Large Valve Replacements & PRV's Contract 11R - Contract #140070
08/13/2015 - Job Progress Photo # 114
Location 11-6 14th & G St
Excavation for Tie-In



Project Status

- Valve installation complete including permanent restoration
- Final walk through scheduled to be completed by January 31, 2016



17



Potential Actions for Process Improvements

- Consider requiring the Contractor to perform final restoration per location (sensitive); likely to increase cost
- Institute monthly coordination meetings with DDOT
 - Eliminate temporary restoration
 - Increased flexibility in expanding Contractor work hours, especially in Sensitive Locations
- Emphasize restoration as a critical factor in performance evaluation
- Invite Advisory Neighborhood Commissions (ANC's) to participate in final walk-through's



District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Questions?



District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Small Diameter Water Main (SDWM) Locations:
P Street between 26th to 28th St NW
and
R Street between Wisconsin and 30th St NW

Presented to:
Water Quality and Sewer Services Committee Meeting
Chairperson: Rachna Butani
January 21, 2016



Contract Background

- General scope of work:
 - Installation of small diameter water mains, fire hydrants and valves
 - Multiple locations in the project scope
- Contractor: Judlau, Inc.
 - New York based, reputable utility contractor with experience working in Manhattan
 - Performance reference was good
 - Had not worked in DC before
- Two contracts were awarded to this contractor within 4 months
 - SDWM 9A, which includes the P Street location
 - SDWM 9B, which includes the R Street location



Contract Background

- SDWM 9A
 - NTP: 11/12/13
 - 90 % complete
 - Original (Planned) completion date: 5/16/15
 - 168-day time extension approved to date; to 10/31/15
 - Assessing Liquidated Damages

- SDWM 9B
 - NTP: 3/31/14
 - 85% complete
 - Original (Planned) completion date: 10/2/15
 - 68-day time extension approved to date: to 12/8/15



SDWM Contract 9A Performance

- Performance issues observed
 - Slow to staff up project
 - Project staffed with local, inexperienced personnel instead of NY-based, experienced personnel
 - Excessive staff turnover
 - Permit acquisition and renewal delays
 - Excavation subcontractor over-committed, causing further delays
- Meetings held with Contractor July 2014 to discuss lack of progress on SDWM 9A and performance issues observed; assurances provided by Contractor yet problems continued
- Contractor performance slightly better on SDWM 9B; however, Contractor is late on both jobs



Current Project Status

- SDWM 9A: P Street NW Location
 - Restoration completed on all streets on 12/15/15
 - Line striping scheduled for completion by 1/20/16
- SDWM 9B: 30th and R Street NW Location
 - Tie-in of newly installed water mains:
31st & R St tie-in completed on 12/16/15, 29th & R St tie-in scheduled for 1/14/16
 - Water service connections in progress
 - All pipe work scheduled for completion by 1/31/16
 - Final pavement restoration estimated for completion by 4/15/16 (due to weather constraints)



Lessons Learned and Potential Solutions

- Lessons Learned:
 - New contractors unfamiliar with DC Water specifications resulted in slow progress
 - Subcontractor workload and experience critical to performance
- Potential Solutions:
 - Educate new Contractors on key activities unique to DC Water
 - Conduct workshops on efficient water main installation process through final restoration
 - Enable cash flow release along the way, per location, to reduce time impact to the neighborhood



Actions to Avoid Contracting with Poor Performers

- Require relevant (linear construction) experience for key positions on the project team; delineate requirement in bid documents as a condition of contract award
- Assess Liquidated Damages
- Include contractor performance evaluation as a critical factor for future contract awards
 - Performance record can be a determining factor in recommendation not to award
- Re-kindle outreach efforts to keep customer communities informed

Option:

Consider contract award based on Best-Value instead of Low-Bid

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

GOODS AND SERVICES CONTRACT MODIFICATION:

**Positive Displacement Meters
(Non-Joint Use)**

Approval to extend the contract for positive displacement meters for an additional five (5) months in the amount of \$1,000,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Mueller Systems, LLC 10210 Statesville Boulevard P.O. Box 128 Cleveland, NC 27013	SUBS:	PARTICIPATION:
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DESCRIPTION AND PURPOSE

Original Contract Value:	\$500,000.00
Original Contract Dates:	04-15-2014—04-14-2015
No. of Option Years in Contract:	1
Modification 1-2 Value:	\$490,000.00
Modification 1-2 Dates:	10-31-2014—04-14-2015
Option Year 1 Value:	\$1,000,000.00
Option Year 1 Dates:	04-15-2015—04-14-2016
Modification 3 Value:	\$1,000,000.00
Modification 3 Dates:	04-15-2016—09-30-2016

Purpose of the Contract:

To provide Positive Displacement Meters in support of the District of Columbia Water and Sewer Authority's (DC Water) Department of Customer Care Operations, Meter Division.

