National Park Service
Cultural Landscapes Inventory

2018

Georgetown Area
Chesapeake and Ohio Canal National Historical Park
August 2018

Table of Contents

Inventory Unit Summary & Site Plan

Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Purpose and Goals of the CLI

The Cultural Landscapes Inventory (CLI) is an evaluated inventory of all significant landscapes in units of the national park system in which the National Park Service has, or plans to acquire any enforceable legal interest. Landscapes documented through the CLI are those that individually meet criteria set forth in the National Register of Historic Places such as historic sites, historic designed landscapes, and historic vernacular landscapes or those that are contributing elements of properties that meet the criteria. In addition, landscapes that are managed as cultural resources because of law, policy, or decisions reached through the park planning process even though they do not meet the National Register criteria, are also included in the CLI.

The CLI serves three major purposes. First, it provides the means to describe cultural landscapes on an individual or collective basis at the park, regional, or service-wide level. Secondly, it provides a platform to share information about cultural landscapes across programmatic areas and concerns and to integrate related data about these resources into park management. Thirdly, it provides an analytical tool to judge accomplishment and accountability.

The legislative, regulatory, and policy direction for conducting the CLI include:

National Historic Preservation Act of 1966 (16 USC 470h-2(a)(1)). Each Federal agency shall establish…a preservation program for the identification, evaluation, and nomination to the National Register of Historic Places…of historic properties…

Executive Order 13287: Preserve America, 2003. Sec. 3(a)…Each agency with real property management responsibilities shall prepare an assessment of the current status of its inventory of historic properties required by section 110(a)(2) of the NHPA…No later than September 30, 2004, each covered agency shall complete a report of the assessment and make it available to the Chairman of the Advisory Council on Historic Preservation and the Secretary of the Interior… (c) Each agency with real property management responsibilities shall, by September 30, 2005, and every third year thereafter, prepare a report on its progress in identifying… historic properties in its ownership and make the report available to the Council and the Secretary…

The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act, 1998. Standard 2: An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110 (a)(2)(A)

Management Policies 2006. 5.1.3.1 Inventories: The Park Service will (1) maintain and expand the following inventories…about cultural resources in units of the national park system…Cultural Landscape Inventory of historic designed landscapes, historic vernacular landscapes,… and historic sites…

Cultural Resource Management Guideline, 1997, Release No. 5, page 22 issued pursuant to Director's Order #28. As cultural resources are identified and evaluated, they should also be listed in the appropriate Service-wide inventories of cultural resources.

Responding to the Call to Action:

The year 2016 marks the 100th anniversary of the National Park Service. A five-year action plan entitled, "*A Call to Action: Preparing for a Second Century of Stewardship and Engagement*" charts a path toward that second century vision by asking Service employees and partners to commit to concrete actions that advance the agency's mission. The heart of the plan includes four broad themes supported by specific goals and measurable actions. These themes are: Connecting People to Parks, Advancing the NPS Education Mission, Preserving America's Special Places, and Enhancing Professional and Organizational Excellence. The Cultural Landscape Inventory relates to three of these themes:

Connect People to Parks. Help communities protect what is special to them, highlight their history, and retain or rebuild their economic and environmental sustainability.

Advance the Education Mission. Strengthen the National Park Service's role as an educational force based on core American values, historical and scientific scholarship, and unbiased translation of the complexities of the American experience.

Preserve America's Special Places. Be a leader in extending the benefits of conservation across physical, social, political, and international boundaries in partnership with others.

The national CLI effort directly relates to #3, Preserve America's Special Places, and specifically to Action #28, "Park Pulse." Each CLI documents the existing condition of park resources and identifies impacts, threats, and measures to improve condition. This information can be used to improve park priority setting and communicate complex park condition information to the public.

Responding to the Cultural Resources Challenge:

The Cultural Resources Challenge (CRC) is a NPS strategic plan that identifies our most critical priorities. The primary objective is to "*Achieve a standard of excellence for the stewardship of the resources that form the historical and cultural foundations of the nation, commit at all levels to a common set of goals, and articulate a common vision for the next century.*" The CLI contributes to the fulfillment of all five goals of the CRC:

1) Provide leadership support, and advocacy for the stewardship, protection, interpretation, and management of the nation's heritage through scholarly research, science and effective management;

2) Recommit to the spirit and letter of the landmark legislation underpinning the NPS

3) Connect all Americans to their heritage resources in a manner that resonates with their lives, legacies, and dreams, and tells the stories that make up America's diverse national identity;
4) Integrate the values of heritage stewardship into major initiatives and issues such as renewable energy, climate change, community assistance and revitalization, and sustainability, while cultivating excellence in science and technical preservation as a foundation for resource protection, management, and rehabilitation; and
5) Attract, support, and retain a highly skilled and diverse workforce, and support the development of leadership and expertise within the National ParkService.

Scope of the CLI

CLI data is gathered from existing secondary sources found in park libraries, archives and at NPS regional offices and centers, as well as through on-site reconnaissance. The baseline information describes the historical development and significance of the landscape, placing it in the context of the landscape's overall significance. Documentation and analysis of the existing landscape identifies character-defining characteristics and features, and allows for an evaluation of the landscape's overall integrity and an assessment of the landscape's overall condition. The CLI also provides an illustrative site plan that indicates major features within the inventory unit and generates spatial data for Geographic Information Systems (GIS). The CLI also identifies stabilization needs to prevent further deterioration of the landscape and provides data for the Facility Management Software System

Inventory Unit Description:

The Georgetown Area Cultural Landscape is located in northwest Washington, D.C. bounded by M Street to the north and the Potomac River to the south, and consists of the canal prism, lift locks, towpath, crossover bridges, and other contributing and non-contributing features associated with the Chesapeake and Ohio Canal. The study boundary extends from Mile Marker 0.0 in Georgetown west to the Washington Canoe Club and is a component landscape of the larger Chesapeake and Ohio Canal National Historical Park (CHOH). This unit of the National Park Service was established by an Act of Congress on January 8, 1971. The study boundary includes all lands managed by CHOH. The study area for this Cultural Landscape Inventory (CLI) is located within the Georgetown Historic District, a National Historical Landmark, which was established by the Old Georgetown Act in 1956.

Historical Overview
The Georgetown section of the Chesapeake and Ohio Canal was constructed during a period lasting from 1828 to 1831. With the expressed goals of facilitating transportation, trade, and industry in the historic Port of Georgetown, the character of the cultural landscape was industrial by nature. The dual purpose of transportation and industry is evident in the construction of the canal prism (transportation), which was modified to provide Georgetown's mills with surplus canal water (industry). Mills and warehouses lined the canal prism. The constructed waterway is a feat of engineering ingenuity as a system of lift locks raise vessels 35 feet from the level of the Potomac to the top of the Georgetown level. To facilitate in travel and the movement of cargo to and from vessels, boat basins were constructed adjacent to the locks to allow the passing of vessels upriver and downstream. Furthermore, the location of the towpath, largely on the berm side of the canal, rather than the river side of canal

allowed for goods to easily be unloaded and shipped from the port of Georgetown. In 1831, the canal was open to navigation from Georgetown to Seneca. The canal was not only used to transport agricultural products, commercial goods, and coal, but it was also frequented by excursions boats and water leases were granted to Georgetown's mills.

By 1876, the canal was in decline due to the unreliability of the canal as a transportation route, competition with the Baltimore and Ohio Railroad (B&O Railroad), and costly damages from severe flooding. Cargo continued to be moved along the course of the water feature. However, excursions boats and tourism continued to operate on the canal and water leases were still granted and collected. According to the work of canal historians Unrau and Shaffer, as a majority stockholder, the Washington County, Maryland Courts granted the B&O Railroad receivership of the C&O Canal on March 3, 1890. The implication of the court proceedings allowed the railroad to absorb the canal and own the waterway outright, with the railroad assuming responsibility for the maintenance of the canal. However, recent research has shown that the matter was a much more complex restructuring than previously understood. Surviving legal evidence suggests that the canal company entered into a trusteeship with the B&O Railroad. It is not fully understood as to the difference between the two forms of oversight. At the time of United States purchase of the waterway, a memorandum addressed to the United States Assistant Attorney General specifically declares that the B&O Railroad did not own the waterway, but rather exerted a "dominate influence" over the course of the company (Blair 1936: 4). Further evidence of a trusteeship is illustrated in the manner in which the title is conveyed in the original deed, with trustees granting ownership to the United States Federal Government. Adding further complication to the situation, the term 'receiver' is also used in the document.

The discussion of these complex legal matters are beyond the scope of CLI. Proper understanding will warrant a more thorough investigation into the legal history of the canal and will require additional research and the completion of a special history report. For research inquiries regarding the matter, the reader is encouraged to review the Maryland State Archives Washington County Equity Files, the Maryland Chancery Files, the 1908 Inland Waterways Report presented to the 60th Congress, and the 1922 to 1936 Reports to Trustees filed with the Circuit Court for Washington County with the understanding that additional primary and secondary source materials likely exist.

In regards to the review of the physical development presented in this CLI, the event is significant as the decisions to make improvements and modifications became the responsibility of a second party, with the canal lacking the self-autonomy it once exerted over the course of the waterway. Whatever the terms of the oversight between the canal, the railroad, or a series of trustees, minimal resources, specifically financial, material, or labor, were invested in the upkeep of the canal to ensure operational order. This effectively ushered in a period of maintenance, rather than improvements or modification to the resources.

By 1938, the National Park Service acquired the study area and rehabilitated this portion of the canal as part of a New Deal public works projects. However, the spatial organization of the Georgetown section was further altered as large-scale developments were constructed adjacent to the canal beginning in the early 1970s. Furthermore, during this period, easements were granted for the use of canal-side plazas and maintenance of pedestrian footbridges and Georgetown's bridges fell under the jurisdiction of the D.C. Department of Transportation per 1930s era management agreements.

Significance Summary

In 1979 a National Register Nomination was submitted for the entire CHOH and signed by the Keeper, while a Supplementary Listing Record was completed in 2014 for a boundary increase, which added additional contributing and non-contributing features. This listing was approved by the Keeper in 2015 and in the update features within the Georgetown Area Cultural Landscape Inventory boundaries were listed as contributing resources, including the canal towpath, canal prism, Lock Nos. 1 to 4, Boat Basins No. 1 to 3, and the Georgetown bridges. However, the nomination contains inadequate documentation within the cultural landscape of the Georgetown section of the CHOH. In the study of the Georgetown Area Cultural Landscape, it was found that the cultural landscape of the Georgetown section is significant under Criterion A for transportation, commerce, tourism, Civil War activities, industrial development, and urban development, as well as Criterion C for construction and engineering water features.

This CLI finds that the Georgetown Area Cultural Landscape has a period of significance from 1828 to 1960 and consists of elements pertaining to different eras and distinct landscape activities, which contribute to the Georgetown Area's period of significance. This landscape was designed and the canal prism, lift locks, towpath, and intake features reflect not only the period of significance of construction (1828-1831), but also the period of canal operations (1828-1924) and water intake use (1839-1960). The period of significance also includes the operation of excursion boats (1831 to 1942), as well as the Civil War (1861 to 1865) when the Potomac Aqueduct, hereafter referenced as the Alexandria Aqueduct in keeping with the naming of the feature per the U.S. Board on Geographic Names, was drained and used as a crossover bridge by Federal forces. In association with these periods of significance, there are numerous character defining features including the commemorative obelisk, Wilkin's Rogers Intake Ruins, and the Thomas Jefferson and 31st Street stone abutments. Furthermore, in the study of this cultural landscape, adjacent developments prove to be important, as they are associated with the period of significance. These features are considered integral to the spatial organization of the canal in Georgetown and are included in the discussion of the development and use of the area of study.

Analysis and Evaluation Summary and Condition

This CLI finds that the Georgetown Area Cultural Landscape retains integrity of location, association, design, materials, and workmanship for the identified periods of significance. However, the setting and feeling of the Georgetown section is greatly diminished due to the construction of large-scale multi-use buildings in the area adjacent to the canal. The retention of the constructed water features, including the canal prism, locks, and boat basins, as well as the circulation features of the towpath and bridges, help to evoke the aspects of setting, feeling, and location within the cultural landscape. These features also serve as testaments to design, workmanship, and materials that were used in the construction of these features. The continued rehabilitation of the Georgetown section of the canal, however, has affected the integrity of the landscape as various bridges have been replaced and walls have been rebuilt.

Site Plan

Site Plan. A larger, more legible map depicting the study area has been added to an appendix at the end of the document. Contributing resources are rendered in black and non-contributing resources are rendered in red (NCR CLP 2017).

Property Level and CLI Numbers

Inventory Unit Name:	Georgetown Area
Property Level:	Component Landscape
CLI Identification Number:	975990
Parent Landscape:	600268

Park Information

Park Name and Alpha Code:	Chesapeake and Ohio Canal National Historical Park -CHOH
Park Organization Code:	3100
Park Administrative Unit:	Chesapeake and Ohio Canal National Historical Park

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

This Cultural Landscape Inventory was researched and written by Elise L. Elder, NCPE Intern and Daniel Weldon, CLI Coordinator, National Capital Region, National Park Service. Primary and secondary source material from within the National Park Service and local repositories was utilized to complete the inventory and is listed in the bibliography. Research and editorial assistance was provided by: Maureen Joseph, Regional Historical Landscape Architect, National Capital Parks Region, National Park Service; Sam Tamburro, Chief of Resources, National Capital Region, National Park Service; Kathryn Smith, National Historic Landmarks & National Register Coordination, National Capital Region, National Park Service; Justin Ebersole, Archeologist, Chesapeake and Ohio Canal Historical Park, National Capital Region, National Park Service. Sophia Kelly, Cultural Resources Program Manager, Chesapeake and Ohio Canal Historical Park, National Capital Region, National Park Service; Jeri De Young, Chief of Resources, Chesapeake and Ohio Canal Historical Park, National Capital Region, National Park Service; Brendan Wilson, Georgetown District Supervisory Park Ranger, Chesapeake and Ohio Canal Historical Park, National Capital Region, National Park Service; John Noel, Deputy Superintendent, Chesapeake and Ohio Canal Historical Park, National Capital Region, National Park Service; Kevin Brandt, Superintendent, Chesapeake and Ohio Canal Historical Park, National Capital Region, National Park Service.

Concurrence Status:

Park Superintendent Concurrence: Yes

Park Superintendent Date of Concurrence: 08/20/2018

National Register Concurrence: Eligible -- SHPO Consensus Determination

Date of Concurrence Determination: 08/20/2018

Concurrence Graphic Information:

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

August 20, 2018

Memorandum:

To: Regional Landscape Architect, National Capital Region

From: Superintendent, Chesapeake and Ohio Canal National Historical Park

Subject: Statement of Concurrence, Georgetown Area Cultural Landscape Inventory

I, Kevin Brandt, Superintendent of Chesapeake and Ohio Canal National Historical Park, concur with the findings of the Georgetown Area Cultural Landscape Inventory for, including the following specific components:

MANAGEMENT CATEGORY: Must be Preserved and Maintained

CONDITION ASSESSMENT: Fair

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The Cultural Landscapes Inventory for the Georgetown Area is hereby approved and accepted.

Kevin D. Brandt — 8/20/18

Superintendent, Chesapeake and Ohio Canal National Historical Park — Date

Superintendent Concurrence with the original findings of the CLI. Concurrence was provided on August 20, 2018.

Statement of Concurrence
Georgetown Area Cultural Landscape Inventory

The preparation of this CLI for the Georgetown Area is part of the National Park Service's efforts to update cultural resource inventories, as required by Section 110 (a) (1) of the National Historic Preservation Act.

- The D.C. Historic Preservation Office concurs with the findings of the Georgetown Area Cultural Landscape Inventory. The DC HPO further concurs that the cultural landscape resources of the Georgetown Area CLI, as enumerated, retain integrity to the site's period of significance; 1828-1924; 1837-1960; 1861-1865 and contribute to its historic character.

David Maloney
District of Columbia Historic Preservation Officer

8/20/2018
Date

Please email signed PDF copy to Daniel Weldon, NCR CLI Coordinator at daniel_weldon@nps.gov

DC HPO Concurrence of the original findings of the CLI. Signed August 20, 2018

Geographic Information & Location Map

Inventory Unit Boundary Description:

The Georgetown Area cultural landscape, as defined by this Cultural Landscape Inventory, is located at the joining of the Rock Creek and the prism of the Chesapeake and Ohio canal and continues west approximately one mile. The overall width of the cultural landscape varies, but includes the canal prism, towpath, parklets, and plazas under the jurisdiction of the Chesapeake and Ohio National Historical Park (CHOH).

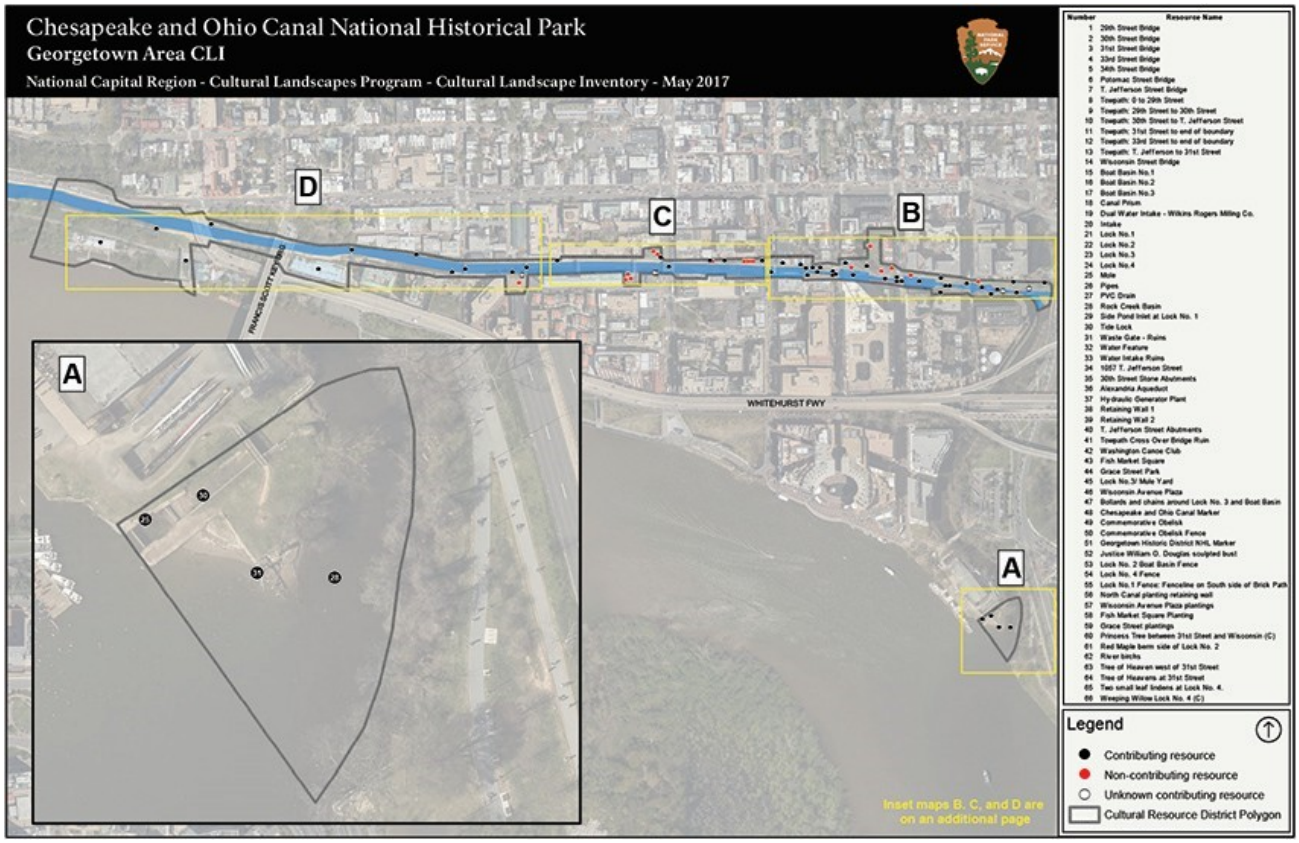
State and County:

State: DC

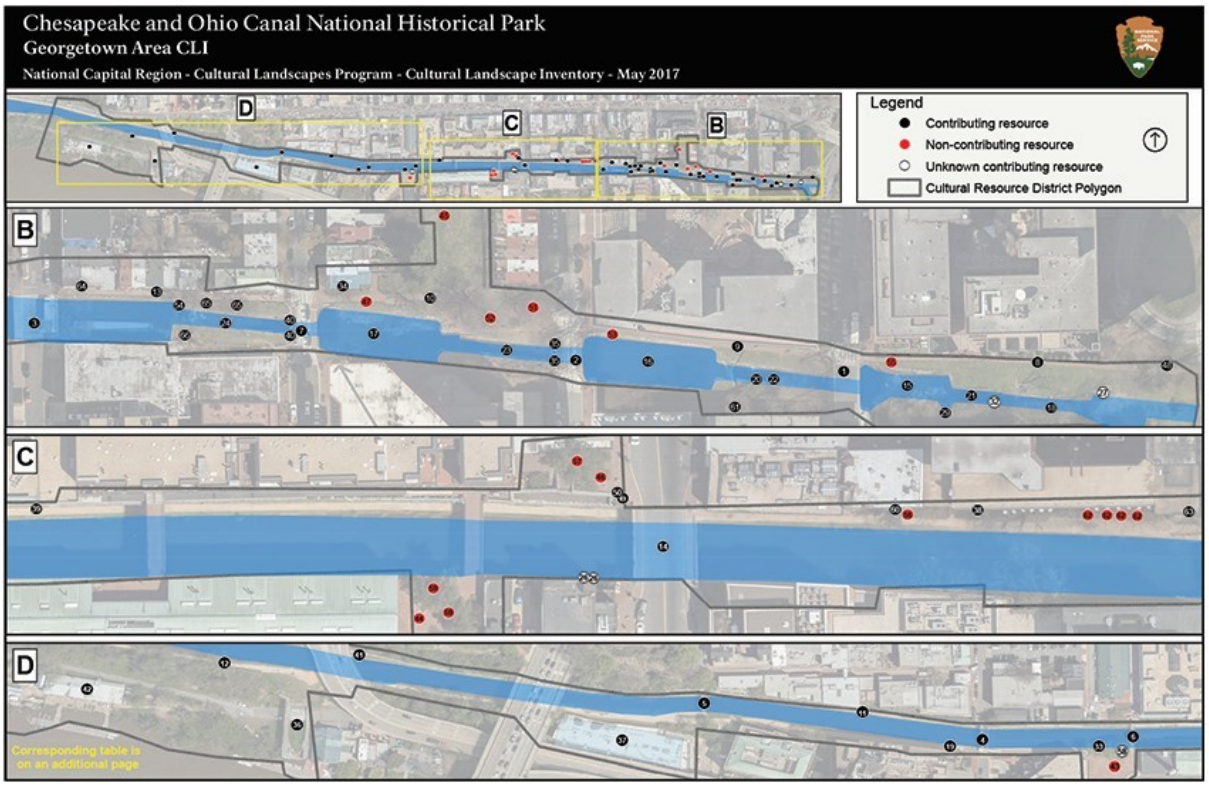
County: District of Columbia

Size (Acres): 13.60

Location Map:



Location Map A. A larger, more legible version of this map is included in an appendix at the end of the document. Cultural resources identified in Map A are contained within a reservation managed by Rock Creek Park (ROCR) (NCR CLP 2017).



Location Map B. A larger more legible map has been included at the end of the document in an appendix. The boundaries drawn are based on current National Capital Region land records. A land survey for the cultural landscape is ongoing (2017) and will like

Management Unit: CHOH-Georgetown Level

Tract Numbers: Reservation 404 including the following parcels:
101-100
102-102
102-104,
102-105,
102-106,
102-108,
102-111
102-112,

Management Information

General Management Information

Management Category: Must be Preserved and Maintained

Management Category Date: 08/20/2018

Management Category Explanatory Narrative:

The management category is 'Must be Preserved and Maintained' as the Chesapeake and Ohio Canal is listed on the National Register of Historic Places as Nationally Significant. The selection of "Must be Preserve and Maintained" further reflects the inclusion of the cultural landscape within the boundaries of a National Historical Landmark District and management implications of National Historical Units of the National Park Service. As a contributing resource of an NHL, whenever a Federal undertaking occurs, according to the National Park Service Management Policy (2006):

The National Historic Preservation Act (NHPA) provides heightened protection for designated NHLs through Section 110(f) and the NHPA's implementing regulations (36 CFR 800.10). Specifically, the NHPA requires that Federal agencies shall, to the maximum extent possible, undertake planning and actions necessary to minimize harm to any NHL that may be directly and adversely affected by an undertaking. The NPS Management Policies (5.1.3.2.2 and 5.2) state that all cultural resources within historical and cultural units that are directly connected to the legislative or executive mandate are nationally significant and NPS must apply the higher level of care set for in 36 CFR 800.10. As such, the special considerations dictated for designated NHLs also apply to mandate-related cultural resources within historical and cultural units.

However, it should also be noted that the Chesapeake and Ohio Canal Historic Park is a special designation within the National Park Service and as such based on the National Park Service Management Policy (2006):

5.2 --Superintendents will ensure full consideration of the park's cultural resources and values in all proposals for operations, development, and natural resource programs, including the management of wilderness areas. When proposed undertakings may adversely affect national historic sites, national battlefields, and other predominantly cultural units of the national park system that were established in recognition of their national historical significance, superintendents will provide opportunities for the same level of review and consideration by the Advisory Council on Historic Preservation and the Secretary of the Interior that the Advisory Council's regulations require for undertakings that may adversely affect national historic landmarks (36 CFR 800.10).
The date of the management category is the date the CLI was approved by the CHOH Superintendent.

Maintenance Location Code: 3100

Agreements, Legal Interest, and Access

Management Agreement:

Type of Agreement: Other Agreement

Other Agreement: Friends Group Agreement

Management Agreement Explanatory Narrative:

Georgetown Heritage- The National Park Service, including the Chesapeake and Ohio Canal National Historical Park entered into a Friends Group Agreement with Georgetown Heritage, an incorporated non-profit, established to support the mission of the National Park Service and to secure charitable donations, philanthropic projects, and volunteer efforts. The agreement is attached to CLI report entry in the database for viewing.

NPS Legal Interest:

Type of Interest: Fee Simple

Explanatory Narrative:

Title for the Chesapeake and Ohio Canal was acquired by the Federal Government in 1938. The title served as collateral on a debt owed and owned by the Reconstruction Finance Corporation from the Baltimore and Ohio Railroad. The transfer included the canal, the right of ways and the control of the water rights. Ownership was transferred to the Department of the Interior and the National Park Service.

However, the history of the Chesapeake and Ohio Canal is beset with the granting of water rights and encroachment upon right of ways, as well as questions regarding ownership of air rights. The understanding of ownership of certain parcels is at best obscure due to various uncertainties.

An on-going land survey study, which was still in draft at the time of the completion of the original version of this document, is attempting to determine proper land title of certain parcels of land and the terms of various easements, as well as the implications for the park. Future versions of the Georgetown Area CLI will be changed to reflect our understanding after the study is complete.

Public Access:

Type of Access: Unrestricted

Explanatory Narrative:

Reviewing information on the park website, The Chesapeake and Ohio Canal towpath is open all year during daylight hours year round, formally closing at dusk. However, as this portion of the park is integrated into the urban core of Georgetown and the circulation system of the city, without physical barriers, the Georgetown Area cultural landscape is used as a circulation corridor after dusk.

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Description:

Mile 0. - Mile 0 is located at the confluence of the Potomac River and Rock Creek. Contained in this area is the Rock Creek Basin, the Waste Gate, the Tidelock, and the Mole. These features were associated with the Chesapeake and Ohio Canal in Georgetown during the period of cargo transportation operations and share a common narrative and development pattern as the cultural landscape, despite being physically disconnected.
These cultural resources are maintained and managed by the National Park Service. However, at present, these landscape features are maintained under the jurisdiction of Rock Creek Park (ROCR). As such, it is recommended that these features be evaluated in a different CLI, which will review the development associated with the mouth of Rock Creek and canal operations currently managed by Rock Creek Park.

Washington Canoe Club- According to guidance provided from the National Park Service Washington Support Office (WASO) Cultural Landscape Program regarding the evaluation of landscape features, only cultural resources that are owned in fee simple may be included for evaluation within a CLI. As such, the Washington Canoe Club will not be included in the discussion of contributing features, nor in the narrative regarding the development of the Georgetown Area cultural landscape. During the completion of the original CLI, the National Park Service was in negotiations to determine ownership of the structure, as the land belongs to the National Park Service, but not the structure proper. Should fee ownership of the structure be granted to the National Park Service, it is recommended that the structure be evaluated and incorporated into the narrative and analysis of this CLI or a new CLI be written.

The Potomac River, a water source for the Chesapeake Bay, is located south of the Chesapeake and Ohio Canal in Georgetown and falls outside of the boundaries of the park. The proximity of the river to the canal facilitated the initial construction and industry associated with the canal. The desire to traverse the river as a trade route into the Ohio Valley led to the development of the canal, or a more “reliably navigable route along the adjacent shoreline.” However, the flooding of the Potomac River greatly impacted canal use and eventually led to the period of oversight, which started in 1889 and concluded with the purchase of the canal by the Federal Government in 1938. While intrinsically linked to the discussion of the development of the canal, the Potomac River is not owned and managed by the National Park Service, and therefore, is not identified as a contributing resource. This method exclusion of identification follows the guidance provided by WASO.

The urban context of Georgetown is also directly associated with the canal and affects the setting and feeling of the cultural landscape. The study area is completely contained within the Georgetown neighborhood of Washington D.C. The study area is bound by Rock Creek to east and is bisected by the north south oriented street grid of 29th, 30th, Thomas Jefferson Street, 31st Street, Wisconsin Avenue, 33rd Street, 34th Street, and remnants of 37th Street at points furthest west. The cultural landscape is bound by the east west oriented Grace Street to the south and M Street to the north. This portion of Georgetown is characterized by dense development and the rehabilitation of warehouses and factories for mixed use development, which started in the 1970s and continues to the present day. Unlike other Cultural Landscape Inventories, this relationship between the canal and the urban fabric is reviewed at detail within the Physical History Section.

National Register Information

Existing National Register Status

National Register Landscape Documentation:

Entered Inadequately Documented

National Register Explanatory Narrative:

Original Listing 10/15/1966 Supplemental Listing 02/02/2015
The entirety of the Chesapeake and Ohio Canal was listed on the National Register on October 15th, 1966. An Additional Documentation Addendum was signed by the Keeper on February 2nd, 2015.

Existing NRIS Information:

Name in National Register:	Chesapeake and Ohio Canal National Historical Park
NRIS Number:	66000036
Primary Certification Date:	10/15/1966
Other Certifications and Date:	Additional Documentation - 8/19/1979

National Register Eligibility

National Register Concurrence:	Eligible -- SHPO Consensus Determination
Contributing/Individual:	Individual
National Register Classification:	District
Significance Level:	National
Significance Criteria:	A - Associated with events significant to broad patterns of our history
Significance Criteria:	C - Embodies distinctive construction, work of master, or high artistic values

Period of Significance:

Time Period:	CE 1828 - 1924
Historic Context Theme:	Peopling Places
Subtheme:	Westward Expansion of the Colonies and the United States, 1763-1898
Facet:	Western Trails And Travelers
Other Facet:	Expansion of Commerce and Industry
Time Period:	CE 1828 - 1924
Historic Context Theme:	Developing the American Economy
Subtheme:	The Mining Frontier
Facet:	Mining (Coal, Salt Peter, Oil, etc)
Time Period:	CE 1828 - 1924
Historic Context Theme:	Developing the American Economy
Subtheme:	Shipping and Transportation by Water
Facet:	Canals
Time Period:	CE 1828 - 1924
Historic Context Theme:	Developing the American Economy
Subtheme:	Trade (Modern)
Facet:	Export-Import
Time Period:	CE 1828 - 1924
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Landscape Architecture
Facet:	The Early National Period
Time Period:	CE 1828 - 1924
Historic Context Theme:	Expanding Science and Technology
Subtheme:	Technology (Engineering and Invention)
Facet:	Transportation
Time Period:	CE 1828 - 1924
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Landscape Architecture
Facet:	Development Of Transportation And Land Tenure Systems

Time Period:	CE 1828 - 1924
Historic Context Theme:	Shaping the Political Landscape
Subtheme:	Political and Military Affairs 1783-1860
Facet:	Post-War Nationalism, 1816-1828
Time Period:	CE 1861 - 1865
Historic Context Theme:	Shaping the Political Landscape
Subtheme:	The Civil War
Facet:	Battles In The North And South
Time Period:	CE 1837 - 1960
Historic Context Theme:	Developing the American Economy
Subtheme:	Power and Lighting
Facet:	Water
Time Period:	CE 1837 - 1960
Historic Context Theme:	Developing the American Economy
Subtheme:	Manufacturing Organizations
Facet:	Other Manufacturing Organizations
Time Period:	CE 1837 - 1960
Historic Context Theme:	Transforming the Environment
Subtheme:	The Industrial Revolution
Facet:	The Industrial Revolution
Time Period:	CE 1837 - 1960
Historic Context Theme:	Transforming the Environment
Subtheme:	The Industrial Revolution
Facet:	Industrialization of Work Force
Time Period:	CE 1837 - 1960
Historic Context Theme:	Transforming the Environment
Subtheme:	The Industrial Revolution
Facet:	Industrial Innovations

Time Period:	CE 1837 - 1960
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Ways of Life
Facet:	Industrial Towns
Time Period:	CE 1837 - 1960
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Ways of Life
Facet:	Industrial Life Of The Last Half Of The 19th Century
Time Period:	CE 1837 - 1960
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Ways of Life
Facet:	Industrial Life Of The First Half Of The 20th Century
Time Period:	CE 1837 - 1960
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Recreation
Facet:	Tourism
Other Facet:	Potomac River Valley tourism

Area of Significance:

Area of Significance Category:	Architecture
Area of Significance Category:	Commerce
Area of Significance Subcategory:	None
Area of Significance Category:	Economics
Area of Significance Subcategory:	None
Area of Significance Category:	Entertainment - Recreation
Area of Significance Subcategory:	None
Area of Significance Category:	Industry
Area of Significance Subcategory:	None
Area of Significance Category:	Maritime History
Area of Significance Subcategory:	None
Area of Significance Category:	Military
Area of Significance Subcategory:	None
Area of Significance Category:	Social History
Area of Significance Subcategory:	None

Area of Significance Category: Transportation

Statement of Significance:

Statement of Significance

The Georgetown Area cultural landscape is eligible for inclusion in the National Register of Historic Places under Criteria A and C. As a component of the larger Chesapeake and Ohio Canal, under Criterion A, the property derives national significance regarding transportation due to the canal's association with the development of American infrastructure, specifically flat-water canals during the Early Republic. The Georgetown Area cultural landscape has national significance under Criterion C as this portion of the canal, as well as the rest of the Chesapeake and Ohio Canal, serves as the best-preserved and maintained example of canal engineering from the Early Republic era. The Georgetown Area of the Chesapeake and Ohio Canal has state/regional significance under Criterion A, as the waterway helped to spur the Potomac Valley economy, served as a vital resource in the Civil War defenses of Washington D.C., and was instrumental in the development of river related tourism. The study area is locally significant under Criterion A as the resource influenced the physical development of Georgetown south of M Street by providing a means to facilitate the development of industries to support processing raw materials from the canal. Beyond the resource of the canal, the study area has local significance under Criterion A due to the development of recreational boating infrastructure along the riverbank of the Potomac.

NATIONAL SIGNIFICANCE

The cultural landscape inventory study unit, the Georgetown Area, is located between Mile Marker 0.0 and Mile 1.2 of the Chesapeake and Ohio Canal National Historical Park (CHOH), within the urban core of the Georgetown neighborhood of Washington D.C. While a component landscape of the larger Chesapeake and Ohio Canal historic district, the Georgetown Area is emblematic of the larger patterns associated with the rise of canal-based transportation in the nineteenth century and the decline in early twentieth-century America. The Chesapeake and Ohio Canal as a whole is the best-preserved and maintained example of Early Republic canal engineering. The idea of creating a Potomac-based water navigation route from the Chesapeake Bay to the Ohio Valley was first expressed by George Washington during the Colonial Era. Thomas Jefferson, following his return from France and his study of the Canal du Midi, encouraged Washington to pursue his plan in the post- Revolutionary war years (Mukeriji 2009: 16). The result was the construction of a series of five skirting canals known as the Patowmack Canal that started at the Little Falls of the Potomac and continued where necessary for smooth portage towards Harpers Ferry. However, the endeavor ultimately did not succeed, but interest remained.

Within the context of the bourgeoning Early Republic era, the desire to improve national infrastructure again revived the discussion of a Potomac River waterway. Spurred by the construction of the Erie

Canal and the “Canal Mania” that was sweeping the country, the Chesapeake and Ohio Canal Company was formed in 1823. After a series of surveys to determine the most effective and feasible route, Benjamin Wright was selected as the chief engineer for the project. Canal Company President Charles Fenton Mercer, Chief Engineer Wright, and other early supporters proposed the construction of a flat-water canal that consisted of a contained prism, separate from the river, a towpath, and a system of lift locks, aqueducts, dams and waste weirs. The established design, which varied depending on the environs of the particular section under construction, proved to be a testament to the engineering ingenuity of the era. In 1828, construction began on the Chesapeake and Ohio Canal and concluded in 1850 with the terminus of the waterway reaching only as far as Cumberland, Maryland.

Within the boundary of the CLI study area, construction began on the canal prism in 1828 and concluded in 1831 with the watering of the first portion of the canal from Seneca Lock to the Rock Creek Basin. The methods and designs of the Georgetown Area followed the specifications and materials approved for the overall structural standards of the canal with some modifications, including the use of local stone to construct the canal prism. Contracts were awarded for the construction of segments of the canal, which included locks, boat basins, prism, and the towpath. Bridges were constructed over the canal in order to maintain the Georgetown street pattern. Additional modifications to the study area include the insertion of water intake features to the canal prism walls in the ensuing decades in order to generate additional income for the canal company in the form of water leases.

The success of the Chesapeake and Ohio Canal was limited, as advances in nineteenth century technology ultimately outpaced the speed and carrying capacity of the canal. The development of railroads competed for the same markets as canals, eventually eclipsing and subjugating the artificial waterways. On that day, construction began on the canal, some 50 miles away construction started on what would prove to be the Chesapeake and Ohio Canal’s main competitor, the Baltimore and Ohio Railroad. A tense and tenuous relationship developed with the two transportation entities. In 1889, the Chesapeake and Ohio Canal Company, due to outstanding debts, lost its autonomy, entering into a complex period of oversight by either receivers or trustees. Floods, infrastructure needs, and mismanagement caused the canal to further decline, ultimately ceasing navigations in 1924.

Criterion A, Transportation- America’s canal building era of 1790 to 1860 Criterion C, Engineering- 19th Century canal engineering in America

State/ Regional Significance

With the completion of the Chesapeake and Ohio Canal in 1850, the waterway was a boon to the Potomac River Valley as it established an economic network linking producers with markets. The coalfields of Cumberland, Maryland and nearby locales were linked to the navigation routes of the Chesapeake Bay, including the ports of Alexandria, Virginia, Washington D.C., and specifically in the cultural landscape, Georgetown. The system was sustained by a series of canallers and locktenders who operated on the canal course. These individuals were responsible for operating and maintaining the canal barges that were pulled through the engineered prism by mules moving along the towpath.

The barges contained storage holds that were used to transport cargo east and west. The canallers largely operated independent of the canal company. Whereas the locktenders were responsible for the general upkeep of the towpath and the operations of the locks. Within the cultural landscape, a system of four lock, and nearly a mile of towpath remain and a are located adjacent to the canal prism.

The artificial waterway provided a means to transport agricultural goods and raw materials from the interior of adjacent states to the Chesapeake Bay. Crops, such as grain and corn, were shipped from farmlands up and down the course of the canal. However, coal proved to be a main commodity, increasing in the total tonnage shipped during the era of canal transportation operations. Within the study boundary of the Cultural Landscape Inventory, upon arrival in Georgetown the products were unpacked from the cargo holds and either processed in the Georgetown mills and refined or were transported to larger seafaring vessels. Portions of the refined products were sent west along the canal for consumption by rural markets. This economic system remained in place from the start of canal operations in 1831 until the closing of the canal navigation in 1924.

During the period of canal operations, the canal was plagued with disruptions in trade due to intermittent flooding and crippling droughts. However, one of the most significant disruptions to general operations was the Civil War. As a viable trade route along the Potomac River, on the border of the two warring states, the location of the Chesapeake and Ohio Canal ensured that the waterway was ensnared in the war's hostilities. Specifically, it was a target of Confederate forces and used as part of the border defenses of the Union. Within the Georgetown study area, the canal was incorporated into the defenses of Washington D.C. Guards near the meeting of the Alexandria Canal monitored the berm and towpath, effectively treating the canal as a moat for the capital defenses. During the initial days of the Civil War, the canal berm was the scene of a skirmish between a Confederate raiding party and Union forces. From Georgetown, supplies and Union troops moved west and north into areas of conflict, with those returning to Washington D.C. following the canal in the opposite direction. Guards were positioned along the canal in Georgetown due to the vulnerability of the resource. During the Civil War, the United States government seized and drained the Alexandria Aqueduct, converting the waterway into a bridge to move troops into Virginia. While the Chesapeake and Ohio Canal prism proper remained intact and watered, canal barges were preemptively commandeered to block parts of the Potomac from rumored Confederate naval threats from the Merrimac (Kytle 1983: 98).

After the Civil War, the economic trade on the canal resumed at a more regular pace. However, agricultural shipping decreased while the amount of coal shipped increased. The forced entry of the canal into a receivership/ trusteeship, due to failing finances and raising maintenance expenses, signaled a a shift away from independent canallers and the movement of a variety of goods to that of private company operations and the movement of a single commodity, coal, from the coalfields in Cumberland, Maryland. The coal was unloaded at Georgetown and sent to Washington D.C. to fuel government buildings or sent to locations further afield. Prior to the closing of the canal, the Chesapeake and Ohio Canal was responsible for shipping the vast majority of the federal coal supply (Unrau 2007: 498).

While the canal was principally used for the transportation of goods to and from Georgetown, the waterway also proved to be a successful route for steamer packet boats transporting tourists along the

Potomac River. Starting in 1831, private tour operators advertised excursions departing from Georgetown to points further north such as Great Falls of the Potomac and Harpers Ferry, West Virginia (Unrau 2007: 339-341). The excursion boats departed from various locations along the length of the canal in Georgetown. According to advertisements found in the Evening Star newspaper, boats such as the Charles F. Mercer and the Louise provided passengers with sumptuous meals, hammocks, deck chairs, dance floors and musical entertainment while passengers were transported to their destination. These tours were part of the development of the larger leisure and tourism culture of the nineteenth century and the exploitation of the Potomac River as a destination. With the closure of the canal to navigation operations in 1924, tourist activities similarly ceased.

However, a second period of canal tour operations emerged in the middle of twentieth century. Due to the restoration efforts of the Federal Government in the later 1930s, tour boats once again navigated along the canal in 1941. The mule drawn Canal Clipper operated by the Welfare and Recreation Association recreated the experience for tourist of daily life of people on boats along the canal. Canal tours departed from Lock 3 and Lock 4 and carried passengers north to Lock 5 and Great Falls, Maryland. The launch of the second period of canal tours coincided with the development of Georgetown as a tourist destination in Washington D.C. Successive tour boats were periodically replaced by the National Park Service, which continued to provide the tours as a visitor experience until 2011.

Criterion A, Commerce – Economic development of the Potomac Valley, 1828 to 1924 Criterion A, Military- the Civil War, 1861 to 1865
Criterion A, Tourism, 1831-1924; 1941-1960

Local Significance

The completion of the canal fulfilled the plans to connect the port of Georgetown, and subsequently the Chesapeake shipping network, to what was then considered the West or “Interior” of the United States. While movement could be difficult at times, due to flooding and draught, the canal presented a viable option for moving larger quantities of goods east and west. The location of the canal terminus in Rock Creek revived the waning tobacco port’s fortunes. Wharfs were constructed from the riverbank to the canal in order to efficiently unload cargo. The wharfs were eventually replaced by trestles that carried coal from the canal to awaiting boats. Warehouses dotted the waterfront to house the products prior to loading onto ships.

While the route of the Chesapeake and Ohio Canal served as a means to transport goods from growers and extractors to markets and ports, within Georgetown the artificial waterway also served as the means to transform the commodities. The location of the canal and the topography of the Georgetown bluff created an ideal height that would allow falling water to sufficiently generate the necessary power to operate a waterwheels and turbines. Beginning in 1837, water rights were sold to individuals who seized the opportunity to construct mills and factories along the canal prism. Water intakes were constructed in the canal prism wall, allowing the excess water to be directed into factory channels, discharging in the Potomac River. Mills and factories were generally constructed on the south or river

side of the canal prism. Surviving records indicate that the various mills constructed included cotton mills for spinning yarn, paper factories, flourmills, grist mills, and generator plants for electric turbines. The tradition of selling water rights as a use for industrial power continued until 1960, well beyond the era of use of the canal as a transportation route (Mackintosh 1991: 22). The changes remain visible to the present day in the form of the various intake features that line the walls of the canal prism.

Within Georgetown, the line of commercial/ residential and industrial was clearly demarcated by the canal due to the expansion of industrial activity associated with the waterway. Due to the wharf development and the mills, an industrial character was established south of the canal or riverside. Warehouses, limekilns, and eventually power plant facilities were constructed between the canal and Potomac River. North of the canal, a more commercial and residential character evolved along the north south axial streets and the M Street corridor. The industrial infrastructure of Georgetown was one of the waterfront industrial areas that emerged in the District of Columbia, which is known for its institutional and residential architectural and land use character.