Contract Scope:

To provide meters for installation at residential and small commercial servicing sites to ensure accurate measurement of water consumption by DC Water's customers.

Spending Previous Year:

Cumulative Contract Value:	04-15-2014 to 04-14-2016—\$1,990,000.00
Cumulative Contract Spending:	04-15-2014 to 12-31-2015—\$1,579,183.11

Contractor's Past Performance:

The contractor's past performance has been satisfactory

No LSBE participation

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	Award Based On:	Single Bidder
Commodity:	Goods	Contract Number:	14-PR-CCO-06
Contractor Market:	Open market with LBE and LSBE		

BUDGET INFORMATION

Funding:	Capital	Department:	Department of Customer Care and Operations
Service Area:	DC Water servicing areas	Department Head:	Lauren Preston

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 1,000,000
Washington Suburban Sanitary Commission	0.00%	0
Fairfax County	0.00%	0
Loudoun County & Potomac Interceptor	0.00%	0
Others	0.00%	0
TOTAL ESTIMATED DOLLAR AMOUNT		\$ 1,000,000

 11/13/16
 Gail Alexander-Reeves Date
 Director of Budget

 11/13/16
 Dan Bae Date
 Director of Procurement

 11/13/16
 Charles Kiely Date
 Assistant General Manager
 Consumer Care and Operations

 George S. Hawkins Date
 General Manager

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

CONSTRUCTION CONTRACT CHANGE ORDER:

**Water Main Infrastructure Repair and Replacement Contract for FY14 - FY16
(Non-Joint Use)**

Approval to execute Change Order No. 01 not to exceed \$5,000,000.00. The modification will exceed the General Manager's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Fort Myer Construction Corporation 2237 33 rd Street, NE Washington, DC 20018 (LBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	\$ 15,778,427.50
Value of this Change Order:	\$ 5,000,000.00 (Not to Exceed)
Cumulative CO Value, including this CO:	\$ 5,000,000.00
Current Contract Value, including this CO:	\$ 20,778,427.50
Contract Time:	1095 Days (3 Years, 0 Months)
Time Extension, this CO:	0 Days
Total CO Contract Time Extension:	0 Days
Contract Start Date (NTP):	10-01-2013
Contract Completion Date:	09-30-2016
Cumulative CO % of Original Contract:	31.7%
Contract Completion %:	86%

Purpose of the Contract:

To perform emergency and non-emergency water main repair and replacement work

Contract Scope:

- Emergency repair of water distribution assets.
- Scheduled repair/replacement of water mains, valves, service lines and hydrants
- Special projects such as cleaning and lining of water mains

Previous Changer Order Scope:

- N/A

Current Change Order Scope:

- This contract was used to undertake some urgent special projects that required immediate action including large valve installations, lead service line replacements on 1300 block of Wallach Pl, NW, and installation of bypass piping on 2500 block of Highwood Pl, NE. Additionally a large project involving cleaning and lining of water mains at the American University Park was completed. These projects were larger and more complex than the average, routine emergency repairs and as a result have greatly impacted the contract threshold. In just two years from the start of a three-year-term contract, 86% of the contract limit has already been exhausted. The purpose of this change order is to increase the contract cost value to offset the costs associated with these special projects

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance

PROCUREMENT INFORMATION


Contract Type:	Unit Price	Award Based On:	Lowest responsive, responsible bidder
Commodity:	Construction	Contract Number:	130040
Contractor Market:	Open Market with Preference		

BUDGET INFORMATION

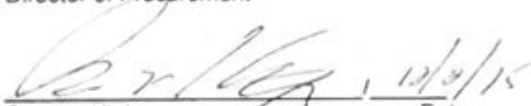
Funding:	Capital	Department:	Water Services
Service Area:	Water	Department Head:	Jason Hughes
Project:	DY		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 5,000,000.00
Federal Funds	0.00%	\$ 0.00
Washington Suburban Sanitary Commission	0.00%	\$ 0.00
Fairfax County	0.00%	\$ 0.00
Loudoun County & Potomac Interceptor	0.00%	\$ 0.00
Total Estimated Dollar Amount	100.00%	\$ 5,000,000.00


 Gail Alexander-Reeves Date
 Director of Budget


 Dan Bae 12/9/15 Date
 Director of Procurement


 Charles Kiely Date
 Assistant General Manager,
 Customer Care & Operations

_____/_____
 George S. Hawkins Date
 General Manager