Criterion A, Transportation- 19th and early 20th century trends in transportation development Criterion A, Industry and Commerce- Milling and Processing in Georgetown, mid 19th to 20th century, 1839-1960

Criterion A, Community Development- development of Georgetown and the industrial heritage of the Waterfront

Criterion A, Recreation- Passive recreation along the Potomac

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Vernacular

Current and Historic Use/Function:

Primary Historic Function: Canal

Primary Current Use: Outdoor Recreation-Other

Other Use/Function	Other Type of Use or Function
Trade	Historic
Social-Other	Both Current And Historic
Sports Facility-Other	Both Current And Historic
Outdoor Recreation-Other	Both Current And Historic
Manufacturing Facility (Mill) - Other	Historic
Fortification-Other	Historic
Plaza/Public Space (Square)-Other	Current
Pedestrian Circulation	Both Current And Historic
Aqueduct	Historic
Canal Lock	Both Current And Historic
Water-Related-Other	Both Current And Historic
Water Trail	Current
Pedestrian-Related-Other	Current

Current and Historic Names:

Name	Type of Name
The Chesapeake and Ohio Canal	Both Current And Historic
Chesapeake and Ohio Canal National Historic Park	Current
Chesapeake and Ohio Canal Recreational Waterway	Historic
Georgetown Level of the Chesapeake and Ohio Canal	Both Current And Historic
The Georgetown District	Both Current And Historic
The Georgetown Level	Historic
The Georgetown Area	Current

Ethnographic Study Conducted: No Survey Conducted

Chronology:

Year		Event		Annotation	
1607	CE	1608	CE]	Discovered	Capt. John Smith explored the Potomac River, allegedly bringing his ships to the falls of the Potomac with the goal of discovering the Northwest Passage. Drawings of John Smith's explorations depict the town of Nacotchtanck on the eastern bank of Anacostia. However, although it is believed that Smith's explorations took him to the falls of the Potomac, no additional Native American villages are depicted north of the
1632	CE	1632	CE	Discovered	Capt. Fleete, a furrier, returned to the village Tohogae with the goal of developing trade with the village. In his Journal for 1632, Fleete noted how 'pleasant and healthful' a place it was and how rich the land was in animals and
1634	CE	1634	CE	Granted & Colonized	King Charles I of England granted the land north of the Potomac River to Cecilius Calvert, the second Lord Baltimore, in a charter. This land was named Maryland and included the future sites of Georgetown and the District of Columbia. Calvert worked to attract settlers to the colony, and upon their arrival would allocate large landholdings, which required an
1703	CE	1703	CE	Platted	Ninian Beall, a Scotsman and former political prisoner who encouraged immigration to Maryland, receives the first patent of land in present day Georgetown. Beall named the 795 acres of land that he received Rock of
1745	CE	1745	CE	Built	George Gordon successfully petitions the Maryland Assembly to construct a "rolling house" for tobacco at the mouth of Rock Creek. The construction of the feature encouraged additional settlement associated
1748	CE	1748	CE	Planned	An interest in improving the Potomac for navigation was expressed as early as 1748 with the formation of the Ohio Co., which aimed to build a trade route up the Potomac, across the Appalachians, to the Forks of Ohio.
1751	CE	1751	CE	Established	By 1751, Georgetown was officially established as a tobacco port. Tobacco warehouses were originally built along the bank of the river; wharves extended from these

					Potomac River. The warehouses were concentrated on the western end of the
1771	CE	1771	CE	Established	An act was passed to make Georgetown an inspection location for flour. The water of the Potomac River and Rock Creek served as a power source for a series of late eighteenth century mills that processed grains.
1784	CE	1785	CE	Established	George Washington's interest in a Potomac route was reinvigorated after travelling the Potomac River in 1784. By 1785, the Pawtowmack Co. was incorporated and improvements focused on the Virginia side of
1785	CE	1822	CE	Built	The Pawtowmack Co. built a series of skirting canals, five in total, on the Potomac River at points north of the Georgetown. In 1822, the Patowmack Co. was dissolved.
1820	CE	1822	CE	Planned	Maryland and Virginia began to lay plans for a canal west via the Potomac Valley. Virginia Board of Public Works recommends two surveys, which suggest they abandon Pawtowmack Co. improvements of river transportation and start building an artificial canal. The engineers who completed this survey were Thomas Moore and Isaac Briggs of the United States Topographical Engineers.
1823	CE	1823	CE	Established	Officials chose to create a new company rather than add an additional subscription to the Potomac Canal Company. Thus, the Virginia Assembly passed an act of inscription for the Potomac Canal Company on February 22,
1828	CE	1828	CE	Built	On July 4, 1828, President John Q. Adams turned the first ceremonial spade of earth at Little Falls, Maryland and construction officially began on the C&O Canal. On the same day, construction also began on the
1828	CE	1828	CE	Planned	On September 17, 1828, it was agreed that canal would terminate at Rock Creek rather than Georgetown. This angered many Georgetown merchants as the new terminus would allow for branch canals to be built to the cities of Alexandria and Washington.
1828	CE	1828	CE	Planned	Charles Fenton Mercer appointed a committee composed of three directors (one from Georgetown, Washington, and Alexandria) to study the problem of the eastern terminus. In consultation with canal engineers, the three parties reached a compromise: the canal would terminate in Rock Creek provided that the C&O Canal Company built a branch canal from the Rock Creek basin to the Tiber estuary and support Alexandria's plea to Congress for
1829	CE	1830	CE	Built	On May 1, 1829, excavation work began though on June 1, 1829 the dimensions were altered to be 60 feet wide at the surface, 6 feet deep, and 42 feet wide at the bottom from

					Ferry. In the construction of the Georgetown Level, the canal was revetted by a stone wall composed of indigenous gabbro and mica
1829	CE	1831	CE	Built	In June/July 1829, construction began on the Georgetown lift locks though their contract was let to Davis on August 30th, 1830.The lift lock chambers of the Georgetown Level were constructed of Aquia Creek sandstone from Stafford County, Virginia and some local stone. By April 1831, the four locks were completed.
1830	CE	1830	CE	Planned	C&O Canal Engineers Thomas Purcell and Charles Fisk enlarged the dimensions of the towpath to be no less than 12-feet wide.
1830	CE	1831	CE	Planned	On March 30th, 1830, McCord & Co. was contracted to construct Georgetown's five stone bridges. By 1831 the bridges were
1831	CE	1831	CE	Developed	By July 22, 1831, the section of canal from Georgetown to Seneca was opened to navigation and on September 19th, 1831 the canal was navigable from Georgetown to
1831	CE	1843	CE	Built	Construction begins on the Alexandria Aqueduct and concludes. The original structure consisted of wooden courses built on top of stone piers. This was a modification from the original design that consisted of
1836	CE	1837	CE	Planned	In 1836 A. Reintzell, M. Adler, Francis Dodge Jr., John Marbury, Francis Dodge Sr. W.C. Corcoran, and Thomas Corcoran sign a petition to use excess water as a power source for the mills in Georgetown. This petition is
1842	CE	1842	CE	Built	By 1842, mills were established in Georgetown. These mills were set back from the canal so as to allow the unloading of materials from canal
1849	CE	1850	CE	Renovated	The canal was renovated from point 0.0 in Georgetown to Dam No. 6, raising the embankment to the highest level of a known freshets recorded in the Potomac Valley, the flood of 1847.
1850	CE	1850	CE	Memorialized	The canal is completed to Cumberland, Maryland. To celebrate the completion of the C&O Canal, the C&O Canal Board commissions a memorial obelisk to be erected in Georgetown to honor the completion of the canal.
1852	CE	1852	CE	Planned	In March 1852, Georgetown merchants issued a memorial for the towpath between Frederick Street (34th Street) and Warren Street (37th Street) to be moved from the river side of the canal to the berm side. This would free the bank for the development of unloading
1861	CE	1865	CE	Military Operation	The Alexandria Aqueduct is seized, drained, and converted into a double track wagon road to serve as a supply route and defensive position for Union troops in northern Virginia.
1865	CE	1866	CE	Legislated	The city of Georgetown approves the raising of

					bridges to eleven feet. By autumn of 1866 contracts were awarded and construction
1865	CE	1866	CE	Built	By July 12th, 1865, the streets were raised west of the Market House and by early fall the streets and bridges were raised to the east and west of the Market House. Then by August 1866 Dewalt & Co. was contracted to raise and construct iron bridges over the canal at Congress, Jefferson, Washington, and Greene
1870	CE	1870	CE	Proposed	In July 1870, Chief Engineer William R. Hutton submitted a comprehensive repair and improvement plan to restore the canal. In this plan, a “rip rap or slope wall” was to be added to the canal embankments, an unspecified 20-miles of towpath was to be raised, and the Rock Creek Basin and the Georgetown Level
1870	CE	1877	CE	Engineered	The desilting of the Georgetown Level began at the end of the boating season in 1870. By 1872, the desilting of the canal prism had been completed though dredging activities continued in Georgetown through the winter of 1873/1874. By 1876, the canal was in “excellent” condition although the dredging of the canal prism and rebuilding of retaining walls with "rip rap" continued across the
1876	CE	1876	CE	Built	The Georgetown Incline Plane was added to the waterway in order to accommodate the shipping traffic on the feature.
1876	CE	1889	CE		Tonnage shipped and total revenues plummet due to the nationwide depression and competition with the Baltimore and Ohio
1887	CE	1887	CE	Sold	Following a series of floods in the early 1880s, the canal company was forced to sell repairs bonds to finance repairs. By 1887, however, the last of the repair bonds was sold and the canal company had no further resources should another disaster strike the canal.
1888	CE	1923	CE	Rehabilitated	The Alexandria Aqueduct is rehabilitated to serve as a bridge from Georgetown to the
1889	CE	1889	CE	Damaged	The May/June 1889 a flood damaged the canal. Georgetown millers advanced $16,000 in future water rent to repair the Georgetown Level. However, the canal fell into either a
1890	CE	1890	CE	Land Transfer	On March 3, 1890, the B&O Railroad is granted receivership of the C&O Canal by the Washington County Circuit Court of Maryland as they held preferred mortgages on the canal
1924	CE	1924	CE	Damaged	The March 1924 flood devastated the canal and ends all commercial boating on the water way. The B&O maintained enough water to fulfill the demands of factory and mill owners in Georgetown for a power source provided by
1936	CE	1936	CE	Damaged	The highest recorded flood to-date significantly damaged the canal. Unable to finance repairs,

					contemplated the sale of the canal.
1938	CE	1938	CE	Land Transfer	On September 28, 1938, the National Park Service purchased the C&O Canal for $2,000,000 with the intention to repairing and developing the twenty- two miles from Georgetown to Seneca for recreational uses.
1938	CE	1938	CE	Planned	Federal Project 712 formulated a plan for the, "repair or replacing of masonry walls and timber gates in 23 lock; constructing stone retaining walls and dams and repairing the towpaths and dikes in the Widewater area below Great Falls; providing water and sewer systems, parking and picnic areas, and refreshment and canoe rental concessions at Great Falls; building flood control structures at the Foundry Branch spillway; clearing the canal channel and repairing the towpath throughout; repairing selected lockhouses; recording all historic structures with architectural drawings; undertaking necessary boundary surveys; collecting historical data; establishing a fishing program; and planning additional recreational developments at Georgetown, Caderock, and Great Falls"-- Memo NCP Nov. 8, 1939. These plans were to be completed by CCC works and
1942	CE	1942	CE	Destroyed	Flooding destroyed much of the CCC efforts.
1945	CE	1945	CE	Rehabilitated	After the end of World War II, the National Park Service restored the lower 22-miles of the canal and resurfaced the towpath from Georgetown to Seneca, among other works.
1961	CE	1961	CE	Established	The Chesapeake and Ohio Canal is established as a National Monument, providing greater protection of the historic resource.
1971	CE	1971	CE	Established	C&O Canal National Historical Park was established and divided into administrative sections. The lower 22 miles from Seneca to Georgetown were designated as the C&O canal Recreational Waterway
1974	CE	1974	CE	Repaired	Repair efforts from Hurricane Agnes shifts from the towpath to the masonry structures after the collapse of the Catoctin aqueduct.
1945	CE	1974	CE	Restored	The first five miles of the canal were re-watered by August of 1974. The proximity to Washington and the volume of recreational use appears to be a deciding factor in the priority of the work order sequence. This included a series of repairs to the towpath in order to allow pedestrian traffic along the canal course
1975	CE	1975	CE	Repaired	Part of canal wall at Lock 3 collapses due to the removal of the Inland Steel office buildings. This is the first noted modern destabilization of the feature in Georgetown.

1975	CE	1975	CE	Repaired	Reconstruction work is proposed for the boat basin of Lock 3. A void developed in the middle of the south wall requiring the reconstruction of the south wall. It should be noted that a brick paving is noted on the north
2009	CE	2009	CE	Planned	D.C. DOT planned to replace the superstructure of the 29th Street, 30th Street, and Thomas Jefferson Street Bridges as part of Operation: Remove, Restore, and Placement Georgetown's C&O Canal Bridges. Additional work on bridges included improvements to the Wisconsin Avenue Bridge and the 31st Street
2016	CE	2016	CE	Designed	Plans are developed for the rehabilitation of Lock Nos. 3 and 4 with work starting in September of 2016.

Physical History:

Prehistory/Pre Contact (1600-1630)

Prior to the period of contact and colonial settlement, the land associated with present day Washington, D.C. was inhabited by Paleo-Indian hunter-gatherers since 15,000 BCE as indicated by archeological and historical evidence. These groups hunted elk, caribou, and deer on their seasonal migrations from 12,000 to 7500 BCE. However, with warming climates and rising sea levels during the Archaic Period (7500 to 1000 BCE) hunter- gatherer groups began to establish more permanent settlements along the Potomac River around 2200 BCE. The rise in the establishment of permanent settlements coincided with the development of new, improved tools for hunting and fishing (e.g. heavy stone points or "broad spears") and food preparation (e.g. mortar and pestles). These developments allowed for resource exploitation, population growth, and the rise of new social hierarchies (Donaldson 2009: 32; Palus 2014: 26-49; Bedell et al. 2001: 9-12).

In the Woodland Period (1000 to 1600 CE), circa 1000 CE, Native American groups began to experiment with farming and the cultivation of crops such as wheat. Additionally, the earliest ceramics in the Potomac date to this period and archeological evidence indicates the presence of substantial dwellings, stone-lined storage pits, granaries, warehouses, and longhouse structures with internal partitions (Donaldson 2009: 32; Palus 2014: 26- 49; Bedell et al. 2001: 9-12). Numerous archeological sites from this period have been identified in the Potomac Valley. In particular, a Native American fishing village dating to the Late Archaic and Early Woodland Period was found on the Potomac River near Little Falls by William Henry Holmes of the Smithsonian Institution in 1897. This site was excavated in the 1940s. Another small fishing village sporadically used throughout the Middle Woodland Period was identified below Chain Bridge in the 1970s (Palus 2014: 57-63).

In the early 15th century, the Conoy or Kanawha, an Eastern Algonquin tribe, inhabited the land around modern Washington, D.C. as indicated by pottery assemblages and worked rhyolite. By 1608, the Conoy, or the tribes of the Nacotchanks, Piscataways, Pamaunkeys, Nanjemoys, Potapacos, and Yaocomacos cultivated corn and produced ceramics now known as Potomac Creekware (Donaldon 2009: 32). The Nacotchtank tribe, which consisted some 400 to 500 people, had the largest settlement cluster of riverside villages near modern day Washington D.C. on the eastern side of the junction of the Anacostia and Potomac Rivers. This settlement was situated near viable trade routes and various resources, which they relied on for sustenance. Into the Colonia Era, the Algonquin-speaking Nacotchtank hunted, foraged, practiced slash-and-burn agricultural, and cultivated crops such as beans, corn, gourds, and pumpkins (Donaldson 2009: 33; Palus 2014: 50-57).

Colonial Era to Early Republic (1607-1784)

Overview
Captain John Smith explored the Potomac River with the goal of discovering the Northwest Passage, the fabled northern water route to the Pacific Ocean. However, Captain Fleete, the

only surviving member of a separate 1621 expedition from Jamestown to the Potomac River, was possibly the first to come across the Anacostan village of Tohogae, the eventual site of Georgetown. By 1634, King Charles I of England had granted the land north of the Potomac River to Cecilius Calvert, the second Lord Baltimore, in a charter. This land was named Maryland, and it included land associated with modern day Georgetown (Taggart 1908: 6; Georgetown Historic Waterfront 1993: 8). After the establishment of Georgetown, European settlement rapidly expanded and by 1747 an official rolling house and licensed tavern had been established at the mouth of the Rock Creek. By 1751, Georgetown was incorporated as a tobacco port, though by the third quarter of the 18th century the milling industry had risen to prominence (Georgetown Historic Waterfront 1993: 8-15).

Discovery

From 1607 to 1608, Captain John Smith explored the Potomac River and the Chesapeake Bay with the goal of discovering the Northwest Passage, the fabled northern water route that connected the Pacific Ocean to the Atlantic Ocean. While his drawings from these explorations depict the eastern bank of Anacostia, there were no additional Native American villages indicated north of the Nachotchtanck settlement. This lack of a graphic representation suggests that Captain John Smith was not the first to come across the Anacostan village of Tohogae, the future site of Georgetown. Rather, in 1621 Captain Henry Fleete embarked on an expedition from Jamestown to the Potomac River in search of corn. The expedition was massacred and Fleete, the only surviving crew member, was taken hostage by a group of Anacostan Indians. Fleete was eventually ransomed and he returned to England with tales of his adventures. In 1631, Fleete returned to the New World to establish trade with the Anacostan Indians. The following year, on June 25, 1832, Fleete set sail to Tohogae in search of furs. In his account of his trip to Tohogae, Fleete described the area of present day Georgetown as a follows:

This place without all question is the most pleasant and healthful place in all this country, and most convenient for habitation, the air temperate in the summer and not violent in winter. It aboundeth with all manner of fish. The Indians in one night will catch thirty sturgeons in a place where the river is not above twelve fathoms broad. And as for deer, buffaloes, bears, turkeys, the woods do swarm with them, and the soil is exceedingly fertile (Georgetown Historic Waterfront 1993: 8). Tales, such as these, of bountiful lands stimulated migration to the New World (Taggart 19208: 134-135; Babin 2011: 35).

Settlement

The Anacostan village of Tohogae was seen as a desirable place for settlement and the site was gradually claimed by colonist during the rest of the 17th century. In 1634, King Charles I of England granted the land north of the Potomac River to Cecilius Calvert, Lord Baltimore. The colony was named Maryland, and included the future sites of Georgetown and the District of Columbia. Calvert advertised promises of land in order to attract settlers to the colony. Upon their arrival, an annual quit rent was collected on large land allocations. This rent was given to the crown, which essentially gave the monarch “feudal ownership of the soil” (Bond, 498). In 1673, a customs office was created in Maryland and by 1686 a separate customs district for the collection of duties along the Maryland shore was established. Trade in the Chesapeake Tidewater increased and in 1703 Ninian Beall, a Scotsman and former political prisoner who

encouraged immigration to Maryland, was granted the first patent of land in present day Georgetown. This patent, which included the 795 acres near where Aubrey's Ferry (later Mason's) docked at the Rock Creek Landing, was named the "Rock of Dumbarton" (Georgetown Historic Waterfront 1993: 8; Taggart 1908: 5). These lands were either taken by force or were occupied following their abandonment by the Anacostan tribes (Donaldson 2009, 33; Palus 2014, 50-57). The establishment of Rock of Dumbarton Plantation is the start of the tobacco culture economy in the area of cultural landscape study boundary.

Expansion & Trade

The location of Rock Creek Landing on the Potomac River allowed for the growth of the tobacco industry as shipments could easily be delivered then shipped down river to be exported. The success of the tobacco trade, which was "the meat, drink, clothing, and money of the colonists," can be seen in the construction of two 40- foot tobacco houses in Georgetown in 1732 (Historic Waterways, 24). These tobacco houses were built in a similar style as contemporary domestic structures. In particular, they were rectangular framed buildings with "a structural system adapted to the length of the clapboards" and methods of construction varied "with continuous sills and wall plates or with principle posts set into the ground." The names of these buildings often reflected their construction method ("whole framed", "bastard framed", and "post in ground"), but most often they referenced the length of the building, which can be seen in reference to the two aforementioned 40-foot tobacco houses in Georgetown (Carson et al. 2013: 187). The structures were used during the tobacco curing process to dry out the crop.

In 1734, George Gordon purchased a 300 acre tract of land for the purpose of constructing a "rolling house." This land, renamed "Rock Creek Plantation," was acquired from a planter named James Smith and was located west of Beall's property at the mouth of Rock Creek (Georgetown Historic Waterfront 1993: 10; Taggart 1908: 6). It was not until 1744, however, that Gordon petitioned the Maryland Assembly to construct a "rolling house" at the "Rock Creek Plantation." This is perhaps due to the fact that a ferry had only recently been established from the Virginia shore of the Potomac to Gordon's land. By 1745, an act was passed for the for the construction of the "rolling house" and in 1747 Gordon's "rolling house" was made an official inspection house in compliance with the 1730 Inspection Act. This Act not only required quality control in the production of tobacco, but also the establishment of a "rolling house" every twelve to fourteen miles (Georgetown Historic Waterfront 1993: 10). The nomenclature of inspection houses as "rolling houses" was derived from the fact that tobacco was cured and "prized" into hogsheads (large, wooden barrels weighing between 800 to 1,100 pounds) at the plantation of origin and then rolled to the nearest inspection house (Georgetown Historic Waterfront 1993: 10; Carson et al. 2013: 182).

The combination of an official inspection house and the subsequent opening of a licensed tavern by Thomas Odell in 1747 (and another by Joseph Belt a year later) brought more people to the small settlement. These developments instigated the 1751 petition to the Maryland Assembly that a town be erected on the "Potowmack River above the Mouth of the Rock Creek Adjacent to the Inspection House." The petition was granted and sixty acres of land, including part of George Gordon and George Beall's (son of Ninian Beall) land, was divided into eighty lots. These lots had the approximate boundaries of "a line parallel with present day 30th Street on

the east; the river on the south; a line parallel with present day M Street and 120 feet south of N Street on the north; and on the west, at a distance of 1200 feet from the eastern boundary, a line with that." In the following years, additions were added to the north boundary, but most development and commerce started and continued to take place in the original tract at the southern waterfront boundary (Georgetown Historic Waterfront 1993: 10-11; Taggart 1908: 9). Within these boundaries, between M Street and the Potomac River, the future Chesapeake and Ohio Canal would cross Georgetown.

By 1751, Georgetown was established as a tobacco port with tobacco warehouses — small rectilinear two-story brick structures — dominating the landscape at the bank of the riverside, primarily near the western end of the waterfront. From these warehouses wharves were built. In 1762, due to the rapid expansion of the tobacco trade, the first of a series of public wharves was constructed at the foot of Water Street. The first public wharf was a substantial structure as it was 60 feet wide and extended out into the river until it reached a depth of 10 feet at low tide. However, while Georgetown was claimed to be the largest tobacco port in the United States by the Governor of Maryland by the end of the 18th century, flour mills were also in operation along the waterfront.
These developments in the Colonial Era were to lay the foundation for Georgetown's industrial heritage (Georgetown Historic Waterfront 1993: 13-15; Taggart 1908:10).

Georgetown in the American Revolution & the Rise of Milling
During the American Revolution, some Georgetown merchants supported the movement for independence, including John Yoast, whose smith shop on Bridge Street, modern day M Street, manufactured muskets. Georgetown also served as an important depot for the collection and shipment of military supplies. In 1779, supplies from Frederick County, Maryland were moved to Georgetown as part of the war efforts, and from there they were moved to points elsewhere (Millers & Mechanics, 14). This is perhaps what William Wirt described in the following entry:

I passed a winter in George Town and remember seeing a long line of wagons cross the river on the ice. I conjecture that it was the winter of 1779-1780 and that these wagons were attached to the Troops which were going south ('The Old Stone House", as seen in Taggart 1908: 11).

Prior to the American Revolution, an agricultural revolution occurred in the Chesapeake region. Tobacco plantations shifted from the cultivation of the cash crop to growing a diverse collection of grain crops. The reasons included the exhaustion of the land, debts incurred to merchants, the less labor-intensive practices in grain cultivation, and the slow decline and collapse of the tobacco culture economy. The grains grown at the plantations were then shipped to the newly developed mills in Georgetown. As the Potomac River and Rock Creek provided easy access to waterpower, the milling industry prospered. By 1771, Georgetown was designated as a site for the inspection of flour (Georgetown Historic Waterfront 1993:15).

Potomac Navigation and the Formation of Potomac Canal Company (1784-1827)

Overview
As early as the 1600s, an interest was expressed in connecting the eastern seaboard with the

western frontier by a trans-Appalachian waterway. By 1748, the Ohio Company was incorporated to establish a passageway into the interior of North America. During the French and Indian War, George Washington travelled up the Potomac River to Great Falls to ascertain whether the Potomac River was a viable route to transport military supplies.
Schemes of a Potomac route was abandoned, though Washington remained interested. However, his plans were revived with the incorporation of the Patowmack Company and the construction of a series of skirting canals along the river by 1802. (High 1997: 1, 13; Georgetown Historic Waterfront 1993: 19; Unrau 2007: 49;
Kapsch: 10-21).

In the early 19th century, artificial canals were developed across the United States and the State of Virginia authorized the Board of Public Works to assess the potential of an artificial canal between the Potomac and the southern branches of the Ohio River. In two reports, one in 1820 and one in 1822, the development of a continuous artificial canal connecting the Potomac and Ohio Rivers was recommended. By February 22, 1823, the Chesapeake & Ohio Canal Company was officially established (Unrau 2007: 50).

During this period, Georgetown continued to develop and the flour trade was greatly expanded. However, by the end of the 18th century the Georgetown waterfront had lost its position as a chief harbor to Alexandria. Georgetown's produce market was also lost to Baltimore, and the fortune of the tobacco port began to wane (Georgetown Historic Waterfront 1993: 19).

From the Potomac Canal to the C&O Canal
In 1748, the Ohio Company was formed by prominent Virginians to connect the Potomac River to the Forks of Ohio across the Appalachians by a human made water route. The Ohio Company never established this route as the proposed waterway was vulnerable to French attack in the Ohio Valley (High 1997: 1). Interest in the Potomac route was revived during the French and Indian War following the defeat of the Virginia militia at the battle of Great Meadows on June 3, 1754. George Washington, a young twenty-two year-old major, recognized that a viable route to transport military lines was needed for the war to be a success. In July 1754, Washington travelled 170 miles by canoe down the Potomac River to Great Falls for the purpose of ascertaining whether the Potomac River could be used to transport military supplies to the upper Potomac River and Ohio Territories. He felt the river would be easily navigable if bypass canals were established. The Potomac route was abandoned, however, as General John Forbes chose a Pennsylvania route for his advance in 1758 (Kapsch: 10-21).

In 1775, George Washington coordinated with Maryland and Virginia to secure legislation authorizing a Potomac River navigation project. However, the War of Independence halted efforts, as Washington became the Commander-in-Chief of the Continental Army. In 1783, the American Revolution ended and in the spring of 1784, Thomas Jefferson wrote to Washington urging him to resume his project as it could be a tool of state making, as did the Canal du Midi in France. Jefferson observed in France how the Bourbon monarch's had used this infrastructure project as a means to provide employment to workers, improve trade networks,

create a statement regarding the engineering ingenuity of France, and consolidated power in the crown. Washington was reluctant to pursue a Potomac River navigation project. However, citing the "indispensable necessity" of visiting his western properties, Washington set out to survey the Potomac River. This trip reignited Washington's enthusiasm for developing a route west and he wrote to Jefferson and the governor of Virginia proclaiming that the Potomac route was superior to that of New York. As speculated by Jefferson, Washington's involvement led to the swift incorporation of the Patowmack Company in 1785 (Mukerji 2009: 16; High 1997: 11-13; Georgetown Historic Waterfront 1993: 19; NR Update 2015: 8, 159; Kapsch: 15).

In 1785, following the incorporation of the Patowmack Company and Washington's resignation as Commander- in-Chief of the armed forces, Washington was appointed president of the newly formed company. He ordered that the Potomac River be surveyed and it was agreed that skirting canals, rather than a continuous contained artificial waterway, were needed to make the river more navigable. These skirting canals, at Little Falls, Great Falls, Seneca Falls, Shenandoah Falls (Harpers Ferry), and House Falls, branched off from the river to avoid falls and rapids, making the river more navigable. Boats would enter the skirting canals at the rapids, using the river until the next set of skirting canals. In August 1785, work began on the Potomac route and by 1802 the five canal sections were completed. In 1802, Benjamin Latrobe, the architect for the Capitol, prepared a map entitled Plans and sections of the proposed continuation of the Canal at the Little Falls of the Potomack. In this plan, it was proposed that a canal be established parallel to the Potomac River through Georgetown, further north of the modern day canal. Unfortunately, the Patowmack Canal was short lived as it was not easy to navigate north of the falls (High 1997: 13; Georgetown Historic Waterfront 1993: 19).

The Planning and Creation of the Chesapeake and Ohio Canal Company (1800-1825)
In the early 19th century, simple river improvements were no longer seen as effective and the states turned their attention towards artificial canals. In 1817, the building of the Erie Canal commenced in the State of New York and before the canal was finished, Pennsylvania had begun work on a trans-Appalachian canal from

Philadelphia to Pittsburgh (High 1997: 20). Canal Mania was sweeping the nation as other waterway projects followed. The Potowmack Company, fearing the loss of its "vested rights", requested a survey of its works in 1819. In response, the State of Virginia authorized the Board of Public Works to simultaneously investigate the Potowmack Company and survey the land between the Potomac and the southern branches of the Ohio River to assess the potential of an artificial canal. Following the examinations, one in 1820 and one in 1822, two reports were issued by Thomas Moore (engineer of the Board of Virginia) and Isaac Briggs (engineer of the Board of Maryland). In their reports, they stated that the Potowmack Company had not only used all of its capital stock from collected tolls, but had also incurred heavy debts that its resources would never be able to discharge.

Furthermore, the company had failed to fulfill the requirements of its charter "to provide navigation for boats carrying 50 barrels of flour in the driest seasons" (Georgetown Historic

Waterfront 1993: 19). Both reports offered the solution of the development of an artificial canal was also recommended and an estimation of costs was provided (Unrau 2007: 49-50).

After the completion of the two reports, it was debated whether the Potowmack Company would take on an additional subscription for the construction of an artificial waterway or whether a new company should be created to "take over the rights and privileges of the old one" (Unrau 2007: 50). It was ultimately decided that a new company would be created and on February 22, 1823, the Chesapeake & Ohio Canal Company was officially established and recognized by the Commonwealth of Virginia. However, the act of incorporation required the confirmation of Maryland and its subscription of $500,000, which Maryland rejected. Maryland's denunciation of the act was likely due to the fear of Baltimore merchants that the planned canal would provide competitors with access to the western trade market, with goods departing from ports other than Baltimore (Unrau 2007: 50). It is suggested that Marylanders was disappointed by the choice of Georgetown as the eastern terminus of the canal. Whatever the reasoning, Maryland chose instead to invest in a risky venture with new technology: the Baltimore & Ohio Railroad (High 1997: 20).

Despite Maryland's rejection of the act, Charles Fenton Mercer, a representative from Virginia, and other influential figures organized the first Chesapeake and Ohio Canal Convention in November 1823 in Washington, D.C. (High 1997: 20). The purpose of the convention was to mobilize public interest and create organizations and committees to petition Congress, and several states, for consent and aid in the project.

Evidence for the success of the convention can be seen in President James Monroe's December 1823 address to Congress in which he referenced the conference and encouraged Congress to consider federal support of the project. Congress ultimately responded to President Monroe's message and provided $30,000 for a survey of the proposed route by the United States Board of Engineers "with a view to the transportation of the mail, the commercial intercourse, and military defense of the United States (Unrau 2007: 52-53). By January 31, 1825, the opposition by Baltimore merchants subsided and Maryland confirmed the Virginia act of incorporation. On February 14, 1825 the results of the aforementioned survey were also reported, which stated that their findings concurred with the opinions of Thomas Moore and Isaac Briggs that the creation of an artificial canal would be practicable. By March 3, 1825, the Chesapeake & Ohio Canal Company was chartered to construct the canal (Unrau 2007: 53-54).

Georgetown Urban Context (1789-1827)

While discussion regarding how to build the canal ensued, the character of the Georgetown urban fabric developed. During the American Revolution Georgetown did not suffer any property damage and was able to quickly regain its prosperity post-war. By 1789, Georgetown was incorporated as a city and additional wharves, warehouses, and flour mills were erected. Although the tobacco trade was the most prominent industry, the flour trade also expanded. Furthermore, a paper factory and textile mill were added to the waterfront as well as stores, shops, and counting houses. In 1791, Georgetown was incorporated into the new Territory of Columbia and by 1792/1793 a total of $364, 537.03 worth of exports had passed through

Georgetown customs. A large majority of the goods shipped supported the growing wholesale grocery business, which led to the establishment of a permanent market at present day 3276 M Street in 1795. With the incorporation of Georgetown into the new Territory of Columbia and the establishment of the Market House, the center of business and social affairs shifted away from Water Street (K Street) to Bridge Street (M Street) (Taggart 1908: 12-19; Georgetown Historic Waterfront 1993: 17).

In 1802, the Patowmack Canal was completed, making Georgetown a terminal port for western trade at the tidewater. At times of high water, flour, whiskey, furs, lumber, produce, and coal were shipped down the waterway from Cumberland, and other points west, to Georgetown. According to accounts in the American State Papers for Commerce and Navigation, by 1819-20 exports had risen from the $35,740 during the War of Independence to $489,124. While the Patowmack Canal sustained the Georgetown business endeavors, the canal was not as successful as anticipated. By the end of the 18th century, the Port of Georgetown had lost its position as a chief port to Alexandria due to problems with siltation in the harbor. Georgetown's produce shipments were lost to Baltimore, as the journey for grain products was longer on the Potomac than for merchants to make the trip to Baltimore. Despite the relative failure of the Patowmack Canal, tobacco continued to be exported from Georgetown in large quantities (Georgetown Historic Waterfront 1993: 19).

Georgetown in 1814. The study boundary for the CLI is outlined in red. A review of the map shows that the positioning of the canal was focused away from the main corridors along alleyways. Original image from the Library of Congress (NCR CLP 2017

Construction (1828-1832)

On July 4, 1828 construction began on the 184.5 C&O Canal, which was divided into sections averaging about a half mile in length (NR Update 2015: 8, 162). Specifically, the two half-mile Georgetown sections (Section A and B) were contracted to McCord & Co and John Baker. During the construction of the C&O Canal, including the Georgetown section, the canal company faced numerous problems including a shortage of laborers, episodes of mass illness, difficulties obtaining land and materials, and competition with the B&O Railroad. However, thanks to numerous loans from the State of Maryland, the waterway was completed from Georgetown to Seneca by July 22, 1831 (Unrau 2007: 11, 57; Georgetown Historic Waterfront

1993: 49-52; NR Update 2015: 8,163; High 1997: 21, 39; Bearss 1961: 8).

Building the C&O Canal

From 1823 onward, support for the construction of the Chesapeake and Ohio Canal continued to grow. On July 4, 1828, President John Q. Adams turned the first ceremonial spade of earth at Little Falls, Maryland and construction officially began on the C&O Canal. On the same day, construction also began on the Baltimore & Ohio Railroad fifty miles away in Baltimore (NR Update 2015: 8, 162). In planning the construction of the 184.5-mile canal, the waterway was divided into sections averaging at about a half mile in length. These half- mile sections were awarded to independent contractors rather than an overarching contracting company as there were no construction firms large enough to take on such an extensive project (National Park Service 1991: 21). In August 1828, the contracts for the first 34 sections were awarded from Little Falls to Seneca Creek and in late October an additional 50 sections were awarded between Seneca Creek and Point of Rocks (Unrau 2007: 181-183; Unrau 1974: 9-10). By November 1830, the Little Falls to Seneca section was completed and a year later the Little Falls to Georgetown section was opened to navigation (Georgetown Historic Waterfront 1993: 49; NR Update 2015: 8, 163).

During the construction of the remaining sections of the waterway, the canal company ran into trouble due to a scarcity of laborers. Few workers, including farm laborers, were present in the Potomac Valley, and fewer could be tempted to the region due to its reputation of poor weather and ill health. Furthermore, workers were being drawn to the Baltimore & Ohio Railroad and the Pennsylvania Main Line Canal projects. The result of this scarcity was an increase in labor costs and a decrease in the average ability of workers (Unrau 2007: 111).

Desperate for laborers, the canal company placed advertisements in newspapers in Dublin, Cork, Belfast, and Holland to attract indentured servants. These advertisements offered “meat three times a day, plenty of bread and vegetables, ‘a reasonable allowance of whiskey’, and a wage ranging from $8 to $12 a month” (Kytle 1983: 32). The Board of Directors even contemplated purchasing 100 slaves to serve as a steady labor force, but this plan was dropped (Routes of Change 1991: 33).

Workers faced many challenges working on the canal including reduced wages and irregular earnings, unsanitary makeshift work camps, dangerous work in extreme weather, dishonest management, and inadequate or rotten food supplies (NR Update 2015: 8,166). It should be noted that these were general conditions observed throughout the construction of the canal, and while not necessarily endemic to the Georgetown portion of the project, archival research has yet to be found that would dissuade these assumptions. This not only led to many running out on their indentures, but also legal battles in the Maryland courts. The rigors of the backbreaking work combined with the unhealthy atmosphere of the Potomac also resulted in numerous episodes of mall illness. In August 1829, sickness caused many contractors and laborers to cease work and destitute workers began to pour into towns. In a letter to the canal company, many sick and dying workers were noted as settling in Georgetown. The authors of this letter, John Little (Trustee for the city of Georgetown) and John Brigum (Overseer of Poor),

complained to the canal company, “These people were not Georgetown’s poor.” During the period from 1832 to 1842, a severe cholera epidemic struck the canal. Townspeople, fearing the spread of this deadly disease, refused the burial of canal workers in local cemeteries. (Unrau 2007: 111-119).

These struggles, as well as difficulties obtaining land and materials, cost the canal company exorbitant prices. In particular, while some landowners accepted the canal company's original offer to purchase land for the canal right-of-way, others refused and sought to extract the maximum profit from the loss of their land. This resulted in the canal company paying more for land than originally budgeted, while also accumulating additional costs from delayed construction. Furthermore, the combination of inflation between the late 1820s and early 1830s and the scarcity of construction materials caused additional financial strain (NR Update 2015: 8,163; Unrau 2007: 57).

Construction along the Georgetown Section

The Chesapeake and Ohio Canal in Georgetown was constructed south of M Street, north of the Potomac River. This section of the canal was constructed parallel to the street grid of Georgetown in an east to west orientation from the mouth of Rock Creek. However, Rock Creek was not the original terminus; rather, the eastern terminus was originally identified as the “tidewater in the District of Columbia.” This nondescript phrase, which could mean “anywhere from Locks Cove down to the Eastern Branch and Alexandria Harbor” (Franklin 1986: 294), afforded canal company President Charles F. Mercer time to appoint a committee to address the issue of Georgetown’s, the city of Washington’s, and Alexandria’s competing interests in being selected as the canal’s terminus. This committee, which was composed of directors from each city and a team of consulting engineers, came up with an “ingenious compromise” (Franklin 1986: 298). The canal would end at Rock Creek if the C&O Canal Company built a branch canal from the Rock Creek basin to the Tiber estuary and supported Alexandria’s plea to Congress for assistance building an aqueduct. While this compromise pleased the city’s representatives, Georgetown’s merchants feared the potential loss of commerce to the markets of Washington and Alexandria, Georgetown’s rivals for commerce in the Potomac Valley. Early stockholders and supporters in Georgetown, including John Mason, Francis Scott Key, and Walter Smith, were so angered by this compromise that they filed a suit against the canal company. This suit, John Mason et al., was dismissed by the U.S. Supreme Court on March 18, 1829, though their efforts did delay work on the canal between Little Falls and Rock Creek (Unrau 2007: 186). By September 17, 1828 the Rock Creek terminus was set in stone, in part due to the city of Washington threatening to withhold payment on its $1,000,000 subscription to canal company stock (Unrau 2007: 62-63).

After the resolution of the canal’s terminus, the C&O Canal Company was able to move forward with planning the Georgetown level. On December 10, 1828, the Board of Directors met at the Engineer’s Office in Georgetown to receive a report from Chief Engineer Benjamin Wright on the “probable quantities and qualities of the various species of work likely to be involved in the construction of that part of the canal between Section 1 [at Little Falls] and Rock Creek.” When comparing the present day footprint of the canal in Georgetown with

urban maps from the period, it is evident that the board selected a route in existing alleyways away from the main thoroughfares of Georgetown, Bridge Street and Water Street. Following this meeting, the five miles between Little Falls and Georgetown were divided into eight sections (Sections A-H). The Georgetown Level was subsequently divided into two half-mile sections (Section A and B). Section A (which extended from Rock Creek to the Market House) was contracted to Isaac McCord & Co. and Section B (which extended west of the Market House to Old Cannon Foundry) was contracted to John Baker. The contract for Section A included the earthen mole across the mouth of Rock Creek, the waste weir and tide lock at the mouth, the four Georgetown locks, and five stone bridges Greene/29th Street, Washington/30th Street, Jefferson Street, Congress/31st Street, and High Street/Wisconsin Avenue. On August 30th, 1830, Davis was awarded the contract for Section A as McCord & Co. abandoned their contract following the completion of Congress Street Bridge. By September 19th, 1831 the section of canal from Georgetown to Seneca was opened to navigation (Unrau 1974: 31-35; Bearss 1961: 8).

Canal Prism

On May 1, 1829, McCord & Co. (Section A) and John Baker (Section B) began excavating their respective sections of the canal prism, with the tops being wider than the bottom to conduct the flow of water. This configuration followed the original plans developed for the canal A month later, on June 1, 1829, the dimensions were altered to be 60 feet wide at the surface, 6 feet deep, and 42 feet wide at the bottom for the section between Georgetown and Harper's Ferry. This change was prompted in part by Congressional subscription to C&O Canal stocks and the intention of the C&O Canal Board to provide the Georgetown mills with surplus canal water (Unrau 2007: 188; Unrau 1974: 27). However, in the Second Annual Report, which outlined progress on the canal through May 31, 1830, it was reported that the actual dimensions of the canal prism varied within the 5-mile level from Georgetown to the Little Falls feeder. Specifically, in the summer of 1831 Army Engineers Colonels John J. Abert and James Kearney of the United States Topographical Engineers reported that:

The width of the canal up to Frederick street is forty-six feet, and its depth six; from this street it gradually widens to eighty feet, and increases in its depth to seven, which it maintains through the remaining part of this level up to Lock No. 5...The great dimensions of the canal heretofore stated, terminate at this lock, beyond which the width at the water surface is sixty feet, and the depth six (Unrau 1974: 29-30).

Furthermore, Colonels John J. Abert and James Kearney documented that the entire Georgetown Level was revetted by a stone wall composed of indigenous gabbro and mica schist that had been blasted out during the excavation of the canal prism. This treatment of the canal walls was unusual as earthen banks were common to the rest of the canal. However, the difference in material may be attributed to the need reinforce the steep slope along the Georgetown section, which brought the canal up 35 feet (Kytle 1983: 68; Unrau 1974: 31-35).

Canal Towpath

In the Geddes and Roberts' report of the United States Board of Engineers, the canal towpath was planned to be on the river side of the canal with a width of 9-feet, 2-feet above the surface of the canal (Unrau 1974: 3). C&O Canal Engineers Thomas Purcell and Charles Fisk enlarged the dimensions in 1831 to be no less than 12-feet wide, though construction reports in the 1830s indicate that the surface of the towpath varied from 9-feet to 12- feet (Luzader 1961:3). In C&O Canal Company records, towpath materials were not specified. As a result, sand and clay was used in some areas, while knapped rock was smoothed over with a roller in others (Luzader 1961: 2). Unfortunately, the original width and materials of the Georgetown Level towpath were not recorded in canal company records (National Park Service 1991: 21). However, per historical documents it is known that the towpath was planned on the river side of the canal west of Frederick/34rd Street. From Frederick/34rd Street to Greene/29th Street the towpath was planned on the berm side of the canal. This shift in towpath opened the river side bank for shipping activities allowing barges to unload cargos unencumbered by a circulation route (Bearss 1961: 7).

Locks & Lock Basins

The four Section A Georgetown lift locks, Locks Nos. 1-4, were contracted to McCord & Co. on December 10th, 1828. In June/July 1829, the contract was originally awarded. However, the construction contract was rewarded to Davis on August 30th, 1830 as McCord & Co. abandoned their contract following the completion of the Congress Street Bridge. The lift lock chambers of the Georgetown Level were constructed of Aquia Creek sandstone from Stafford County, Virginia and some local stone. This sandstone was expensive and not common to the rest of the canal where stone was sourced from nearby quarries. By April 1831, the four locks—generally measuring 100 feet long, 16 feet deep, with lifts from 6 to 10 feet—were completed by Davis at a cost of $34,052.08. These locks were closely spaced and brought the canal up 35 feet from point O of Rock Creek (Unrau 2007: 227; Kytle 1983: 68).

In June 1831, Lieutenant Colonels John J. Abert and James Kearney of the United States Board of Engineers surveyed the canal. In their report, the lock basins were also documented with the pool between Lock Nos. 1 and 2 measuring 100 by 40 feet. However, the pool following Lock 2 was different in that "[t]here is a drain from the streets of the town into this pool," which in the opinion of Abert and Kearny should have run alongside the pool and charged into the basin. At the pool above Lock No. 3, there were "stone steps on each side of these pools, conducting to the bottom" (Georgetown Historic Waterfront 1993: 50).

Lock-houses

On September 19, 1828 the C&O Canal Board of Directors instructed Chief Engineer Benjamin Wright to select suitable places, "for the immediate construction of as many Lockkeepers houses along the line of the Canal, as may facilitate the operation of the Corps of Engineers in executing and superintending the works already contracted for (Little Falls to Seneca Creek), or which may be hereafter contracted for" (Unrau 1978: 1). On October 1, 1828, Dr. John Martineau of the Board of Engineers, a close associate of Wright while working on the Eerie Canal, drew up the first specifications and provided an estimate of expenses for the proposed lock houses. By December 11, 1828, the first contracts were let for the construction of lock houses at Locks Nos. 6, 10, 11, 13, 16, 18, 20, 24, 25, 26, and 27. On

March 18, 1829 the contract was let for the lock houses at Lock No. 5 and 7 (Unrau 1978: iv, 1).

There are no extant records documenting the construction of the lock houses at Locks Nos. 1 to 4. However, a canal company ledger from 1828 to 1841 indicates that there were at least two or three lock houses in Georgetown. These lock houses were likely existing structures adapted for canal-use as no dates, contractors, or cost estimates were recorded. A canal ledger from the spring of 1831 also documents the erection of locust-post fences around these two structures by a man named James Hook. On this same ledger, work was indicated as being done to a lock house (identified in other canal documents as Lockhouse No. 2) in the spring of 1830 and 1831. This work was completed at a cost of $120.02, which suggests that the lock house was a pre-existing structure because the average cost to construct a lock house was $700 (Unrau 2007: 242-243).

Bridges

On March 30th, 1830, McCord & Co. was contracted to construct five stone bridges across Section A in a "~8t substantial manner, with suitable rails or parapets." These bridges were to be built at the crossing of the street grid at Greene/29th Street, Washington/30th Street, Jefferson Street, Congress/31st Street, and High Street/Wisconsin Avenue. Also, as part of the contract McCord & Co. was to keep the bridges in "good order" following their completion (Bearss 1961: 4).

In the building of the Congress Street Bridge, 31st Street, McCord & Co. ran into financial difficulties due to the fact that the bridges plans and specifications had been so drastically altered. The C&O Canal Board, however, refused McCord & Co. the $4,000 needed to finish the bridge. Consequently, McCord removed his men from the job. Georgetown's Board of Aldermen mediated the dispute and it was agreed that the canal company would reimburse McCord & Co. for the added costs following the completion of the bridge. McCord & Co. resumed work though following the completion 40-foot span stone bridge McCord & Co. abandoned their contract (Bearss 1961: 6-7). On August 30th, 1830, Davis was awarded the contract for the remaining four bridges at Greene Street (29th Street), Washington Street (30th Street), Jefferson Street, and High Street (Wisconsin Avenue) (Bearss 1961: 7).

Captain William Easby, a Washington shipbuilder, was awarded the sub contract for Georgetown's four wooden bridges: one at Duck Lane/33rd Street, one at Frederick Street/34th Street, and one to the east and west of the Market House (3276 M Street) (Bearss 1961: 6-7). By October 1831, all of the Georgetown bridges, except the Duck Lane and High Street Bridges, had been completed. In late June 1831, Army Engineers Colonels John J. Abert and James Kearney of the United States Topographical Engineers were able to "examine and re-port…[on] the present condition" of these bridges (Bearss 1961: 6). In their survey, Abert and Kearney noted the completion of the aforementioned bridges and the continued construction of the High Street/Wisconsin Avenue Bridge. They also noted that the wooden towpath footbridge at Frederick/34th Street had been constructed to allow drivers and mules to transfer from the towpath on the river side of the canal west of Frederick/34th Street to the

berm side of the canal between Frederick/34th Street and Greene/29th Street. At Greene/29th Street, the stone street bridge allowed drivers and mules to regain the river side of the canal and continue on to the mole at Rock Creek (Bearss 1961: 6). Later that same year, the High Street/Wisconsin Avenue Bridge was completed as interpreted by the '1831' inscription on the Keystone (Bearss 1961: 6-8).

Early Period (1830-1860)

Overview

In the early years of canal operations, trade was irregular due to flooding, competition with the B&O Railroad, and the unreliability of the waterway, due to low water levels, as a mode of transportation (Unrau 2007: 437-458). However, in Georgetown, the industrial milling business continued to develop and following the September 1843 flood, the millers actually financed the raising of the Georgetown Level towpath. Unfortunately, additional floods struck the canal necessitating additional repairs in 1849 and April 1852 (Unrau 2007: 290-294, 464).

C&O Canal Overview: Trade Fluctuations & Competition with the B&O Railroad

From the opening of the canal between Little Falls to Seneca Falls in 1830, until the canal's completion in 1850, the C&O Canal predominately relied on the agricultural production of the Potomac Valley. These agricultural products included items such as flour, wheat, and corn. Lumber, lime and coal were also shipped along the canal, but to a lesser extent (Georgetown Historic Waterfront 1993: 49; Unrau 2007: 437-438). In 1831, during its first full year of operation, trade along the canal was considered a success and in March —within ten days of watering the canal a few hundred yards above Georgetown — approximately 30,000 barrels of flour and other merchandise had descended the canal into Georgetown (Unrau 2007: 437-438).

Despite the success, the Baltimore & Ohio Railroad presented a physical roadblock to the development of canal. In the 1830's, in attempt to obtain the right-of-way, the B&O Railroad raced to buy up land where its line would reach the Potomac at Point of Rocks. The canal company, by inheritance from the Patowmack Company and its own charter, believed the land to be rightfully theirs. This resulted in a four-year battle in court and delayed construction from the Point of Rocks to Harpers Ferry. In January 1832, the court of appeals ruled for the canal company; however, the canal company was bankrupt and unable continue construction (High 1997: 21, 39).

In 1836, the State of Maryland provided the canal company with a loan of $3 million, which was contingent on bonds, to complete the canal. Despite this loan, the payment of canal workers was delayed due to the worldwide bank crisis. The canal company's inability to pay its workers spurred large-scale episodes of violence between 1834 and 1840. Specifically, ten significant disturbances were noted and intervention by the state militia was required five times and federal troops once (NR Update 2015: 8,166). By 1837, in spite of unrest along the waterway, the canal was completed 107 miles above Georgetown. In 1839, the canal was completed within 50 miles of Cumberland, Maryland. However, funds had petered out by 1842 as the

canal began to reach past the Appalachian Ridges. Unable to borrow money, the State of Maryland waived the canal company's lien on canal revenue and by October 10th, 1850 the entire 184.5 mile C&O Canal was completed (Georgetown Historic Waterfront 1993: 49-52).

This initial enthusiasm and surge in canal use was short-lived, however, as business decreased along the canal from 1832 to 1837. According to canal company records, in 1838 there was an increase in canal trade with tolls increasing by over $8,000 due to an, "unusually fine and abundant harvest" of grain crops in the Potomac Valley (Unrau 2007: 442). Following this upswing, there was a slump in trade in 1842 due to a light grain harvest and the B&O Railroad's attempts to monopolize the flour trade (Unrau 2007: 444). Although tonnage increased annually (1,440 tons in 1847, 86,436 tons in 1848, 102,041 tons in 1849, and 101,950 tons in 1850) until 1850, canal revenues continued to fluctuate because of work above Harpers Ferry, poor wheat crops in the valley, breaches and floods, and competition with the B&O Railroad for the flour and coal trade (Unrau 2007: 437, 453). Specifically, in regards to flour, the two companies struggled to monopolize the lucrative Shenandoah flour trade at Harper's Ferry. In 1841, the railroad reduced its rates and between June and December 1841, flour trade on the canal decreased from 15,239 barrels in 1840 to 10,828 barrels in 1841. Again, in 1844, the railroad decreased it rates, forcing the canal company to lower its own (Unrau 2007: 453- 456).

Interestingly, early on the B&O Railroad transported coal from Cumberland to Dam No.6 for the C&O Canal Co. (Unrau 2007: 446-456). From Dam No. 6 the coal shipment continued down the course of the canal to the Tidewater. This amicable partnership, which was in effect from December 1843 to March 1845, deteriorated when the C&O Canal Company received funds to complete the remaining 50 miles of the waterway to Cumberland, Maryland. The B&O Railroad, fearing a potential loss of revenue, "began a large-scale assault on the trade" of the C&O Canal (Unrau 2007: 456). For instance, in April 1845 the City of Baltimore passed an ordinance allowing the B&O Railroad to build tracks and construct a new depot on the south side of the Baltimore Harbor with no docking fee. The railroad then lowered the price for transporting coal "to a mere nominal sum", which forced the canal company to lower its fees at a loss of revenue to the company (Unrau 2007: 456).

In 1852, the canal company expected a banner year in the coal trade because the Cumberland mines planned to ship 300,000 tons of coal on the waterway. However, due to a heavy flood in April the canal company lost the opportunity to the B&O Railroad. This resulted in the amount of coal shipped on the waterway declined to 65,719 tons and increasing on the railroad to 268,459 tons. Furthermore, in the summer of 1854 a severe drought between Cumberland and Dam No. 6 suspended the coal trade, as water levels were low. This drought, as well as the previous closures of the canal due to flooding damage, made the waterway appear unreliable. As a result, the canal company lost their prospected business with the mining companies in Allegany County in 1854. The unreliability of the waterway can also be seen in how the railroad nearly doubled its tonnage in 1852 despite freight prices being raised from $1.75 to $2.75 per ton from Cumberland to Baltimore, while the canal's tonnage had only increased slightly despite toll and freight charges had dropped to $1.81 (Unrau 2007: 468).

Georgetown Urban Context in the Early Years (1830-1860) The Georgetown Waterfront:

Milling & Other Industries

During this period, the tobacco trade shifted to the Port of Alexandria, which put the Georgetown waterfront at risk of collapsing. However, with the opening of the Georgetown section of the C&O Canal in 1831, Georgetown's industrial milling business further developed as the canal provided a means to ship unprocessed grains. Additionally, at "over 35 feet above the level of the Potomac at Lock No. 4, [the canal] could provide a new source of power for milling" because this height was sufficient enough to generate power from the fall of water (CoFA 1968: 113; Georgetown Historic Waterfront 1968, 15-16). By January 13, 1836, Georgetown merchants A. Reintzell, M. Adler, Francis Dodge Jr., John Marbury, Francis Dodge (sr.), W.C. Corcoran, and Thomas Corcoran petitioned the United States Congress to use excess water as a power source for mills in Georgetown according to the terms of an 1829 amendment to the company charter. In 1837, following discussions between Maryland and Congress, their petition was approved and leases were established for the use of excess canal water in Georgetown (Georgetown Historic Waterfront 1993: 52).

By 1842, numerous mills had been established in Georgetown. These mills were set back from the canal prism and towpath to allow for the unloading of goods from canal barges. Bomford's Mill, 1000 Potomac Street, was one of the first mills established during this time period and one of the most documented. As such, its history merits some discussion, as it is representative of the growth of industrial milling in Georgetown. In 1820, Col. George Bomford purchased Lot No.79 —a plot of land once part of Ninian Beall's estate (Ninian Beall received the first patent of land in present day Georgetown in 1703) —from Thomas Beall in 1820. By 1832, a flour mill had been established though in September 1844 the mill was destroyed by a fire. According to Mrs. Corra Bacon-Foster in "The Story of Kaloramo", Bomford's mill was rebuilt in 1847 as a four-story cotton mill (Georgetown Historic Waterfront 1993: 63; Unrau 2007: 683). Bomford's Mill drew water from the canal with an allotment in the company lease of 400 inches of right of way. The same lease and intake feature was used to supply the Arlington Mill/Ray's Mill on the northwest corner of Water and Potomac Streets. This is based on an 1848 deed required "a circular orifice to be made in the side of" Bomford's Mill to furnish the Arlington Mill/Ray's Mill with canal water (CoFA 1968: 162).

With the rise of milling, other businesses developed along the prism. Specifically, the Canal Warehouse, north of the canal between Warehouse Alley and Wisconsin Avenue at modern day 3222 M Street, which has undergone several uses throughout its existence. Until 1823, the lot was occupied by George Gordon's tobacco inspection house and the rear portion of the warehouse "unloaded directly into canal boats" (CoFA 1968: 133). However, in 1839 ownership of the two-story brick warehouse was transferred to "Richard B. Mason and others for the manufacture and storage of corn brooms, and the storage of the materials of which they are made" (Firemen's Insurance Co. of Washington and Georgetown, Ref. No. 444, p.99). By the early 1850s, the Union Line used the warehouse as stables for horse drawn omnibuses (Changing Fashions in Transportation, CHS v. 48-49, [1949] p. 161). In 1854, the two-story brick Duvall's Foundry was also built. This building, southwest of the canal at Washington Street at modern day 1050 30th Street, was set back 120 feet south of the canal at Lock No. 3 (CoFA 1968: 199-204). Unfortunately, not much is known about the Foundry. However, the location suggests that it depended on the canal to bring its raw materials, which included coal

from Cumberland and perhaps pig iron from Antietam (Georgetown Historic Waterfront 1993: 65-66; High 1997: 102). The two-story brick Canal Company House, northeast of the canal at Congress/31st Street at modern day 1061 31st Street, was also constructed around 1830 by the C&O Canal Co. This building was originally used as a storage room, but was later used as a tavern and then as a stables for horses and mules that drew barges along the canal. The drivers of these barges lived above the stables (Georgetown Historic Waterfront 1993: 69).

By the late 1850s, feed and grocery store applications were submitted in Georgetown as boatmen and "canallers" required goods such as sugar, coffee, corn, and oats for their journey north to Cumberland. By 1860, in Georgetown there were 17 flour and feed stores near the canal associated with canal traffic: 13 on Water Street and one each on Greene, Cherry, High, and Jefferson Streets. There were also seven grocers: six on Water Street and one on Market Street (Unrau 2007: 834). The Dodge Warehouse, on northwest corner of High Street and Water Street at modern day 1000-1006 Wisconsin Avenue, was one such store as it operated "as a Wholesale grocery store, Spirituous liquors excepted" according to an 1837 Fireman's Insurance Co. insurance policy (Georgetown Historic Waterfront 1993: 20-23). Furthermore, it should be noted that with the construction of the canal through Georgetown in 1831 that "the lower third of the original plot [of the Market House] was separated from the part upon which the Market House stood." The Market House parcel was divided into two lots with the northern lot continuing to operate as the Market House and the southern parcel, located at the northwest corner of modern day Potomac and Grace Street, becoming a fish market (Georgetown Historic Waterfront 1993: 25).

It was also during this era, that the Alexandria Canal Co. was chartered by Congress (Kytle 1983: 52; Georgetown Historic Waterfront 1993: 1968). In 1830, the Alexandria Canal Co. was established to construct the Alexandria Canal, which would connect the Port of Alexandria to the C&O Canal. In order to link the Chesapeake and Ohio Canal to the Alexandria Canal, the Alexandria Aqueduct was necessary to span the Potomac. With the construction of the aqueduct and canal, merchants could ship goods directly to Alexandria, without unloading in Georgetown and incurring additional costs. In 1829, C&O Canal Engineers Wright and Roberts had already selected a site adjacent to the western edge of the extension of 36th Street for the Georgetown abutment, but a new site was chosen in 1832 following Major William Turnbull of U.S. Topographical Engineers appointment to the project. The site suggested by Major Turnbull was at the lower part of 35th Street. However, it was at the proposed site of Wright and Roberts that the abutment was ultimately constructed (Kytle 1983: 52; Georgetown Historic Waterfront 1993: 55-56).

On July 4th, 1831, work on the Georgetown side of the Alexandria Aqueduct — alternatively called the Potomac Aqueduct—began under the supervision of Major William Turnbull. The plan for the Alexandria Aqueduct called for the construction of a series of arched piers to span the Potomac River. The arches supported a stone canal trunk that included a carriage lane, allowing for additional transportation traffic to cross the feature. By 1837, to construct the feature, an agreement was reached that called for the Georgetown abutment to be constructed as a stone arch. This design, which was more expensive than the simple causeway on the Alexandria side, was deemed necessary by Colonel Abert of the United States Topographical

Engineers as an arch was needed to cross 36th Street in Georgetown, but also a simple causeway would "disfigure" the city. In 1839, work officially began on the Georgetown abutment and by December 31st, 1840, the last pier of the Georgetown abutment was completed. By July 10, 1843, the Alexandria Aqueduct, at almost a quarter mile long and 40 feet above the river, with piers founded on solid rock below 35 feet of water and mud, opened for use. Unfortunately, the carriage lane proved inadequate, as it could not accommodate the high traffic crossing the Potomac. In 1856, suggestions were made for the renovation of the aqueduct, however, alterations were delayed as the aqueduct was under federal control by 1861 (Georgetown Historic Waterfront 1993: 59).

The Georgetown Waterfront: Flooding & the Raising of Georgetown's Embankment
In 1831, with the opening of the Georgetown Level, additional mills and wharves were developed along the waterfront. However, trade was hindered by floods. In June 1836, the greatest flood on the river since 1810–and the first major flood on the canal– occurred after six days of continuous rain. The damage, however, was not extensive despite water levels recorded above the surface of the towpath below Locks Nos. 5, 7 and 8. Within three weeks, on June 20th, navigation was fully restored from Georgetown to Harpers Ferry and in early July navigation was restored from Harper's Ferry to Dam No. 5 (Unrau 2007: 210, 279; Flooding on the Potomac River, 8). Following this flood, J. Y. Young, the superintendent of the Georgetown Level, took steps to reduce future damage to the canal. In particular, he had a controlled bank cut into an embankment on the Georgetown Level. The intent of the design modification was to have a higher embankment downstream where a waste weir was not sufficient enough to vent excess water from the canal, saving the lower canal prism from damage (Flooding on the Potomac River, 8). The canal company also initiated some flood control projects including the coping of the Rock Creek Basin with stone (Shaffer 1997: 9). Further research is need to determine the exact location of the controlled bank.

By the early 1840s, as discussed previously, the canal was virtually bankrupt and could not afford the estimated $40,000 per year needed to maintain the canal. As a result, the waterway was rapidly deteriorating due to a lack of up-keep. The canal company's financial position — combined with a fear of unplanned repairs and expenses— led to the lowering of the canal's water level to three feet, nine inches in the spring of 1841. This preventative measure, which lowered the canal waters to less than two-thirds of the canal's six-foot depth, impeded canal navigation and the water supply to Georgetown's mills. Furthermore, it did not protect the canal from the April 1843 flood, which severely damaged the canal between Edwards Ferry and Georgetown. On the Georgetown Level, between April 18th and 19th, "the high water in the river ran over all the 'low levels' on the Georgetown Division, opening one or more breaches on each of them." As noted by Unrau (2007: 282), "in most cases the water passed into the canal at the high or upper end of the levels and out by the breaches below. Precautionary measures were taken by cutting the embankments at points where the least damage would take place." At a cost of $10,000, immediate repairs were completed and by May 2, 1843, the canal was open to navigation (Shaffer 1997: 10-12; Unrau 2007: 210, 282). Unfortunately, the location of the cuts to the Georgetown embankment are currently unknown and further research is needed.

In September 1843, prior to the raising of the embankment walls, a more severe flood hit the canal causing extensive damage between Georgetown and Dam No. 6. Following a survey of flood damage on the Georgetown Level, two breaches were noted (one near Pointers and one opposite the Alexandria Aqueduct) and repairs were estimated at a cost of $2,500. In Georgetown, repairs were expedited, as canal water was pouring over the canal banks into the town, thereby increasing the chances of a cholera outbreak. It was also in the interest of the Georgetown millers that the water supply be promptly restored. As such, $3,000 was advanced by the millers in anticipated future water rents to fund the repairs of the Georgetown Level. On September 19th, 1843, repairs commenced on the section of the waterway from Georgetown to Little Falls. By November 8th, 1843, additional waste weirs had been added to prevent future disasters and navigation was restored from Georgetown to Edwards Ferry (Unrau 2007: 284-285). Unfortunately, given the documentary evidence the location of these waste weirs is currently unknown.

Despite the reopening of the canal, extensive work was needed to protect the canal from future flooding. C&O Canal Company President James Coale and Chief Engineer Charles B. Fisk proposed a $60,000 program, which they outlined in the June 3rd, 1844 Annual Report:

"As a protection against these river freshets it will be necessary, as soon as adequate means (for which we are now negotiating) can be obtained, to raise the part of the towpath liable to overflow, and also the feeder bank below the guard gates, at least one foot above the highest water mark hitherto known in the Potomac; or, in other words, about one foot higher than the rise of the last September freshet. This, with a tumbling waste 500 feet long on the towpath side of the canal, near the fourth milestone, and some few other repairs of minor importance, it is thought would oppose an effectual barrier against the inroads of the river at all times hereafter, and would amply compensate the Company for the cost of the outlay, in the savings from breaches, in the course of three or four years."

The canal company agreed to complete the aforementioned recommendations if the Corporation of Georgetown loaned $10,000 from future water rents. The Corporation of Georgetown was willing to provide this loan on the condition that the canal company provide "a deed of Mortgage" for security. However, the canal company refused and on November 4, 1844, repairs on the Georgetown Level commenced without the financial assistance of the Corporation of Georgetown. In the repair of the Georgetown Level, the towpath was raised one foot above the level of the September 1843 freshet where the towpath was liable to overflow. Unfortunately, there are no known extant records documenting the specific locations. By April 30, 1845, the improvements to the Georgetown Level were complete. These improvements and the waste weir at Falls Branch in particular, saved the Georgetown Level from severe damage when canal was struck by freshets in March 1846 and October 1847 (Unrau 2007: 286-288; Shaffer 1997: 12-17).

These improvements did not include the restoration of the canal's water carrying capacity. As such, water levels remained at a level less than two-thirds of the canal's six-foot depth. This hindered coal trade as the canal could not carry a full load. In June 1848, Washington, Georgetown, and Alexandria sent a memorial to the canal company requesting that "proper

measures are adopted without delay, the necessary means, may be raised among ourselves & other interested parties to forthwith place the Canal between Georgetown & Dam No 6, in a permanently substantial and profitable condition" (Shaffer 1997: 19). In response, the canal company sent a memorial to the State of Virginia in fall of 1848 asking for a loan of $200,000 to fund the repair of the canal. On March 15, 1849, the Virginia legislature passed a bill that issued $200,000 in repair bonds to the canal company. Thus, able to proceed, Chief Engineer Charles B. Fisk submitted repair plans to the C&O Canal Board in August 1849. As part of Fisk's plan, a total of $80,000 would go to the raising of the towpath and the desilting of the Rock Creek Basin. The remaining funds were allocated for the repair and protection of all existing dams, the raising of the canal level at vulnerable locations, the construction of new overflow wastes and waste weirs, and the repair and rebuilding of culverts and bypass flumes (Shaffer 1997: 19-21).

In August 1849, Fisk's plan was quickly implemented, though the Virginia Board of Public Works retroactively prohibited the canal company from spending repair bond money "east of the C&O Canal's junction with the Alexandria Aqueduct." This prohibition was motivated by the fears of Alexandria merchants that that the desilting of the Rock Creek Basin would draw traffic away from Alexandria to Georgetown. Despite the prohibition, the canal company used its own resources and by the spring of 1852, the restoration was complete. This restoration included the desilting of the Rock Creek Basin and the raising of the embankment to the highest level of a known freshet in the Potomac Valley– the flood of 1847 – from point 0.0 in Georgetown to Dam No. 6 (Shaffer 1997: 18-22; Unrau 2007: 290).

Unfortunately, in April 1852 the lower 22 miles of the C&O Canal were damaged by a flood. In Georgetown, numerous wharves and warehouses, along with their stores of flour, lumber, coal, and firewood, were destroyed. Four large breaks also occurred on the Georgetown Level. By June 16th, 1852, the canal company had secured $77,900 in pledges from Corporations of Georgetown and Alexandria, banks in the District cities and Cumberland, water renters in Georgetown, and individuals in Cumberland, to fund the repair of the waterway. In late July, repairs were completed at a total cost of $100,000 (Unrau 2007: 290-294, 464). In the following years, numerous floods struck the canal. However, none damaged Georgetown as much as the April 1852 flood. The floods did result in highly irregular tonnage shipping to Georgetown, which can be seen in a breakdown of the ascending and descending trade during the 1850s (see Unrau 2007: 464).

The Georgetown Section of the C&O Canal: Boat Basins, Towpath, Elevated Railways, and Bridges

On November 27, 1850, the C&O Canal Board had an obelisk monument commemorating the completion of the waterway fashioned and erected in Georgetown along the course of the waterway. Additional research is needed to determine the historic location of the feature. The obelisk was placed at the northeast corner of the Wisconsin Avenue Bridge above the canal on level with the present day street in 1900 (Washington Herald 1920:4). The following year, efforts were made to stimulate trade and the development of transfer facilities on the Georgetown Level. Specifically, the C&O Canal Board granted G.L. Thompson Company and others permission to construct boat basins on the towpath side of the Georgetown Level with

the purpose of loading and unloading cargo. The size of the basin is unknown, but was large enough to accommodate one vessel, if not multiple. As mentioned, the towpath was located on the berm side of the canal east of Frederick/34th Street, while to the west it was located on the river side. In March 1852, however, Georgetown merchants issued a memorial for the towpath between Frederick/34th Street and Warren/37th Street to be moved from the river side of the canal to the berm side (Bearss 1961: 21; Unrau 2007: 469-470). Chief Engineer Fisk, now General Superintendent, reported that moving the towpath would be advantageous as it would "free use of the towpath and canal occasioned by the loading and unloading of boats at Davis' Mill" and the Board furthermore stipulated that "a large coal business can be acquired, if this change is made" (Bearss 1961: 22).

By mid-summer 1854, the land needed for this endeavor was secured and work on relocating the towpath began in the spring of 1855. In conjunction with this project, new towpath bridge were erected across the canal above the Alexandria Aqueduct at Warren/37th Street. This new towpath bridge allowed mules and drivers to pass over the canal from the river side towpath west of Warren/37th Street to the berm side towpath to the east (Bearss 1961: 22; Kytle 1983: 75). By June 30, 1855, the augmented towpath was complete and noted as "very beneficial" because the "move left the lower bank free for the construction of sorely-needed unloading facilities, including basins, wharves and railway chutes connecting to the riverfront (Unrau 2007: 470). The 1855 request of Georgetown merchant Alexander Ray to build a boat basin on the south side of the canal (between Frederick and Market Streets on Lots Nos. 32 and 33) is illustrative of the aforementioned changes. From this boat basin, an elevated railway was also built over Water Street to the Potomac River. This elevated railway was constructed by Aetna and Midland (two Allegheny coal companies) in 1858 and it allowed for the easier transportation of coal from canal boats to river boats. Numerous other elevated railways were constructed throughout this era across the western end of the waterfront, which can be seen in Albert Boschke's 1861 map and Major William P. Craighill's 1857 Hydrographic Map of the Potomac River (Georgetown Historic Waterfront 1993: 43-47, 53).

As hoped, the shift in towpath stimulated the construction of wharves along the waterfront. Alexander Ray, the successful agent for the Loacoming Coal & Transportation Company, purchased Lots Nos. 29 and 30 (between Market and Potomac Streets) for constructing moors and docks. Lot No. 29, in particular, featured a tailrace that entered the Potomac River creating a dock for mooring barges. Ray also purchased Lots Nos. 34 through 46 which "ran 441 feet S. side Water street, back to the river---with wharves" (Georgetown Historic Waterfront 1993: 64; CoFA 1968: 188). These lots were named Ray's Docks (also referred to as the Lower Coal Wharf) and from directories it is known that they were used for coal storage and shipping (CoFA 1968: 188). It is also known that Ray's Docks drew excess canal water as a power source from 1858 to 1880, while Upper Coal Wharf (between Water and Lingen Streets) used canal water from 1856 to 1880 and the coal wharf of William
A. Bradley (between Water and Fayette Streets) used canal water from 1859 to 1860 (Unrau 2007: 693).

While modifications to the towpath spurred additional industrial enterprises, the Georgetown bridges were viewed as a hindrance to commerce. Specifically, the wooden Frederick/34th Street, Duck Lane/33rd Street, and the Market House Bridges were in constant need of repair. In 1833, William Spaulding was awarded the contract to paint the bridges an unspecified color. By 1837, the Frederick/34th Street and Duck Lane/33rd Street bridges were in a state of disrepair due to heavy use. The C&O Canal clerk sent out requests for bids and Noah Drummond's proposal was accepted with a total bid of $650. However, unable to obtain the needed lumber for sills and rails, Drummond withdrew his bid and K. Lambell, the second lowest bidder at $700, was awarded the contract. Unfortunately, given the available documentary resources the dates for the reconstruction of the Frederick/33rd Street and Duck Lane/34th Street bridges is currently unknown (Bearss 1961: 10-11).

On May 27th, 1827, the two wooden bridges constructed by Easby to the immediate east and west of the Market House were noted by Superintendent Young of the Georgetown Division as unsafe and temporary repairs were made. Due to the financial position of the company they were simply "shored and propped to prevent a complete collapse" (Bearss 1961: 11). It wasn't until 1839 that Young was given permission to reconstruct the western bridge given that it was raised to accommodate the passage of "large covered, unloaded vessels." Captain Easby, who was contracted for the project, drew up a plan that specified that there should be no "less than 9 feet from the water surface to the bridge" and on December 7, 1839 Easby's proposal was approved. Work began immediately, but on January 12, 1841, the bridge was destroyed by a flood (Bearss 1961: 12-13). Unable to finance the rebuilding of the bridge, the Board of Aldermen sought a resolution with the C&O Canal Co. Specifically; the Board proposed that the city finance the rebuilding of the bridge west of the Market House provided that they were repaid once the canal company's financial condition warranted it. For some years, the canal company did not respond to the proposal, but on August 2, 1844, $10,000 was issued in corporation bonds for the raising of Georgetown's bridges. This loan, which was contingent on the remodeling of the bridge west of the Market House, went instead to the repair of the two Market House bridges. By February 15, 1845, Matthias Duffy was contracted to construct the bridge and on December 29, 1845, the bridge to the west of the Market House was finally rebuilt. Interestingly, the eastern bridge had been reconstructed in August 1844 (Bearss 1961: 13-14).

By 1845, the wooden bridges at Frederick/34th Street) and Duck Lane/33rd Street were yet again in a dangerous condition. This was noted by Chief Engineer Fisk and Georgetown's Mayor Addison following a survey of the Georgetown Level. The C&O Canal Company was informed of this issue, but no action was taken. For safety reasons, the structures were closed to vehicular traffic the following year and on August 24, 1846 Mayor Addison declared to canal company President Coale that it was "a matter of surprise that they had not long since given away" (Bearss 1961: 14). In the following months, the Frederick/34th Street Bridge was dismantled and on April 20,, 1847 Superintendent Lambie requested $200 for the purchase of lumber to rebuild the two bridges. Due to a June drought, the shipment of lumber was delayed, but by June 30, 1847 the Frederick/34th Street Bridge had been rebuilt and by September 15, 1847 the Duck Lane/33rd Street Bridge had been rebuilt. By July 24, 1848, Superintendent Lambie reported that all the Georgetown bridges, except for the bridge to the east of the

Market House, were in good condition (Bearss 1961: 15).

By autumn of 1849, the canal was nearing completion and many Georgetown businesses and civic leaders were concerned about the current state of the canal and river-front shipping facilities. In a letter to Mayor Addison on October 29, 1849, Chief Engineer Fisk presented the current condition of Georgetown's bridges and his solution:

Several of the Canal bridges in Town, are entirely too low. Above Georgetown, the established height of bridges…is seventeen feet, in the clear, above water surface…While in Georgetown, some of the bridges are not more than 7, 8, 8 1/4 and 9 feet, above the water, and the Market house over the canal, with the full depth of water in the Canal, would not be more than 7 1/4 feet. Even now, with less than 5 feet water in the level above Lock No.4, there are boats on the Canal, that cannot, when unloaded, pass under same of the bridges in Georgetown. This evil should be remedied. No bridge in Town should have a less height, in the clear, above Canal water surface, than 10 feet…" (Bearss 1961: 17).

Furthermore, Fisk reported that the width of the canal "is too little for the convenient loading and unloading of boats…and the free passage of boats up and down the line of the Canal, —and there is no place in Town where boats that unload above Lock No. 4 can turn" (Bearss 1961: 17). Considering the height of the bridges and the width of the canal, Fisk suggested the following improvements:

1st. The raising of the bridges, in Town.
2nd. The moving of the towpath bridge up to a point above the [Alexandria] Aque-duct. 3rd. The widening of the Canal from the Aqueduct to Frederick street.
4th. The making of the [boat turning] basin between Frederick and Market streets. 5th. The widening of the Canal between Market and Potomac streets.
6th. The making of the basin between locks No. 3 and 4, and
7th. The making of the branch canal east of Greene street, and of the basin between that and Washington streets (Bearss 1961: 18)

On May 1, 1850, Georgetown Mayor Walter Lenox and the Board of Aldermen petitioned the C&O Canal Co. to raise the Georgetown's bridges and on June 2, 1851, the C&O Canal Board instructed Fisk (now General Superintendent) to submit plans and estimates. By March 30, 1852, Fisk informed the Board that of the nine bridges in Georgetown only the High Street/Wisconsin Avenue Bridge had an elevation sufficient for the passage of boats. The remaining bridges (four stone bridges with an aggregate span of 84 ½ feet and four wood bridges with an aggregate span of 216 feet) were to be raised. Given that the bridges above Georgetown (which ranged in height from 12 to 17-feet) did not interfere with traffic, Fisk proposed that the Georgetown bridges have a clearance of 12-feet. However, the Greene/29th Street, Washington/30th Street, and Jefferson Street bridges were to have a clearance of 10 ½ feet because their livery spanned short levels. Furthermore, the Market House bridges were to be raised and the portion of the Market House above the canal would have to be raised 2- feet. Although the Board determined that it was expedient "to raise [the bridges] in a permanent

manner," the C&O Canal Co. had difficulties obtaining funds. As such, the raising of the Georgetown bridges was delayed for some years (Bearss 1961:19).

In the meantime, on July 29, 1852 Fisk reported to the Board that the bridge east of the Market House was unsafe and recommended that it be closed to traffic. As the canal company did not have the funds to repair the bridge, the Board of Aldermen loaned the money if they were reimbursed. That same year, the bridge was rebuilt, "on such [a] plan and at such [an] elevation," as Fisk proposed. Further research is needed to determine the exact specifications (Bearss 1961: 21). By November 1857, the bridge west of the Market House needed to be rebuilt, but the canal company did not have the funds for its rebuilding. The Board of Aldermen again agreed to advance the money as well as follow the canal company's request "that if said bridge be reconstructed by the Corporation of Georgetown [as the one east of the Market had been], that it be elevated two feet higher than the former bridge, to facilitate trade in Georgetown" (Bearss 1961: 23). Unfortunately, records at the National Archives are not clear as to if the bridge was ever raised. By 1859, the Georgetown bridges had not been raised because of difficulties obtaining the needed funds from Congress (Bearss 1961: 23).

Canal Boat Excursions on the Georgetown Level

In the spring of 1831, packet services commenced on the canal for the transportation of mail. These boats also offered long-range passenger services/pleasure excursions from points in Georgetown to locations further west including, Great Falls, Seneca, and Harpers Ferry. On July 1, 1831, the C&O Canal Board officially granted permission for the proprietors of the George Washington and Tyber to navigate on the canal provided that they follow regulations passed by the Board:

No boat shall be used as a Packet Boat on said Canal, unless specially licensed therefore, which license shall give to the said Boat the privilege of carrying passengers to and from any point on said Canal, between the Basin at Georgetown and Rushville: and the owner or master of said Packet Boat shall pay for every trip up or down between said Basin and Rushville, or any intermediate points, the sum of one dollar and fifty cents, which sum shall be paid weekly to such Collector as authorized or receive the same, and on any failure to pay the said sum, or fraudulent return by the owner, master, or the other person having charge of the said Boat, of the number of voyages made in the week by said Boat, its license shall be forfeited (Unrau 2007, 338) .

In the following days, C&O Canal Clerk Ingle granted licenses to W.W. Fenlon, L.M. Offut, and Charles Embry to operate the Charles Fenton Mercer, George Washington, and Lafayette, respectively. There was an advertisement for the George Washington in the July 3, 1832 issue of the Columbian Gazette which stated that the boat made daily runs from the Frederick/34th Street Bridge to Great Falls and back for a cost of 50 cents per person. Dinner was included and served at the Crommelin House. The Lafayette advertised in the same issue that it offered $1.00 trips from Georgetown to Great Falls and could accommodate 100 passengers and 20 couples "in a cotillion at a time.' Dinner could be purchased on board (Columbian Gazette, July 3, 1832). These excursions, however, proved unprofitable and the Lafayette was sold to the

canal company on January 12, 1833. By 1834, only the Charles F. Mercer continued to operate on the canal (Unrau 2007: 338-339).

On April 27, 1833, during the decline of long-range packet services, Captain William Easby sent a proposal to the canal company for the construction of a sheet-iron packet. The C&O Canal Company accepted Easby's proposal, as a packet service between Georgetown and Harpers Ferry was desirable as the canal was watered between Dam Nos. 2 and 3. By March 1834, The President was completed at a cost of $1,400. The President proved to be unprofitable and by December 11, 1836, the C&O Canal Board ordered that the boat be sold. The Charles F. Mercer, however, continued to operate on the canal and the C&O Canal Company promoted excursions from Georgetown to Great Falls, Seneca, and Harpers Ferry. In August of 1835, President Andrew Jackson and 50 guests accompanied by the U.S. Martine Band travelled on the canal from Georgetown to Seneca. The excursion included a "sumptuous meal" and "a great variety of good things, embracing an abundance of the choicest luxuries of the season, and a generous supply of capital wines and beverages." Similarly, in the spring of 1836 a group of Congressmen travelled from Georgetown to Harpers Ferry at a cost of over $1,700 on the Charles F. Mercer (Unrau 2007: 339-340).

On September 11, 1835, in effort to stimulate packet services on the canal, the C&O Canal Company entered into a contact with O. M. Linthicum's Georgetown Canal Packet Company. This contract allowed the private packet service to operate daily packets between Georgetown and Harper's Ferry for one year free of tolls. The packet service was a success and service was extended to Shepherdstown. However, by the summer of 1836 the C&O Canal Company was dissatisfied with the quality of the Georgetown Canal Packet Company's boats. The two companies failed to settle terms and by 1837 it appears that the Georgetown Canal Packet Company was no longer in operation (Unrau 2007: 340-341).

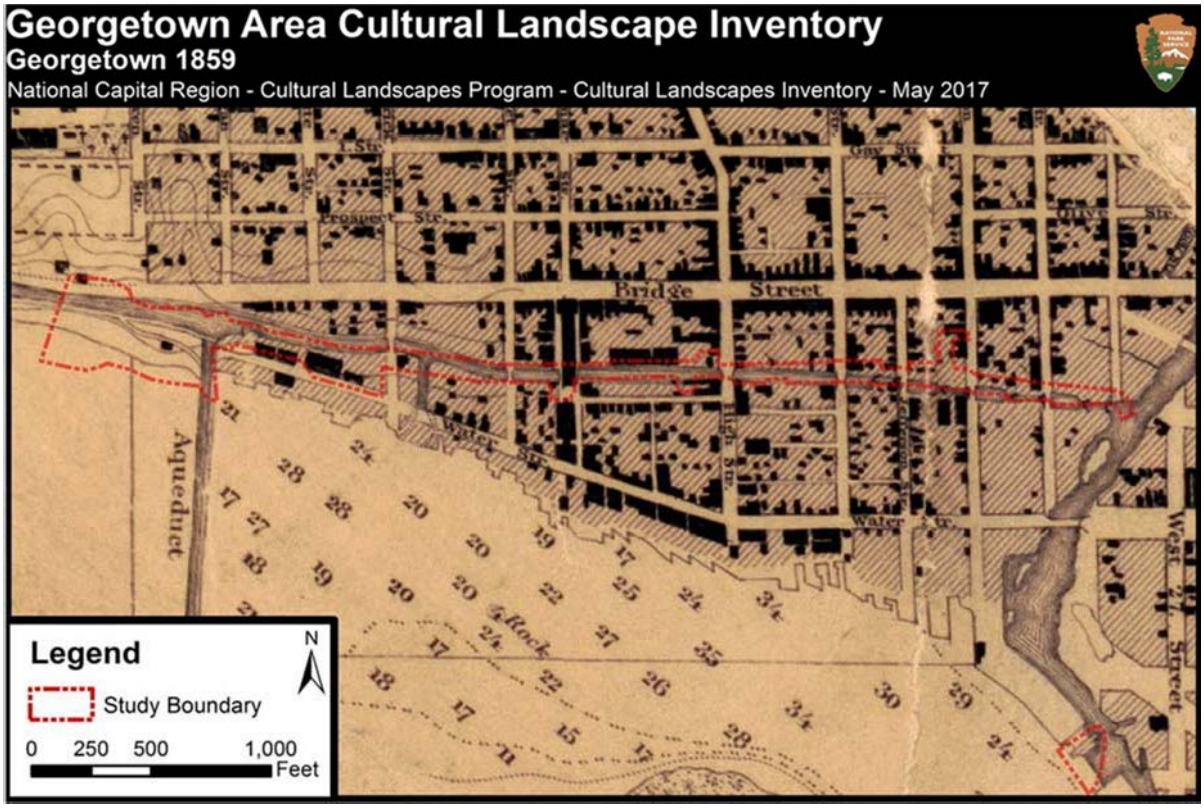
In 1851, with the completion of the waterway to Cumberland, the C&O Canal Company promoted steam packet services. The C&O Canal Board authorized Reeside and Lynn on September 22, 1851 to operate two to three packets on the canal from Georgetown to Harper's Ferry free of charge for two years. It is not clear if the packet company established by Reeside and Lynn survived, as there are no extant records. There were, however, other packet boats operating on the canal. On June 4, 1853, the C&O Canal Board granted permission to Volney Pursell to run the steam packet Congress between Georgetown and Harper's Ferry (Unrau 2007: 356). In the March 20, 1854, issue of the Evening Star an advertisement was posted for the Fashion. This pleasure boat made tri-weekly trips to Great Falls and the Potomac Aqueduct from Ritter's Wharf in Georgetown. The advertisement promised that, "passengers may reply on every attention being paid to their comfort" (Evening Star, March 20, 1854, pg. 2).

In the August 1, 1856 issue of the Washington Evening Star, an advertisement was titled "First Grand Excursion of the Butchers of Georgetown to the Great Falls & Water Works." This excursion was scheduled for August 4, 1856 and the advertisement assured "that no pains will be spared to make it decidedly the most agreeable trip of the season." The boat was schedule to leave from Ritter's Wharf and refreshments were to be provided on the way to the large hall at Great Falls where "the best Cotillion Music, has been engaged for the occasion" (Evening

Star, August 1, 1856). The C&O Canal Company also approved the long-range steam packet service boats the Argo (c. 1856), the Flying Cloud (1860), and the Antelope (1860) (Unrau 2007: 357; McCarthy 2014).

Additional research is needed regarding the development passenger excursion on the canal in the context of Potomac Valley tourism.

]



Georgetown 1859. Original image used is from the Library of Congress. During this period, development occurred along both side of the canal (NCR CLP 2017).

Civil War (1861-1865)

Overview

During the Civil War, the waterway served as part of the border between the Union and Confederacy. The Union troops used the C&O Canal to transport supplies between

Washington, D.C. and Harpers Ferry and the towpath was used as a military road to move troops up and down the Potomac (NR Update 2015: 8, 152, 184). On December 16, 1861, the Alexandria Aqueduct was drained as part of the war efforts. This, as well as the canal being watered to one-half of its capacity, caused long and costly delays and hindered navigation. As a result, canal-related businesses suffered and numerous Georgetown mills were forced to close (Unrau 2007: 732). However, as a convenient outlet to the tidewater was needed, Congress created a bill in 1862 for the raising of the Georgetown bridges. By early fall 1865 both the streets and bridges were raised to the east and west of the Market House (Bearss 1961: 23-24).

The C&O Canal during the Civil War

During the Civil War, the C&O Canal was part of the dividing line of the Union and Confederacy. As such, its facilities were raided, appropriated, and destroyed by the contending armies at various points throughout the war. This resulted in an irregularity of service, which made the waterway an unreliable mode of transportation for the government and private shippers. Consequently, trade decreased along the canal during the war, which further threatened the financial position of the canal company. Additionally, the flour trade, which was already suffering due to competition with the Baltimore and Ohio Railroad, was lost to the railroad (Unrau 2007: 707; Civil War, 53). However, the C&O Canal benefited from the large demand for Maryland's "super-coal" as Virginia coal was no longer available to the northeastern market and the Union cause. By 1865, coal accounted for more than 90% of trade on the waterway and by the end of the war 340,290 tons of coal had been shipped along the canal as compared to the 283,249 tons shipped prior to the start of the Civil War (Snyder 2011: 235). Despite irregularities in trade and the loss of the flour trade, the net income of the canal company rose during the war years. This increase was not due to a marked increase in trade, but a decrease in maintenance and repairs along the canal as well as the raising of toll rates during the period (Unrau 2007: 707).

Georgetown Context during the Civil War

From 1861 to 1865, the Georgetown section of the C&O Canal did not undergo any significant changes. Trade, however, was greatly affected as skirmishes were fought along the canal near Georgetown. The first skirmishes near Georgetown took place in 1861 when bands of Confederate pickets established themselves near the Alexandria Aqueduct. In late April and early May 1861, Federal troops carried out various attacks against these pickets and by May 23 the Alexandria Aqueduct was under Federal control (Unrau 2007: 710). The Federal Government, recognizing the aqueduct as one of three potential routes to invade Washington, seized control of the aqueduct and drained it on December 16, 1861. The bed of the aqueduct was then used as an ordinary bridge with a wooden approach connecting the Georgetown section of the C&O Canal with the Georgetown abutment at 36th Street (Georgetown Historic Waterfront 1993: 59).

In March 1862, another important military operation occurred near the Georgetown section of the C&O Canal. Specifically, as the Federal Government was in a state of panic over the Confederate ironclad Merrimack, Capt. John A. Dahlgren (commandant of the US Naval

Yard) proposed that the U.S. Government block the channel of the Potomac River. Following a meeting of cabinet and military officials, the government decided to commandeer approximately 100 boats and bring them to the canal mouth at Georgetown, fill them with rocks, and sink them in the Potomac River to block the channel (Kytle 1983: 98; Civil War 60; Snyder 2011: 88). On March 9th, 1862, two steam tugs (each with eight ballasted canal boats in tow) were prepared to depart and block the canal. The following day, Gideon Welles (Secretary of the Navy) called off the operation because President Lincoln had not sanctioned it. Following an agreement that no obstruction be placed until it was known that the Merrimack was approaching the Potomac; only 31 of the 100 boats seized were transported to the lower Potomac to await orders. In the end, only six or eight were actually sunk, while the rest were returned to their owners (Sanderlin 1945: Snyder 2011: 109). Interestingly, a long line of canal boats were left moored at Georgetown into the spring, which Secretary of War Edwin M. Stanton referred to as "Stanton's Navy" (Snyder 2011: 109). These boats were not used again in the wars efforts until October 1862 and June and July of the following year (Sanderlin 1945: 60).

The Georgetown Waterfront in the Civil War: The Impacts of War & Flooding on Trade
During the Civil War, a freshet struck the canal and water levels rose to the highest level recorded since the great April 1852 flood. This flood destroyed most of the wharves in Georgetown and repairs were delayed, as crews feared confronting Confederate troops. The reluctance of canal repair workers hindered commerce and it was not until Union troops were dispatched to protect workers that the pace of repairs quickened (Shaffer 1997: 37; Unrau 2007: 297). Financially, the canal company was struggling and on July 1, 1861 President Spates urged Clerk Ringgold to collect Georgetown miller's water rents, totaling $1,000, in advance for repairing $500 worth of damage to the stop lock at Dam No. 4. This repair was essential, as it would enable stranded coal boats to continue on to Georgetown (Unrau 2007: 741). However, the war had forced several Georgetown millers to shut down operations. These millers were unable to pay the advance and asked to be relieved of water rents. Bomford's Mill, for instance, closed due to the war inflationary wages and expenses, the scarcity and high price of cotton, and the reduction of trade along the Georgetown section of the C&O Canal (Unrau 2007: 712). The Columbia Mill, on the northwest corner of Water and Fayette Streets, was forced to sell the mill, as commerce was sporadic at best (Unrau 2007: 732).

As noted by Superintendent Horace Benton, the Georgetown Level became run-down during the Civil War as the canal company could not finance repairs, specifically, repairs to Lock No. 3 (Unrau 2007: 741). This hindered navigation in the Georgetown section of the C&O Canal and in July 1863 the Washington Evening Star reported that the Georgetown wharves were clear of vessels and "business is at a standstill" (Snyder 2011: 124, 169). Problems with navigation to Georgetown continued into 1864 and the Washington Evening Star reported that in Georgetown "there is nothing doing in the canal, although the panic created by the rebel raid has subsided. The water [in the canal] continues to be very low, which would hinder the passage of laden boats, even if no other hindrance [sic] of trade existed" (Snyder 2011: 196). They also reported on July 16, 1864, following Jubal Early's raid on Washington, "the suspension of active business is felt by all Georgetown merchants" (Snyder 2011: 201). By August 22,, 1864, the only goods received at the Georgetown wharves was wood from farms within 20 miles of town, ice from Middleton's ice-houses 12 miles away, and a few bushels of

grain (Snyder 2011: 208).

Despite trade fluctuations and the closing of various mills, including the Duvall's Foundry, Georgetown merchants and entrepreneurs continued to invest in commercial activities. Browns Bakery,on the northeast corner of Water and Lingan Streets, was bought in 1860 and converted into a running flour and grist mill by John Hutton, while Abraham Herr purchased a flour mill, on Water/K Street between Water and Fayette Streets, in 1861 from Davis Boyd & Taylor (originally Thomas J. Davis). Herr's head miller, Welch, operated this mill, called the Columbia Flouring Mill or Columbia Mill. Furthermore, in 1862 the iron foundry of John Rynax, on the southwest corner of Water and Fayette Streets, was purchased and turned into a grist mill by Mark Young and the Potomac Paper Mill Co., on the northeast corner of Water and Potomac Streets, was established by George Hill Jr. in 1864. In 1864, Herr purchased Bomford's Mill (then owned by Thomas Wilson and operated by A. Pryor Williams & Co.) and turned it into a prosperous flour mill called the Pioneer Cotton Factory or Pioneer Mill (Unrau 2007: 659). Benjamin Darby and George Shoemaker, Jr. purchased the Robinson Mill, on the north side of Water Street between Potomac and Market Streets, which had closed because of war-induced cutbacks. This flour mill was converted into a flour and grist mill and was named Rivers De Mill (Unrau 2007: 756-757).

Prosperity during the Civil War was also reflected in the undertakings of Georgetown's wharves. In 1864, the Consolidation Coal Company (on Linthicum's wharf at the foot of Market Street on the riverfront) installed new hoisting machinery to improve the transshipment of coal. To operate the hoisting apparatus, the company went into a lease with the canal company that stipulated that they could:
take so much water from the canal, not exceeding the quantity necessary to pass a loaded boat into the river and back again as may be needed to make their experiment with the pneumatic cylinder in transferring coal from the canal to the river (Unrau 2007: 764).

This lease was similar to that granted earlier to Ray's Dock's, immediately west of Market Street, extending to the waterfront wharf near the southwest corner of Water and Market Streets, and Swanton Coal Company , located at the southeast corner of Water and Lingen Streets on the waterfront (Unrau 2007: 699, 764).

Other developments across Georgetown include the division of lot 74, the Dodge Warehouse, in 1861. The southern half was sold to William Edes, a flour merchant who obtained a government contract for transporting flour (Georgetown Historic Waterfront 1993: 23). By 1865, the old Georgetown Market was torn down and the existing one-story red brick building, 40 feet in length, was erected on the fieldstone foundations of the earlier market. This newer building maintained the market-house arcaded style and the word "Market" was painted in the pediment over the M Street door (Georgetown Historic Waterfront 1993: 25).

The Georgetown Section of the C&O Canal during the Civil War
The canal proper was also affected by the aforementioned war efforts (Kytle 1983: 96). In particular, the draining of the Alexandria Aqueduct caused "long and costly delays… [as] the

boats lined up on the Georgetown level above the aqueduct, awaiting their turn to unload." Prior to the war, these delays could be avoided as the aqueduct served as an alternative outlet to the tidewater (Snyder 2011: 88; Bearss 1961: 17). Recognizing that a convenient outlet was needed "in place of that which has been interrupted by the occupation of the aqueduct," Congress drafted a bill (House Resolution No. 54) in 1862 for "reconstructing the bridges and market-house in Georgetown" which were "entirely too low" (Bearss 1961: 23; Unrau 2007: 744-745).

By March 1863, Congress had authorized the appropriation of $13,000 for the raising of Georgetown's bridges. On April 8, 1865 the Board of Aldermen resolved that the bridge west of the Market House had to be raised, "one foot five inches, at its highest point above its present elevation… and that the grade of the street may be changed as to suit the elevation of the bridge." However, the bridge on the eastern side of the building was to be raised to have a clearance of 11-feet above the top of the prism (Bearss 1961: 23-24). A few days later, on the April 10, 1865, the Corporation of Georgetown agreed to raising the bridges east and west of the Market House to a height of 11-feet above the water line. By July 12, 1865, the streets were raised west of the Market House and by early fall the streets and bridges were raised to the east and west of the Market House (Bearss 1961: 23- 24). Unfortunately, the remaining bridges were not raised and they continued to obstruct trade along the Georgetown Section. To combat this problem, Georgetown merchant Edward M. Linthicum submitted a proposal to the Board on February 18, 1864, suggesting that an inclined plane be built west of the Aqueduct "to pass boats from the canal to the river." Although the Board was enthusiastic about the idea, the uncertainties of the war and financial position of the canal company halted progress until the 1870s (Unrau 2007: 743, 754).

Post War Years (1865-1870) and Prosperity (1870-1875)

Overview

After the Civil War, the C&O Canal entered into its "Golden Age" as total tonnage shipped increased and canal revenues rose. Furthermore, by December 1868 the canal company was able to appropriate $100,000 for William R. Hutton's repair and improvement program. This program called for the addition of a "rip rap or slope wall" to the canal embankments, the raising of an unspecified 20-mile of towpath, and the desilting of the Rock Creek Basin and the Georgetown Level. By August 1866, Dewalt & Co. had been contracted to raise and construct iron bridges at Congress/31st Street, Jefferson, Washington/30th Street, and Greene/29th Streets (Bearss 1961: 24-25; NR Update 2015: 8, 164; Unrau 2007: 480-484; Shaffer 1997: 39-41).

The C&O Canal after the War: Post War Recovery & Prosperity

Following the Civil War, the canal emerged deteriorated and in need of extensive repairs. The canal company president and C&O Canal Board ordered Charles P. Manning, the engineer and general superintendent, to examine and report on the condition of the entire line. In his report, Manning recommended the repair of the masonry wall at Dam No. 5 and a systematic program for dredging. Furthermore, he suggested that the canal company end the sale of canal water for manufacturing; as such, an action would minimize silting in the Rock Creek Basin and Georgetown Level. By July 1866, repairs commenced on Dam No. 5, but its completion was

delayed because the cofferdam was destroyed in the October 1866 flood. In the spring of 1868, two freshets struck that canal which also delayed rehabilitation work, though the majority of damage occurred to Dams No. 1 and 2 and the Rock Creek Basin. By 1869, the repair of Dam No. 5 was complete with no further actions being taken to dredge the canal prism (Shaffer 1997: 38-39; Unrau 2007: 301).

It is in this environment of repairs and rehabilitation that the C&O Canal began to prosper with total tonnage shipped increasing from at 265, 847 tons (coal accounting for 229,416, flour accounting for 8,566) in 1863 to 290,772 tons (coal accounting for 260, 368 tons, flour accounting for 5,962 236 tons) in 1864. By 1865, 80,000 more tons coal were shipped than in 1864 (340,736 tons in 1865). The total tonnage continued to rise to 521,402 tons, coal accounting for 458,009 tons, in 1867. 552,987 tons, coal accounting for 484, 849 tons, in 1868A a record level of 723, 938 tons of cargo, coal accounting for 661,828 tons, were recorded in 1869 (Kytle 1983: 100; Snyder 2011: 235-236; Unrau 2007: 474, 477). With the rise in tonnage came a rise in canal revenue and by 1867 the canal company had paid off nearly all of its debts on the Virginia repair bonds (this debt was paid off by 1871). The canal company also began to pay off interest on the preferred construction bonds (Kytle 1983: 100; Shaffer 1997: 39).

In December 1868, this newfound prosperity allowed for the appropriation of $100,000 for a new repair and improvement program. As part of this program, which was developed by Chief Engineer William R. Hutton in July 1870, a “rip rap or slope wall” was to be added to the canal embankments, an unspecified 20-miles of towpath was to be raised, and the Rock Creek Basin and the Georgetown Level desilted. At the end of the 1870 boating season, the repair of the C&O Canal commenced and by the winter of 1870/1871 the Conococheague aqueduct had been repaired, a flume had been constructed at the guard bank at Dam No. 4, and the Georgetown Level had been desilted. By August 1872, C&O Canal Company engineer Hutton proposed additional repairs to the aqueducts, locks, dams, and other structures, which Thomas L. Patterson (successor to Hutton) completed in the following years. By 1876, C&O Canal Co. President James C. Clarke declared that the canal was in “excellent” condition (Shaffer 1997: 39-41).

This repair and rehabilitation program laid the foundation for “The Golden Age” of the canal, which historian Walter S. Sanderlin identifies as between 1870 and 1875. The effect of canal improvements can be seen in increased tonnage from 661,772 tons in 1870 to 968,827 tons in 1871. However, increased tonnage at such a significant rate could not be expected to continue as it had resulted in part from the reopening of the Pennsylvania mines earlier that year. Although commerce did not surpass the high of 1871, trade along the canal continued around this unprecedented level at 923, 581 tons in 1872, 845,248 tons in 1873, 909, 959 tons in 1874, and 973, 805 tons in 1875. Furthermore, despite numerous interruptions in 1872 (a shortage of coasting vessels in Georgetown, a severe drought from August to September, and a premature closure of the canal) canal tonnage was at 923,581 tons, which was 261,809 more tons than 1870 (Unrau 2007: 480-484).

During this period, the C&O Canal also prospered due to a new source of business: the gas coal trade. Specifically, in an attempt to profit from this new business, the C&O Canal Board

granted rebates to several large companies in western Pennsylvania. By 1873, approximately 16,000 tons of gas coal had been shipped along the canal, while only 3,000 tons of gas coal had been shipped in 1870/72. In 1874, the total tonnage of gas coal had increased to 65,000 tons, but by 1875, tonnage had decreased to 40,000 tons because the amount of sulfur in West Virginia gas coal surpassed the inspection standards of the District of Columbia. For the remainder of the decade gas coal trade consisted of an average of 22,000 tons of Toughioghany gas coal (Unrau 2007: 480). Water rights, however, continued to be a valuable source of income for the canal. By 1866, fifteen mills from Georgetown to Little Falls had been granted water leases. Furthermore, water leases were also granted to warehouses and dry docks near locks, towns, and ferries (NR Update 2015: 192).

The Georgetown Waterfront and Canal in the Post War/Prosperity Years

Following the end of the Civil War, the Alexandria Aqueduct remained under federal control. On September 5, 1866, the C&O Canal Board resolved to ask President Andrew Johnson to intervene, as it was estimated that the army occupation of the Aqueduct cost the canal an estimated $75,391.96 for the years 1861 and 1862 and $292,330 for 1863 and 1864, which made an aggregate loss of $367,721.96 (Snyder 2011: 239; Unrau 2007: 770). Unfortunately, it was not until 1867 that the aqueduct was released to the canal company and it was in such a state of disrepair that it was leased to the Alexandria Railroad and Bridge Company. In 1868, the Alexandria Railroad and Bridge Company repaired the aqueduct and was authorized by Congress to build a highway bridge over the trough and charge tolls. The building of this new bridge involved the removal of the original Queen-post truss bridge and the addition of a wooden superstructure of Howe trusses, which were strengthened at the sides by laminated wooden arches. The new bridge had two levels with the “lower chord of the truss supporting the canal trough and the upper supporting the toll road” (Snyder 2011: 239; Georgetown Historic Waterfront 1993: 59-60).

In January 1866, the C&O Canal Board ordered the removal of coal unloading platforms, which extended 10-feet over the river side of the prism. These wharves, including the Cumberland Coal and Iron Company and the Borden Mining Company wharves, impeded navigation through Georgetown. However, by the 1870s Georgetown was prospering with some two-thirds of the shipments from Cumberland to the Potomac Aqueduct being unloaded at the Georgetown wharves from 1870 to 1877. This increased trade proved to be a burden as the Georgetown wharves were unable to handle the increased tonnage. As a result, traffic jams of 60 to 80 boats at a mile and a half long experienced costly delays across the Georgetown Level. These rows of canal boats not only formed because of “the clamoring boatmen awaiting access to the coal wharves”, but also because the canal was not “wide enough to accommodate the ordinary traffic to and from the Rock Creek Basin and the Potomac Aqueduct” (Kytle 1983: 102; Unrau 2007: 479).

With the overburdening of Georgetown’s wharves, unregulated private wharf owners were able to charge ‘exorbitant’ wharfage fees (Unrau 2007: 479). To combat this issue, as well as the delays caused by congestion, the C&O Canal Board granted permission to various coal companies (i.e. Baltimore and Borden Coal Company, New Central Coal Company, Georges

Creek, and Cumberland Coal Company) to enlarge and improve their basins and wharves in Georgetown (Unrau 2007: 482). They also contracted
H.H. Dodge, a politician and president of the Potomac Lock and Dock Company, on May 10, 1872 to construct an outlet above Georgetown where canal boats could gain access to the Potomac and be towed down the river to points below Georgetown. The canal company shifted plans, deciding to construct an incline, as "an outlet lock capable of lowering canal boats between the waterway and the river would require more water than was often available on the Georgetown Level." The contract for the construction of the incline plane (or "outlet incline") was awarded to the Potomac Lock and Dock Company and work began in the spring of 1875 (Georgetown Historic Waterfront 1993: 52).

The aforementioned increase in trade led to the establishment of two new mills: a flour mill owned by D.L. Shoemaker (located on the Water Street at the corner of High Street) and a flour mill owned by Beall and Shoemaker (located at 73 Water Street). From 1870 to 1875, thirteen mills were in operation. Perhaps not surprisingly, the misuse of surplus canal water was addressed during "The Golden Age" as the canal company needed to ensure sufficient water levels to sustain increased navigation. C&O Canal Company President Arthur P. Gorman resolved the issue of canal water misuse, placing gauges on the canal banks to measure water use (Kytle 1983: 103-104).

The Georgetown Section of the C&O Canal: Development in the Post War/Prosperity Years

In regards to the canal proper, the Georgetown Level was in a poor condition and extensive desilting was needed. In the late 1860s, Charles P. Manning proposed the desilting of the Georgetown Level.
However, these efforts were delayed as the available funds went to the rebuilding of Dam No. 5. In December 1868, $100,000 was allocated for the repair of the canal and at the end of the boating season in 1870, the desilting of the Georgetown Level began. By 1872, the desilting of the canal prism had been completed though dredging activities continued in Georgetown through the winter of 1873/1874. It was noted in 1876 by C&O Canal Co. President Arthur P. Gorman that the canal was in "excellent" condition although the dredging of the canal prism and rebuilding of retaining walls across the Georgetown Level continued into 1877 (Shaffer 1997: 39-42). Also included in the repair and improvement plan was the raising of the towpath. Unfortunately, there are no extant records that specify what twenty miles of canal towpath were to be raised. As such, additional research is needed to determine if the Georgetown Level was included (Shaffer 1997: 40).

Furthermore, efforts were made to raise the remaining bridges in Georgetown. On June 26, 1866, the Board of Aldermen passed an ordinance authorizing the C&O Canal Company "to substitute permanent Iron Bridges in lieu of the present Stone Bridges over the Canal at Congress, Jefferson, Washington & Greene Streets" (Bearss 1961: 24). A week later, this ordinance was amended to permit the canal company to ""substitute Draw or Pivot Bridges…across the Canal at Washington and Jefferson Streets, for the present Stone Bridges" (Bearss 1961: 24). By August 1866, Dewalt & Co. was contracted to raise and construct iron bridges over the canal at Congress/31st Street, Jefferson, Washington/30th

Street, and Greene/29th Street for $22,000 with an additional
$9,000 being drawn from company funds. Dewalt & Co. began work immediately and on October 10, 1866, W. Von Essen asked the C&O Canal Board to extend the wall north of the canal, east of Congress/31st Street. This was completed using stone and iron railing from the old stone bridge at Congress Street. By early 1867, the four iron bridges were complete and on April 4, 1867 the C&O Canal Board sought a contract for their painting (Bearss 1961: 24-25).

By December 1870, the Superintendent of the Georgetown Division reported that the Market House bridges were again in need of repair. The C&O Canal Board authorized the replacement of the two wooden footbridges "above and below the Market House" with steel spans. By September 1871, they were noted by Chief Engineer Hutton as complete (Bearss 1961: 25; NR Update 2015: 8, 164).

Canal Boat Excursions on the Georgetown Level
After the Civil War, excursion boats continued to operate on the Georgetown Level. These boats were topped with "an inverted rectangular box perforated by windows" and a full-length canvas canopy (McCarthy 2014: 1) The Meigs continued to transport pleasure seekers and the Nellie departed from a point near the Congress/31st Street Bridge to Great Falls. The mule-powered Nellie could also be charted for $10 to Cabin John Bridge or for $12 to Great Falls (National Republican, July 2, 1879). In the July 15, 1865, issue of the Evening Star there was an advertisement for the Eliza Hutchins which left from Ritter's Wharf in Georgetown to Great Falls (Evening Star, July 15, 1865, pg. 3). There was also a May 10, 1867 advertisement in the Evening Star for the Minnesota (Evening Star, May 10, 1867, pg. 3).

This photograph shows the canal looking east towards 33rd Street. On the river side of the canal a worker is unloading goods from a barge. "C&O Canal and Wisconsin Avenue Bridge, Georgetown, Washington, D.C." 1890. From the Library of Congress (https://ww

This historic photograph of Wisconsin Avenue Bridge was taken looking east from the towpath level of the C&O Canal. "C&O Canal and Wisconsin Avenue Bridge, Georgetown, Washington, D.C." 1890. From the Library of Congress (https://www.loc.gov/item/96502917

Decline (1876-1889)

Overview
In 1876, trade on the C&O Canal began to decline due to competition with the B&O Railroad and the Panic of 1873, which reduced the volume of cargo shipped. The C&O Canal Co.

recognized that the waterway was not going to provide a profit and the decision was made to sustain trade at its current level by reducing toll rates. However, the continued reduction of rates threatened canal revenues and the company's ability to pay interest on repair bonds. Furthermore, the canal company could hardly finance even the most basic of repairs, which resulted in the selling of repair bonds. By 1887, the last of the repair bonds was sold and the canal company had no resources should another disaster strike. In May 1889, a record-breaking flood devastated the canal. The Georgetown millers advanced $16,000 from future water rents for the repair of the Georgetown Level. By the conclusion of that year, the Chesapeake and Ohio Canal ceased to exist as an autonomous entity (Shaffer 1997: 48-51).

The C&O Canal: An End to an Era

By 1876, trade on the canal declined due to the Panic of 1873 and competition with the B&O Railroad. In particular, tonnage shipped fell from 973,805 tons in 1875 to 709,130 tons in 1876 with toll revenues falling from $458,534.66 in 1875 to $290,274.39 in 1876 (Unrau 2007: 484, 486). C&O Canal Co. President Arthur P. Gorman identified the causes for this plummet in the June 1876 Proceedings of the President and Board of Directors, stating:

The continued depression in all branches of industry has so lessened the demand for coal as to seriously affect our business. The depression has also induced the shippers of coal from other regions and transportation lines leading to tidewater, to reduce the price of coal at commercial centers, so that (a) large reduction in prices was necessary in Cumberland coal (Unrau 2007: 486)

One of the "transportation lines leading to tidewater" was the B&O Railroad, which lowered its rates from
$2.30 per ton to $2.02 per ton in 1876. This forced the canal company to lower its toll and wharfage rates from 51 cents to 46 cents per ton in April 1876 (Unrau 2007: 486). In the spring of 1877, the B&O Railroad also offered the American Coal, Maryland Coal, and Borden Mining Companies private drawbacks of up to 20 cents if guaranteed shipment of 35,000 tons for the year. This agreement accelerated the rate war with the canal company reducing its tolls from 41 cents to 33 cents on April 10, 1877 and then from to 33 cents to 22 cents on August 21, 1877 (Unrau 2007: 488). Furthermore, trade was lost to the B&O Railroad following the boatmen's strikes from June 21 to August 20, 1877 and following the November 24,, 1877 flood that ended the season. In 1877 trade fell to 627,913 tons and toll revenues dropped to $187,756.66 because of the rate war and the canal only being open for 161 days out of the year (Unrau 2007: 488).

In the following years, the C&O Canal Board was aware that it would be impossible to make a profit and that its best effort was to sustain its current level of trade (Unrau 2007: 488). Many efforts were made by the canal company, including:

1) The Board authorized the canal company's president to reduce tolls on all commodities at competing points along the canal. Specifically, between Williamsport and Weverton, C&O Canal Co. President Gorman was authorized to lower the toll on flour from 1 cent to ¾ cent a

ton per mile because the Baltimore & Ohio Railroad had reduced its charges by 4 cents a bushel from Harpers Ferry to Baltimore (Unrau 2007: 487).

2) To reduce canal coal costs and stimulate trade, Gorman also secured the passage of a law by the Maryland General Assembly, which mandated that the Cumberland & Pennsylvania Road reduce its charges from 3 cents to 2 cents a ton per mile. However, it wasn't until May 1877 that the law was upheld (Unrau 2007: 487, 490).

3) Another effort to stimulate trade was the canal company's attempt to secure an independent connection with the coal fields, which would not only reduce the cost of transportation for coal companies, but also the canal company's dependence on the Baltimore & Ohio Railroad. In December 1876 the Board authorized that a survey be completed to determine if "a direct connection between the canal basin at Cumberland and the coal fields [was possible] either by extending the canal to the mouth of the Savage River or [by] construct[ing] a new rail line to the vicinity around George's Creek, the Savage River and Laurel Run" (Unrau 2007: 487,490).

4) The canal company also sought to gain control of freight rates on the canal so as to reduce the profits of other agencies (and ultimately their overall charges), while maintaining profitable tolls (Unrau 2007: 490).

5) Another effort made by the canal company was the reduction of operating expenses, which can be seen in the October 1879 installation of a 3-station telephone line along the waterway. This telephone line was able to provide more effective communication, which allowed the canal company to reduce its maintenance staff. As a result, an annual savings of $12,000 was gained (Unrau 2007: 491).

6) The canal company also attempted to establish trade agreements with its competitors. In particular, in 1880 the canal company was able to come to an agreement with the Baltimore & Ohio Railroad and the Pennsylvania Railroad Companies that fixed charges on canal trade at a more profitable level (Unrau 2007: 491).

Despite these efforts, the coal shipments continued to decline as both the B&O Railroad and the Pennsylvania Improvements to locomotives that allowed railroads to offer sustainable rate reductions. In 1885, the B&O Railroad carried coal at a cost of $1.00 to $1.30 a ton, whereas in late 1865 it charged $5.58 a ton. This reduction was made possible by the development of enlarged cars that could carry three times the amount of coal. In comparison, no significant improvements had been made on the waterway. The carrying capacity of the canal boats – at 112 tons- had remained the same since 1852, while the number of men and mules needed to operate the boats had remained the same since 1830. Consequently, rate reductions were necessary to sustain trade with tolls being reduced from 51 cents in 1880 to 36 cents in 1883, 33 cents in April 1884, and 22 cents in February 1885 (Unrau 2007: 493).

The reduction of tolls resulted in an irregular decline in canal revenues, which threatened the canal company's ability to pay interest on repair bonds. These bonds, if left unpaid for more than two years, would result in the closure of the canal. To compensate for insufficient revenue, the canal company cut expenses by reducing salaries, discharging laborers, and closing staff offices between 1882 and 1884. The canal company also reduced maintenance and improvement work to only include the most essential repairs (Unrau 2007: 493). However, the canal company could hardly finance even the most basic of repairs, which resulted in the selling

of its repair bonds. By 1887, the last of the repair bonds was sold and the canal company had no resources should another disaster strike. In January 1887, C&O Canal Company President Victor Baughm speculated the end of the canal was near, stating:

With a steady and gradually increasing indebtedness, and without a dollar of means to repair in the event of a disaster—a destruction of any considerable portion of the works (though not so disastrous as that of the past season) will amount to—for it will essentially produce—a total abandonment of the canal as a water- way carrier (Shaffer 1997: 47-48).

Revenues increased from $81,718.73 in 1886 to $110,667.83 in 1887 and $121,218.27 in 1888, but the tolls and total tonnage were not sufficient to save the canal from its increasing indebtedness. By May 1889, Baughman's prediction came true with the largest flood in the history of the Potomac hitting the canal from Cumberland to the Rock Creek Basin. The flood completely devastated the canal and a total of $300,000 was need for repairs (Shaffer 1997: 48-51).

On June 19, 1889, under the leadership of C&O Canal Company President Stephen Gambrill, attempts were made to raise funds for the repair the canal. The Georgetown millers advanced $16,000 from future water rents for the repair of the Georgetown section. However, there was no market for sale of new repair bonds granted by the State of Maryland as the canal company could only pledge future revenues as collateral. Contractors also refused to take toll certificates and appeals to patrons were met with no success. According to previously completed research, on December 31, 1889, the B&O Railroad was granted authority of the C&O Canal as they held preferred mortgages on the canal and its revenue (Shaffer 1997: 48-51).

Georgetown and the Decline of Canal Operations

Despite the decline of canal operations, the Georgetown Incline Plane was completed by 1876. It ran at an angle to the canal and featured three sets of railroad tracks. The middle track held a 112 foot long and 17 foot wide caisson designed to carry not only a canal boat with 100 tons of coal, but also enough water to keep the boat afloat. The outer tracks carried cars of rocks, which acted as counterweights as the caisson descended. Pulleys driven by turbine powered by water drawn from the canal then drew up these counterweights. With these mechanisms, the incline was able to lower boats at a 40 foot drop and at a 30 degree slope down the from the canal to the river, subsequently bypassing the four Georgetown locks (High 1997: 61-65; Georgetown Historic Waterfront 1993: 52). The Georgetown Incline Plane was considered an engineering achievement, and a model of the feature was exhibited at the Paris Exhibition in 1876. Ironically, by 1876 the Georgetown Level had no real need for the incline plane due to the decline in canal operations (Unrau 2007: 487). The Georgetown Incline Plane was destroyed in a flood and not restored in 1889 (Shaffer 1997: 48).

During the decline, many Georgetown mills remained in operation. Bomford's Mill/ Pioneer Mill/Pioneer Cotton Factory, located at the southwest corner of Market and Potomac Streets, was depicted in the 1887 Plat of Georgetown as well as the 1888 Sanborn map. The Ray/Arlington Mill, located on the northwest corner of Water and Potomac Streets, was sold to G.W. Cissell & Co. in 1885 and was likely in operation until 1900 (Georgetown Historic

Waterfront 1993: 64). This is suggested by its water lease and its depiction on the 1887 Plat of Georgetown and the 1888 Sanborn map (Unrau 2007: 687). The Columbia Mill, occupying the northwest corner of modern Water and Fayette Streets, was likely in operation until 1887 as it was recorded on the 1887 Plat of Georgetown. However, the mill was identified as vacant on the 1889 the Sanborn map despite canal company records showing a water lease end year of 1901 (Unrau 2007: 686). W.H. Tenney & Son's Capital Mill, positioned on the north side of Water Street, between modern Lingan and Fayette Streets, was illustrated on both the 1887 Plat of Georgetown and the 1889 Sanborn map. River's De Mill, on the north side of Water Street between Potomac and Market Streets, was likely still in operation until 1880 as its water lease ended in 1880.

By 1887, River's De Mill was likely out of operation as the plot of land was marked "to E.M. Linthicum" on the 1887 Plat. The plot was also identified on the 1889 Sanborn map, but the writing was illegible (Unrau 2007: 684). The Potomac Paper Mill, located on the northeast corner of Water and Potomac Streets, failed in 1885, and on the 1887 Plat of Georgetown the property was identified as "Geo. Hill, Jr" (Unrau 2007: 690). On the 1889 Sanborn map, "Geo. Hill, Jr" was identified as "Geo Hill Paper Mill."

Albert Boschke depicted the previously described Canal Warehouse, 3222 M Street, in an 1860 map. However, ownership was not indicated. It is not until the 1887 Plat of Georgetown that the Washington & Georgetown R. Co., the first streetcar company to operate in Washington, D.C., was identified as the property owner. Given that the Washington & Georgetown R. R. Co. was in operation by 1862, it is possible that the building was owned by the horse-drawn car business as early as the mid-1860s. In the 1888 Sanborn map, the Canal Warehouse was identified as the "Washington & Georgetown R. R. Stables" while the site south of the canal (on the land north of Grace Street, between High and Potomac Streets) was identified as "Hay & Feed Store." This site was also operated by the Washington & Georgetown R. R. Co. and was likely purchased in the mid-1860s, as it was not recorded in the 1856-1859 map of Georgetown nor the 1860 Boschke map. It is important to note that although labeled as Washington & Georgetown R.R. Co. on the 1887 Plat and 1888 Sanborn map the property was historically known by the later iteration of the entity: the Capital Traction Company. This company was formed in 1895 following the merging of the Rock Creek Railway and the Washington & Georgetown R.R. Co.

During the decline, numerous canal related businesses failed. The Alexandria Canal Company, for instance, was forced to charge high tolls due to plummeting canal profits. Unable to maintain a profit, in 1881 Congress authorized the purchase of the Alexandria Aqueduct. However, as the company refused to sell, the Aqueduct Aqueduct/ Alexandria Bridge was closed to all foot traffic. By December 1886, the Alexandria Aqueduct was sold for $125,000 and in 1888, the superstructure was changed to a light iron truss bridge on the existing stone piers. The Alexandria Aqueduct was used as a bridge to the Virginia shore until 1923 (CoFA 1968: 152; High 1997: 107; Georgetown Historic Waterfront 1993: 60).

The Georgetown Section of the C&O Canal

In attempt to sustain the existing coal trade, the C&O Canal Company attempted to gain control of Georgetown's unregulated wharves, which were still charged "exorbitant" prices. These prices were so high that the canal company was forced to reduce its own rates to remain in competition with the B&O Railroad. As a result, the toll rates were not profitable. To combat this issue, the Rock Creek Basin was dredged and improvements were made to the tide lock and Georgetown Incline in 1877. This allowed for the development of additional wharf facilities on the river bank, which forced Georgetown's wharfs to lower their fees to a fair level (Unrau 2007: 490). On November 24, 1877, a flood struck the canal and "damaged… every mile of the canal from Cumberland to Maryland" (Shaffer 1997: 43). On November 26, 1877, repairs began on the Georgetown Level so that water could be promptly restored to the Georgetown mills. Unfortunately, there are no known resources documenting the extent of the damage in Georgetown and specifics of the repairs. However, it is known that by December 20, 1877 water was restored to the Georgetown mills (Unrau 2007: 306).

In 1884, the leading Cumberland coal companies wrote to the C&O Canal Board about "the obsolescence of the port at Georgetown" (Unrau 2007: 492) and in April/May 1886 three freshets left the Georgetown section of the canal in a state of disrepair. In particular, the slope walls of Lock Nos. 1 through 4 were heavily washed. By early June, the canal was in operation as repair bonds were sold to fund the canal's restoration (Unrau 2007: 308-311). However, with the sale of these bonds, the canal had no resources for the restoration of the canal following the May/June 1889 flood. This flood, in particular, caused the river levels to rise to 13.3 feet at Easby's Wharf in Georgetown. As a result, Georgetown's mills, warehouses, and wharf facilities were destroyed. Furthermore, the steam dredge and scows on the Georgetown Level were destroyed (Unrau 2007: 312).

The C&O Canal Company was unable to fund the repairs of the canal and fulfill financial obligations. According to previously completed research, the Washington County Circuit Court of Maryland worked to determine the nature of the B&O receivership/ trusteeship. While this took place, on June 20, 1889, a contract was let to Georgetown merchants George W. Cissell, Arthur B. Crossley, Robert B. Tenney, W.H. Burr, and F.L. Moore for the restoration of the Georgetown Level. As part of this deal, the millers agreed to advance $16,000 from future water rents for the repair of the Georgetown Level (Shaffer 1997: 51). The terms were as follows:

The said parties of the first part [the Georgetown millers] do covenant and agree with the party of the second part [the C&O Canal Co.], that they will rebuild and put in good condition and repair all that part of the canal ... which lies between Lock No. 4 and Lock No. 5 including the Feeder Lock & Gate, and the Feeder itself ...rebuild the guard bank at said Feeder, to its original height and width, rebuild the tow-path, with good material with banks properly sloped on either side and worked up in the bottom, whenever there is new work on said banks, so that a perfect connection may be formed between said new & old work, having along the center of said bank, whenever made from the bottom of the breaks and washouts to the top of said towpath a core of not less than six feet in width made of good clay; the sides of said towpath next to the water of said Canal to be paved with large flat stones closely laid together

whenever the breaks and washes go through the banks of the Canal, and the side next to the river to be well rip rapped with stones wherever the breaks and washes so through the banks of the Canal; and generally to re-store said part of said canal to the condition in which it was before the freshets of May & June, 1889, that is to say, with sufficient water to float loaded boats to the coal wharves.

The parties of the first part covenant and agree that whenever it shall be necessary they will rebuild and make watertight, with good cement and stone all culverts along said level (Unrau 2007: 315)

By August 1, 1889, the Georgetown Level had been repaired and rewatered (Unrau 2007: 315; Shaffer 1997: 51)

Canal Boat Excursions on the Georgetown Level
Packet boats and excursions boats continued to operate on the canal during the decline. The packet boat Aldanbaran was advertised in the July 1, 1878 issue of the Evening Star as leaving from the Aqueduct Bridge in Georgetown every Sunday morning for Great Falls (Evening Star, June 1, 1878, pg. 9). From High/Wisconsin Avenue and Congress/31st Streets the light steamboat Excelsior transported excursionists to the Great Falls and Cabin John Bridge from 1882 to 1889 (Washington Critic, August 25, 1888, pg. 2). The steamer H.G. Wagner operated for a single season in 1885 (Evening Star, May 27, 1888, pg. 8).

The canal boats of this period were described in an August 17, 1896 article of the Washington Times. In the article, excursion boats, and specifically the “Mule Yacht” was described as follows:

the craft is built for comfort rather than speed… The deck is as unobstructed and free from all objects as a ballroom floor, making a delightful promenade. An awning, which can only be described of a “sky blue pink” protects the amateur boatmen from the midday sun’s rays…Rattan and camp chairs, rockets, and invalid recliners will be placed in the most favorable positions on the large deck… (Washington Times, August 17, 1896)

B&O Oversight (1890-1924)

Overview

However, total tonnage and toll revenues steadily declined. By May 1924, a flood “mortally damaged” the canal from Cumberland to the tidewater. The B&O Railroad kept the canal in operation below Dam No. 1, as well as below Dam Nos. 4, 5, and 8, to honor existing agreements with Georgetown millers and those with water rights in Washington and Allegany Counties (Shaffer 1997: 56-58).

According to the work of canal historians Unrau and Shaffer, as a majority stockholder, the Washington County, Maryland Courts granted the B&O Railroad receivership of the C&O Canal on March 3, 1890. The implication of the court proceedings allowed the railroad to absorb the canal and own the waterway outright, with the railroad assuming responsibility for

the maintenance of the canal. However, recent research has shown that the matter was a much more complex restructuring than previously understood. Surviving legal evidence suggests that the canal company entered into a trusteeship with the B&O Railroad. It is not fully understood as to the difference between the two forms of oversight. At the time of United States purchase of the waterway, a memorandum addressed to the United States Assistant Attorney General specifically declares that the B&O Railroad did not own the waterway, but rather exerted a "dominate influence" over the course of the company (Blair 1936: 4). Further evidence of a trusteeship is illustrated in the manner in which the title is conveyed in the original deed, with trustees granting ownership to the United States Federal Government. Adding further complication to the situation, the term 'receiver' is also used in the document.

The discussion of these complex legal matters are beyond the scope of CLI. Proper understanding will warrant a more thorough investigation into the legal history of the canal and will require additional research and the completion of a special history report. For research inquiries regarding the matter, the reader is encouraged to review the Maryland State Archives Washington County Equity Files, the Maryland Chancery Files, the 1908 Inland Waterways Report presented to the 60th Congress, and the 1922 to 1936 Reports to Trustees filed with the Circuit Court for Washington County with the understanding that additional primary and secondary source materials likely exist.

In regards to the review of the physical development presented in this CLI, the event is significant as the decisions to make improvements and modifications became the responsibility of a second party, with the canal lacking the self-autonomy it once exerted over the course of the waterway. Whatever the terms of the oversight between the canal, the railroad, or a series of trustees, minimal resources, specifically financial, material, or labor, were invested in the upkeep of the canal to ensure operational order. This effectively ushered in a period of maintenance, rather than improvements or modification to the resources.

The C&O Canal during the B&O Oversight

As presented in previously completed National Park Service approved documents, on March 3, 1890, the Washington County Circuit Court of Maryland granted authority to the B&O Railroad, which held preferred mortgages on the canal and its revenue. According to the terms of the court, the railroad had to maintain the waterway; otherwise, it would be sold to pay off the C&O Canal bondholders. This in turn would result in a bidding war for the canal's right-of-way, which if lost, would force the B&O Railroad to keep its rates low, subsequently reducing revenue. By September 1891, repairs were completed at a cost of over $430,000. In the following years, minimal efforts were made to keep the canal in operating condition in order to retain the right-of-way (Shaffer 1997: 53-54).

As the terms of the Washington County Circuit Court of Maryland required the B&O Railroad to operate the canal at a profit, the railroad established an agreement with the Cumberland coal companies. Per this agreement, the coal companies pledged to ship a total of 450,000 tons of coal annually for four years. Specifically, the Consolidation Coal Company promised to ship 200,000 tons, the Georges Creek Coal & Iron Company promised 150,000 tons, the Barton & Georges Creek Valley Company promised 50,000 tons, and the Big Vein Coal Company

promised 50,000 tons. However, in 1891 the recorded tonnage was only 50,533.14 tons as the prolonged suspension of canal operations caused many boatmen to leave and pursue other work. In the following years, tonnage increased (264,799.08 tons in 1892 and 336,295.11 tons in 1893) though shipments were never able to surpass the record-breaking tonnage of the 1880s (Unrau 2007: 498).

In January 1894, the trustees of the railroad set up a shadow corporation called the Chesapeake & Ohio Transportation Company to keep the canal in navigable condition. In return, the B&O Railroad agreed to provide the necessary boats for trade and guaranteed an annual profit of $100,000. In 1902, the Consolidation Coal Company and the B&O Railroad also created the Canal Towage Company to provide efficient and regular transportation along the waterway. As part of their services, boats, teams, and equipment were supplied and a regular schedule of runs was set. Freight rates were also cut and the distribution of cargoes was controlled.

These improvements drove the remaining independent boatmen off the canal, as Canal Towage Company boatman made a profit of $30.70 while independent boatmen made only $17.70 from 1894 and 1924 despite carrying similar tonnage. As such, by the 1900s the canal was operating for the benefit of the B&O Railroad with 99% of the coal being supplied by the Consolidation Coal Company (which it owned) and transported by the Canal Towage Company (which it also owned) (Unrau 2007: 497-498).

During World War I, the waterway was actively used as canal boats carried coal for the government to Indian Head, Maryland. The canal was nationalized and placed under the Inland Waterways Commission, which operated railways and coastwise and intercostal shipping during the war, on January 1, 1918. The Commission contracted the Canal Towage Company to increase the delivery of coal and facilitate unloading at Washington and other government stations along the Potomac River. However, despite the increased use of the waterway, trade did not increase and the total tonnage and toll revenues steadily declined (Unrau 2007: 497-498). The suggested reasons for the steady decline from 1894 to 1924 include:

1. Lack of aggressive leadership.
2. Obsolescence of the waterway as a transportation line, of Georgetown as a port, and of the Potomac River as a channel for competitive trade.
3. Irregularity of navigation.
4. Competition of the Baltimore & Ohio Railroad.
5. Interference of navigation by the freshets of 1897, 1902, 1907 and 1914, and by occasional breaches, particularly in the lime sinks of the upper valley

(Unrau 2007: 499).

The near exhaustion Cumberland coal contributed to the decline in trade. In 1907, 5,532.628 tons of Maryland coal was produced while only 4,065,239 tons was produced in 1920 and

3,078,353 tons in 1926. Coal prices furthermore experienced a decline, with coal sold at $4.63 per ton in 1920 and $2.21 per ton six years later (Unrau 2007: 499).

In late March 1924, the first major flood in thirty-five years struck the canal. Damage to the canal was not extensive and the canal was repaired at a small cost to the B&O Railroad. A more severe flood struck the canal in May 1924 that "mortally damaged" the canal from Cumberland to the tidewater. As reported by the Evening Star on May 13, 1924, "in many places the waters of the Potomac and Chesapeake and Ohio Canal have merged and for miles the canal cannot be seen." The article further stated that the canal "was likely doomed" (Shaffer 1997: 57). Given that the most severe damage occurred between Harpers Ferry and the tidewater, the B&O Railroad considered keeping the canal open from Cumberland to Williamsport. However, by early August 1924 the B&O Railroad had decided to keep only the section of the canal below Dam No. 1 in operation, as well as Dam Nos. 4, 5, and 8, which allowed for the continued supply of canal water to Georgetown's mills and a continued income from water leases (Shaffer 1997: 56-58).

Federal Interaction with the C&O Canal

During the B&O oversight, the poor condition of the C&O Canal attracted federal government's attention. As early as 1901, the McMillan Commission noted the canal's historic and recreational values. The canal was included in the McMillan Plan, which sought to revive Pierre Charles L'Enfant's plan for a monumental core for the capital. The plan, in specific regards to the canal, called for the development of the "Potomac Drive", which would extend from Great Falls, Virginia to Washington, D.C. along the Potomac River. As part of the plan, lands on both sides of the river were to be converted into a national park in an effort to enhance the park system beyond the capital. As the C&O Canal follows the Potomac River, its aesthetic, recreational, and historic value was also noted in the Potomac Drive Plan:

The canal has a charm of its own, as, half disclosed and half revealed, it winds among the trees; and not the least part of its charm, so desirable to be preserved, is the slow, old-fashioned movement of the boats and of the people on and near this ancient waterway. Already the canal is used, aside from the navigation of commerce, by pleasure seekers in canoes, and by excursion parties in various craft. More and more will the canal thus be used as an attractive route between the populous city and the natural charms of the picturesque region between Cabin John Bridge and Great Falls. The preservation and continuance of the canal in its original charterer will thus add elements of gaiety and life to a scene much enjoyed by the passers-by on the neighboring and upper roadways (Mackintosh 1991: 5).

The Potomac Drive Plan was not implemented, though the acquisition of the C&O Canal remained a subject of federal interest.

Georgetown Urban context during the B&O Oversight

During the B&O oversight, the port facilities of Georgetown deteriorated due to a lack of maintenance and upkeep (Unrau 2007: 499). Industry was light since the Southwest Harbor had replaced Georgetown as the District's major port and goods previously shipped to Georgetown were handled at the railroad yards on Delaware Avenue north of Union Station (Passonneau 2004: 130). This led to the disuse of various structures associated with the canal, including elevated railways. By the 1890s, only one elevated railway owned and operated by the Georgetown Barge, Dock, Elevator and Railway Company remained (Passonneau 2004: 96). Also contributing to this “run-down” description was the Alexandria Aqueduct, which despite the complete replacement of pier No. 5 in 1903-1905 and the addition of new grinders in 1908, was seen as insufficient. By 1916, Congress had authorized its replacement with a larger, more substantial bridge: the Francis Scott Key Bridge. The building of Key Bridge commenced in 1920 and was opened to the public on January 17, 1924. The two bridges existed side-by-side until 1933 when the iron superstructure and upper parts of the piers of the Alexandria Aqueduct were removed (High 1997: 16-107; Georgetown Historic Waterfront 1993: 60).

Georgetown maintained its industrial character due to the rise of streetcar lines and associated businesses. Two lines (one on M Street, one of P Street) connected Georgetown with central Washington, D.C. Additional lines crossed the Aqueduct Bridge to connect the city with Rosslyn, one ran west beyond Georgetown University to Cabin John Bridge, and one ran north along Wisconsin Avenue to Tenleytown and then on to Rockville, Maryland (Passonneau 2004:, 98). In the establishment of these lines, the stone Georgetown abutment at 36th Street was raised between 1900 and 1909 to allow railcars to pass under it (Georgetown Historic Waterfront 1993: 61). Furthermore, individual companies (i.e. Capital Traction Co.) maintained the streetcars on their separate routes. The Capital Traction Co., which formerly operated as a horse-drawn carriage business, was located on the site of the original Canal Warehouse. In addition to the M Street location, the Capital Traction Co. owned and operated the property on the south side of the canal. This can be seen in a 1920 Library of Congress photograph and a 1903 map where bridges connect the buildings on the berm and river side of the canal. In a 1939 map of Georgetown, the western most bridge is identified as High Bridge and the eastern bridge is identified as High Passageway.

By 1900, about 90% of Georgetown south of P Street along M and Potomac Street was commercial in character whereas north of M Street retained a residential character. To the immediate north and south of the canal, warehouses and mills continued to be the most prominent building typology. The industrial businesses included,

the W.H. Burr Ice Factory, the Arlington Mill, and the Paper Mill, all of which are identified on the 1888 Sanborn map. The Potomac Electric Power Co. (north of Water Street on the northwest corner of Water and 33rd Streets), as well as the “Machine Shop”, were added post-1888. Furthermore, the Capital Traction Powerhouse (south of Water Street on the southeast corner of Wisconsin Avenue and Water Street) was built along the Georgetown waterfront in May 1910 to provide power for streetcars. The building of the plant was carried out from 1910 to 1911 (CoFA 1968: 279-280). The character of the Georgetown waterfront

was, per the to the city's 1920 zoning ordinance, "industrial" with the addition of the incinerator plant (on Water Street between Wisconsin Avenue and 31st Street) contributing to this description (Passonneau 2004: 130). However, the Bomford/Pioneer Mill and Columbia Mill were no longer extant in the 1903 map of Georgetown.

The Georgetown Section of the C&O Canal during the Oversight
The B&O Railroad kept the canal watered and in operating condition in order to maintain their right-of-way as required by the terms of the court. As such, repairs were kept to a minimum with as little money being spent as possible. However, in 1890 the Potomac Street Bridge was replaced with steel spans. In the early 1900s, the Greene/29th Street Bridge was also replaced with concrete spans. From 1889 to 1924, at least sixteen episodes of high water occurred with four "serious" floods occurring in 1897, 1902, 1907, and 1914. The most serious flood occurred in May 1924. Further research is needed to determine the extent of the damage to the Georgetown Level. However, it is known that the canal was repaired and kept in operating condition below Dam No. 1 to honor existing agreements. Exact modifications are unknown and will require future research in order to determine what changes were made to the canal. The Congress/31st Street Bridge was also replaced with concrete spans in 1924 (Shaffer 1997: 58; NR Update 2015: 8, 164).

Canal Boat Excursions on the Georgetown Level
The canal in Georgetown continued to be used by pleasure seekers during the period of B&O oversight. In the August 17, 1896 issue of the Washington Times the "Mule Yacht" was mentioned as being "one of the largest of its kind" and being "built for comfort rather than speed." The boat, which featured a dance floor, on-deck piano, hammocks, and comfortable sleeping quarters, departed from Washington/30th Street to Cumberland (Washington Times, August 17, 1896, pg. 5). The Evening Star also reported on June 4, 1900 that the 250-passenger pleasure boat, the Lafayette, took the Plattdeutche Ladies Veremin from Georgetown to Great Falls for a picnic. The description of the outing is as follows:

It was a delightful affair enjoyed by one of the merriest parties that ever went up the canal from Georgetown. The music, which was furnished by Ludwig Naecker's brass band, was of the sweetest…After arrival of the boat at the Falls dinner was served, succeeding which all proceeded to enjoy themselves in their individual way (Evening Star, June 4, 1900, pg. 12).

The steamer, the Louise, operated from Wisconsin Avenue to Great Falls between 1902 and 1910 (Evening Star, November 22, 1902, pg. 16; Evening Star, June 28, 1904, pg. 16; Washington Herald, August 12, 1910, pg. 9). There was also mention of a "Pleasure Trip Arranged" in the June 6, 1903 issue of the Washington Times. E.T. Jestus of Philadelphia was to take a pleasure trip on "The Mule Yacht", the John R. Mason, up the canal to Williamsport with a party of friends from Washington and Philadelphia (The Washington Times, June 6, 1903, pg. 12). The same John R. Mason was documented as carrying the Spanish War Veterans of the District from the Aqueduct Bridge to Great Falls in the August 23, 1903 issue of the Washington Times. The boat was described as proceeding "leisurely on her way, giving all on board an opportunity to view the beautiful scenery along that picturesque and historical

stream, the Chesapeake and Ohio Canal" (The Washington Times, August 23, 1903, pg. 18). This boat can be seen in a c. 1904 photograph (DC Historical Society, General Photographs Collection, CHS 09878). These trips, however, stopped following the 1924 flood on the canal.

This photograph of the Greene/29th Street Bridge looking west was taken from the berm side of the canal. "Chesapeake & Ohio Canal." 1909. From the Library of Congress (https://www.loc.gov/item/2002695629/, accessed 2017).

The Potomac Street Bridge circa. 1920-1950."Chesapeake and Ohio Canal (C&O Canal) Canal in Georgetown. C&O Canal Wiew I." Theodor Horydczak, ca.1920-1950. From the Library of Congress (https://www.loc.gov/item/thc1995004371/PP/, accessed 2017).

The historic Wisconsin Avenue Bridge. There is minimal development on the berm and river side of the canal east of Wisconsin Avenue."Chesapeake and Ohio (C&O) Canal in Georgetown. View of C&O Canal with bridge." Theodor Horydczak, ca. 1920-1950. From the From the Library of Congress (https://www.loc.gov/item/thc1995004374/PP/, accessed 2017.)

Early Federal interactions with the Canal (1924-1946)

Overview

In 1933, President Franklin D. Roosevelt's National Industrial Recovery Act authorized the

acquisition of the C&O Canal as a public works project (Mackintosh 1991: 6-9). By September 28, 1938, the National Park Service had purchased the C&O Canal and the New Deal C&O Canal Project, officially called Federal Project 712, was underway. As part of this project, the Civilian Conservation Corps (CCC) cleared the canal prism and restored the lower 22-miles of the towpath. The Public Works Administration (WPA) oversaw the rebuilding of locks and bridges and the repair of large breaks. By August 9, 1940, the canal was watered from Seneca to Lock No. 5 and eight days later the entire lower 22-miles of canal was open (NR Update 2015: 8, 203). Unfortunately, in October 1942 a major freshet hit the canal and destroyed much of the CCC's work from Seneca to Georgetown. By June 1943, Corson & Gruman was awarded the contract for these repairs and by early October 1943 the canal was restored (Mackintosh 1991: 46-48; Shaffer 1997: 76).

The C&O Canal Overall

Following the flood of 1924, the B&O Railroad completed limited repair work to maintain the image that the waterway would return to service (Shaffer 1997: 63). The B&O Railroad's neglect of the C&O Canal reignited federal interest in the waterway and the McMillan Commission's 1901 "Potomac Drive Plan." In 1926, Lt. Col.
J. Franklin Bell, engineer commissioner for the District of Columbia, proposed the acquisition of canal property for the development of a federal highway from the Washington, D.C. to Cumberland. In the construction of the highway, which would be constructed adjacent to the C&O Canal, the canal would not be destroyed. Rather, Bell envisioned that the highway would in fact "revive [the canal's] use for heavy freight powered barges by providing more and better access and transfer facilities" (Mackintosh 1991: 6). Fred G. Coldren, Secretary of the National Capital Park and Planning Commission (NCP&PC), supported this proposal, as "this route would be appealing… from the standpoints of beauty, historical interest, grade, and distance." Maj. U.S. Grant III, the NCP&PC's executive officer, also supported the idea and proposed that the road be built inland from the canal along the bluffs to maximize the view from it. In the view of Maj. U.S. Grant III, such an endeavor would "preserve the canal itself, with its quiet waters and ancient locks, as an asset of unusual beauty, providing picturesqueness and sylvan intimacy for the enjoyment of canoeists and pedestrians." However, the B&O Railroad was unwilling to cede control of canal property as efforts were being made to expand its tracks into the canal's right-of-way between Point of Rocks and Harpers Ferry (Mackintosh 1991: 6-7).

In December 1928, Bell's proposal was replaced when Rep. Louis C. Cramton of Michigan introduced new legislation to implement the McMillan Commission's Potomac Drive Plan. In particular, Cramton's bill would authorize appropriations for the development of the George Washington Memorial Parkway which would extend above Great Falls on both sides of the Potomac River. Also included was "the protection and preservation of the natural scenery of the Gorge and the Great Falls of the Potomac and the acquisition of that portion of the Chesapeake and Ohio Canal" (Mackintosh 1991: 7). The bill passed in the House too late in the legislative session and was reintroduced by Cramton in April 1929. In January 1930, it was passed again in the House and sent to Sen. Arthur Capper of Kansas who chaired the Senate Committee on the District of Columbia. Capper's committee increased the appropriation from $7 million to $9 million to cover the cost of constructing a bridge between the Maryland and

Virginia segments of the parkway at Great Falls. This amended bill, known thereafter as the Capper-Cramton Act, passed the house and was signed by President Herbert C. Hoover on May 29, 1930. Unfortunately, the Capper-Cramton Act was not appropriated any funding due to the Great Depression (Mackintosh 1991: 8). On June 16, 1933, President Franklin D. Roosevelt signed the National Industrial Recovery Act and authorized the creation of the Works Progress Administration (WPA), which was created to produce public works programs for the "construction, repair, and improvement of public highways and park ways, public buildings, and any publicly owned instrumentalities and facilities" (Mackintosh 1991: 9). Through the WPA, property could be acquired "with a view to increasing employment quickly" (Mackintosh 1991: 9). These New Deal Programs allowed for the acquisition of the C&O Canal as it was both a public highway project and could provide work for the Civilian Conservation Corps (CCC).

While attempts were underway to acquire the C&O Canal, FDR expanded the National Park Service's authority and jurisdiction. On June 10, 1933, Executive Order No. 6166 was issued, transferring all of the national military parks, battlefield sites, and national monuments from the War Department and Department of Agriculture to the National Park Service. Included in the transfer were the National Capital Parks in Washington, D.C. This order not only redefined the hierarchy of the National Park Service, but also the agency's relationship with park development, research, and preservation.

In March 1936, the entire canal was struck by a devastating flood. The crest was seven inches higher than the 1889 flood in Georgetown, one foot higher in Little Falls, and nine inches higher in Seneca. The water level was 21-feet above the towpath at Harpers Ferry and 22-feet above the towpath at Shepherdstown. This led to the heavy silting of the canal prism, numerous breaks, and the destruction of various bridges across the canal. At a cost of $25,460, the B&O Railroad was able to repair the rubble dam at Little Falls as well as the Georgetown Level. However, as the B&O Railroad owed the Reconstruction Finance Corporation (RFC) $80 million, it was unable to fund further repairs of the canal. This forced the railroad to consider the sale of the canal (High 1997: 46; Unrau: 2007: 319; Shaffer 1997: 65)

However, legal issues over the canal company's title delayed the sale of the waterway. By 1938, these issues were resolved and the canal was foreclosed upon, as the railroad was unable to pay a due note of $2,000,000. On September 28, 1938, the National Park Service purchased the C&O Canal for $2,000,000 with the intent to repair and develop the twenty-two miles from Georgetown to Seneca for recreational uses (Kytle 1983: 121; High 1997: 46). The project was part of a series of New Deal sponsored endeavors. The New Deal C&O Canal Project was illustrative of this development as its urban recreational amenities, such as hiking trails and canoe houses, had to be considered in conjunction with a "historical research program that would meet the needs of the preservation, restoration, interpretation, planning, and development [of] the canal." The aforementioned research program was completed by the newly formed Historic American Buildings Survey (HABS), which researched and documented historical buildings and structures along the canal (NR Update

2015: 8, 200-202).

Civilian Conservation Corps laborers, Works Progress Administration (WPA), and the Historic American Buildings Survey (HABS) completed the New Deal C&O Canal Project, officially called Federal Project 712. In particular, CCC laborers cleared 200 acres of vegetation from the canal bed. Then they excavated 50,700 cubic yards of earth from the canal prism, and helped restore 22 miles of towpath. They hand placed 9,835 square yards of stone rip rap for bank protection, dry masonry walls for bypass flumes adjacent to locks, and along the towpath at Widewater (NR Update 2015: 8,204)

On the other hand, private contractors overseen by the WPA completed the more complex projects, such as the rebuilding of locks and bridges and the repair of large breaks in the prism wall (NR Update 2015: 8, 203). By February 1940, all CCC and WPA projects had been completed and the twenty-three locks from Georgetown to the inlet at Violettes Lock (Lock No. 23) were in operational condition. On August 9, 1940, the canal was watered from Seneca to Lock No. 5 and eight days later the canal was open to canoeing, biking, and hiking (NR Update 2015: 8, 203).

By the start of World War II, nearly all of the $500,000 appropriated for the restoration of the canal had been exhausted. As such, in the event of a disaster restoration work was unlikely as the War Production Board prohibited federal civilian construction projects over $10,000. Unfortunately, in October 1942 a major freshet hit the canal and destroyed much of the CCC's work from Seneca to Georgetown. In particular, the filled towpath embankment at the lower end of the Widewater was destroyed, while breaches were documented at Fletcher's Boathouse, above Chain Bridge, and Lock No. 7. Furthermore, damage to the control gate below Lock No. 5 left the Georgetown mills without water. Arthur E. Demaray, the Associate Director of the National Park Service, estimated that it would cost approximately $250,000 to repair the canal upstream to Great Falls. To fund the repair of the canal, Demaray turned the restoration of the canal into an issue of national security.

Specifically, he noted that the waterway should be repaired, as it would provide an alternative water supply to the Dalecarlia Reservoir. This proposal was successful and the National Park Service was granted $149,369 for the repair the canal from Georgetown to Dam No. 1 in April 1943. In the repair of the canal, the National Park Service attempted to make it more flood resistant with parts of the towpath being rebuilt with a clay and cement mixture. The towpath embankment was also rip-rapped to prevent erosion. Additionally, the National Park Service developed a flood plan that would go into effect when the gauge of the Potomac (located at Wisconsin Avenue in Georgetown) reached a height of 12.6 feet or higher (Shaffer 1997: 72-77; Mackintosh 1991: 46).

In 1945, after the end of World War II, the National Park Service resurfaced the towpath from Georgetown to Seneca. The National Park Service also repaired breaches at Locks Nos. 7 and 8 and constructed a spillway at Lock No. 7. The section of the canal from Old Angler's Inn to Lock No. 5 was watered with a diversion from the Washington Aqueduct because the National Park Service was unable to fund the repair of the Widewater from the stop gap on Level 16 to Old Angler's Inn. The diversion was completed by the Corps of Engineers in 1946, but water

levels on the canal were often low from Lock No. 5 to Lock No. 17 because the water supply from the Washington Aqueduct was irregular (Mackintosh 1991: 48; Shaffer 1997: 77). In 1945 the Army Corps of Engineers flood plan for Cumberland, Maryland was proposed. In this plan, the Corps of Engineers proposed removing Dam No. 8, which would make it difficult for the National Park Service to rewater the canal above Dam No. 5. The proposal called for the construction of a levee that would cover the last mile of the canal and towpath, and the raise the grade of an old basin in Cumberland (Mackintosh 1991: 53; Shaffer 1997: 78- 79). These plans forced the National Park Service to consider the sustainability of restoring and maintaining the canal. In 1946, Demaray estimated that at least $10 million was needed to restore the canal to Cumberland while an estimated $300,000 per year would be need to maintain the canal thereafter. Given that Congress was unlikely to provide these funds, and the flood control project would improve recreational opportunities in Cumberland, Demaray encouraged National Park Service officials to cooperate with the Corps of Engineers (Mackintosh 1991: 53-55). By late 1945, the National Park Service agreed with proposals of the parkway moving forward (Shaffer 1997: 79).

Early National Park Service Georgetown: The Transition of the Georgetown Waterfront

In 1938, with title of canal, the National Park Service gained the rights to grant the water rights for The Wilkins-Rogers Milling Company (previously Bomford's Mill) and The District of Columbia Paper Mills, which supplied an annual rent of $23,067.80. As this money was placed in the Federal Reserve, these funds could not go to the repair of the feeder dam at Lock No.5 following the flood of October 1942. This left Georgetown's mills without canal water. However, as discussed, Demaray was able to turn the restoration of the canal into a war expense and the Georgetown Level was repaired and open to canal trips by early October 1943 (NR Update 2015: 8,224; Mackintosh 1991: 16, 22, 46-48; Shaffer 1997: 72, 76).

In the early years of National Park Service Management, the character of the Georgetown waterfront remained industrial with the Washington Gas Light Co. buildings occupying plots north of the canal, east and west of 29th Street. The western building, flanked by concrete walkways to the east and west, was drawn on maps as early as 1887, while the eastern Washington Gas Light Co. building was flanked by a brick walk-way to the west that was likely added post-1915 as it was not recorded in the 1913-1915 Baist map. South of Lock No. 1, east of 29th Street and the truck parking lot, was a dry dock and shack, which was documented in a 1935 Library of Congress photograph of Lock No.1 looking west. Continuing west along the canal, south of Lock No. 3 was Capital Chemical Co., previously the Duvall's Foundry, while south of canal at Lock No. 4 there was an automobile business. North of the canal, between Wisconsin Avenue and 31st Street, was the Wisconsin Motor Corporation and the International Business Machine Corporation (the latter of which also occupied a building south of the canal and west of 31st Street). According to a 1913-1915 map, these businesses were relatively recent additions with the International Business Machine Corporation to the south previously occupied by a fertilizer warehouse and the building to the north being owned by the Tabulating Machine Co. According to the same map, the Wisconsin Motor Corporation was once home to

a livery.

The Restoration of the Georgetown Section of the C&O Canal under the National Park Service

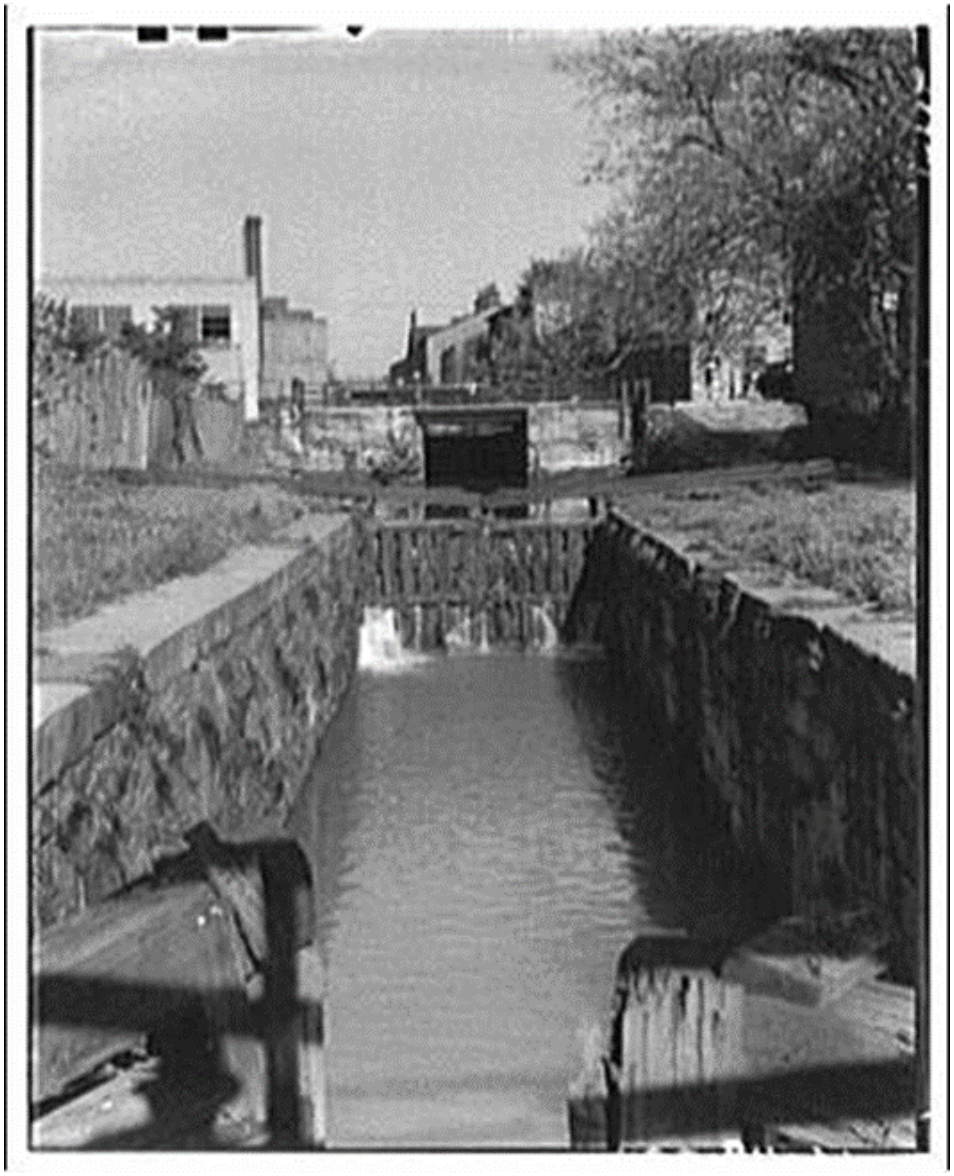
From the period of early National Park Service acquisition, there are two photographs in the Library of Congress collection dating to 1935 of Lock No. 4 looking east. These photographs show that the grass plots north and south of the canal, west of Jefferson Street, were used as makeshift parking lots. Additionally, a wooden guardrail extended west about midway between Jefferson and 31st Streets. Unfortunately, the materials of the towpath are unclear. Following the mid-March 1936 flood, the washing of the banks was documented across the Georgetown Level. These banks were restored because the Georgetown mills supplied revenue to the B&O Railroad (Unrau 318-321). In 1938, when the National Park Service acquired the canal, the Georgetown Level was rehabilitated. Specifically, the Georgetown locks were repaired, the towpath resurfaced, and the canal prism cleared. In the repair of the lower 23 locks of the canal, "the stonework of some had required only minor resetting and repointing; others had been completely reconstructed. All had received new wooden gates, with ironwork salvaged from the old ones and from locks further up the canal" (Shaffer 1997: 71). Unfortunately, the available records do not indicate what materials were used in the restoration of the towpath (NR Update 2015: 8,204).

The 1939 "Existing Conditions" map illustrates the condition of the Georgetown section following the National Park Service's acquisition of the canal. From 31st to Jefferson Street and from Wisconsin Avenue to 33rd Street, on both the berm and river side of the canal, buildings were built up to the canal. Furthermore, there was a parking lot indicated north of Lock No. 1 on the east side of 29th Street, adjacent to the Washington Gas Light Company Storehouse, was likely added in 1938 as part of Federal Project 712. Additionally, the parking lot for trucks, a space south of Lock No. 1 on the east side of 29th Street, and a rooftop parking lot, south of the canal on the east side of Wisconsin Avenue, were likely added to the cultural landscape in 1938. A cobblestone path, located on the berm side of the canal between Jefferson and 31st Streets, was also noted in the "Existing Conditions" drawings and is recorded in a Library of Congress 1920-1950 photograph of the towpath by Lock No. 4. Unfortunately, it is unclear if the cobblestone was added as part of the CCC restoration given the broad date of the photograph. Furthermore, towpath materials are not indicated for the other locks. On November 8, 1939, the NCP Acting Superintendent Frank T. Gartside and the National Park Service Director planned additional recreational facilities in Georgetown. In particular, the plans proposed the construction of "a canoe concession in a rear addition to the Francis Scott Key House, which fronted M Street just west of Key Bridge" (Mackintosh 1991: 31). This structure was not drawn on the 1939 map of Georgetown.

In February 1940, repairs to the Georgetown section were complete. By July 1941, mule-drawn barge trips had commenced in Georgetown. The Welfare and Recreational Association operated these trips on the Canal Clipper, from Lock No. 3 to Lock No. 5 and back. A secondary source (McCarthy 2014), however, states that the canal offered two round-trips a day from Georgetown beginning in 1946. Although extremely popular, the Canal Clipper was

not historically accurate and problems arose as litter travelled down the canal from the feeder to Georgetown. Acting Superintendent Francis Gillen responded to the litter situation stating: “It must be remembered that the canal in the Georgetown area is operated as a commercial waterway [for the mills] and not for its scenic or park value” (Mackintosh 1991: 41-43).

In October 1941, members of the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments met in Washington, D.C. to discuss the C&O Canal as a potential National Historic Landmark. By February 1942, the members were polled and it was agreed that the designation of the C&O Canal was favorable.
However, a month later President Roosevelt issued a moratorium on the designation of National Historic Landmarks for the duration of the war. As a result, the National Park Service, with the approval of Secretary Ickes, placed an imitation marker at the start of the canal in Georgetown. This marker, which was funded by the
D.C. chapter of the Daughters of the American Revolution, was inscribed with a brief history of the canal and its significance. On June 20, 1942, the plaque was formally accepted in a ceremony at the site. Fourteen poster- sized narrative markers were also placed along the canal in September 1943, though they were removed in the 1950s due to frequent vandalism (Mackintosh 1991: 41).



This photograph of the Greene/29th Street Bridge looking west. "Chesapeake and Ohio (C&O) canal. Locks in Georgetown." Theodor Horydczak, ca. 1920-1950. From the Library of Congress (https://www.loc.gov/item/thc1995001854/PP/, accessed 2017.)

The bridge closest to the viewer is the High Bridge, with the High Passageway in the mid ground, and Wisconsin Avenue Bridge in the background"Chesapeake and Ohio Canal (C&O Canal) in Georgetown. C&O Canal View II." Theodor Horydczak, ca. 1920-1950. From

In this photograph, a possible cobble stone path is present on the berm side of Chesapeake and Ohio Canal of Lock 4 "(C&O Canal) Canal in Georgetown. Path along C&O Canal." Theodor Horydczak, ca. 1920-1950. From the Library of Congress (https://www.loc.go

"LOOKING EAST FROM THIRTY-FIRST STREET BRIDGE LOCK #4- Chesapeake and Ohio Canal,
Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC." Historic American Buildings Survey (HABS DC-147) Albert S. Burns, 193

Developments towards the Modern C&O Canal (1946-1968)

Overview

While the lower 22-miles of the canal form Georgetown to Seneca were restored for recreation use, questions remained as to what to do with the remaining 162 miles of canal. In 1950, it was proposed that the Potomac Drive plan be implemented north of Great Falls. This plan was met

with some resistance as it threated the natural and historical resources of the canal. On March 19, 1954, the now-famous seven day Douglas walk commenced as Supreme Court Justice William O. Douglas attempted to show parkway supporters that the canal "would be utterly destroyed by a fine two lane highway" (Mackintosh 1991: 68-69). By 1956, the plans for the parkway were dropped and the National Park Service decided to obtain National Historical Park designation for the canal (Mackintosh 1991: 101-102).

The Development of the C&O National Historical Park

After the rehabilitation of the lower 22-miles of the canal, the question of what to do with the canal above Great Falls continued to perplex the National Park Service. The remaining 162 miles to Cumberland were unsuitable for public recreation and enjoyment since the right-of-way was only about 230 feet wide, ownership barely extended over the towpath embankment on the river side of the canal, and squatters and encroachments were common as little effort was made to retain the right-of-way following the closing of the canal to navigation in 1924. Interest in the Potomac River Drive Plan was reignited (Mackintosh 1991: 49-52).

In 1948, the National Park Service, with the aid of western Maryland Congressman J. Glenn Beall, introduced legislation into Congress, proposing that a feasibility study be completed to determine the practicability constructing a parkway along the course of the canal. On June 10, 1948, Congress allocated $40,000 for a "joint reconnaissance" study to be completed by the National Park Service and Bureau of Public Roads (BPR) (Mackintosh 1991: 56). By August 16, 1950, this joint NPS-BPR report was completed, informing Congress that at cost of $17,107,700 a parkway:

would be both practical and advisable if the state of Maryland would donate additional land for the right-of-way. [The parkway] would provide a suitable approach to the nation's capital, permit recreational developments along its route, and enable full benefits to be realized from the federal investment in the canal property. It would also contribute to civil defense, being a controlled access road (Mackintosh 1991: 56).

In the creation of the planned parkway, additional lands were to be obtained from Maryland to increase the canal's right-of-way. On September 22, 1950, Congress passed a bill for the donation of land "sufficient to increase the present parkway width to an average of one hundred acres per mile for the entire length of the parkway" (Mackintosh 1991: 59). Furthermore, on August 1, 1953, Congress authorized the Secretary of Interior to grant easements for right-of-way "through, over, and under" the canal, which would allow for the development of the parkway (Mackintosh 1991: 186-187).

However, the parkway proposal was met with some resistance. In particular, the State of Maryland feared that it would interfere with the state's plan to develop forests, parks, wildlife

habitats, and recreational areas along the banks of the Potomac (Mackintosh 1991: 58-61). Supreme Court Justice William O. Douglas also vehemently opposed the parkway and invited Washington Post editors to walk the canal with him following a pro-parkway article published on January 3, 1954. Through this walk, Douglas hoped to show parkway supporters that the canal was, "a refuge, a place of retreat, a long stretch of quiet and peace at the Capital's back door… a place not yet marred by the roar of wheels and the sound of horns…a sanctuary that would be utterly destroyed by a fine two lane highway" (Mackintosh 1991: 68-69). On March 19th, 1954, the now-famous seven day hike of the C&O Canal commenced, generating a significant amount of publicity with the network radio, television news broadcasts, Time and Life magazines, and even movie newsreels covering the event. After the highly publicized Douglas walk, the Washington Post editors continued to support the development of a parkway. However, they proposed some substantial changes. These changes were echoed in the plans of Douglas's ad hoc committee (the 1957 C&O Canal Association), which met on the last day of the hike. Specifically, the committee proposed that the parkway follow "existing state, county, and federal aid roads where practicable, perhaps at places parallel to, but not on the canal proper…[and that] the canal property should be developed as a recreational area" (Mackintosh 1991: 72). If followed, this would involve restoring and rewatering the canal for recreational activities, the establishment of campsites every ten miles, and the addition of new and improved access roads (Mackintosh 1991: 68-72).

In January 1955, a restudy of the parkway plan found that the proposed parkway would destroy "the intimate character of the canal-river strip." It was recommended that the towpath be improved for hiking and bicycling and that as much of the canal be rewatered as possible (Mackintosh 1991: 74-75). By 1956, the plans for the parkway were dropped for the entire length if the canal (though the adjacent Clara Barton Parkway was under development) and the National Park Service decided to obtain National Historical Park designation for the C&O Canal north of Great Falls to Cumberland. Furthermore, they planned to build an associated parkway west of Hancock. While the C&O Canal's National Historical Park designation was being debated, National Park Service Director Conrad Wirth developed a ten-year program called "Mission 66" in 1956. This multi-million dollar initiative "intended to modernize, enlarge, and reinvent the park system" and address issues of "traffic jams, long lines outside bathrooms, overflowing parking lots, and no available accommodations or campgrounds (NR Update 2015: 8, 208). Increased visitation, increased automobiles, and the lack of significant infrastructure improvements since prior to World War II, strained the capacity of the National Park Service. To address these concerns, the National Park Service decided to shift from an visitor use model that encouraged and supported overnight stays to a day-use model of park visitation and relocate hotels, administrative buildings, and camping facilities to "less sensitive areas" in the parks. In place of extensive guest accommodations, a new building typology: the visitor center, picnic areas, comfort stations, parking facilities, and an improved pedestrian and vehicular transportation infrastructure was to be developed. A modern architectural idiom was selected, which included a material palette of concrete and glass in low horizontal forms and set in curvilinear pathways. For the Chesapeake and Ohio Canal unit, the Carderock Pavilion (mile 10.42) and two comfort stations (mile 10.42) were developed as part of this program and are representative of the Modernist design characteristic of the "Mission 66" program. However, although the plans were developed for the Georgetown section during the Mission 66 era, these

changes were not in keeping with the character of Mission 66. The material pallet and forms were brick and largely angular, not concrete and curvilinear. Bench designs were common to D.C. and no interpretation was proposed. (NR Update 2015: 8,208-212).

From 1957 to the 1971, numerous proposals were introduced in Congress for the authorization of the C&O Canal as a National Historical Park. Unfortunately, none of the proposed acts could be agreed upon. In 1961, President Eisenhower designated the portion of the canal from the Seneca to Cumberland a national monument. This granted the entire canal official status as part of the National Park System. The C&O Canal was also included in the 1967 and 1968 bills to establish the Potomac National River, which would allow for the protection of canal's historical features. However, none of these acts protected the broader resources of the Potomac Valley (NR Update 2015: 8, 207; National Park Service, General Plan 1976: 4).

Georgetown in the Development of a National Historical Park

In the 1949 map, a three-story brick Washington Gas Light Co. building and parking lot were documented at the northeast corner of 29th Street on the berm side of the canal. However, on the river side of the canal east of 29th Street the truck parking lot and shack documented in 1939 were no longer extant. The Central Heating Plant, which was built between 1946 and 1948, led to the removal of these features as well as the side pond inlet at Boat Basin No. 1 (Babin 2011: V; NPS LCS 2017). The Wilkin's Rogers Milling Co, building between Potomac and 33rd Street was extant and continued to pay water rent into the 1960s (Mackintosh 1991: 22).

Furthermore, to the far west, the remnants of the Alexandria Aqueduct was seen as "an eyesore." In 1962, the Army Engineers blasted out all but one of the piers to a depth 12 feet below the water. The rubble from these piers was used to construct the foundation of sea walls at the Anacostia Park. The remaining pier, pier one, remains 30 feet from the Virginia shore, jutting about 6 feet out of the water. The destruction of the Alexandria Aqueduct enabled local rowing meets to have nine full lanes in the river (Georgetown Historic Waterfront 1993: 60-61).

The Canal Clipper continued to operate on the canal. In March 1954, at the end of the now-famous Douglas walk, Justice William O. Douglas and other dignitaries were transported from Lock No. 5 to Georgetown on the Canal Clipper. On their arrival in Georgetown, the Canal Clipper, draped in American flags and, "patriotic bunting," was greeted by hundreds of supporters of Douglas and his cause (Mackintosh 1991: 41, 181). By the Spring of 1961, the Canal Clipper was replaced by the mule-drawn John Quincy Adams which could hold up to 125 passengers and featured a snack bar. This barge was built and operated by the Government Services Inc. (GSI) (Mackintosh 1991: 22, 41-43, 181). According to McCarthy, the John Quincy Adams was called the Canal Clipper II. This 70-foot long and 11-foot wide boat operated on the canal from Lock No. 3 to Lock No. 5 and back from May to October. The trip was 10-miles, 4-hours long, and either a National Park Service historian or naturalist accompanied guests (McCarthy 2014:10; Mackintosh 1991: 181).

The Rehabilitation of the Georgetown Section of the C&O Canal

While the debate regarding the designation of the C&O Canal as a National Historical Park ensued, the Georgetown Level towpath and its environs were rehabilitated. These efforts can be seen in a series of planting plans. However, further research is needed to corroborate the proposed changes. Additionally, canal tours continued to operate between Georgetown and Lock No.5. In the spring of 1961, the aforementioned Canal Clipper was replaced by the John Quincy Adams, which could hold up to 125 people. This boat was built and operated by the Government Services Inc. (GSI), the successor to the Welfare Recreational Association (Mackintosh 1991: 181).

1948 Rehabilitation Planting Plan for Lock No. 4

In 1948, a planting plan was proposed for the Georgetown Level between Jefferson and 31st Streets. As part of this plan, three small-leaved lindens (tilia cordata) were to be planted evenly throughout a semi-triangular plot north of Lock No.4. To limit access, a steel cable on 15" posts was to border approximately one-third of this plot to the northeast near Jefferson Street. A new wooden guardrail was also proposed and the pre-existing cobblestone towpath was to be re-laid. To the south of Lock No. 4, north of the Jefferson Spring Service Co. Warehouse, four weeping willows (salix babylonica) and fourteen California privets (ligustrum ovalifolium) were to be evenly spaced. To the west of the rectangular plot, three weeping willows (salix babylonica) were to be evenly planted and interspersed with ten California privets (ligustrum ovalifolium). At the eastern end of Lock No.4, at the crossing of Jefferson Street, a three foot tall ornate wrought iron fence and gate was noted in the 1948 plan. Currently, there is no photographic or documentary evidence to corroborate these changes. As a result, future research will need to be conducted. However, two small-leaved lindens (tilia cordata) are extant on the berm side of Lock No. 4, which suggests that the plan was carried out in part. Furthermore, in the semi- rectangular plot south of Lock No. 4, there are extant weeping willows (salix babylonica): the western most weeping willow is now a stump and the weeping willow directly to its east is extant. The western most weeping willow in the thin semi-triangular plot south of the canal at Lock No. 4 is also extant.

1949 Rehabilitation Planting Plan for Lock Nos. 1-4

Drawings indicate that an additional planting rehabilitation was proposed for Locks Nos. 1, 2 and 3 in 1949. The proposal is similar in character to that of the Lock 4 plan that was created the previous year. As part of this plan, modifications to the canal prism proper were also proposed.

Lock No. 1

According to the 1949 planting plan, the topography north of Lock No.1 was to be graded to make an even surface, grass was to be planted, and various trees not specified in the drawing were planned. A bituminous towpath was also proposed on the berm side of the canal, though historically the towpath was on the river side of the canal east of 29th Street/Greene Street (Bearss 1961: 11). This bituminous towpath was to extend from Lock No.1 to 37th Street on

the berm side of the canal. To the north of the proposed towpath, south of Lock No. 1, plants of an unknown species were indicated and a railing of unknown character w planned north of Lock Basin No. 1.

Lock No. 2

At Lock No. 2, between 29th Street and 30th Street, a wrought iron fence was to be repaired on the eastern edge at the crossing of 29th Street. Currently, there is no photographic or documentary evidence for this fence and further research is needed. However, it is possible that the fence at Lock No. 2 was added around the same time as the planned wrought iron fence for Lock No. 4 in the 1948 planting plan. Also, in a thin rectangular plot north of Lock No. 2, south of the Washington Gas Light Co., a tree of an unknown species was planned near the entrance of Lock Basin No. 2. To the north Lock Basin No. 2, a railing of unknown character was indicated while to the south of Lock No. 2 trees of an unknown species were to be planted. One Paw Paw (asimina tribola) was documented as extant near the entrance of Lock Basin No. 2.

Lock No. 3

At the eastern end of Lock No. 3, located along 30th Street, a wrought iron fence was to be repaired. Similar to the wrought iron fence at Lock No. 2, it is possible that this fence was added around the same time as the wrought iron fence for Lock No. 4. Furthermore, to the north of the canal a bituminous towpath led to a small, paved rectilinear parklet with benches. A tree of heaven (ailanthus altissima) was to be removed from this space. From the parklet, the bituminous path continued to Jefferson Street where an unknown species of tree was planned north of the towpath near the barge landing.

Lock No. 4 to the Alexandria Aqueduct

Lock No. 4 is located between Jefferson Street to the east and 31st Street to the west. On the 1949 planting plan, the cobblestone paving to the north of the canal had been re-laid and plants of an unknown species were planted south of Lock No. 4. Continuing west along the canal, between 31st Street to the east and Wisconsin Avenue to the west, a small plot north of the canal was to be planted and graded. The plant species were not documented. The south wall of the canal was to be raised 30” to improve the slope.

Between Wisconsin Avenue and Potomac Street, south of the Capital Transit Co., slight repairs to the top course were planned. The drawing also indicates that the High Bridge, which connected the Capital Transit Co. building to the north of the canal to the D.C. Paper Co. to the south, was extant. However, the High Passageway to the east of the High Bridge was presumably removed sometime after the 1939 “Existing Conditions” map of the Georgetown Level. A new 60’ wall was proposed north of the canal, east of the Potomac Street footbridge. Plants of an unknown species were planned in the same location. Between Potomac Street and 33rd Street slight repairs to the top course were indicated north of the canal. To the south of the canal, a small, thin plot was to be filled and planted. Further repairs were indicated to the

top course between 33rd and 34th Streets.

1950 Rehabilitation Planting Plan for Locks No. 1-4
In 1950, another planting plan was proposed for Locks Nos. 1 through 3 and the section from 31st Street to Wisconsin Avenue. In this plan, the species names were given and for ease of understanding the common name will be provided.

Lock No. 1
Across the Georgetown Level, a 5' bituminous towpath was indicated. However, it is unclear if it was extant at the time of the creation of the plan. To the north of the towpath, south of the Washington Gas Light Co. building, 40 symphoria vulgaria and one London planetree (platanus acerifol) were planned. To the east this building, it is unclear if the eight golden-bell (forsythia suspense) indicated were extant at the time of the planting plan. Next to "rock tablet" (presumably the National Historic Landmark marker) a London planetree (platanus acerifol) was proposed. In the lawn south of the towpath, a weeping willow (salix babylonica) was planned to the west while a London planetree (platanus acerifol) was indicated at the center of the lawn. At the entrance of Lock No.1, a weeping willow (salix babylonica) was planned. In place of the 1949 proposed railing, a wooden guard rail was indicated north of Lock Basin No. 1 and south of the canal unknown trees and shrubs were indicated. Further research is needed to corroborate these changes.

Lock No. 2
Continuing west along the canal to Lock No. 2, repairs to the wrought iron fence were still planned and a new gate was to be added. A wooden railing was planned at the northeast corner of the northern lawn in place of the unspecified 1949 railing. In the thin rectangular plot north of Lock No. 2 (south of the Washington Gas Light Co.), two lindens (tilia tomentosa) trees were planned while south of the canal three London planetrees (platanus acerif), three red maples (acer rubrum), and three weeping willows were planned. The Paw Paw (asimina tribola) located near the Lock Basin No. 2 was extant in the 1950 planting plan. Further research is needed to corroborate these changes. However, to date there is an extant western most red maple (acer rubrum) in the proposed location.

Lock No. 3
At Lock No. 3, repairs to the wrought iron fence were still planned and the 5' bituminous walk led to the aforementioned small, paved parklet, which was identified as a "sitting place." Two stone steps led up to the sitting place where the tree of heaven (ailanthus altissima) had yet to be removed. The mulberry trees (morus) were indicated as extant in the 1949 plan and five hibiscus (hibiscus syriacus) were to be interspersed throughout the northern lawn. In the southern lawn, a small-leaved linden (tilia tomentosa) was to be planted while south of Lock No. 3 three weeping willows (salix babylonica) and four red maples (acer rubrum) were planned. Further research is needed to corroborate these changes. However, in a 1967 Library of Congress photograph of Lock No. 3, benches were recorded north of the entrance of Lock

Basin No. 3 and a post-and- chain fence lined a brick path. Shrubbery was planted north of the canal.

31st Street to Wisconsin Avenue

Lock No.4 was not included in the 1950s-planting plan. However, the section of the canal west of 31st Street was included. In particular, north of the canal and towpath the slope was to be graded, seeded, and planted with eleven trees. Unfortunately, it is unclear if the six althea/hibiscus (hibiscus syriacus) and three princess/fox- glove trees (paulownia) were extant. Furthermore, eight trees and a variety of shrubs were planned south of the canal. Also, a tree of heaven (ailanthus altissima) was to be removed.

In the 1948 planting plan, a new wooden fence with two rails and a cap was proposed at Lock No. 4. The 1967 photograph of Lock No. 4 consists of a single rail and capped fence. "LOCK NO#4 GATES, AND 'TOW PATH ROW' BUILDINGS- Chesapeake and Ohio Canal, Geo

The Lock No. 3 Plaza/Mule Yard, 1967 photograph looking west. "Lock #3-Chespeake and Ohio Canal, Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC." George Eisenman, 1967. From the Library of Congress (ht(https://www.loc.gov/resource/hhh.dc0053.photos/?sp=1, accessed 2017).

Later Period (1969-2017)

Overview

On January 8, 1971, that President Nixon signed Public Law 91-664 into law, officially forming

the Chesapeake and Ohio Canal National Historical Park. In accordance with the law, additional lands were acquired and by 1990, the park encompassed 19,237 acres (Shaffer 1997: 97; Mackintosh 1991: 97-118; National Park Service, General Plan 1976: 13). On the Georgetown Level, numerous repairs were completed and planting plans were proposed along the canal in association with canal-side developments. The industrial character along the canal changed as buildings associated with canal-use were transformed into office buildings, high end retail stores, and apartment buildings. In the 1970s, buildings along the canal drastically grew in height, which created a more enclosed feeling in various sections of the canal. By 2000, nearly every building along the canal on the Georgetown Level had been renovated and multistory buildings were constructed on almost all open spaces.

The C&O Canal: Becoming a National Historical Park

From 1957 to 1971, various National Historical Park bills were considered in Congress. In 1970, Rep. John P. Taylor of Pennsylvania presented a bill (H.R. 658) which Secretary of Interior Walter J. Hickel proposed a number of amendments to. These amendments were combined with elements of H.R. 658 and other amendments to create the Chesapeake and Ohio Canal Development Act (H.R. 19342). On October 1, 1970, the bill was presented to the House. This bill proposed the establishment of the Chesapeake and Ohio Canal National Historical Park "to preserve and interpret the historic and scenic features of the Chesapeake and Ohio Canal, and to develop the potential of the canal for public reaction, including restoration as may be needed." In the creation of the park, the boundaries were to follow National Park Service planner John M. Kauffmann's enlarged map, state-owned lands were to be included if donated or managed under a cooperative agreement, and a 19-member Chesapeake and Ohio Canal National Historical Park Commission was to be established.
Furthermore, $20.4 million was to be appropriated for land acquisition and an additional $17 million for development. On October 5, 1970, this bill passed the House without amendment and the Senate approved it without dissent on December 22, 1970. By January 8, 1971, President Nixon signed it into law and the Chesapeake and Ohio Canal National Historical Park was officially formed under Public Law 91-664 (Mackintosh 1991: 97-101).

The historical resource compromised some 5,250 acres, and pursuant with Public Law 91-664, efforts were made to acquire an additional 15,000 acres for the purpose of enlarging the canal's right-of-way and preserving associated sites. By September 1971, the National Park Service had determined that of the 47 planned developments 34 would need additional private lands. These lands were to be acquired using scenic easements and long-term retention rights. Scenic easements, which restricted the property to their present use or small scale residential development, were mainly used on the berm side of the canal and consisted of some 1,555 acres of the acquisition program. On the other hand, under the fee acquisition program owners could obtain 25- year or life tenancies for their properties. This program consisted of some 8,228 acres of the acquisition program and the majority of these lands were on undeveloped floodplains or agricultural, woodland, and residential lands. However, land acquisition was not easy and easements were difficult to enforce. In particular, the acquisition of riverfront

properties was difficult because of the uncertainty of ownership between high and low water lines (Mackintosh 1991: 103-118; National Park Service, General Plan: 13).

While land acquisition efforts ensued, the largest flood since 1936 struck the canal in June 1972 following Hurricane Agnes. This flood was most destructive to the section of the canal below Hancock with damage becoming progressively worse closer to Washington, D.C. Across the canal, 66 miles of unspecified towpath had eroded while 17 of the 26 documented breaches were downstream from Seneca. Furthermore, the flood "washed away bridges, damaged locks and lock houses, and left trees and debris scattered over the towpath and canal prism" (Shaffer 1997: 89). Congress appropriated a total of $34 million, but the Office of Management and Budget (OMB) delayed repairs. As funding was stalled, only stopgap measures could be completed using the National Historical Park's 1973 fiscal maintenance budget and the $400,000 diverted to the park by Secretary of Interior Rogers C. B. Morton. In 1973, the park received $1.8 million as part of its 1974 budget. This allowed the park to begin larger scale repairs and in September 1973, the National Park Service awarded its first contract at $353,800 for the repair of the canal between Georgetown and Lock No. 5. In September 1973, the C&O Canal Restoration Team was created to manage and prioritize preservation and water control needs. The restoration of the canal's masonry structures was seen as a priority and seventeen structures were scheduled to be restored by 1976. In 1974, towpath continuity was restored from Georgetown to Seneca and the canal was watered from Georgetown to Brookmont, Maryland by August 1974 (Shaffer 1997: 89-95).

While further efforts were made to restore the canal, the Chesapeake and Ohio Canal National Historical Park Commission worked to develop a General Plan. This plan was completed by July 1975 and called for the stabilization and restoration of the park's historic resources, the conservation of its historic and natural setting, the interpretation of its resources, and the development of outdoor recreation that would not "intrude upon or impair" the resources that the park was established to protect. In January 1976, National Capital Park Director Manus J. (Jack) Fish, Jr. approved the General Plan, which presented the parks purpose as providing the opportunity to:

…understand the canal's reason for being, its construction, its role in transportation, economic development and westward expansion, the way of life which evolved upon it, the history of the region through which it passes and to gain an insight into the era of canal building in the country

…appreciate the setting in which it lies and the natural and human history than can be studied along its way; and

…enjoy the recreation use of the canal, the parklands and the adjacent Potomac River

(National Park Service, General Plan 1976: 1)

The General Plan also presented the park's management goals as follows:

… Preserve the atmosphere of past times and enduring natural beauty and safeguard historic remains and natural features

….Impart to visitors an understanding and appreciation of an historic way of life blinded into the

natural setting of the Potomac Valley
…Develop the potential of the park's recreation resources for safe yet stimulating enjoyment by the visitors within limits compatible with the other two objectives (National Park Service, General Plan 1976: 1-2)

Furthermore, as part of the General Plan, the park was divided into 32 sections and each section was assigned to one of five zones. These zones, labelled A through E, were established to recognize the values that the various sections of the canal contained and were created following an analysis of visitation patterns, natural and cultural resources, available land areas within the park boundaries, and adjacent land use patterns. Of the canal, 10.4 miles were included in Zone A, 23.4 miles were included in Zone B (Cultural Interpretive Zone), 39.1 miles in Zone C (Short-Term Recreation Zone), 61.8 miles in Zone D (Short-Term Remote Zone), and 49.6 miles in Zone E (Long-Term Remote Zone) (National Park Service, General Plan 1976: 21-23). In particular, the Georgetown Level was classified as Zone A or National Interpretive Center Zone. The areas selected for Zone A had "major historic restoration opportunities" and could operate as interpretive centers for large density, short-term visitor use (1 to 2 hours). In these areas, it was proposed that outdoor living museums be developed with historically accurate recreations of historic scenes. Furthermore, where appropriate interpreters would dress in period costume.

Included in this plan, was the repair of 1972 flood damage and proposals for rewatering the canal in sections. The General Plan proposed that a total of 46 miles be re-watered starting with the 22-mile section from Violette's Lock to Georgetown. In addition, all of Zone A and B not included in the 22-mile section was to be rewatered. To determine a "water source and engineering feasibility" and whether "rewatering is infeasible or that longer stretches should be rewatered to transport water from a source to the Zone A or B section." In the watered sections, canoeing and fishing was to be encouraged as long as it did not interfere with historical demonstrations. Where rewatering was infeasible, the General Plan proposed that the canal bed be cleared of natural vegetation, sodded, and mowed. In these areas, historical interpretation was to be the objective (National Park Service, General Plan 1976: 25). By the end of 1976, the repair of the C&O Canal was complete, by the end of 1977, the National Park Service had obtained most of the lands, and interests it had planned to acquire. By 1977, the park consisted of 13,804 acres owned in simple fee and 1,164 acres held in scenic easements. Over the years, additional properties were acquired and by 1990, the park encompassed 19,237 acres (Shaffer 1997: 97; Mackintosh 1991: 103-118; National Park Service, General Plan 1976: 13).

Throughout the 1970s and 1980s, the National Park Service continued to restore and maintain the canal with one culvert being stabilized a year in each of the three districts of the park. In October 1976, the canal was struck by a flood and the entire canal was damaged at a cost of $70,000. The most extensive damage was documented at Catoctin Creek where a foot bridge was washed away. The National Park Service also funded a
$2.7 million project on the Georgetown Level in 1978. This project involved stabilizing the

retaining walls on the Georgetown Level and preventing leakages of water from the canal. That same year, the State of Maryland's Land Heritage Program financed the restoration of one lift lock, six lockhouses, and six culverts. In 1979, a briefing statement was released for the fiscal year 1979 budget that stated since 1972 "we have stabilized 5 locks, 3 guard locks, 7 aqueducts, 10 culverts, a mule barn, 6 lockhouses, the Paw Paw Tunnel ravine, 2 major breaks in the towpath at Widewater and rebuilt and resurfaced approximately 17 miles of towpath" (Shaffer 1997: 97-98).

In February 1984, the canal was flooded by water run-off from the Blue Ridge Mountains following the fall of six inches of rain in a span of 12 hours. In Frederick and Washington counties of Maryland, the flood damage was the most intensive. The 1984 flood caused the 70 miles of towpath in the counties to be completely submerged underwater. From Cumberland to Georgetown, breaks and erosion were also documented in some areas, while silting and debris was noted in others. At a cost of $580,000, the canal was restored. However, the canal was struck by another flood in November 1985. The section of the canal from Old Town to Georgetown was affected by high water as well as the confluences of the North and South branches of the Potomac River. The most extensive damage was documented in the upper portion of the canal though there was a "massive blowout" below Fletcher's Boathouse above Georgetown and the towpath eroded for miles. It was not until 1988 that repairs on the canal and towpath were completed (Shaffer 1997: 99-102).

Georgetown Urban Context in the Later Years

In the early 1970s, the industrial character of Georgetown began to change. On M Street and Wisconsin Avenue, high priced specialized shops replaced traditional businesses and from 31st to 35th Street landmarks associated with canal use were cleared. These landmarks include the Warring Barrel Company Warehouse, 3256 K Street, and Ray's Warehouse, 3260-3262 K Street (Georgetown Historic Waterfront 1993: 81-84). Furthermore, from 1968 to 1970, the brick 1890 berm-side canal warehouse, 1054 31 Street, was developed for commercial and office use. Originally, the warehouse was to be razed and turned into a parking lot. However, it was preserved and new 60-foot tall office building was constructed at the rear of the restored historic warehouse. This development, called the Canal Square, created an inner-block courtyard made of traditional waterfront materials such as wood and brick. In 1971, the development of the Dodge Warehouse, 1000 Wisconsin Avenue, was proposed. The new Dodge Center, a stepped red-brick-clad office complex, was planned to be 90-feet in height. By 1974, the development was complete and new zoning limitations were proposed as the height of the structure drastically affected the landscape (Georgetown Historic Waterfront 1993: 81-87; Luebke 2013: 291).

In 1970, developers approached the Inland Steel Corporation and proposed the development of the mid-19th century Duvall's Foundry, 1055 Thomas Jefferson Street, for commercial and office use. This development would have 400-feet of store frontage and rise to a height of 80-feet. In 1972, the chairman of the Old Georgetown Board, J. Carter Brown, stated that the

proposed “building is too high in view of the historic nature of the site, and the unique esthetic values around it” (Luebke 2013: 343). The buildings plans were modified to 60-feet and the redesigned commercial building was completed in 1976. This building was “pulled back from the canal” and a pedestrian place was established on the river side of the canal adjacent to the foundry. In 1975, the development of The Four Seasons Hotel and office building, 3350 M Street, was first proposed. The 60-foot tall development on the berm side of the canal was planned to wrap around the commercial row houses of “Diamond Row.” In an agreement with the National Park Service, the building was to be set back thirty feet from the park boundary. The new development was also responsible for resurfacing the towpath between Rock Creek and 29th Street in brick. In the construction of the hotel, an easement was granted in 1977 so that pedestrians could access to the towpath from the sunken garden of the hotel (CHOH). By 1979, the hotel was opened and the six-story building was noted as being “beautifully fitted into the slopes” (Luebke 2013: 343, 346; Georgetown Historic Waterfront 1993: 81-87; National Park Service, Boundary Agreements, 1984;
Mackintosh 1991: 175).

In the 1976 General Plan, these developments were documented as threatening the canal’s “charm” and the industrial character of Georgetown. The District of Columbia Zoning Commission responded to the recent developments by establishing a 60-foot height limit for buildings adjacent to the canal. This was important because higher buildings drastically altered the canal’s setting. At the time of the General Plan, a “canyon-like” setting was forming between Wisconsin and 33rd Street by the massive brick warehouses lining the canal. In other locations, the small-scale row houses created a different view. However, due to the limitations of zoning the General Plan recommended:
A program of land acquisition by the National Park Service should be undertaken. This could be accomplished by both fee and simple easement purchase. Where opportunities exist for creating limited scale openings and expansions of the canal “frame” to heighten its variety and interest, fee acquisition should be undertaken. Limited
expansions of the canal lands should also be made by property transfers of unused District of Columbia holdings. Where buildings of historic or architectural form part of the canal setting, historic preservation easements should be sought. Where development-prone land adjoins and is highly visible from the canal and where inappropriate renewal should be prevented, designed review easements should be considered (National Park Service, General Plan 1976: 43).

With the General Plan in place, the land around the Georgetown Level of the C&O Canal continued to develop. In 1976, M Street Estates (renamed Georgetown Park Venture Associates in December 1977) proposed the mixed-use Georgetown Park project. As part of Phase I, the old Capital Transit Company, 3222 M Street, building was to be redeveloped as a neo-Victorian shopping mall with three sub-surface levels of parking, three levels of commercial office space, and two to five levels of residential space. In the construction of the mall, the 40-foot tall brick M Street facades and the old retaining wall overlooking the canal were to be preserved.
Furthermore, included in the Phase I plan was the development of the multistory brick warehouse previously occupied by the D.C. Paper Manufacturing Co., 3225 Grace Street, on

the river side of the canal. This building was to be converted into 80-foot tall brick townhouses. In May 1978, the plans for townhouses were approved, though apartments substituted the townhouses in the final drawing review of July 1981 (Georgetown Historic Waterfront 1993: 94-96).

In 1976, plans were developed for Bomford's Mill/Wilkin's Rogers Milling Company, 1000 Potomac Street. The proposal required that a portion of the Bomford Mill be razed with the historic structures being reused for office and retail space. A residential structure was also planned adjacent the new Bomford Mill development at 33rd Street, 1015 33rd Street. In May 1984, Phase II plans were presented for the Georgetown Park. These plans called for the redevelopment Market House, 3276 M Street, as a commercial space and the development of a canal-side terrace plaza, Wisconsin Avenue Plaza, on the berm side of the canal west of Wisconsin Avenue. This plaza was to connect with the proposed Grace Street Park on the river side of the canal by a pedestrian footbridge. By June 1985, the Phase II plans of Lockman Associates had been approved and architect Peter Vercelli transformed the adjacent Fish Market Square into an open park (Georgetown Historic Waterfront 1993: 97-99).

By 2000, nearly every building along the canal on the Georgetown Level had been renovated and almost all open spaces were developed into multistory buildings. Furthermore, by 2000, there were more than 4,000,000 square feet of new development spaces (as compared to the 600,000 square feet in 1970) and about two-thirds of this space was dedicated to commercial purposes. Sixty-eight row houses were also extant between the canal and waterfront in 2000 and six had been converted into retail stores. The aforementioned Paper Mill development added an additional 200 plus new rental and condominium units. By 2000, high-end commercial developments, apartment homes, and office buildings had replaced the industrial corridor. Some of these developments include, the Marriot Residence Inn, 1000 29th Street, the Morrison Inn, 1077-1099 30th Street, and the development of the Washington Harbor as a mixed complex the in the late 1980s (Passonneau 2004: 236- 238; Georgetown Historic Waterfront 1993: 100-115).

The Georgetown Level in the Later Years: 1970-1974

As previously discussed, the canal was struck by a heavy flood in 1972 that severely damaged the canal. The most severe damage occurred below Hancock and worsened near Washington, D.C. Specifically, some 66 miles of unspecified towpath had eroded. Unfortunately, there are currently no extant records documenting the specific damage to the Georgetown Level and further research is needed. However, it is known that in 1973 the park received $1.8 million as part of its 1974 budget. This allowed the park to begin larger scale repairs and in September 1973, the National Park Service awarded its first contract for the repairs of the canal between Georgetown and Lock No. 5. By 1974, the towpath was restored from Georgetown to Seneca at a cost of $353,800 and by August 1974, the canal was rewatered from Georgetown to Brookmont, Maryland (Shaffer 1997: 89-95).

The excursion boat tours continued to operate on the canal. However, in 1972 the John Quincy Adams was destroyed by Hurricane Agnes (Mackintosh 1991: 181). According to McCarthy

(2014: 11), the canal boat operating in Georgetown was actually the Canal Clipper II. The John Quincy Adams, rather, was in operation at Great Falls. Further research is needed to determine which boat was running tours on the Georgetown Level.

1974-1979

In 1975, a survey was completed, documenting the existing conditions and topography of the Georgetown Level. That same year, the canal prism at Lock No. 3 was repaired as it had collapsed following the blasting of the adjoining Inland Steel/Duvall's Foundry and subsurface parking garage (Mackintosh 1991: 162). These repairs were documented in a plan dated to March 1975. There was also a planting plan for the area south of the International Business Machine Corporation at 1054 31st Street. In this plan, a new stone wall and steps was proposed. Behind the stone wall, the existing tree of heaven (ailanthus altissima) was to remain and dwarf holly (ilex), deciduous shrubs (forsythia), ivy, and numerous other species were proposed. Threes balustrades were also proposed at the 31st Street entrance to the towpath. Associated with the redevelopment, on June 1, 1977, the National Park Service entered into an arrangement with Canal Squares to use 1,260 square feet of space on the north side of the canal between 31st Street and Wisconsin Avenue. This agreement specifically allowed the restaurant to construct a wooden deck and awning on park property to the west of the aforementioned plantings (National Park Service, Boundary Agreements, 1984, Site #8).

In 1977, to commemorate the efforts of Supreme Court Justice Wm. Douglas, a planting plan was developed for the section of the canal between 30th and Jefferson Streets. As part of this plan, the 1950s sitting place was to be removed as well as the brick walk. In their place, brick square tiles in an S-shaped curve were to lead into the main walk from 30th Street. At 30th Street, the Georgetown Historic District Memorial plaque, placed when the Old Georgetown Act established Georgetown as a historic district post 1956, was documented (Passonneau 2004: 188). To the north and south of this S-shaped curve path there were planting beds. In the northern planting bed, the existing tree of heaven (ailanthus altissima) was to remain while little-leaved linden (tilia cordata), flowering dogwood (cornus florida), flowering quince (chaenomeles), heller's dwarf jar holly (ilex crenata helleri), and coral bell azaleas (azalea 'coralbell') were proposed. While in the southern planting bed, flowering dogwood (cornus florida), a little leaf linden (tilia cordata), silver linden (tilia tomentosa), flowering quince (chaenomeles lagenaria), heller's dwarf jar holly, ilex crenata helleri), and coral bell azaleas (azalea 'coralbell') were proposed. A straight path with brick square tiles was to cut through this southern planting bed from 30th Street. Furthermore, to the immediate west the bust of Justice William O. Douglas was to be placed in a semi-circular spaced area. To the west of this area, a square plot with a little leaf linden (tilia cordata) was proposed in the path. North of the towpath near Jefferson Street, the existing mulberry (morus) and tree of heaven (ailanthus altissima) were to remain while autumn clematis (clematis terniflora), crape myrtle (lagerstroemia), and various shrubs were proposed. To the south of Lock No. 3, the two existing red maples (acer rubrum), mulberry (morus), privet (ligustrum ovalifolium), and quince (anaden oblonga) were to remain while shrubbery was to be added.

In 1977, Lockman Associates/Architects presented plans for the National Park Service owned

Wisconsin Avenue Plaza (on the berm side of the canal at the northwest corner of the Wisconsin Avenue crossing) and the Grace Street Park (on the river side of the canal west of the Wisconsin Avenue Bridge). The Wisconsin Avenue Plaza, bound by the former Georgetown Park development, was to be paved with brick and new planters and benches were to be added. Also, the walkway around the Commemorative Obelisk, at the southeast corner of the plaza, was to be paved around with concrete to match the sidewalk. The Grace Street Park, bound by a one-story brick structure to the east and the two story converted Bomford's Mill to the west, was to retain its historic wall at the southern boundary of the park and three retaining beds were to be planted. Throughout the park benches were to line the retaining beds and access to the park was granted from either a pedestrian bridge from the berm side of the canal (not maintained by the National Park Service) or from Grace Street proper through the former southern facade. In September 1978, following the proposed plan, easements were granted to the Georgetown Park Associates to allow for the construction of two pedestrian bridges (one connecting the Wisconsin Avenue Plaza to the Grace Street Park and one connecting buildings located at Lot 868 [3222 M Street] and Lot 852 [3225 Grace Street]). This agreement also granted easements to the Georgetown Park Associates for the pedestrian use of the Wisconsin Avenue Plaza to access the stairway and towpath. Following this easement, the Georgetown Park associates were to maintain the Wisconsin Avenue Plaza, the Grace Street Park, the two pedestrian bridges, and the "Rusticated Stone Wall" (National Park Service, Boundary Agreements, 1984). By the 1980s, these Wisconsin Avenue Plaza and Grace Street Park were completed (Georgetown Historic Waterfront 1993: 98),

The continued construction of modern office buildings in Georgetown throughout the 1970s led to the destabilization of the canal walls. In 1978, the National Park Service funded a $2.7 million project on the Georgetown Level to address the matter. Specifically, this project involved stabilizing the retaining walls west of Wisconsin Avenue, west of the Georgetown Mall development, and the structure of the canal prism to prevent leakages of water into adjacent building basements and foundations (Shaffer 1997: 97-98; Mackintosh 1991: 162).

In either 1973 or 1974, the damaged Canal Clipper II, referred to as the John Quincy Adams by the Mackintosh 1991 source material returned to the canal to conduct tours. However, as the boat was far too damaged to operate on the Georgetown Level, the Government Services, Inc. (GSI) began constructing a new self-propelled boat. The National Park Service rejected this self-propelled boat proposal, as canal boats historically were mule- powered. As the National Park Service would not relent and the GSI was operating the canal boats at a loss since 1941, the GSI withdrew from its contract and donated the $200,000 self-propelled boat to the National Park Service (McCarthy 2014: 11). By September 28, 1976, the National Park Service was operating the Canal Clipper III (referred to as the Canal Clipper II by the Mackintosh 1991 source material) without its 75- horsepower diesel turbine engine on the canal in Georgetown. This 25 ton, 85-foot long boat ran from Lock No. 3 to Fletcher's Cove, 2 ½ miles upstream from Georgetown (McCarthy 2014: 11; MacKintosh 1991: 181).

According to McCarthy, the Canal Clipper III was backed up to return to its starting point at Lock No. 3. Furthermore, similar to the Canal Clipper I and II, the emphasis of the excursion

was on recreational rather than interpretive value. In the following years, park management established a “living history” program with park rangers/boatmen performing in the first person, providing insight to canal life to visitors. In 1979, the Canal Clipper III was relocated to Great Falls because the Georgetown Park development was interfering with its operation at Lock No. 4 (McCarthy 2014: 11-12; MacKintosh 1991: 181).

1980-1999

In 1980, a planting plan was developed for Lock No. 1 and fragmented sections of the canal between 31st and 34th Streets. At Lock No. 1, the extant weeping willow (salix babylonica) on the berm side of the canal, documented in the 1950 planting plan, was removed. A white ash (fraxinus american) was documented on the berm side of the canal. The location corresponded with proposed placement of two London planetrees from the 1950s. In the 1980 plan, a rail fence and brick walk was proposed in place of the 1950s 5’ bituminous walk and wooden guardrail. Similar to the white ash (fraxinus americana), it is unknown if the 5’ bituminous walk and wooden guardrail were added following the 1950s planting plan. Considering the 1967 Library of Congress photograph of Lock No. 3, it is possible that Lock No. 1 also featured a brick walk and post-and-chain fence.

Additional research is needed to ascertain what work was completed. In the 1980 planting plan, trees of an unspecified species were also documented as extant on the river side of the canal. An additional six red maple (acer rubrum) were proposed.

Continuing west along the canal, the 1950s silver linden (tilia tomentosa) on the berm side of the canal at 29th Street was extant in the 1980 planting plan. On the river side of the canal at 29th Street, a white ash (fraxinus americana) was documented. Additional white ash (fraxinus americana) and sycamore (platanus occidentalis) trees were documented on the river side of the canal west of 29th Street. These trees were not proposed in the 1950s plan. Moving west, the weeping willow (salix babylonica) proposed in the 1948 planting plan at the entrance of Lock Basin No. 4 was extant. From 31st Street to Wisconsin Avenue, the trees on the berm side of the canal were documented as extant. Unfortunately, their species names were not documented in the 1980 plan. Furthermore, from 33rd to 34th Street, trees are documented as existing on the berm and river side of the canal.
The species names were not specified. However, on the river side of the canal arrow wood viburnum (viburnum dentatum), burning bush (euonymus alatus), doublefile viburnum (viburnum plicatum tomentosum ‘Mariesii’), eastern redbud (cercis canadensis), and flowering dogwood (cornus florida) were proposed. Further research is needed to determine if and to what extent this planting plan was completed.

During February 1984, the canal was struck by a flood, which brought some 70 miles of towpath underwater in Frederick and Washington Counties Maryland. From Cumberland to Georgetown breaks and erosion of the towpath was also documented. At a cost of $580,000, the canal was restored though in November 1985 another flood damaged the canal from

Oldtown to Georgetown. This flood caused a, “massive blowout,” in the canal prism below Fletcher’s Boathouse above Georgetown and extensive towpath erosion. It was not until 1988 that repairs on the canal and towpath were completed (Shaffer 1997: 99-102). Unfortunately, the specific damage to the Georgetown Level is not clear nor are the repairs completed. Further research is needed to ascertain the extent of damage and repairs.

After the removal of the Canal Clipper III , the Marine Power, Inc. of Gulf Breeze, Florida introduced plans for a fourth generation mule-drawn excursion boat that more closely resembled a 1870s freighter. The Morris and Gwendolyn Cafritz Foundation funded the construction of the 17 ½ tons, 90-feet long, and 12 ½ feet wide at the beam Georgetown, which was launched in September 1982. This new boat could carry approximately 100 people and it offered 1.5 hour long rides from Lock No. 3 to the Foundry Branch. In the 1990s, some of the trips were shortened to 1 hour to accommodate schools groups. These trips turned around at the Whitehurst Expressway on-ramp (Mackintosh 1991: 22, 41-43, 181; McCarthy 2014: 12).

In September 1998, the Georgetown was severely vandalized. It was removed from the canal and shipped to Washburn’s boatyard in Solomon, Maryland for repairs. However, as certain materials were no longer available, the Georgetown was not rebuilt to its original specifications. On July 24, 1999, the restored Georgetown was returned to the canal (McCarthy 2014: 12).

2000-2017

Throughout the 2000s, the Georgetown bridges were monitored by the U.S. Department of Transportation with repairs done in conjunction with the DC Department of Transportation (DDOT). A series of reports regarding the condition of the bridges were submitted to the National Park Service, granting insight into modifications and rehabilitations to the structures.

Greene/29th Street Bridge

In 2009, bracing was temporarily added to the structure in order to better support a water main that was crossing the underside of bridge superstructure. According to the submitted compliance statement, this issue was to be more permanently addressed when additional work was completed on the bridge (Planning and Environmental Public Comment 2007: 17660). In 2012, the bridge superstructure was completely replaced as a part of the DDOT’s Operation: Remove, Restore, and Replace Georgetown’s C&O Canal Bridges. The goal of the project was to improve infrastructure for both automobiles and pedestrians at the bridge crossings of the canal. A steel and concrete bridge deck was installed with sidewalks allowing pedestrians to safely cross the structure. The project was complete by the end of 2012 (WE love DC).

Washington/30th Street Bridge

The Washington/30th Street Bridge was the first of the three bridges to be replaced in the DDOT’s Operation: Remove, Restore and Replace Georgetown’s C&O Canal Bridges. The effort replaced the superstructure of the bridge in order to accommodate vehicular and pedestrian traffic in a manner keeping with current transportation standards. Work began in August 2009 and was completed in July 2010 (WE Love DC). The replacement was a steel

superstructure deck that supported a concrete surface.

Thomas Jefferson Street Bridge
In 2011, the historic bridge, including the deck, was demolished by DDOT. The bridge was rebuilt into the present configuration. This project was also responsible for rebuilding the road on either side of the canal and the sidewalk system (The Georgetowner Feb 9th 2011).

Potomac Street Footbridge
On October 31, 2005, the Potomac Street footbridge was inspected by DDOT. In their report, the trail bridge was classified as fair to poor condition due to, “widespread rusting of the structural steel with severe section loss in several isolated locations, as well as severe cracking of the south abutment.” Prior to the inspection, the abutment had been retrofitted with a steel tube and rod confining system. However, this was not seen as a long- term solution to the problem. In 2005, the bridge superstructure was replaced and the south abutment was reconstructed.

Duck Lane/33rd Street Bridge
On October 17, 2003, the 33rd Street footbridge was inspected by DDOT. According to the report, the truss bridge was in critical condition because of, “severe rusting and section loss throughout the structural steel with numerous damaged or missing members and noticeable deflection of the main superstructure elements.” By January 2004, the bridge was closed to pedestrian traffic following the recommendation of DDOT. The repair/rehabilitation of the bridge was “not considered a practical of economical option,” and in the 2005 Bridge Inspection Report the footbridge was still closed. In the October 31, 2005 report, the replacement of the superstructure of the bridge was proposed.

By 2007, the steel truss bridge at 33rd Street had been replaced and was in good to fair condition. However, the October 22, 2007 inspection noted the following: “cracking with efflorescence and delamination of the concrete abutment breastwall fasciae and the vegetation growing from the east side of the south abutment breastwall.” In the report, corrective actions were recommended and if regularly maintained the bridge would have an estimated use life of 35-40 years. On October 19, 2009, the bridge was inspected and noted as in good condition.

Frederick Street/34th Street Footbridge
On October 31, 2005, the 34th Street footbridge was inspected by the DDOT. The footbridge was in good condition though one deck plank displayed evidence of moderate decay. This plank was to be replaced, as it was a tripping hazard. The report also documented additional problems including the “deterioration of the mortar joints throughout the south abutment and adjacent retaining walls; spot rusting of the structural steel, railings, and utility pipe; and settlement at the approaches.” In the report, it was estimated that the bridge would have an estimated use-life of 20 to 25 years if corrective actions were taken. Following the 2005 inspection, the superstructure and railings were painted and the settlement at the north

approach had been repaired.

On October 22, 2007, another inspection was completed and the bridge was noted as in fair to good condition. However, the aforementioned deck plank was evidencing further decay and several other planks were creating a tripping hazard to pedestrians. Other problems included the "deterioration of the mortar joints throughout the south abutment and adjacent retaining walls, settlement at the south approach, an accumulation of debris on the deck and on the north abutment bearing seat, a broken utility conduit near the south abutment, and a loose globe on the street lamp at the south approach." Following the 2007 inspection, the deck plank was covered with plywood.

The 34th Street footbridge was re-inspected on October 24, 2011. This steel pony truss bridge was documented as in fair to good condition though some problems were noted. These problems included "moderate to severe deterioration of the timber deck planks and moderate to severe deterioration of the south abutment breastwall masonry mortar joints and the south approach ramp." Additional problems were "settlement of the surfacing at the south approach, accumulation of debris on the deck surface and on the north abutment bearing seat, and a broken utility conduit near the south abutment." In the report, it was recommended that the deck plank covered with plywood be repaired immediately and that the south abutment breastwall masonry be repointed to prevent stone loss.

Lock No. 3 Rehabilitation

In 2010, it was stated in supplied compliance materials that Lock No. 3 required total reconstruction because water from level 3 was passing around the lock wall structure, "undermining the 14 feet high, ashlar laid, stone lock walls." Additionally, the timber foundation of the lock had deteriorated causing the lock walls, "to bow inward approximately 11 inches per side as well as to differentially settle over their length (180 feet)." As outlined in the PEPC (NPS PEPC 2010: 32862) entry, the scope of the project required:

1) The disassembly of the lock walls down to the foundation
2) Building a new foundation
3) Rebuilding the lock using original and supplemental stone
4) Construction of new lock gates
5) Restoration of the surrounding plaza paving and landscaping

In September 2016, work commenced on this project and is ongoing at the time of the completion of the original CLI in 2017. Future version of this CLI will comment on the nature of this work accordingly.

Lock No. 4 Rehabilitation

In 2015, the rehabilitation of Lock No. 4 was proposed as weathering and vegetation growth had caused leakage and the destabilization of the masonry. As outlined in the PEPC (NPS PEPC 2010: 32862) entry, the scope of the project required:

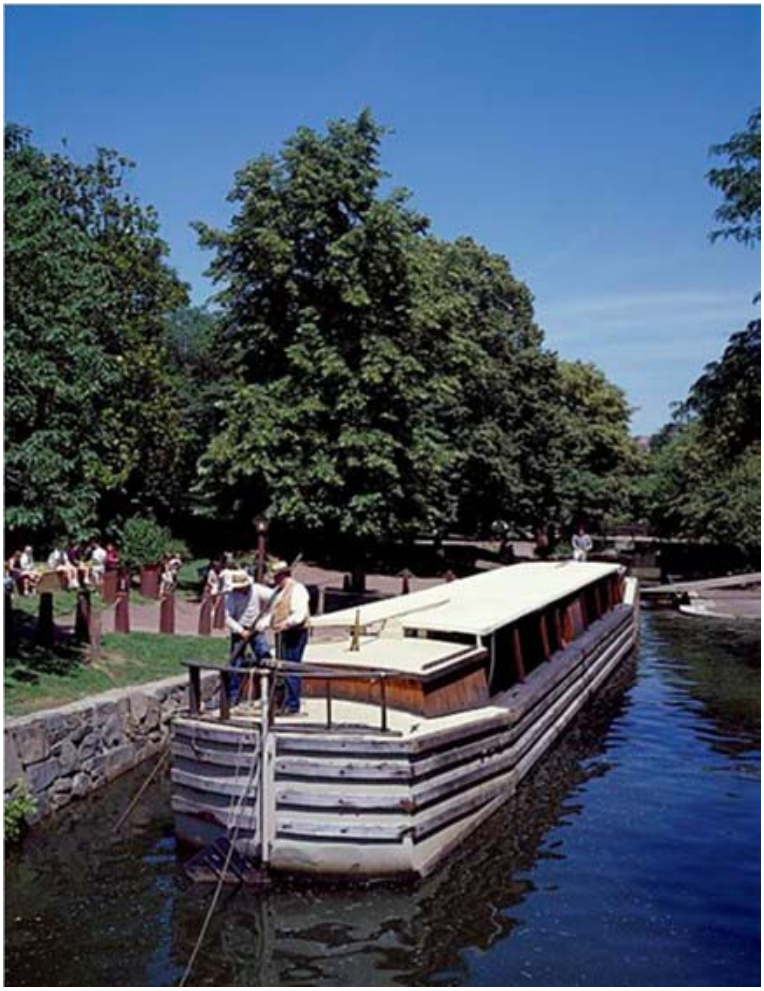
1) The Raking and re-pointing of all masonry joints including the lock walls, breast wall, wing walls, and fifty feet of the Level 4 walls upstream

2) Repairs to the broke and damaged stone through the application of mortar to small cracks, the pinning of broken portions of stones back together, and the application of a Dutchman-style repair to areas missing facing stone
3) Disassembly and reconstruction of the southern wingwall which has been disturbed by a trees root system and the breast wall
4) The plugging of the internal culverts

In September 2016, work commenced on this project and it is ongoing. Future versions of this CLI will comment on the nature of this work.

The Georgetown continued to operate on the canal into the 2000s; however, the trips were shortened to 1 hour. In the winter of 2001/2002 National Park Service Park Rangers John P. McCarthy and Mark Myers, as well as volunteer Michael McMahan, added a replica family cabin at the rear of the Georgetown. On July 7, 2011, a consulting marine engineer condemned the Georgetown. The boat, after 29 years of services, was deposited at the dry dock above Lock No. 4. In 2016, the Georgetown was removed from the canal. With funds from the District of Columbia, Georgetown Heritage plans to introduce a new canal boat to the Georgetown section of the C&O Canal (McCarthy 2014: 13).

It is pertinent to note that during the completion of the original CLI, the Chesapeake and Ohio Canal National Historical Park, in partnership with Georgetown Heritage and the Georgetown Business Improvement District (BID), are in the process of developing of a master plan to rehabilitate the cultural landscape. James Cornor Field Operations is the landscape architectural firm that was selected to oversee the project. To date a public input session has occurred and draft proposals have been submitted for discussion amongst park staff. It is critical that future versions of this CLI document what was proposed by firm, but more importantly, what is actually implemented as a result of the design discussion.



Photograph of Lock No. 3 looking west. "Tourist barge on the old C&O Canal in the Georgetown section of Washington, D.C." Carol M. Highsmith, 1980. From the Library of Congress (https://www.loc.gov/item/2011632165/, accessed 2017.)

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

This section of the cultural landscape inventory provides an evaluation of the physical integrity, landscape characteristics, and features of the Georgetown section of the Chesapeake and Ohio Canal National Historical Park cultural landscape, as researched and surveyed between the summer of 2016 and the spring of 2017. To document all visible above-ground features, site visits were conducted to supplement topographical surveys and GIS data. All field data was collected and converted into a database for the Georgetown section of the Chesapeake and Ohio Canal. Existing conditions were then compared with those of landscape characteristics and features present during the period of significance (1828-1960).

Landscape characteristics are the tangible and intangible aspects of the landscape that allow visitors to understand its cultural value. Collectively, they express the historic character and integrity of the landscape. Landscape characteristics give a property cultural importance and compromise the property's uniqueness.

Each characteristic or feature is classified as contributing or non-contributing to the site's overall historic significance. Landscape characteristics are comprised of landscape features. Landscape features are classified as contributing if they were present during the property's period of significance and retain integrity. Non-contributing features (those that were not present during the historical period) may be considered "compatible" when they fit within the physical context of the historic period and attempt to match the character of the contributing elements in a way that is sensitive to the construction techniques, organization methods, or design strategies of the historic period. Incompatible features are those that are not harmonious with the quality of the cultural landscape and, through their existence, can lessen the historic character of the property. For those features that are listed as undetermined, further research, is necessary to determine the feature's origination date. Landscape characteristics and features, individually, and as a whole, express the integrity and historic character of the landscape and contribute to the property's historic significance. On-going research and studies associated with the study area of cultural landscape will change our understanding of the site, and future versions of this CLI will reflect new information.

This section also includes an evaluation of the property's integrity in accordance with National Register criteria. As defined by the National Register, historic integrity is the authenticity of a property's identity, evidenced by the survival of physical characteristics that existed during the site's historic period. The National Register recognizes seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. To be listed on the National Register, a property must be shown to have significance under one or more criteria and retain integrity to the period of significance.

Contributing landscape characteristics categories identified for the Georgetown section of the Chesapeake and Ohio Canal are: land-use, spatial organization, circulation, constructed water features, buildings and structures, small-scale features, vegetation and topography.

Historically, the canal was used to transport agricultural products, coal, and other materials from Cumberland to Georgetown. This ascending trade led to the development of new mills and the establishment of groceries, feed stores, taverns, and warehouses to support the growing industry in Georgetown. From 1831 to 1924 the canal was also used for recreation as excursion boats travelled from Georgetown to points further west. These operations ended in 1924 when the canal was destroyed by a flood. By 1938, under the management of the National Park Service, the canal was rehabilitated for recreational use. A series of canal boats operated from Lock No. 3 to Lock No. 5 and back from 1941 to 2011. Currently, at the time of the 2017 CLI, the canal is unwatered due to the ongoing rehabilitation of Locks Nos. 3 and 4. Following the revitalization of the Georgetown section, Georgetown Heritage plans to purchase a new historic replica canal boat with grant funds to provide excursion to visitors in the canal once again.

The spatial organization of the study boundary is defined by the canal's relationship with Georgetown's urban development. Historically, two to four-story canal-side warehouses were set back from the canal prism. These buildings, level with the topography of M Street, were intermixed with two to three-story residential row houses. The buildings between Wisconsin Avenue and 33rd Street, however, were built up to the canal. This created a narrow more restricted enclosed feel on this portion of the canal. The spatial organization of the Georgetown section was altered from 1890-1938 as buildings began to encroach on the canal's right-of-way. By the 1970s, 60 to 80-foot tall multi-use developments were constructed on the berm and river side of the canal. These new developments amplified the "canyon-like" feel between Wisconsin Avenue and 33rd Street and effect the integrity of the Georgetown section.

The canal towpath defines the circulation of the C&O Canal in Georgetown. Historically, the towpath was located on the river side of the canal west of 34th Street while east of 34th Street to 29th Street the towpath was on the berm side of the canal. In 1856, the towpath shifted to the berm side of the canal from 34th Street to 37th Street. However, in 1949/1950 the towpath shifted from the river side of the canal to the berm side of the canal from mile marker 0.0 to 29th Street and in the 1980s the towpath was established on both sides of the canal west of 33rd Street. In regards to towpath materials, in the 1949 planting plan it was proposed that the towpath be made a bituminous path. The parklet on the berm side of the canal at Lock No. 3 was also planned to be brick. As the towpath historically was composed of sand and clay or knapped rock smoothed over with a roller, only portions of the towpath retain integrity of location not material.

Furthermore, the circulation in the Georgetown section is defined by a series of bridges at the crossing of the street grid. The original Greene/29th Street, Washington/30th Street, Thomas Jefferson Street, Congress/31st Street, and Wisconsin Avenue Bridges were constructed in 1831 and made of stone, while the Potomac Street, Duck Lane/33rd Street, and Frederick/34th Street Bridges were wood. In 1867, the 29th, 30th, and Thomas Jefferson Street Bridges were raised and replaced with an iron superstructure. The historic abutments were retained. As of the 2017 CLI, only the Wisconsin Avenue Bridge has high integrity as it retains its historic 1831 stone structure. The 30th and Thomas Jefferson Street Bridges have partial integrity as they retain their historic stone abutments. Due to various

renovation efforts the remaining bridges (29th, 31st, Potomac, 33rd, and 34th Street) only have integrity of location. However, it should be noted that the pier of the 31st Street Bridge, which extends into the canal prism, is a character-defining feature of the bridge.

The constructed water features, which include the canal prism, Lock Nos. 1 to 4, Boat Basin Nos. 1 to 3, the water intake ruins and dual water intake at Wilkin's Rogers Milling Co., and pipes, all retain varying degree of integrity. The locks, specifically, retain partial integrity as patchwork repairs of brick or slabs of granite are intermixed with the historic Aquia Creek sandstone and local rock. There have also been slight repairs to the Boat Basins, water intakes, and pipes. As such, these features only retain integrity of location. In regards to buildings and structures, the historic 1831 30th Street and Thomas Jefferson Street stone abutments retain a high degree of integrity, as do the former Georgetown Visitor Center (1057 Thomas Jefferson Street NW), the hydraulic generator plant, retaining wall 0.59-.61, and retaining wall 0.67-1.07. However, the towpath cross over bridge ramp ruin only retains integrity of location and the Alexandria Aqueduct only retains integrity of location and material (not design).

The small-scale features, including the north canal plant retaining wall, commemorative obelisk, Chesapeake and Ohio Canal Marker 0.0, and the Georgetown Historic District NHL Marker, have high integrity. Further research is needed to determine the integrity of the Lock No. 1 fence and Lock No. 2 boat basin fence. The vegetation along the canal course retains integrity as various species of trees date to the periods of 1940-1950 and 1950-1960. The topography of the canal, which is lower south of M Street, also retains integrity and continues to maintain the spatial organization of the Georgetown section.

INTEGRITY

Location: The location aspect of integrity involves the place where the landscape was constructed. The Georgetown section of the Chesapeake and Ohio Canal retains the location and general boundaries of its original construction. The canal maintains its original course south of M Street in the urban context of the Georgetown neighborhood of Washington DC. Its boundaries have not been altered since the end of the period of significance.

Design: Design is the combination of elements that create the form, plan, space, structure, and style of a cultural landscape and historic property. The Georgetown section of the Chesapeake and Ohio Canal includes a series of constructed water features—the canal prism, locks, boat basins, water intakes, possible guard locks, and pipes—that are engineered to work together as a system to conduct the flow of water. These features are consistent with the historic plans and retain the essential integrity of design from the period of significance despite repairs.

Setting: Setting is the physical environment of a cultural landscape of a cultural property. Historically, canal warehouses and private residences were removed, or set back, from the canal and towpath, with limitations to the overall height. The exception to this character occurs between Wisconsin Avenue and 33rd Street, where a combination of high walls and the low elevation of the canal prism create an

almost “canyon-like” condition. During the period Baltimore and Ohio Railroad control (1890-1938), however, the right-of-way of the canal and towpath was encroached. By the 1970s, large-scale multi-use developments were constructed on the both the river and berm side of the canal. These developments drastically altered the setting of the canal and diminished the integrity of the setting.

Material: Materials are the physical elements of a particular period, including construction materials, paving, plants, and other landscape features. The materials used in the construction of the Georgetown locks were Aquia Creek sandstone from Stafford County, Virginia and local rock. These materials are still extant though bricks or slabs of granite were used to make necessary repairs. As a result, the materials of the Georgetown locks retain partial integrity. In regards towpath materials, historically the towpath was composed of sand and clay or knapped rock smoothed over with a roller. Beginning in 1949, the various sections were either paved with brick or made a bituminous path. These, as well as future changes, have decreased the integrity of material.

Workmanship: Workmanship includes the physical evidence of the crafts of a particular period. The workmanship of the canal is visible in the design construction of the waterway. Despite the use of different materials in the repair of the canal walls, the Georgetown section of the Chesapeake and Ohio Canal retains integrity from the period of significance.

Feeling: Feeling is a property’s expression of the aesthetic or historic sense of a particular period. The feeling of the Georgetown section as an industrial and transportation waterway water was altered in the 1970s with the construction and redevelopment of commercial and residential buildings along the canal corridor. These buildings, not associated with the commercial use of the canal, do not contribute to the integrity of feeling from the period of significance. As such, the Georgetown section of the Chesapeake and Ohio canal retains a partial degree of integrity of feeling.

Association: Association is the direct link between an important historic event, pattern, or person and a historic property. The Georgetown section of the Chesapeake and Ohio Canal is associated with Mid-Atlantic transportation and industry, and recreation in the Potomac Valley. In 1831, with the opening of the canal in Georgetown, excursion boats provided pleasure trips to locations further west. These boats continued to operate until the 1924 flood. In 1941, under the management of the National Park Service, an excursion boat was reintroduced to the canal. This boat, the Canal Clipper, offered recreational and interpretative trips from Lock No. 3 to Lock No. 5 and back. These recreational and interpretive trips continued to operate until the 2011 removal of the Georgetown. There are plans to introduce a new canal boat following the rehabilitation of the Georgetown section.

Conclusion: After evaluating the landscape features and characteristics within the context of the seven aspects of integrity established by the National Register, this cultural landscape inventory finds that the location, association, design, materials, and workmanship retain a high degree of integrity. The setting and feeling of the Georgetown section has low integrity due to large-scale multi-use developments to either side of the canal. Overall, the Georgetown section of the Chesapeake and Ohio Canal then retains integrity from its period of significance.

Landscape Characteristics and Features
This section presents an analysis of landscape characteristics and their associated features and corresponding List of Classified Structures names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility for the historic period (1828-1960), contributes to the property's historic character, or if it is noncontributing,

Aspects of Integrity:

Location

Design

Setting

Materials

Workmanship

Feeling

Association

Landscape Characteristic:

Land Use

Historic Condition
Georgetown was established as a tobacco port prior to the construction of the C&O Canal. The success of the Georgetown port can be attributed to the location of the Rock Creek Landing on the Potomac River. This location allowed for the easy delivery of goods from the interior of Maryland and their exportation to locations downstream. In the third quarter of the 18th century, mills were also established along the waterfront as the Potomac River and Rock Creek provided a source of waterpower for the rising milling industry (Georgetown Historic Waterfront 1993: 13-15).

In 1828, construction began on the C&O Canal. By 1831, the waterway was open to navigation in the Georgetown section. The canal was used to transport agricultural products, commercial goods, and coal. It also provided a means to ship unprocessed grains, which supported Georgetown's growing milling industry. It wasn't until 1837, however, that the C&O Canal Board advertised the sale of Georgetown's excess canal water. The Georgetown Level (which rose 35 feet) could provide a new source of power for milling because this height was sufficient enough to generate power from the fall of water. It could also provide an additional income to the indebted canal company. By 1839, the first water lease was granted to George Bomford for the operation of a flour mill. In the following years, various leases were granted (Unrau 2007: 656-667). For a full list of Georgetown's water leases refer to Unrau (2007, 683-702).

The canal was also used for excursions. On July 11, 1831, W.W. Fenlon, L.M. Offutt, and Charles Embrey were authorized to operate the packet boats Charles Fenton Mercer, George Washington, and Lafayette, respectively, on the Georgetown Level. These proprietors actively placed advertisements in the Georgetown newspapers, including the Columbian Gazette. On July 3, 1832, there was an advertisement in the Columbian Gazette for the Lafayette. They

advertised that this boat, which ran from Georgetown to Great Falls, could accommodate 100 people and 20 couples "in a cotillion at a time." The proprietors also offered food on board. The excursion/packet boats proved unprofitable and on July 3, 1832 the Columbian Gazette advertised that the Lafayette would be sold the following day at public auction (Columbian Gazette, July 3, 1832)). By 1833, the Charles Fenton Mercer was the only packet boat in operation on Georgetown Level (Unrau 2007, 337-339).

On April 27, 1833, Captain William Easby, a Washington shipbuilder, submitted a proposal for the construction of a sheet-iron packet boat. This packet boat, named The President, was completed in March 1834 at a cost of $1,400. Also, on September 11, 1835, O.M. Linthicum, president of the Georgetown Canal Packet Company, was granted permission by the canal company to operate a daily packet service between Georgetown and Harpers Ferry for one year free of charge. By 1836, The President was sold as regular passenger service was unprofitable. The business of Linthicum was also out of operation by 1836/1837. However, despite the failure of regular packet services, in August 1835 President Andrew Jackson and 50 guests travelled on the Charles F. Mercer from Georgetown. The party was accompanied by the U.S. Martine Band and a "sumptuous" meal was provided. The women on board "honored the men in the pleasing amusements of the dance" as they approached Georgetown. In the spring of 1836, a group of Congressman also travelled on the Charles F. Mercer from Georgetown to Harpers Ferry (Unrau 2007: 339-341).

In the late 1840s, steam-powered excursion boats were introduced to the C&O Canal. The Congress, one of the earliest steam boats, transported passengers between Georgetown and Harpers Ferry and also offered excursions to Great Falls on Sundays. By the mid-1850s, with the completion of the Washington Aqueduct, regular packet boat services commenced and the Commemorative Obelisk was placed in Georgetown (Unrau 2007: 356-358; Unrau 2007: 226). On August 1, 1856, the Washington Evening Star featured an advertisement for the General, M.C. Meigs. The Meigs offered a chartered excursion from the Alexandria Aqueduct in Georgetown "To the Great Falls and Water Works" and refreshments were provided. At Great Falls "a large hall" was available to dance to the best Cotillion Music" (Evening Star, August 1, 1856). There were numerous other excursion boats that commenced in Georgetown including the Aldanbaran (Evening Star, June 1, 1878, pg. 2), the John R. Mason (The Washington Times, June 6, 1903, pg. 12), the Eliza Hutchins (Evening Star, July 15, 1865, pg. 3), and the Minnesota (Evening Star, May 10, 1867, pg. 3). Specifically, the Fashion departed from "Ritter's Wharf" in Georgetown (Evening Star, March 20, 1854, pg. 2) and "The Neat Little Packet Nellie" departed from Congress/31st Street Bridge to Great Falls (National Republican, July 2, 1879).

From 1861 to 1865, during the Civil War, commercial canal boats experienced costly delays along the Georgetown Level as the Alexandria Aqueduct was under federal control. It is also probable that the aforementioned excursion/packet services ceased operation (Kytle 1983: 98; Sanderlin 1945: 60; Snyder 2011: 88). After the war, from 1865 to 1875, the C&O Canal prospered and goods continued to be transported to Georgetown from points further up along

the canal. The Georgetown's mills were also supplied with excess canal water. By 1876, canal operations had begun to decline due to the unreliability of the canal as a transportation route, competition with the B&O Railroad, and flooding (Unrau 2007: 493). Interestingly, excursion boats continued to operate on the Georgetown Level. The Meigs hosted excursions until 1888 and from 1882 to 1889 the light steam boat the Excelsior transported excursionists from High/Wisconsin Avenue and Congress/31st Street to Great Falls and Cabin John Ridge (Evening Star, June 30, 1880, pg. 3; McCarthy 2014: 7; Washington Critic, August 25, 1888, pg. 2). Also, the H.G. Wagner was in operation for a single season in 1885 (Evening Star, May 27, 1888, pg. 8). In 1889, the canal-era came to an end though the waterway continued to transport goods and support the B&O Railroad (Unrau 2007: 497-498)

From 1890-1938 the canal was operating for the benefit of the B&O Railroad with 99% of the coal being supplied by the Consolidation Coal Company (which it owned) and transported by the Canal Towage Company (which it also owned) (Unrau 2007: 497-498). However, from 1902 to 1910 the Louise offered public and private excursions from Wisconsin Avenue to Great Falls (Evening Star, June 28, 1904, pg. 16). Her sister ship, the India, operated on steam or was pulled by mules (Evening Star, July 12, 1905, pg. 16). By 1924, the C&O Canal was devastated by a flood and excursionist boats were out of operation. The section of the canal from Georgetown to Dam No. 1, as well as Dam Nos. 4, 5, and 8, were kept in operation and excess canal water continued to supply Georgetown's mills with waterpower. After the 1924 flood, the waterway fell into a state of despair as the B&O Railroad only made minimal repairs to maintain their right-of-way. It is under these conditions that federal interest in the C&O Canal was reignited. By 1928, Rep. Louis C. Cramton of Michigan introduced new legislation to implement the McMillan Commission's 1901 Potomac Drive Plan. This bill led to the 1930 Capper-Cramton Act that authorized the purchase of the canal. Ultimately, President Franklin Delano Roosevelt's 1933 National Industrial Recovery Act authorized the acquisition of the C&O Canal as a public works project and allowed for the September 28, 1938 acquisition of the canal by the National Park Service for recreational use (Mackintosh 1991: 46-48; Shaffer 1997: 76).

Under National Park Service, the Georgetown section of the C&O Canal was used to supply water to two Georgetown businesses: Wilkin's Rogers Milling Co. and the District of Columbia Paper Mills. The canal continued to supply the Wilkin's Rogers Milling Co. with canal water into the 1960s. However, the canal's primary use was recreational and associated with interpretation. In July 1941, mule-drawn barge trips commenced in Georgetown. The barge, the Canal Clipper, was operated by the Welfare and Recreational Association and could board as many as 80 passengers at Boat Basin No. 3. From Boat Basin No. 3, passengers would travel up to Lock No. 5 before returning. In March 1954, at the end of the now-famous Douglas walk, Justice William O. Douglas and other dignitaries were transported from Lock No. 5 to Georgetown on the Canal Clipper. On their arrival in Georgetown, hundreds of supporters of Douglas and his cause greeted the Canal Clipper, which was draped in American flags and "patriotic bunting," (Mackintosh 1991: 41, 181).

By the spring of 1961, the larger mule-drawn John Quincy Adams replaced the Canal Clipper. This boat, which could hold up to 125 passengers and featured a snack bar, was built and operated by the Government Services Inc. (GSI) (Mackintosh 1991: 22, 41-43, 181). According to (McCarthy 2014: 10), the John Quincy Adams was actually called the Canal Clipper II. This 70-foot long and 11-foot boat operated on the canal from Lock No. 3 to Lock No. 5 and back from May to October. The trip was 10-miles, 4-hours long, and a National Park Service historian or naturalist that provided interpretation of the experience accompanied guests (McCarthy 2014:10; Mackintosh 1991: 181).

In 1972 the John Quincy Adams/ Canal Clipper II, was destroyed by Hurricane Agnes (Mackintosh 1991: 181). According to a McCarthy, it was not until 1973 or 1974 that the boat was returned to the canal.
However, as this boat was far too damaged to operate on the Georgetown Level, the Government Services, Inc. (GSI) began constructing a new self-propelled boat (McCarthy 2014: 11). This boat, which was rejected by the National Park Service, as canal boats were historically mule-powered, was donated to the National Park Service by the GSI after they abandoned their contract. By September 28, 1976 the National Park Service was operating the Canal Clipper III (referred to as the Canal Clipper II by Mackintosh 1991) without its 75-horsepower diesel turbine engine. This 25 ton, 85-foot long boat ran from Lock No. 3 to Fletcher's Cove, 2 ½ miles upstream from Georgetown (McCarthy 2014: 11; MacKintosh 1991: 181). In the following years, park management commenced a "Living History" program.

In 1979, the Canal Clipper III was relocated to Great Falls due to prolonged canal repairs (McCarthy 2014: 11-12; MacKintosh 1991: 181). Following the completion of repairs, the Morris and Gwendolyn Cafritz Foundation donated $180,000 for a fourth generation mule-drawn excursion boat that more closely resembled a 1870s freighter. This barge, the Georgetown, was 17 ½ tons, 90-feet long, and 12 ½ feet wide at the beam and was constructed by the Marine Power, Inc. of Gulf Breeze, Florida. In September 1982, this new boat was launched and could carry approximately 100 people. It also offered 1.5 hour long rides from Lock No. 3 to the Foundry Branch.

In September 1998, the Georgetown was severely vandalized and on July 24, 1999, the restored Georgetown was returned to the canal. The Georgetown continued to operate on the canal into the 2000s; however, the trips were shortened to 1 hour. By July 7, 2011, a consulting marine engineer condemned the Georgetown. The boat, after 29 years of services, was deposited at the dry dock above Lock No. 4. In 2016, the Georgetown was removed from the canal. With funds from the District of Columbia, Georgetown Heritage plans to introduce a new canal boat to the Georgetown section of the C&O Canal (Mackintosh 1991: 22, 41-43, 181; McCarthy 2014: 12-13).

Existing Condition

Pedestrians, bikers, tourists, and residents alike as high-end retail stores, restaurants, condominiums, visit and use the Georgetown section of the C&O Canal and office spaces are established on the berm and river side of the canal. Visitors and those working in the area for lunch also frequent the Lock No. 3 Plaza/Mule Yard, Fish Market Square, and Grace Street Park. Until 2011, the Georgetown operated from Lock No. 3 to Lock No. 5 and provided passengers with both an interpretive and recreational experience. The boat was removed, in 2011 due to structural damage. The boat was removed from Level 4 in 2016. There are plans to introduce a new barge boat following the reconstruction of the Lock Nos. 3 walls and the rehabilitation of Lock No. 4.

Analysis
To-date, the land-use of the canal has high integrity as it is still used by residents and visitors for recreation and educational use.

Contributing Feature: Recreation Contributing Feature: Interpretation Contributing Feature: Commemoration

Character-defining Features:

Feature: Recreation

Feature Identification Number: 181849

Type of Feature Contribution: Contributing

Feature: Interpretation

Feature Identification Number: 181851

Type of Feature Contribution: Contributing

Feature: Commemoration

Feature Identification Number: 181853

Type of Feature Contribution: Contributing

Spatial Organization

The following discussion will be divided into separate sections as the spatial organization includes the relationship of the canal and its urban context as well as numerous internal plazas and parklets.

RELATIONSHIP OF THE CANAL TO THE URBAN CONTEXT
Historic Condition
Prior to the construction of the C&O Canal, Georgetown was established as a tobacco port and the riverfront was dominated by tobacco warehouses extending into the Potomac River (Georgetown Historic Waterfront 1993: 13). Numerous mills using waterpower from the Potomac River and Rock Creek were established along the waterfront to support this rising industry. By the late 18th century/early 19th century, stores, shops, a counting house, and a

Bank of Columbia were established in Georgetown. Private residences were built north of the waterfront along the street grid. These structures were commonly two to three-stories and made of brick (Commission of Fine Arts 1968: 127).

In 1828, construction officially began on the C&O Canal. By this time, Georgetown's industrial character was forming. The section of the canal passing through Georgetown between M Street and the Potomac was completed by 1831 and allowed for the further development of Georgetown's industrial milling industry. By 1850, numerous mills were located on the river side of the canal and set back to allow for the unloading of the materials from canal barges, including Bomford's Mill, 3261 K Street, which was established as a flour mill in 1832 (Georgetown Historic Waterfront 1993: 41, 63). The Canal Warehouse, 3222 M Street, previously a two-story brick "rolling house," was occupied by a variety of canal-related businesses over the years (Commission of Fine A 1968: 133). The two-story warehouse to the south of the Canal Warehouse, on the river side of the canal, was also associated with canal use. The height of warehouses combined with the topography of the Georgetown bluff between Wisconsin Avenue and 33rd Street, caused the elevation of the canal to be greatly suppressed and sunken. In 1854, the two-story brick Duvall's Foundry, 1050 30th Street, was established on the river side of the canal at Lock No. 3 (Georgetown Historic Waterfront 1993: 65-66; High 1997: 102). By 1860, two to three-story single-family residences were intermixed with retail and warehouse buildings of up to four-stories on the river and berm side of the canal.

By 1876, trade on the canal had begun to decline due to the Panic of 1873 and competition with the Baltimore & Ohio Railroad (Unrau 2007: 484, 486). Despite the overall decline in operations, many Georgetown mills remained in operation, including Bomford's Mill. As seen in an 1888 map, three and four-story brick warehouses and two-story joint residences and stables dominated the landscape on the berm side of the canal. There were also several two to three-story wood framed private residences and residences with brick sides established on the berm side. On the river side of the canal, three to four-story brick warehouses were prominent as well as two to three-story wood framed private residences. These buildings were set back from the canal to allow for the unloading of goods. The right-of-way was encroached upon and by the 1900s, warehouses associated with canal use were being used for the operation of streetcars, including the Canal Warehouse (CoFA 1968: 133). These developments did not alter the landscape and the "canyon-like" setting between Wisconsin Avenue and 33rd Street was maintained.

In 1938, the National Park Service acquired the 22-miles of the canal from Georgetown to Seneca, as well as the "water rights in Georgetown and one or two small items elsewhere," for recreational use (NR Update 2015: 8,224; Mackintosh 1991: 16). The right-of-way of the National Park Service was then about 230 feet wide and ownership barely extended over the towpath embankment on the river side of the canal. However, this right-of-way was encroached upon, as little effort had been made to retain the right-of-way during Baltimore & Ohio Railroad receivership (Mackintosh 1991: 49-52). In Georgetown, the three-story brick Washington Gas Light building (north of the canal on the northwest corner of 29th Street) was

built up to the waterway. The buildings on the berm side of the canal between Jefferson and 31st Street were also built up to the canal. To the west of 33rd Street, a wholesale grocery was also built up to the canal. These encroachments can be seen in a comparison of the pre-receivership 1888 Sanborn map of Georgetown and the 1939 map of Georgetown. Furthermore, during the 1940s and 1950s the urban character of Georgetown shifted as retail businesses dominated M Street and Wisconsin Avenue north of M Street. There were some retail business south of M Street, but the majority of the buildings were industrial warehouses including the extant Washington Gas Light Co. building, Capital Transit Co., D.C. Paper Manufacturing Co., and Bomford's Mill/Wilkin's Rogers Milling Co.

Beginning in 1970, canal-era businesses were demolished or restored for commercial or office use south of M Street (Georgetown Historic Waterfront 1993: 81-84). These developments, as well as the replacement of traditional shops with high-end retail stores along M Street in the mid-1970s, drastically altered the historic industrial character of Georgetown (Passonneau 2004: 236). From April 1968 to 1970, the three- story late-19th century brick berm-side canal warehouse, 1054 31 Street, was developed for commercial and office use. Originally, the warehouse was to be razed and turned into a parking lot. However, it was preserved and a new 60-foot tall office building was constructed at the rear of the restored historic warehouse. This development, called the Canal Square, was the first large-scale development in Georgetown (Georgetown Historic Waterfront 1993: 81-87; Luebke 2013: 291). In 1970, the Foundry Project was proposed. As part of this project, the two-story brick mid-19th century Duvall's Foundry, 1055 Thomas Jefferson Street, was to be adapted for commercial and office use. This proposed development would have 400-feet of store frontage and rise to a height of 80-feet. As the building was "too high in view of the historic nature of the site, and the unique esthetic values around it" the buildings plans were modified to 60- feet (Luebke 2013: 343). In 1976, the building, which was "pulled back from the canal", was complete and a pedestrian place was established on the river side of the canal adjacent to the foundry (Luebke 2013: 343, 346; Georgetown Historic Waterfront 1993: 81-87).

The 1974 redevelopment of the 19th century two-story brick Dodge Warehouse, 1000 Wisconsin Avenue, was to influence future zoning regulations. This is because the new Dodge Center, a stepped red-brick-clad office complex, was built up 90-feet and drastically altered the landscape (Georgetown Historic Waterfront 1993: 81-87; Luebke 2013: 291). As noted in the 1976 General Plan, these developments threatened the "charm" of the canal and new zoning regulations were established limiting future developments to a height of 60 to 70-feet. The land around the C&O Canal in Georgetown continued to be developed and in 1976 M Street Estates (renamed Georgetown Park Venture Associates in December 1977) proposed the mixed-use Georgetown Park project. As part the Phase I plan, the old Canal Warehouse (3222 M Street) building was to be redeveloped as a neo-Victorian shopping mall with three sub-surface levels of parking, three levels of commercial office space, and two to five levels of residential space. Following the recommendation of the Commission of Fine Arts, the 40-foot tall brick M Street facades and the old retaining wall overlooking the canal were preserved. Furthermore, the multistory brick D.C. Paper Manufacturing Co. warehouse (3225 Grace Street) on the river

side of the canal was to be converted into 80-foot tall brick townhouses (Georgetown Historic Waterfront 1993: 94-96).

In May 1984, the Phase II plans for the Georgetown Park were presented. These plans called for the redevelopment Market House (3276 M Street) as a commercial space and the development of a canal-side terrace plaza (Wisconsin Avenue Plaza) on the berm side of the canal west of Wisconsin Avenue. This plaza was to connect with the proposed Grace Street Park on the river side of the canal by a pedestrian footbridge. By June 1985, when the plans of Lockman Associates were approved, architect Peter Vercelli transformed the adjacent Fish Market Square into an open park (Georgetown Historic Waterfront 1993: 97- 99). Additional developments include the Marriot Residence Inn (1000 29th Street), the Morrison Inn (1077-1099 30th Street), and development of the Washington Harbor as a mixed complex the in the late 1980s (Georgetown Historic Waterfront 1993: 100-115).

Existing Condition

Throughout the cultural landscape inventory study boundary, the course of the Chesapeake and Ohio Canal maintains a defined relationship with the urban context of Georgetown's urban development. The canal a low ribbon that moves through the course of the urban fabric. The lower elevation of the canal prism creates an almost "canyon-like" feeling due to the vertical nature of the development between Wisconsin Avenue and 33rd Street.

Analysis

Beginning in the 1900s, under B&O receivership (1890-1938), the right-of-way was encroached upon. By the 1970s, large-scale developments were being built on the berm and river side of the canal. These 60 to 80- foot multi-use buildings diminish the integrity of the landscape and create a visually enclosed and suppressed feel adjacent to the canal.

LOCK NO. 3 PLAZA/MULE YARD

Historical Condition

Historic maps rendered the space presently referenced as Lock No. 3 Plaza/ Mule Yard as either open lawn, or enclosed yard spaces. The earliest known photograph (DC Historical Society, General Photograph Collection, CHS 16534; H 029) of the berm-side lawn at Lock No. 3, between 30th and Thomas Jefferson Street, dates between 1870 and 1910. In this photograph, looking east, the towpath cuts through an unplanted grass bed. To the north of the towpath, near the entrance of Lock Basin No. 3, is a large, unidentifiable species of tree. The first evidence for the development of the lawn north of Lock No. 3 dates to a 1949 planting plan. In this plan, a bituminous towpath leads from the 30th Street entrance to a small, paved rectilinear parklet with benches on the berm side of the canal. From the parklet, the proposed bituminous path continues west past Lock Basin No. 3 to Thomas Jefferson Street. In the 1949 planting plan, numerous trees were also documented as extant (see Vegetation) and a barge landing was illustrated on the berm side of the canal in the middle of Lock Basin No. 3. This was presumably, where the excursion boats boarded passengers. As there are currently no

extant records or photographs documenting the completion of the 1949 planting plan, further research is needed to determine if and to what extent it was completed.

In the 1950 planting plan, a 5' bituminous walk leads from the 30th Street entrance to the aforementioned "sitting place" on the berm side of the canal. From this "sitting place", which is fronted by two stone steps, the towpath extends to Jefferson Street. To the north of the 5' bituminous walk, numerous trees and shrubbery were also proposed (see Vegetation). There are currently no extant records documenting if and to what extent this planning plan was completed. However, as captured in a 1969 Library of Congress photograph of Lock No. 3, the grass lawn on the berm side of the canal was planted with unidentifiable shrubs while to the north of the planting bed a bollard and chain fence extended along the canal-side edge of the towpath. This same fencing bordered the barge landing as well as the northern edge of the towpath past the entrance of Lock Basin No. 3. There were also benches with a simple seat and back made of slats (and no armrest) bordering the planting bed and the northern edge of the towpath past the entrance of Lock Basin No. 3. The towpath, however, was not bituminous; rather, it was paved with brick.

In 1977, to commemorate the efforts of Justice William Douglas and the formation of the Chesapeake and Ohio Canal National Historical Park, a planting plan was proposed. In this plan, an S-shaped square brick path was to lead from the 30th Street entrance to a semi-circular shaped area at the entrance of Lock Basin No. 3. In this semi-circular area, the bust of Justice William O. Douglas was to be placed. From 30th Street, another path (a straight square brick path) was to cut through the southern planting bed to the aforementioned semi-circular shaped area. There were also various trees and shrubs were proposed for these planting beds (see Vegetation). This planting plan was completed and can be seen in a 1979 photograph of the canal looking east (Luebke 2013: 344).

Existing Condition
The Lock No. 3 Plaza/Mule Yard is currently serving as the construction staging area for the rehabilitation of Lock Nos. 3 and 4. The space is covered in gravel to accommodate the movement of heavy construction equipment. All circulation paths, small-scale features, including the bust of Justice Douglas, benches, tie posts, and post and chains, and the majority of the vegetation was removed from the space, this includes a large historic basswood tree. A previous site visit in September 2016 captured the arrangement of the plaza prior to construction. Subsequent versions of this CLI will be tasked with documenting the condition and composition of the plaza after rehabilitation has been completed.

Analysis
As the Lock No. 3 Plaza is currently serving as the construction staging area for the rehabilitation of Lock Nos. 3 and 4, the plaza has no integrity of materials. But, the feature retains integrity of location and setting.

FISH MARKET SQUARE

Historical Condition

The parcel associated with the first 1795 Market House, Lot No. 42, was originally used as a butchers market and jail. In 1831, with the construction of the Chesapeake and Ohio Canal through Georgetown, the lower third of this lot was separated from the Market House. This new lot, south of the canal at the northwest corner of Potomac and Grace Streets, became a Fish Market (Georgetown Historic Waterfront 1993:, 25).

The history of the Fish Market remains obscure at best. There are several maps, including Albert Boschke's 1861 map of Georgetown, that evidence the presence of the Fish Market. The 1887 Hopkins Atlas map of Georgetown also shows the Fish Market or "Old Fish Market" north of the Bomford/Pioneer Mill.

However, the Fish Market is not rendered in the 1888 Sanborn map though the brick Market House is depicted on the berm side of the canal east of Market Street (33rd Street). In the following years, the Fish Market Square is identified as Lot No. 43 (north of Bomford/Pioneer Mill) in an 1894 map and the old Fish Market scales are documented in a 1903 map (north of the American Ice Co. building). In the 1907, 1909, and 1913-1915 Baist maps, the Fish Market is identified as an empty lot (north of the American Ice Co.). This empty lot can be seen in a 1920 Library of Congress photograph of the Potomac Street footbridge. By 1925, the lot was used as a parking lot for the workers of Wilkins Rogers Milling Co. (Superintendent, C&O Canal National Historical park to Regional Director, National Capital Region, November 5, 1980).

In 1974, the Georgetown Planning Group's study for the National Capital Planning Commission (NCPC) first proposed the development of the Fish Market Square as a pedestrian plaza. On February 24, 1980, the jurisdiction of the center portion of the Fish Market Square (Lot 802, Square 1185) was transferred to the National Park Service from the District of Columbia under D.C. Survey's Order Number 29213. This square, which measured 45 by 60.5 feet and is now part of U.S. Reservation 404, was part of the larger 92.4 feet by 101 feet Lot 802, Square 2723. The C&O Canal Advisory Committee on February 9, 1980, the Commission of Fine Arts on June 17, 1980, and D.C. Historic Preservation Officer approved the action on June 26, 1980 in a series of letters sent to the Superintendent of the C&O Canal National Historic Park. On November 8, 1980, the D.C. Government granted the National park Service a special permit that authorized the National Park Service to occupy the spaces surrounding Lot 802 as the legal status of the surrounding space was unclear and a resolution was pending. By November 18, 1980, the Regional Director of the National Capital Region granted permission for the development of the Fish Market Square and on August 25, 1980 an easement for the Fish Market Square was officially signed (Superintendent, C&O Canal National Historical park to Regional Director, National Capital Region, November 5, 1980; Regional Director, National Capital Region to Mr. Marvin F. Weissberg, Weissberg Development Corporation, November 18, 1890). In the 1984 Georgetown Boundaries & Agreements document, the restrictions were outlined as follows:

Under the terms of a letter from Regional direct, NCR, Mr. M. J. Fish to Weisberg

Construction Co., the latter constructed the Fish Market Square as a pedestrian plaza. Weisberg Construction Co., donated to the NPS an easement 12 feet by 169.71 feet from 33rd Street to Fish Market Square. Only the center portion of lot 802 of Fish Market Square is now under NPS jurisdiction (45 feet x 60.5 feet). Title surrounding space is unclear according to the D.C. Government and may be street space, which is closed. Title search ordered by D.C. in the meantime written consent to enter and use space was given.

NPS has maintenance responsibilities for the Square. (After expiration of 1 year from acceptance- June 9, 1984)

Construction of the Flour Mill and Fish Market Square has been completed (National Park Service, Boundary Agreements, 1984).

The aforementioned transfer of jurisdiction allowed for the development of the Fish Market Square as a pedestrian plaza. In the plans, developed by architect Peter Vercelli, the Fish Market Square was to be closed off from Grace Street and Potomac Street by continuing the curb line of these streets in a continuous arc. This arced curb would be lined by a new brick sidewalk, which would be accentuated by a rectangular band of granite paving stones. A series of six bollards, which would be 4 feet and 2 inches in height, would be placed behind this accented walk. The interior of the square was then to be repaved with brick pavers in a red color consistent with the adjacent buildings and the concrete structures that once contained an old flume were to be removed along with the concrete sidewalk at the eastern edge of the historic Bomford Mill. However, the stoop in front of the Bomford Mill was to be retained as well as the stone and concrete abutment of the footbridge connecting to Potomac Street. It was proposed that a stairway, which would take the plaza down to the canal level, would be constructed adjacent to the abutments. At the bottom of the stairway, a grating was to be installed to “echo and recognize the existence at this location of an historic fume intake from the canal which powered the Flour Mill until quite modern times.” On the plaza level, approximately 10 feet from the canal wall, four linden trees were also to be planted. Furthermore, the slope of the Fish Market Square was to “remain in a diagonal direction from a height of 41.23 feet in the northwest corner to a low 36.83 feet at the Potomac Street sidewalk adjacent to the Bomford Mill” (Superintendent, C&O Canal National Historical park to Regional Director, National Capital Region, November 5, 1980). This plan was completed by 1984 (National Park Service, Boundary Agreements, 1984; Georgetown Historic Waterfront 1993: 98).

.

Existing Condition

The Fish Market Square, located on the river side of the canal between Potomac and 33rd Streets, consists of the center portion of lot 802 in square 2723. The plaza is bound by the canal prism to the north and the Flour Mill development to the west and south. The plaza features three trees adjacent to the canal prism, a set of low brick bollards form the boundary at the curve Potomac Street, and moveable patio-grade furniture.

Analysis
The Fish Market Square has remained an open plaza space adjacent to the canal. As a result, it retains integrity.

WISCONSIN AVENUE PLAZA
Historical Condition
The Wisconsin Avenue Plaza, located on the berm side of the canal at the northwest corner of the Wisconsin Avenue crossing, was included in the Georgetown Park development of the 1960s/1970s. In 1977, Lockman Associates/Architects proposed a planting plan for the Wisconsin Avenue Plaza. This plaza was paved with brick and a series of retaining beds were interspersed through the space. By September 1978, easements had been granted to the Georgetown Park Associates to allow for the construction of two pedestrian bridges to span the air over the canal. These bridges connected the Wisconsin Avenue Plaza and the southern Grace Street Park, while the second bridge was to connect the berm side of the canal with the Fish Market Square. The National Park Service also granted to the Georgetown Park Associates "easements in perpetuity allowing pedestrian use of Lot 872, Square 1200, Wisconsin Avenue Plaza, and stairway to towpath" while the Georgetown Park Associates conveyed to the National Park Service "fee simple title to land occupied by Rusticate Stone Wall." The Georgetown Park Associates were to maintain this wall as well as the Wisconsin Avenue Plaza (National Park Service, Boundary Agreements, 1984). By the 1980s, the Georgetown Park development was completed and the plaza, also called the Georgetown Market Terrace, complemented the pedestrian bridge and stair connections to the canal towpath (Georgetown Historic Waterfront 1993: 98). An image of the Wisconsin Avenue Plaza can be seen in the 1984 National Park Service Boundary Agreements document for the Georgetown section of the C&O Canal.

Existing Condition
The Wisconsin Avenue Plaza is located on the berm side of the canal at the northwest corner of the Wisconsin Avenue crossing. This sloping brick plaza is bound by the former Georgetown Mall development and contains the Commemorative Obelisk in the southeast corner of the space. There are also a series of retaining beds and benches.

Analysis
The National Park Service owns the Wisconsin Avenue Plaza. However, in the 1970s it was developed by the Georgetown Park Associates in association with the former Georgetown Mall development. The National Park Service does not maintain this plaza, rather this is performed by that adjacent property owners.

GRACE STREET PARK
Historical Condition

The Grace Street Park, located on the river side of the canal west of the Wisconsin Street Bridge, was included in the Georgetown Park development of the 1960s/1970s. In 1977, Lockman Associates/Architects proposed a planting plan for the Grace Street Park. This park was to retain its historic wall at the southern boundary of the park and three retaining beds were to be planted. Throughout the park benches were to line the retaining beds and access to the park was granted from either a pedestrian bridge from the berm side of the canal (not maintained by the National Park Service) or from Grace Street proper through the former southern facade. In September 1978, following the proposed planting plan, easements were granted to the Georgetown Park Associates to allow for the construction of two pedestrian bridges (one connecting the Wisconsin Avenue Plaza to the Grace Street Park and one connecting 3225 Grace Street to 3222 M Street). The agreement also stipulated that the Georgetown Park was to maintain the National Park Service owned park "including tort claims insurance" (National Park Service, Boundary Agreements, 1984). By the 1980s, the Grace Street Park was completed (Georgetown Historic Waterfront 1993:98).

Existing Condition
Grace Street Park is located on the river side of the canal west of the Wisconsin Street Bridge. A one-story brick structure bounds the eastern boundary, while the two story converted mill factory forms the western edge. A historic wall forms the southern boundary of the park. Retention of the southern wall maintains the historic urban fabric and street edge, while allowing for the footprint to be rehabilitated. Access to the park is from either a pedestrian bridge from the berm side of the canal (not maintained by the National Park Service) or from Grace Street proper through the former south facade. The spatial arrangement of Grace Street Park reflects the arrangement proposed in the 1977 redevelopment plan by the firm of Lockman Associates/Architects. While the overall plaza planting and circulation forms are the same, with the exception of a path, which created two smaller planters than were drawn, the composition of the vegetation has remained similar to the original proposal. It is unclear at this time when the pathway was inserted into the space. Additional research is needed to answer this question.

Analysis
The spatial organization of the Grace Street Park was altered when a bisecting path was cut through the largest planter. However, the overall planting and circulation forms are the same as those proposed in the 1977 plan presented by Lockman Associates/Architects.

Character-defining Features:

Feature: Relationship of the Canal to the Urban Context

Feature Identification Number: 182181

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Lock No. 3 Plaza/Mule Yard

Feature Identification Number: 182183

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Feature: Fish Market Square

Feature Identification Number: 182185

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Feature: Wisconsin Avenue Plaza

Feature Identification Number: 182187

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Feature: Grace Street Park

Feature Identification Number: 182189

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Landscape Characteristic Graphics:

Lock Three Plaza/ Mule Yard prior to the rehabilitation work on Lock 3 (NCR CLP 2016).

Grace Street Park. (NCR CLP 2017).

Constructed Water Features

CANAL PRISM
Historical Condition
The canal was constructed in the form of a trapezoidal prism, with the top being wider than the bottom, to conduct the flow of water. Per the Geddes and Roberts report, which was completed following a survey of

the flat water route by the United States Board of Engineers in 1824, the overall waterway dimensions were to be 60 feet wide at the surface, 5 feet deep, and 42 feet wide at the bottom. However, on September 10, 1828 it was announced by C&O Canal Co. President Charles F. Mercer that the dimensions were to be enlarged to be 60 feet wide at the surface, 6 feet deep, and 50 feet wide at the bottom. The canal embankments were to “rise above the waterline at

least two feet… and such a slope shall be preserved on the inner and outward side of the banks as that every foot of perpendicular rise shall have a horizontal base of eighteen inches, or more if required" (Unrau 1974: 10-12). To prevent the canal walls from caving in retaining walls of mortar or rip rap (stone thrown together without order) were to line the sides of the canal. Similar walls were also built on the river side of the towpath to protect that canal during times of high water (Unrau 1974: 5).

In the construction of the Georgetown section, the waterway was divided into two half-mile sections (Section A and B). Section A (which extended from Rock Creek to the Market House) was contracted to Isaac McCord & Co. and Section B (which extended west of the Market House to Old Cannon Foundry) was contracted to John Baker on December 10, 1828. By May 1, 1829, the excavation of the canal prism was underway in both sections though the canal dimensions were enlarged for the section of the canal between Georgetown and Harper's Ferry following June 1, 1829 stockholder meeting. Specifically, the dimensions were enlarged to be 60 feet wide at the surface, 42 feet wide at the bottom, and 6 feet in depth. This change was prompted in part by Congressional subscription to C&O Canal stocks and the intention of the board to provide the Georgetown mills with canal water (Unrau 2007: 188; Unrau 1974: 27).

In the Second Annual Report, which outlined progress on the canal through May 31, 1830, the actual dimensions of the canal prism varied within the 5-mile level from Georgetown to Little Falls. The dimensions of the Georgetown Level were documented as follows:

The width of the canal up to Frederick street is forty-six feet, and its depth six; from this street it gradually widens to eighty feet, and increases in its depth to seven, which it maintains through the remaining part of this level up to Lock No. 5...The great dimensions of the canal heretofore stated, terminate at this lock, beyond which the width at the water surface is sixty feet, and the depth six (Unrau 1974: 29-30).

By November 1830, the canal was open to navigation from Little Falls to Seneca and at the request of the C&O Canal Board Lieutenant Colonels John J. Abert and James Kearney of the United States Board of Engineers made an examination on June 13, 1831 (Bearss 1961: 6-7). In their examination, they noted that along the entire Georgetown section the canal was revetted by a stone wall composed of indigenous gabbro and mica schist that had been blasted out during the excavation of the canal prism. This was unusual as earthen banks were common to the rest of the canal. However, the difference may be attributed to the need to reinforce the steep slope along the Georgetown section, which brought the canal up 35 feet (Kytle 1983: 68). Following their examination, navigation was opened from Georgetown to Seneca on July 22, 1831 and on September 19, 1831, the C&O Canal Board travelled on a packet boat through Locks Nos. 1 through 4 to the basin at Rock Creek (Unrau 1974: 31-35).

Since its initial construction, significant floods and developments have facilitated the need to reconstruct and rehabilitate the Georgetown section of the canal prism. It should be noted that unless stated in the descriptions of the events that repairs were completed to the prism in a

piecemeal manner using whatever materials were available, including brick, dressed stone, dry laid stacked stone, and live rock. Records have yet to be uncovered describing when certain materials were used for which repairs. These events include:

April 1843- A freshet struck the canal and destroyed the waterway primarily between Edwards Ferry and Georgetown. On the Georgetown Level, the high-water levels ran over the "low levels" causing breaches. Water consequently passed into the canal and cuts were made to the embankments to decrease damage. C&O Canal Chief Engineer Fisk estimated that it would take two weeks to repair the Georgetown Level and by May 6, 1843 the entire waterway was open to navigation (Unrau 2007: 282).

September 1843- A flood struck the canal mid-September. This flood damaged the canal from Georgetown to Dam No. 6 with the lower portion of the waterway evidencing the most extensive damage. On the Georgetown Level, two large breaches occurred at the Alexandria Aqueduct Quarry and one near Pointers. In Georgetown proper, water poured over the canal banks into sections of the town. This alarmed many Georgetown residents as it increased the chances of a cholera outbreak. Georgetown millers were also interested in the prompt return of water to the canal and pledged $3,000 from future water rents to fund repairs. On September 19, 1843, repairs commenced on the section of the canal from Georgetown to Little Falls and an underdetermined number of waste weirs were added. By November 8, 1843, water was restored from Georgetown to Edwards Ferry (Unrau 2007: 284-285).

1851- The C&O Canal Board granted permission to G.L. Thompson Company and others to construct boat basins on the river side towpath west of Frederick Street (34th Street). Experimental basins were first constructed around College Run and above the Alexandria Aqueduct under specific guidelines issued by the C&O Canal Co. (Unrau 2007: 469-470).

April 1852- The worst flood in the history of the Potomac to-date struck the entire canal in April 1852. Although damage was not extensive to the Georgetown section the canal embankments were raised above the highest known freshets in the Potomac Valley from point 0.00 in Georgetown to Dam No. 6 (Unrau 2007: 290).

August 1855- Alexander C. Ray was granted permission to construct a boat basin on Lots Nos. 32 and 33 (between Frederick Street/34th Street and Duck Lane/33rd Street) on the river side of the canal (Unrau 2007: 469-470).

June 1858- James R. Wilson was authorized to construct a boat basin on the river side of the canal, altering the shape of the canal prism in a limited location (Unrau 2007: 469-470).

1859- W.A. Bradley was authorized in 1859 to construct a boat basin on the river side of the canal (Unrau 2007: 469-470).

October 1866- In the rebuilding of the Congress Street Bridge materials from the old bridge were used to extend the wall north of the canal, east of Congress Street, as requested by W. Von Essen (Bearss 1961: 24- 25).

1870-1877- Following the Civil War, the Georgetown section of the C&O Canal was in poor condition and extensive desilting was needed. Although Charles P. Manning proposed the desilting of the Georgetown Level in the late 1860s, the available funds only allowed for the rebuilding of Dam No. 5. In December 1868, $100,000 was allocated for a new repair and improvement program and by July 1870 Chief Engineer William R. Hutton had developed a comprehensive restoration plan. As part of this plan, the Georgetown Level was to be desilted and the canal prism restored to its original dimension as "the carrying capacity of the waterway had been reduced by the gradual accumulation of earth, gravel and sand washed from its banks and slopes" (Unrau 1974: 64). Presumably, "rip rap" was added to canal walls (Shaffer 1997: 40).

By 1872, the desilting of the canal prism had been completed. However, dredging activities continued in Georgetown through the winter of 1873/1874. By June 1875, a steam dredge had been built and more than 25,000 cubic yards of earth had been removed from the Rock Creek Basin and Georgetown Level (Unrau 1974: 64). As noted by C&O Canal Company President James C. Clarke in 1876, the canal was in "excellent" condition though the dredging of the canal prism and rebuilding of retaining walls across the Georgetown Level continued into 1877 (Shaffer 1997: 39-42).

1877- On November 24, 1877, the greatest flood to-date hit the canal and "damaged… every mile of the canal" (Shaffer 1997: 43). A few days later, on November 26, 1877, repairs began on the Georgetown Level so that water could be promptly restored to the Georgetown mills. Unfortunately, there are no known resources documenting the extent of the damage and specifics of the repairs. However, it is known that by December 20, 1877 water was restored to the Georgetown mills (Unrau 2007: 306).

April/May 1886- Between April and May 1886 three freshets left the Georgetown section of the canal in a state of disrepair with the slope walls of Lock Nos. 1 through 4 being heavily washed. To fund the canal's restoration repair bonds were sold and by early June, the canal was navigable. However, the sale of these bonds left the canal company without any additional resources should the canal be destroyed by another flood (Unrau 2007: 308-312).

May/June 1889- A flood with the highest crest ever recorded in the Potomac swept the canal between May 30, 1889 and June 1, 1889. In Georgetown, the water levels rose to 13.3 feet at Easby's Wharf and several Georgetown's mills, warehouses, and wharf facilities were destroyed. The steam dredge and scows on the Georgetown Level were also destroyed (Unrau 2007: 312). In June 1889, Georgetown millers advanced $16,000 from future water rents for the repair of the Georgetown Level though the rest of the canal remained in a state of disrepair. This led to the B&O oversight of the canal (Shaffer 1997: 51).

March 1924- The first major flood in 35 years swept the canal though damage was not extensive. However, the condition of the canal quickly deteriorated because the B&O Railroad made minimal efforts to keep the canal in operating condition (Shaffer 1997: 64-65).

March 1936- With the sudden thaw of winter temperatures flooding occurred. In Georgetown, the river crested seven inches higher than it had in 1889. This caused the banks to be washed in Georgetown as well as the heavy silting of the canal prism (Unrau 2007: 318-319).

1938- Following the acquisition of the canal by the National Park Service, the Civilian Conservation Corps excavated and restored 50,700 cubic yards of earth from the canal prism (NR Update 2015: 8, 204). Rip-rap and gates were also added to the canal walls to prevent erosion. This can be seen in the 1937 plan of Locks Nos. 1-4 (Mackintosh 1991: 22).

1949- In 1949, a rehabilitation plan was developed for the Georgetown Level boat basins.

1975- The Georgetown Level was drained to repair the canal prism at Lock No. 3. This section of the canal had collapsed following the blasting of the adjoining Inland Steel office building and subsurface parking garage (Mackintosh 1991: 162). A March 1975 plan exists for the repairs to the canal walls.

1978- The continued construction of modern office buildings in Georgetown throughout the 1970s led to the destabilization of the canal walls. In 1978, the National Park Service funded a $2.7 million project on the Georgetown Level. This project involved stabilizing the retaining walls west of Wisconsin Avenue and preventing leakages of water from the canal (Shaffer 1997: 97-98; Mackintosh 1991: 162).

Existing Condition

The canal prism is located in the urban context of Georgetown, a block south of M Street and with a parallel course to the busy thoroughfare. It is flanked by commercial and residential structures on either side and crossed by five bridges. In 2009, volunteers, supervised by National Park Service staff, removed vegetation from the prism (specifically at Lock No. 2 and Boat Basin No.1) by applying herbicide and pesticide to vegetation within ten feet of the structure and along the lock walls proper (NPS PEPC 2010: 24599). The canal prism, to-date, retains its historic dimensions and materials (indigenous gabbro and mica schist) though it is intermixed with patchwork repairs of dressed stone, brick, and rubble stone. This gives a lively mosaic and in places vibrant play of material pallets due to the juxtaposition. The canal prism is also unwatered due to the rehabilitation of Lock No. 3 and Lock No. 4 (NPS PEPC 2010: 32862), there is evidence of structural fracturing in the wall, vegetation is growing along portions of the wall, and siltation and vegetative growth is noted in the prism bed. The documented vegetation includes tree of heaven (ailanthus altissima), aquatic grasses, and moss.

Analysis

The canal prism retains integrity of location and design, despite modifications during its existence and changes in the materials used to line the walls of the prism.

LOCK NOS. 1-4

Historical Condition

In the construction of the C&O Canal, the waterway was divided into different levels or sections of water. The half mile Section A extended from Rock Creek to the Market House in Georgetown while Section B extended a half mile west from the Market House to Old Cannon Foundry. On December 10, 1828, McCord & Co. was let the contract for Section A and John Baker was let the contract for Section B. Included in Section A was the construction of Georgetown's four lift locks, which McCord & Co. began in June/July 1829. The chambers of the locks, which generally measured 100 feet long, 16 feet deep, with lifts from 6 to 10 feet, were constructed using Aquia Creek sandstone from Stafford County, Virginia and some local stone. This sandstone was expensive and not common to the rest of the canal where stone was sourced from nearby quarries. At the ends of these chambers, watertight miter/swing gates with sluices regulated water to and from the lock chamber by letting in water from the high level or discharging it into a lower level. The filling of emptying of the locks generally took 10 minutes and allowed for the raising or lowering canal boats between canal levels (Bearss 1961: 4; CHOH, 22; High 1997: 50; Kytle 1983: 68). On August 30, 1830, Davis was awarded the contract to finish the four Georgetown locks as McCord & Co. abandoned their contract. By April 1831, the Georgetown locks, which were closely spaced to bring the canal up 35 feet, were completed at a cost of $34,052.08 (Unrau 2007: 184, 227).

There are few extant records documenting the repair and maintenance of the Georgetown locks. However, on December 1, 1862 Superintendent Horace Benton reported that the Georgetown Level was run-down and Lock No. 3 was in need of repair (Unrau 2007: 741). In April/May 1886, three freshets also left the Georgetown section in a state of disrepair as the slope walls of Lock Nos. 1 through 4 were heavily washed. By early June 1886, the canal was in operation as repair bonds were sold to fund the canal's restoration (Unrau 2007: 308-311). Additionally, in 1937 (prior to the acquisition of the canal by the National Park Service) plans were prepared for the repair of the Georgetown locks. These plans can be seen in the 1937 plan of the Georgetown Level. However, it was part of the 1938 New Deal C&O Canal Project, officially called Federal Project 712, that the Georgetown locks were repaired (along with the 19 other locks to the inlet at Violettes Lock). Private contractors, overseen by the Works Progress Administration, repaired these locks and in their repair "the stonework of some had required only minor resetting and repointing; [while] others had been completely reconstructed. All … received new wooden gates, with ironwork salvaged from the old ones and from locks further up the canal" (Shaffer 1997: 71). By February 1940, all twenty-three locks were operational (NR Update 2015: 8, 203). By 1975, Lock No. 3 was in need of repairs as it was damaged following the blasting of the adjoining Inland Steel office building and subsurface parking garage (Mackintosh 1991: 162). A March 1975 plan exists for the repairs of the canal walls.

Existing Condition
Lock No. 1, to the east of 29th Street, is located at mile marker .38 of the C&O Canal, at its original location. The rectangular shape constructed feature is oriented east west following the course of the canal. The lock has an overall length of 90 feet, and a width of 15 feet. The overall lift of the lock is 8 feet. A set of gates, at the west and eastern end of the feature, are responsible for raising and lowering the water level. Boat Basin No. 1 binds the lock to the west and the Rock Creek Basin to the east. Lock No. 1 is composed of smoothed faced Aquia Creek sandstone, granite, concrete, brick, and limestone due to various repairs.

Lock No. 2, between 29th and 30th Streets, is located at mile marker .42 of the C&O Canal. The rectangular shape constructed feature is oriented east west following the course of the canal. The lock has an overall length of 91 feet, and a width of 15 feet. The overall lift of the lock is 8 feet. A set of gates, at the west and eastern end of the feature, are responsible for raising and lowering the water level. Lock No. 2 is composed of smoothed faced Aquia Creek sandstone, granite, concrete, brick, and limestone due to various repairs.

On March 14, 2009, volunteer efforts led by certified National Park Service staff worked to remove vegetation from the entrance to Lock No. 2, specifically the bridge abutments associated with Washington Street, and the remainder of the canal structure associated with Level 2. Hand removal and the application of herbicide and pesticide were applied to vegetation within ten feet of the structure and along the lock walls proper (NPS PEPC 2010: 24599). Wording in the PEPC entry suggests that the removal occurred from the tide lock to the Key Bridge. Additional research is needed to verify that this did occur.

Lock No. 3, between 30th Street and Thomas Jefferson Street, is located at mile marker .49 of the C&O Canal. The rectangular shape constructed feature is oriented east west following the course of the canal. The lock has an overall length of 90 feet, and a width of 15 feet. The overall lift of the lock is 8 feet. A set of gates, at the west and eastern end of the feature, are responsible for raising and lowering the water level. Lock No. 3 is composed of smoothed faced Aquia Creek sandstone, granite, concrete, brick, and limestone due to various repairs.

Lock No. 4, between Thomas Jefferson Street and 31st Street, is located at mile marker .54 of the C&O Canal. The rectangular shape constructed feature is oriented east west following the course of the canal. The lock has an overall length of 89’ 10” feet, and a width of 15 feet. The overall lift of the lock is 8 feet. A set of gates, at eastern end of the feature, are responsible for raising and lowering the water level. Lock No. 4 is composed of smoothed faced Aquia Creek sandstone, granite, concrete, brick, and limestone due to various repairs (NPS PEPC 2010: 61528).

At the time of the original completion of this CLI in 2017, Lock Nos. 3 and 4 were undergoing a major rehabilitation. In 2010, it was noted that Lock No. 3 required total reconstruction because water from level 3 was passing around the lock wall structure “undermining the 14 feet high,

ashlar laid, stone lock walls."

This caused the timber foundation of the lock to deteriorate and the lock walls "to bow inward approximately 11 inches per side as well as to differentially settle over their length (180 feet)." As outlined in the PEPC entry, the scope of the project required:

1. The disassembly of the lock walls down to the foundation
2. Building a new foundation
3. Rebuilding the lock using original and supplemental stone
4. Construction of new lock gates
5. Restoration of the surrounding plaza paving and landscaping (NPS PEPC 2010: 32862)

In 2015, the rehabilitation of Lock No. 4 was proposed as weathering and vegetation growth had caused stop leakage and the destabilized of the masonry. As outlined in the PEPC entry, the scope of the project required:

1. The raking and re-pointing of all masonry joints including the lock walls, breast wall, wing walls, and fifty feet of the Level 4 walls upstream
2. Repairs to the broke and damaged stone through the application of mortar to small cracks, the pinning of broken portions of stones back together, and the application of a Dutchman-style repair to areas missing facing stone
3. Disassembly and reconstruction of the southern wing-wall which has been disturbed by a trees root system and the breast wall
4. The plugging of the internal culverts (NPS PEPC 2010: 32862)

In September 2016, work commenced on Lock Nos. 3 and 4 and project and it is ongoing. Future CLIs will comment on the nature of this work.

Analysis

In 1831, Davis completed Lock Nos. 1 to 4 using Aquia Creek sandstone from Stafford County, Virginia and some local stone. In the following years, repairs were completed using concrete, brick, and limestone. Despite these repairs, and the 1940 rehabilitation of the locks using materials from locks further up the canal, the integrity of the locks has not been negatively impacted. At the time of this CLI, Locks Nos. 3 and 4 are undergoing rehabilitation to address structural failures. However, modification will be contained to the original footprint of the lock and materials will be replaced in kind.

BOAT BASINS NOS. 1-3

Historical Condition

On December 10, 1828, McCord & Co. was contracted to construct the three lock basins. In June/July 1829, McCord & Co. began construction though on August 30, 1830 the contract was awarded to Davis as McCord & Co. abandoned their contract (Unrau 2007: 184). Unlike the rest of the canal, where earthen banks were common, indigenous gabbro and mica schist was used in the construction of the Georgetown Level. This was perhaps done to reinforce the steep slope created by the close spacing of the locks that brought the canal up 35-feet (Kytle 1983: 68). This unusual treatment of the canal walls was noted by Lieutenant Colonels John J. Abert and James Kearney of the United States Board of Engineers, who surveyed and reported on the condition of the canal prior to its opening on June 13, 1831 (Bearss 1961: 6- 7). Further noted by Lieutenant Colonels Abert and Kearney were the measurements of the basins. Between Locks Nos. 1 and 2 there was a pool measuring 100 by 40 feet and it was enclosed by a stone wall. The pool following Lock No. 2 was different in that "there is a drain from the streets of the town into this pool," which in the opinion of Abert and Kearny should have run alongside the pool and charged into the basin. At the pool above Lock No. 3, "[t]here are stone steps on each side of these pools, conducting to the bottom." These steps are no longer extant (Georgetown Historic Waterfront 1993: 50).

There are currently no extant records documenting the repair, replacement, and maintenance of the Georgetown Level lock basins prior to 1949. However, in a 1949 plan of the Georgetown section of the C&O Canal the northern walls of the Boat Basin No. 1 are noted as needing repairs. Also, Boat Basin No. 3 was repaired in 1975 when Lock No. 3 was damaged following the blasting of the adjoining Inland Steel office building and subsurface parking garage (Mackintosh 1991: 162).

Existing Condition

Boat Basin No. 1 is located between Lock Nos. 1 and 2 at mile marker .41 of the C&O Canal. The rounded rectangular shape of the feature is oriented east west following the course of the canal. The basin has an overall length of 100 feet, a width of 46 feet, and a height of approximately 32 feet from base to top. Boat Basin No. 1 is composed of indigenous gabbro and mica schist. On March 14, 2009, volunteer efforts led by certified National Park Service staff worked to remove vegetation from Boat Basin No. 1. Hand removal and the application of herbicide and pesticide were applied to vegetation (NPS PEPC 2010: 24599). Future site visits have noted vegetation and siltation in the base of the feature.

Boat Basin No. 2 is located between Lock Nos. 2 and 3 at mile marker .41 of the C&O Canal. The rounded rectangular shape of the feature is oriented east west following the course of the canal. The basin has an overall length of 147 feet, a width of 43 feet, and a height of approximately 32 feet from base to top. Boat Basin No. 2 is composed indigenous gabbro and mica schist. Site visits have noted vegetation and siltation in the base of the feature. Concrete piers that were responsible for holding the former canal tour barge were noted during the site visit. These temporary features were located on the river side of the canal.

Boat Basin No. 3 is located between Lock Nos. 3 and 4. The rounded rectangular shape of the

feature is oriented east west following the course of the canal. The basin has an overall length of 135 feet, a width of 46 feet, and a height of approximately 32 feet from base to top. Boat Basin No. 3 is composed of indigenous gabbro and mica schist. Site visits have noted vegetation and siltation in the base of the feature. The gates leading into Lock No. 3 were replaced in 1994 (NPS LCS 2017).

Analysis
Davis completed Boat Basin Nos. 1 to 3 in 1831 using indigenous gabbro and mica schist. However, materials composition has changed due to repeated repairs caused by flooding. There are few extant records documenting the repair and maintenance of these basins. However, in 1949 the northern walls of the Boat Basin No. 1 were noted as needing repairs. Boat Basin No. 3 was also repaired in 1975 when Lock No. 3 was damaged following the blasting of the adjoining Inland Steel office building and subsurface parking garage (Mackintosh 1991: 162). Despite repairs, the basins have retained their integrity.

SIDE POND INLET ENTRANCE GATE (LOCK NO. 1)
Historical Condition
In the early 1830s, the C&O Canal Company debated the repairing of boats along the canal. The Board determined that resident engineers should "select a stop on each residency for a dry dock and recommend a plan for their construction" (Unrau 2007, 245). On December 2, 1847, the Board authorized John Moore, the lock tender at Georgetown, to construct a dry dock under the direction of the chief engineer provided that he operated the dry dock "at the pleasure of the board" (Unrau 2007, 345). This dry dock was to be adjacent to Lock No. 1, on Lots Nos. 5, 7, and part of 7, and lined with wood supports and a set of piers and outlet gates to control the flow of water. In the following years, small structures were built adjacent to the dry dock and were likely associated with its use. In particular, a shed and pitch kettle are documented in an 1888 Sanborn map. By the 1903 Sanborn map, it is probable that the dry dock was no longer used as the pitch kettle is no longer illustrated. However, the dry dock is captured in a circa 1910 photograph. The footprint of the dry dock is also recorded in a 1922 map of the canal. By the mid-1940s, with the construction of the West Heating Plant (Pepco Power Plant), the pond was infilled (Unrau 2007, 222; Babin 2012: 42-47; 69; NPS LCS 2017).
.
Existing Condition
The side pond inlet is a filled stepped inlet that measures 15/-3" wide and 3' feet deep. It is located on the south corner of the Lock No. 1 prism. The pond was filled as part of the foundation of the West Heating Plant (Pepco Power Plant) in the mid-1940s.

According to LCS records (NPS LCS 2017), the condition of the side pond inlet was "poor" in 1997. In 2005, 2008, and 2012 the condition was documented as "good." Routine maintenance was recommended in 2008 and 2012. In 2017, the condition was "fair" and development was documented as severely impacting the side pond inlet. Other impacts included weather and vegetation. Specifically, it was noted in 2017 that the stonework had deteriorated especially on the inlet shelf.

Analysis
The dry dock at Lock No. 1 was proposed in the early 1830s and constructed in the late 1840s. This feature was likely used until the late 1880s. In the mid-1840s, the side pond inlet was infilled in association with the construction of the West Heating Plant (Pepco Power Plant). As a result, the side pond inlet only retains integrity of location.

WATER INTAKE FEATURES
Historical Condition
In the 1820s, the C&O Canal Co. noted a twofold advantage of the sale of surplus canal water: 1) the financial return from the sale of water and 2) the added business from increased trade from industrial establishments. The C&O Canal Board petitioned Congress for the authority to sell canal water in the winter of 1828/1829 as the added income could support the near bankrupt canal company. In the following years, before Congress approved the C&O Canal's sale of canal water, efforts were made to gain control of water rights across the canal. In March 1836, the C&O Canal Co. had won the right to use surplus water generated from Dam No. 1. By March 1837, Congress had approved the sale of canal water in the District of Columbia. (Unrau 2007: 655).

It was on May 1, 1837 that the C&O Canal Board first advertised the sale of canal water in the District of Columbia. Unfortunately, the Panic of 1837 delayed the lease of waterpower. By 1839, the first permanent lease for canal water was issued to George Bomford retroactive to January 1, 1839 (Unrau 2007: 655-656). This lease entitled Bomford "to a water right of 400 in…the grant of which is for 20 years renewable forever" (CoFA 1968: 162). Over the next fifty years, water rights were granted Georgetown offered the greatest opportunity for water leases because"

(1) The nearness to markets, labor supply, and capital
(2) The location of Dam No. 1 at Little Falls
(3) The large dimensions of the feeder and the Georgetown Level
(4) [The] absence of restriction on the use of water
(5) [A]nd the fact that [Georgetown] was a long-established port city and trade center and the site of various warehousing, merchandising and manufacturing concerns (Unrau 2007: 656-667).

The water intake features, which supplied the mills with water, were generally framed with concrete or brick and covered with horizontal wooden boards that controlled the flow of water. These features are noted in the 1939 "Existing Conditions" map of Georgetown and continued to supply the Wilkin's Rogers Milling Co. with water into the 1960s (Mackintosh 1991: 22).

Existing Condition
The Wilkins Rogers Milling Company water intake ruins are located 0.81 miles west of mile marker 0.0 on the river side of the canal prism. The intake feature consists of two intake

openings stacked directly on top of each other. The openings are framed with concrete. The lower level is boarded with wood planks. The upper intake feature is exposed and exhibits evidence of siltation.

The opening of the Dual Water Intake associated with the Wilkins Rogers Milling Company is located at
0.98 miles west of mile marker 0.0, west of the historic factory. The intake feature is legible in the prism walls as a brick frame opening. The opening is now boarded up.

Analysis
There are no extant records for the construction or repair of the intake features. However, it is probable that they retain a high degree of integrity.

PIPES
Historical and Existing Condition
There are two open and one down pointing metal pipes between Wisconsin Avenue and Potomac Street.

These pipes, which are on the berm side of the canal south of the old Canal Warehouse, were added at unknown date. It is also not clear who owns them and where they go. As such, further research is needed.

Analysis
These features were documented in a 2017 survey for CLI. As no documentation has been found, further research is needed to determine if they contribute to the character of the cultural landscape.

Character-defining Features:

Feature: Canal Prism

Feature Identification Number: 182191

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46539

LCS Structure Name: Mile 000-001, Canal Prism

LCS Structure Number: 000.01

Feature: Lock No. 1

Feature Identification Number: 182193

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12656

LCS Structure Name: Lock 1

LCS Structure Number: 000.38

Feature: Lock No. 2

Feature Identification Number: 182195

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12660

LCS Structure Name: Lock 2

LCS Structure Number: 000.42A

Feature: Lock No. 3

Feature Identification Number: 182197

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12661

LCS Structure Name: Lock 3

LCS Structure Number: 000.49

Feature: Lock No. 4

Feature Identification Number: 182199

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12663

LCS Structure Name: Lock 4

LCS Structure Number: 000.54

Feature: Boat Basin No. 1

Feature Identification Number: 182201

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12658

LCS Structure Name: Boat Basin

LCS Structure Number: 000.41A

Feature: Boat Basin No. 2

Feature Identification Number: 182203

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Boat Basin No. 3

Feature Identification Number: 182205

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Side Pond Inlet Entrance Gate (Lock No. 1)

Feature Identification Number: 182207

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12657

LCS Structure Name: Side Pond

LCS Structure Number: 000.41

Feature: Wilkins Rogers Milling Co. Intake-Ruins

Feature Identification Number: 182209

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12673

LCS Structure Name: Dual Water Intake - Wilkins Rogers Milling Co.

LCS Structure Number: 000.98

Feature: Wilkins Rogers Milling Co. Dual Water Intake

Feature Identification Number: 182211

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Pipes

Feature Identification Number: 182213

Type of Feature Contribution: Undetermined

Latitude Longitude

0.0000000000

Landscape Characteristic Graphics:

Lock One. (NCR CLP 2016).

The Fish Market Square, designed by Peter Vercelli. This photograph also captures the Dual Water Intake-Ruins of the Wilkins Rogers Milling Co., which supplied the former mill to the south with surplus canal water from 1839 to 1960. (NCR CLP 2017).

The side pond inlet located on the south corner of the Lock No. 1 prism. (NCR CLP 2016

Vegetation growing in Boat Basin No. 1. (NCR CLP 2016).

Buildings and Structures

WASHINGTON/30TH STREET BRIDGE, THOMAS JEFFERSON, and 31st STREET BRIDGE STONE ABUTMENTS

Historical Condition

In August 1830, Davis was awarded the contract to construct four bridges crossing the canal at Greene/29th Street, Washington/30th Street, Jefferson Street, and High Street/Wisconsin Avenue as McCord & Co. abandoned their contract following the completion of the Congress Street Bridge. By October 1831, the stone Washington/30th Street and Jefferson Street Bridges were complete along with their stone abutments (Bearss 1961: 6-8). These abutments were an integral part of the engineering system as they supported the bridges superstructure. On June 26, 1866, Georgetown's Board of Aldermen passed an

ordinance authorizing the C&O Canal Company "to substitute permanent Iron Bridges in lieu of the present Stone Bridges over the Canal at Congress, Jefferson, Washington & Greene Streets" (Bearss 1961: 24). By August 1866, Dewalt & Co. was contracted to raise and construct the iron bridges and by early 1867 the bridges were complete (Bearss 1961: 24-25). Although the bridges were replaced with iron spans the stone abutments were left in-situ (NR Update 2015: 8, 164).

In the following years, only the Washington Street/30th Street, Thomas Jefferson, and 31st Street Bridge stone abutments were retained. In 1998, the condition of the Washington/30th Street and Thomas Jefferson Street Bridge stone abutments were documented as in "fair" condition. The Washington Street/30th Street abutments, however, needed repointing. It was also recommended that the Portland cement be removed and replaced. In 2007, 2012, and 2017 the condition of both abutments was documented as "fair." Though in 2017, the Washington/30th Street abutments displayed moderate structural deterioration. The abutments were also documented as being impacted by weather (NPS LCS 2017). In 2017, the Thomas Jefferson Street Bridge stone abutments, when surveyed, were indicated as having severe structural deterioration.
The condition of the abutments was also impacted by weather and vegetation. Following this survey of the Thomas Jefferson Street Bridge stone abutments, repointing was recommended as well as the removal and replacement of Portland cement where necessary (NPS LCS 2017).

Existing Condition
Washington Street/30th Street Bridge Stone Abutments
The Washington Street Bridge Stone Abutments are located at the exit gate or eastern most portion of Lock No. 3. The abutments run parallel to the course of the Chesapeake and Ohio Canal prism. These abutments carry the 30th Street Bridge over the canal course and their height is approximately 28.8 feet each from the base to top of the structure. The bridge abutments consists of a rubble stone interior, clad by finished dressed stone exterior. A crack has been noted in the northern stone abutment during investigations of Lock No. 3. Portions of the abutment will be dissembled and reconstructed in order to replace deteriorated stones and address structural failings (PEPC 2016: 67936). Subsequent versions of this CLI will make observations to the extent of material replaced and the method employed to repair the structure of the abutments.

Thomas Jefferson Street Bridge Stone Abutments
The Jefferson Street Bridge Stone Abutments are located at the exit gate of Lock No. 4 and the western approach of the Boat Basin No. 3. The abutments are oriented parallel to the course of the Chesapeake and Ohio Canal prism. The abutments carry the Thomas Jefferson Street Bridge over the canal course and their height is approximately 37.4 feet each from the base to top of the structure. The interior of the abutments are composed of rubble stone and clad with dressed stone. The abutments are slated to be repointed during the rehabilitation of Lock No. 4 and the copping stones along the top of the southern abutment will be reset.

Subsequent versions of this CLI will make observations to the extent of material replaced and the method employed to repair the structure of the abutments.

31st Street Bridge Stone Abutments

Following the replacement of the 31st Street Bridge superstructure, the only portion of the structure to remain of the original feature are the bridge abutments. At the time of the completion of the CLI, guards were proposed to be placed along the sides of the abutments to prevent damage from canal boats. Future versions of the CLI will endeavor to observe the condition of the abutments.

Analysis
The Washington/30th Street Bridge and Thomas Jefferson Street Bridge stone abutments were completed by Davis in 1831. Over the years, the superstructures were altered though the abutments were maintained. As such, they currently have high integrity. However, they are slated to be renovated and future CLIs will document the materials and methods used to repair the structures.

1057 THOMAS JEFFERSON STREET (CHOH VISITOR CENTER)
Historic Condition
The row house was constructed in 1878 in the Italianate style. Further research is needed to determine if it was constructed in association with the canal. In 1927, the front door and steps were renovated and in 1954 the interior stairs to the cellar were removed. It was in 1991 that the row house was purchased by the National Park Service from a Mr. Benkirane. According to LCS records, in 1997 the condition of the building was ‘”good.” In 2008, 2012, and 2017, the condition of the building was also documented as “good” though weather/water damage was noted on the upper cornice, bay window molding, and front pediment. Other impacts included visitation, park operations, and tenants/occupants (NPS LCS 2017).

Existing Condition
The two story brick Italianate structure, located at the northeast crossing of Thomas Jefferson Street with the Chesapeake and Ohio Canal, faces Thomas Jefferson Street. It is composed of a main structural block and a rear “el.” The overall width of the structure is approximately seventeen feet. The west façade of the building consists of a canted bay window in the right bay of the structure. Egress to the building is granted via an adjacent door topped with a gabled pediment. Rounded arched pediment windows articulate the upper story. Regularly spaced brackets support a cornice. The south elevation of the main structure is devoid of ornament or opening. The rear “el” has three expressed openings in a uniform line. The sizes vary with a square window on the lowest level topped with two similar rectangular openings on the upper levels. The west elevation of the main structure consists of two aligned windows, rectangular in form, yet with the smallest window placed atop a larger opening. The “el” western elevation consists of a door on the lowest basement level that provides egress into the structure. A

double window and Juliet balcony articulates the main floor of the structure with a smaller six over six window expressed on the upper story.

During the initial writing of the CLI, a rehabilitation was proposed for the former visitor center structure in order to make the structure habitable by CHOH employees and visitors. The proposal included the removal of vegetation from the exterior of the structure, the reproduction of missing architectural details, the repointing of damaged masonry, and addressing interior concerns (NPS PEPC 2016: 67936). Subsequent CLIs must determine if these changes were indeed executed on the structure.

Analysis
The visitor center has maintained integrity of design, materials, and location. However, it is currently closed for renovations. Future CLIS will document the changes executed.

RETAINING WALL 0.59-.61
Historical Condition
The details regarding the original construction of the feature remains largely unknown. There was a marked increase in trade along the C&O Canal after the Civil War, which revived previous efforts to raise the Georgetown bridges. On October 10, 1866, while efforts were made to raise the Congress/31st Street Bridge, W. Von Essen petitioned the C&O Canal Board to extend the wall north of the canal, east of Congress Street. The petition for an extension of the wall alludes to a pre-existing structure or wall at the location. The Board approved the request of Von Essen and stone and rail from the Congress/31st Street Bridge was used to extend the wall (Bearss 1961: 24-25).

Existing Condition
The retaining wall, composed of stacked rubble stone bonded with mortar, is bound by the 31st Street Bridge to the east, the Wisconsin Avenue Bridge to the west, and the berm side towpath to south. This retaining wall, which runs parallel to the canal prism, has been incorporated into the basement levels of buildings associated with 1054 31st Street, NW and 1063 Wisconsin Avenue, NW. The height of the wall also varies with a maximum height of one and half stories from the base of the towpath.

Analysis
The retaining wall maintains integrity of location, and likely materials, however, more intensive analysis must be conducted prior to forming that conclusion.

RETAINING WALL 0.67-1.07
Historical Condition
The origins of the retaining wall, which extends west from Wisconsin Avenue to mile 1.07, are unclear at best and will require future research to conclusively determine when the structure was first erected. The wall consists of stacked rubble stone, dry laid in places and mortared in

others. It is possible that the wall is associated with the raising of the Georgetown Streets after the Civil War. The retaining wall is visible in two photographs dating to 1890. Both are oriented to the east, with one focusing on the Wisconsin Avenue Bridge from the canal towpath, while the second image is captured from the 34th Street Bridge looking east towards Washington DC (Library of Congress: 1890 No. 96502917; Library of Congress: 1890 No. 96502919). A review of additional photographs of the canal show that the wall is incorporated into the foundation of the Capital Traction Company, suggesting that the wall may have building existed prior to the construction of the building and the 1880s record of such in the Sanborn Maps.

Existing Condition
This rubble stone stacked retaining wall bonded with mortar is bound by the Wisconsin Avenue Bridge to the east and continues west for a half mile adjacent to the berm-side towpath. The height of the wall varies with a maximum height of two stories and portions of the wall are dry laid and vary depending on the era of construction. It is the western most portion of the wall that was most recently constructed and in the 1980s the structure of the wall was incorporated into the former Georgetown Mall. The wall behind Dean and Deluca is not continuous as it is terraced.

Analysis
The retaining wall is evidence of the raising of the streets north of the canal at the Market House in 1845 and 1865. These walls have been documented in numerous photographs and have retained their original character. As a result, they have high integrity.

HYDRAULIC GENERATOR PLANT
Historical Condition
In 1841, a flour mill was established on the north side of Water/K Street on the river side of the canal prism between Lingan /35th and Fayette/34th Streets. During the Civil War, trade on the canal decreased and the mill went out of operation. In 1862, Abraham Herr, a commission merchant at Smith's Wharf in Baltimore, purchased the mill and called it the Columbia Mill. This mill was left in the hands of his head miller, James
S. Welch, who eventually purchased the mill (Unrau 2007: 659). By the 1888 Sanborn map, the flour mill was vacant though it is still identified as the Columbia Mill in an 1894 and 1907 map. However, according a 1903 map, the site was used as an ice warehouse in 1900s. Specifically, the 1903 map identifies the old mill as "Crystal Plate Ice Co." while in 1909/1911 and 1913/1915 the old mill is identified as "American Ice House." On a 1945 map, the building is identified as the "American Brewery." Further research is needed to determine when the building operated as the Hydraulic Generator Plant.

Existing Condition
The three-story Hydraulic Generator Plant is located adjacent to the Key Bridge on the river side of the canal, 10 feet south of the canal prism. Due to the topography of the site, only one story is visible at the level of the canal, with the full three stories legible at the K Street level. The small red brick structure is part of a larger development associated with K Street. The

brick chimney that is subtly articulated over the roofline differentiates the Hydraulic Generator Plant from the adjoining structures. The building measures approximately 20 feet by 20 feet and is in an "L" shape with the base of the building fronting the Potomac River. Three two over two windows articulate the K Street elevation of the structure.

In 1996, the condition of the building was documented as 'fair'. By 2005, the condition was "poor" as "the wire mesh over the windows has been pulled away and vagrants have occasionally taken up residence in the building. Vandalism has also taken its toll on the structure. The site is overgrown with vegetation." In 2007, 2012, and 2017 the condition was also documented as "poor" and it was noted that "vegetation and graffiti removal are needed" and "vandalism continues to impact the structure." The impact of vandalism is severe with other impacts including structural deterioration and vegetation (NPS LCS 2017).

Analysis
The current condition of the Hydraulic Generator Plant is poor as it evidences severe vandalism and structural deterioration. However, the building retains integrity of location.

ALEXANDRIA AQUEDUCT
Historical Condition
The original terminus of the C&O Canal was in Georgetown. However, by 1830, the Alexandria Canal Co. was chartered by Congress to construct the Alexandria Canal, which would connect to the C&O Canal across the Potomac River to Alexandria by the Alexandria Aqueduct. The aqueduct would allow merchants to cross the river without having to unload their cargo into sailing ships, incurring additional costs to ship goods, and connect Alexandria with trade on the C&O Canal the canal. This angered many Georgetown merchants, as it would allow access to essential goods and revenues (Kytle 1983: 52; Georgetown Historic Waterfront 1993: 1968; Unrau 2007: 62-63).

On July 4, 1831, under the supervision of Major William Turnbull of U.S. Topographical Engineers, work on the Georgetown side of the Alexandria Aqueduct (also called the Potomac Aqueduct and Aqueduct Bridge) began. The Georgetown abutment was to be built at a site adjacent to the western edge of the extension of 36th Street following C&O Canal Engineers Wright and Roberts's 1829 plans. In 1832, Major Turnbull proposed that Georgetown abutment be built at the lower part of 35th Street. However, the abutment was constructed at the proposed site of Wright and Roberts. In 1837, an agreement was reached that called for the Georgetown abutment to be constructed as a stone arch. This design, which was more expensive than the simple causeway on the Alexandria side, was deemed necessary by Colonel Abert of the United States Board of Engineers because an arch was needed to cross 36th Street in Georgetown, but also a simple causeway would "disfigure" Georgetown. In 1839, work officially began on the Georgetown abutment and by December 31, 1840, the last pier of the Georgetown abutment had been completed. By July 10, 1843, the Alexandria Aqueduct, at almost a quarter mile long and 40 feet above the river, with piers founded on solid rock below

35 feet of water and mud, was opened for use. Unfortunately, in 1856 the carriage lane across the aqueduct proved inadequate doe to the narrowness and could not accommodate the high traffic crossing the Potomac. By 1861, the Aqueduct was under federal control and the suggested renovation of the Aqueduct and its carriage lane were delayed (Kytle 1983: 52; Georgetown Historic Waterfront 1993:, 55-59).

In 1861, during the Civil War, Confederate pickets established themselves near the Alexandria Aqueduct. In late April and early May 1861, Federal troops carried out various attacks against these pickets and by May 23, 1861 the Aqueduct was under Federal control (Unrau 2007: 710). The Federal Government, recognizing the Aqueduct as one of three potential routes to invade Washington, seized control of the Aqueduct and drained it on December 16, 1861. The bed of the Aqueduct was then used as an ordinary bridge with a wooden approach connecting the Georgetown section of the C&O Canal with the Georgetown abutment at 36th Street (Georgetown Historic Waterfront 1993: 59). The draining of the Aqueduct, an outlet to the tidewater, caused "long and costly delays… [as] the boats lined up on the Georgetown level above the aqueduct, awaiting their turn to unload" (Snyder 2011: 88; Bearss 1961: 17). Congress recognized that a convenient outlet was needed "in place of that which has been interrupted by the occupation of the aqueduct", and drafted a bill (House Resolution No. 54) in 1862 for the "reconstructing the bridges and market-house in Georgetown" which were "entirely too low" (Bearss 1961: 23; Unrau 2007: 744-745). For a further discussion on the bridges, refer to the Georgetown Bridges section.

The Alexandria Aqueduct was still under federal control after the Civil War. On September 5, 1866, the C&O Canal Board resolved to ask President Andrew Johnson to intervene. It was estimated that the army occupation of the Aqueduct cost the canal an estimated $75,391.96 for the years 1861 and 1862 and $292,330 for 1863 and 1864, which made an aggregate loss of $367,721.96 (Snyder 2011: 239; Unrau 2007: 770). Unfortunately, it wasn't until 1867 that the aqueduct was released to the canal. The aqueduct was in such a state of disrepair that it was leased to the Alexandria Railroad and Bridge Company. In 1868, the Alexandria Railroad and Bridge Company repaired the Aqueduct and were authorized by Congress to build a highway bridge over the trough and charge tolls. The building of this new bridge involved the removal of the original Queen-post truss bridge and the addition of a wooden superstructure of Howe trusses, which were strengthened at the sides by laminated wooden arches. This new bridge had two levels with the "lower chord of the truss supporting the canal trough and the upper supporting the toll road" (Snyder 2011: 239; Georgetown Historic Waterfront 1993: 59-60).

As trade along the canal declined, the Alexandria Aqueduct was forced to charge high tolls to compensate for plummeting canal profits. This angered many locals and in 1881, Congress authorized the purchase of the Aqueduct. The Alexandria Canal Company refused to sell and the Aqueduct Bridge was closed to all foot traffic. By December 1886, the Alexandria Canal Company sold the Aqueduct Bridge for $125,000 and in 1888, it was rehabilitated. Specifically, the superstructure was replaced by a light iron truss bridge (on the existing stone piers) and it was used as a bridge to the Virginia shore until 1923 (CoFA 1968: 152; High 1997: 107;

Georgetown Historic Waterfront 1993: 60). In 1903-1905, pier No. 5 was completely replaced and new grinders were added in 1908. In the 1900s, two streetcar lines, one on M Street, one of P Street, were established and connected Georgetown with central Washington, D.C. Additional lines crossed the Aqueduct Bridge to connect the city with Rosslyn, one ran west beyond Georgetown University to Cabin John Bridge, and one ran north along Wisconsin Avenue to Tenleytown and then on to Rockville, Maryland (Passonneau 2004: 96, 98). In the establishment of these lines, the stone Georgetown abutment at 36th Street was raised between 1900 and 1909 to allow railcars to pass under it (Georgetown Historic Waterfront 1993: 61).

Despite these changes, the Alexandria Aqueduct was seen as "run-down" during the Baltimore & Ohio Railroad receivership. By 1916, Congress had authorized its replacement with the larger, more substantial Francis Scott Key Bridge. The building of Key Bridge commenced in 1920 and was opened to the public on January 17, 1924. Following the construction of the Francis Scott Key Bridge, the two bridges existed side-by-side until 1933 when the iron superstructure and upper parts of the piers of the Alexandria Aqueduct were removed. In 1962, the Army Engineers blasted out all but one of the piers to a depth 12 feet below the water, subsequently taking the rubble to Anacostia Park for the foundation of sea walls. The remaining pier, pier one, remains 30 feet from the Virginia shore and juts about 6 feet out of the water. The reason behind the destruction of the aqueduct was not only the fact that it was an "an eyesore", but also it would provide rowers with nine full lanes (High 1997: 16-107; Georgetown Historic Waterfront 1993: 60).

Existing Condition

The Alexandria Aqueduct, composed of dressed rough stone, consists of two-barrel vaults and associated piers supporting the remnant of the canal prism. Furthermore, the overall length of the abandoned aqueduct is 136 feet projecting perpendicular to the course of the Chesapeake and Ohio Canal towards the Potomac River and the overall width of the structural remains are approximately 48 feet wide. The remnant structure is twenty-nine feet above the shoreline and a berm physically connects the Alexandria Aqueduct to the Chesapeake and Ohio Canal. Graffiti and tagging is a constant problem.

At the time of the completion of the CLI in 2017, the Alexandria Aqueduct was incorporated into the proposed project area of the Non-Motorized Boat Zone of Georgetown. The goal of the project is to develop the riverfront of Georgetown into a destination area to accommodate recreational boating, in the form of organized and individual rowing. This plan includes the expansion of current boat storage and boathouse facilities. Additionally, in the Non- Motorized EA it is proposed that the Alexandria Aqueduct be rehabilitated into an observation deck that will accommodate spectators during regattas. Renderings were not provided depicting how this modification would impact the historic resource. It remains unclear at this time what might occur to the aqueduct. Subsequent versions of the CLI will have to document any future modifications to the structure.

Analysis

The aqueduct retains integrity of location and material as the extant two-barrel vaults and associated piers represent the larger structure and date to the period of significance. However, due to the destruction of the aqueduct in 1962 there is no integrity of design.

TOWPATH CROSS OVER BRIDGE RAMP-RUIN
Historical Condition
In March 1852, Georgetown merchants issued a memorial for the towpath between Frederick Street (34th Street) and Warren Street (37th Street) to be moved from the river side of the canal to the berm side (Bearss 1961: 21; Unrau 2007: 469-470). By mid-summer 1854, the land needed for this endeavor was secured and work on relocating the towpath began in the spring of 1855. In conjunction with this project was the erection of a new towpath bridge across the canal above the Alexandria Aqueduct at Warren Street (37th Street). This new towpath bridge would allow mules and drivers to pass over the canal from the river side towpath west of Warren Street (37th Street) to the berm side towpath to the east (Bearss 1961: 22; Kytle 1983: 75). By June 1855, the towpath bridge was presumably complete along with the augmented towpath (Unrau 2007: 470). This bridge can be seen in an 1865 colored lithograph print of the Alexandria Aqueduct. The bridge is identified as a proposed mule bridge in a 1949 map of the Georgetown section of the C&O Canal.

Existing Condition
Currently, all that exists of the Towpath Crossover Bridge is an earthen ramp and a concrete retaining wall on the berm side of the canal prism. The ramp is bound by the retaining wall of Canal Road, NW on the north and the aforementioned retaining wall on the south. The feature is located west of the Key Street Bridge and the Whitehurst Freeway access ramp. The ramp is the terminus berm side towpath.

Analysis
The towpath crossover bridge at 37th Street was added in 1855 as the towpath between 34th and 37th Street shifted to the berm side of the canal so. The ramp, now a ruin, maintains integrity of location.

Character-defining Features:

Feature: Washington/30th Street Bridge Stone Abutments

Feature Identification Number: 182215

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Thomas Jefferson Street Bridge Stone Abutments

Feature Identification Number: 182217

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: 1057 Thomas Jefferson Street NW (Former CHOH Visitor Center)

Feature Identification Number: 182219

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 47546

LCS Structure Name: 1057 Thomas Jefferson Street NW

LCS Structure Number: 000.49C

Feature: Retaining Wall 0.59-.61

Feature Identification Number: 182221

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Retaining Wall 0.67-1.07

Feature Identification Number: 182223

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Hydraulic Generator Plant

Feature Identification Number: 182225

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 47564

LCS Structure Name: Hydraulic Generator Plant

LCS Structure Number: 001.00A

Feature: Alexandria Aqueduct

Feature Identification Number: 182227

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12994

LCS Structure Name: Alexandria Aqueduct, Abutments

LCS Structure Number: 001.07

Circulation

TOWPATH
Historical Condition
The original design for the canal towpath was reported to the United States Board of Engineers on October 23, 1826 in the Geddes and Roberts report. The specifications dictated that the towpath was to be built on the river side of the canal with a width of 9-feet at 2-feet above the surface of the canal (Unrau 1974: 3). In 1830, C&O Canal Engineers Thomas Purcell and Charles Fisk enlarged the dimensions to be no less than 12-feet wide, but construction reports in the 1830s indicate that the surface of the towpath varied from 9- feet to 12-feet wide. Materials also varied with sand and clay being used in some areas, while knapped rock was smoothed over with a roller in others (Luzader 1961: 2-3). Further research is needed to determine the original dimensions of the Georgetown Level towpath as well as the materials used in its construction. However, historical evidence indicates that the original towpath was on the berm side of the canal from Frederick Street (34th Street) to Greene Street (29th Street). This allowed for the river side of the canal to be free for shipping activities (Bearss 1961: 7).

Over the years, the towpath in Georgetown deteriorated due to intermittent flooding and erosion. On September 19, 1843, repairs commenced on the section of the canal from Georgetown to Little Falls and by November 8, 1843, water was restored from Georgetown to Edwards Ferry. Although the Georgetown Level was repaired, C&O Canal Chief Engineer Charles Fisk reported to stockholders on June 3, 1844 that extensive long-range improvements needed to be made to the Georgetown Level. In particular, Fisk proposed raising of the towpath one foot above highest known freshet mark in areas where water ran over the towpath. Presumably, this included the towpath in Georgetown proper, as the Corporation of Georgetown was willing to pledge $10,000 from water rents to fund the repair of the Georgetown Level. By November 4, 1844, repairs commenced and by April 30, 1845, the improvements to the Georgetown Level were completed (Unrau 2007: 284-287; Shaffer 1997: 10).

The second documented renovation of the towpath followed the devastating freshets of 1847. These floods did not directly affect the Georgetown Level, but they pushed the C&O Canal Co. to consider renovating the waterway below Dam No. 6. In August 1849, C&O Canal Chief Engineer Charles B. Fisk submitted a comprehensive restoration plan to the C&O Canal Board

that involved eight separate projects. The largest project was to raise the towpath to the highest level of a known freshet in the Potomac Valley– the flood of 1847–from point 0.0 in Georgetown to Dam No. 6. By the spring of 1852, the renovation was completed at a cost of $80,000. The materials used in the restoration of the towpath are currently unknown (Shaffer 1997: 18-22; Unrau 2007: 290).

In 1851, alterations were also made to the river side towpath west of Frederick Street, 34th Street, when the C&O Canal Board granted permission to G.L. Thompson Company and others to construct boat basins on the towpath side of the Georgetown Level. The intent of the Board was to encourage the development of transfer facilities and ultimately commerce along the canal. They also wanted, "to ascertain the best and most convenient mode of handling and unloading or transshipping coal upon its arrival at tidewater." Experimental basins were first constructed around College Run and above the Alexandria Aqueduct under specific guidelines issued by the C&O Canal Co. One of the guidelines dealt with "the absence of a continuous towpath" caused by these experimental basins. Specifically, moveable bridges were to be built across the entrance of the basin. The boat basin established by Alexander C. Ray in 1855 on Lots Nos. 32 and 33 (between Frederick Street/34th Street and Duck Lane/33rd Street) did not interfere with the towpath as the towpath was on the riverside of the canal between Frederick/34th and Greene/29th Street. Presumably, the boat basins of James R. Wilson and W.A. Bradley did not interfere with the towpath (Unrau 2007: 469- 470).

In March 1852, while experimental boat basins were being developed west of Frederick Street, 34th Street, Georgetown merchants issued a memorial for the towpath between Frederick Street and Warren Street, 37th Street, to be moved to the berm side of the canal (Bearss 1961: 21; Unrau 2007: 469-470). Chief Engineer Fisk, now General Superintendent, studied the proposal and reported to the C&O Canal Board that moving the towpath would be advantageous, as it would "free use of the towpath and canal occasioned by the loading and unloading of boats at Davis' Mill." In July 1853, the Board approved the request, as it would allow for the acquisition of a large coal business (Bearss 1961: 22). The acquisition of the land on the berm side of the canal, however, proved to be a challenge and in the spring of 1854 the C&O Canal Co. "chartered privilege of condemnation" (Bearss 1961: 22). By mid-summer 1854, the land was acquired and in the spring of 1855, construction finally began. In late spring 1856, the new towpath was constructed at a cost of $1,000 and on June 30, 1856 it was reported that the move "had been very beneficial" (Bearss 1961: 22; Unrau 2007: 469-470).

In the following years, numerous floods struck the canal and damaged the Georgetown Level. However, it is unknown if the Georgetown towpath was included in the "unspecified twenty miles of the canal towpath" to be raised in William R. Hutton's 1870 to 1872 repair plan (Shaffer 1997: 40). In 1889, however, the Georgetown Level was devastated by a flood, which brought water levels up to 13.3 feet at Easby's Wharf in Georgetown. This flood destroyed Georgetown's mills, wharves, steam dredge, and scow. As the C&O Canal Co. was unable to finance repairs, Georgetown millers advanced the canal company $16,000 from future water rents in June 1889. These repairs included the repair of the canal between Lock No. 4 and

Lock No. 5 and the rebuilding of the towpath with "large flat stones loosely laid together" (Unrau 2007: 312-315). These repairs were completed in the summer of 1889 (Shaffer 1997: 48-51).

In 1890, the Baltimore and Ohio Railroad was granted authority over the canal. From 1890 to 1924, minimal efforts were made to maintain the canal. This can be seen in an 1890 Library of Congress photograph of the Wisconsin Avenue Bridge looking east where the towpath is dirt and bordered by wild grass. In two 1920 photographs, one of the Wisconsin Street Bridge and one of the Potomac Street Bridge, the neglect of the canal the narrow towpath is covered in grass (Shaffer 1997: 53-54). By May 1924, the Georgetown left, which was in a state of disrepair, was struck by the first major flood in thirty-five years. The Evening Star reported that the canal "was likely doomed." However, the canal was repaired and kept in operation below Dam No. 1 (Shaffer 1997: 58). Unfortunately, there are currently no extant records documenting the damage to the Georgetown Level towpath. The photographic evidence is also limited to one 1935 Library of Congress photograph of Lock No. 4 where towpath is unclear.

By 1938, the National Park Service had acquired the canal from the B&O Railroad (Shaffer 1997: 53-54). As part of the C&O Canal New Deal Project, or Federal Project 712, the Civilian Conservation Corps (CCC) restored the 22-miles of towpath from Georgetown to Seneca (NR Update 2015: 8, 204).

Unfortunately, the extant records do not indicate what materials were used in the restoration of the canal. However, a pre-existing cobblestone path on the berm side of the canal at Lock No. 4, between Jefferson and Congress/31st Streets, is documented in a 1939 "Existing Conditions" drawing of the Georgetown Level. It is possible that this cobblestone path was the aforementioned 1889 towpath made of "large flat stones loosely laid together." This towpath is captured in a 1920-1950 Library of Congress photograph, though towpath materials are unclear in a 1941 drawing of Lock No. 4 (D.C. Historical Society, Kiplinger Washington Collection, KC0470.DR.AP.L.F).

In October 1942, the restoration efforts of the CCC were destroyed by a flood. The extent of the damage to the Georgetown Level is currently unknown though the section of the towpath from Georgetown to Dam No. 1 was rebuilt with a clay and cement mixture to make it more flood resistant by April 1943 (Shaffer 1997: 76-77). The cobblestone towpath at Lock No. 4 was also retained as it was planned to be re-laid in the 1948 planting plan for Lock No. 4. In the 1949 planting plan, the cobblestone path had been re-laid and the rest of the towpath planned to be a bituminous path. A towpath was proposed north of Lock No. 1. In the 1950 planting plan, the towpaths segments are marker as 5' bituminous paths and the proposed towpath above Lock No. 1 was established. At Lock No. 4, between Jefferson and 31st Streets, the cobblestone towpath is noted as extant and 8-feet wide. Interestingly, the towpath north of Lock No. 3 had been surfaced with brick as documented in two 1969 Library of Congress photographs.

In June 1972, Hurricane Agnes caused extensive flooding below Hancock with damage becoming progressively worse closer to Washington D.C. The extant records indicate that some 66-miles of unspecified towpath were destroyed and by 1974, the towpath was restored from Georgetown to Seneca (Shaffer 1997: 89-85). The current records do not indicate what materials were used to restore the towpath and there is currently no photographic or documentary evidence for the Georgetown towpath following the 1974 restoration. However, the towpath north of Lock No. 3 is indicated as brick in the 1977 Justice Wm. Douglas Bust Planting Plan and the Wisconsin Avenue Plaza and Grace Street Park were planned to be brick in the 1977 Georgetown Park development plans. In 1975, the National Park Service and the Four Seasons Hotel entered into an agreement that made the hotel responsible for resurfacing the towpath between Rock Creek and 29th Street with brick (Mackintosh 1991: 175). In the 1980s, the towpath west of 33rd Street was restored with gravel on the river and berm side of the canal. This can be seen in a 1980 planting plan for Lock No. 1 to the Alexandria Aqueduct.

Existing Condition
The following is a segment-by-segment description of the towpath as it passes through the cultural landscape inventory study boundary.

0.0 to 29th Street NW
The towpath is located on the berm side of the canal prism and consists of brick pavers laid in an interlocking pattern approximately 5 feet wide. The towpath slopes upward from mile marker 0.0 to 29th Street NW. A strip of grass separates the edge of the canal from the towpath.

29th Street, NW to 30th Street, NW.
The towpath is located on the berm side of the canal prism. The path is defined by brick pavers and is approximately 5 feet wide. A strip of grass serves as the buffer between the edge of the canal and towpath. No structure or fence physically separates the towpath from the canal. The general course of the towpath slopes upwards from 29th Street, NW to 30th Street, NW in order to provide access to these streets.

30th Street, NW to Thomas Jefferson Street, NW.
The towpath is located on the berm side of the canal prism. The towpath is brick and incorporated into the overall circulation of the Lock No. 3 Plaza/Mule Yard. The towpath slopes upwards from the plaza towards Thomas Jefferson Street in order to provide access to the street. A fence defines the southern edge of the pathway. However, it should be noted that this description represents the condition of the towpath in the Fall 2016 prior to the rehabilitation of Lock 3 and the use of the plaza as a staging area.

Thomas Jefferson Street, NW to 31st Street, NW.
The towpath is located on the berm side of the canal prism. The towpath is brick with a width of approximately five feet. The course of the towpath follows that of the canal and curves to the higher elevation of 31st street. A fence serves as a defining edge adjacent to Lock No. 4.

This fence is replaced with a strip of grass in-between the canal and the towpath prior to the introduction of a second fence on the upward sloped approach to 31st Street, NW.

31st Street, NW to end of cultural landscape boundary
The towpath slopes down from 31st street, NW as it follows a course parallel to the canal prism. The circulation feature is defined in tan gravel with a varying width throughout the remainder of the feature course. A strip of grass defines the edge of the circulation feature. The elevation of the towpath is even with the top of the canal and does not meet the elevation of the Georgetown street grid for the remainder of its course. Rather, it remains sunken below. The towpath terminates on the berm side of the canal at the Towpath Crossover Bridge Ramp.

33rd Street, NW to the end of the cultural landscape boundary
At 33rd Street, NW, the towpath is expressed on the river side of the canal prism. The towpath is of varying widths and composed of the tan gravel on the opposite towpath. A strip of grass separates the towpath from the canal prism structure. The towpath continues on the river side of the canal for the remainder of the course of the Chesapeake and Ohio Canal.

Analysis
Historically, the Georgetown Level towpath was constructed of sand and clay or knapped rock smoothed over with a roller. In the following years, the towpath was resurfaced with a variety of materials. For instance, the section of the canal from Thomas Jefferson Street to 31st Street was paved with brick post- 1950. The other segments were rehabilitated post-1974. As a result, only the Lock No. 3 the towpath retains integrity of material. Furthermore, the towpath only retains integrity of location from 29th to 30th Street, 30th to Thomas Jefferson Street, Thomas Jefferson to 31st Street, and the berm side section from 31st Street to
the end of the cultural landscape boundary.

THE GEORGETOWN BRIDGES
Historic Condition
On November 29, 1828, C&O Canal Co. Clerk Ingle printed and distributed Chief Engineer Wright's specifications for the Georgetown bridges. This was done under the canal company's direction that the "buildings and other improvements on the line of the canal through Georgetown, be sold at public sale, after five days' notice given in the Georgetown Columbian" (Bearss 1961: 4). By December 10, 1828, numerous proposals had been submitted to the Engineer's Office in Georgetown and on March 30, 1830 McCord & Co. was let the contract for the five stone bridges. These bridges, Greene/29th Street, Washington/30th Street, Thomas Jefferson Street, Congress/31st Street, and High Street/Wisconsin Avenue, were to be built in a "~8t substantial manner, with suitable rails or parapets" and kept in "good order" following their completion. Captain William Easby, a Washington shipbuilder, was awarded the contract for Georgetown's four wooden bridges, Duck Lane/ 33rd Street, Frederick/34th Street, and the two Market House Bridges (Unrau 2007: 184; Bearss 1961: 4-7).

In the construction of the Congress/31st Street Bridge, McCord & Co. ran into financial difficulties and an additional $4,000 was needed to finish construction. The canal company refused to supply the needed funds and McCord removed his men from the job. A resolution was reached with the help of the Georgetown Board of Aldermen and the C&O Canal Co. promised to reimburse McCord & Co. for the added costs following the completion of the bridge. McCord & Co. resumed work and in the summer of 1830, the stone Congress Street Bridge, with a span of 40 feet, was completed at a cost of $4,530.50. In December 1830, Davis was awarded the contract for the remaining bridges, Greene/29th Street, Washington/30th Street, Thomas Jefferson Street, and High Street/Wisconsin Avenue, as McCord & Co. abandoned their contract (Bearss 1961: 6-7). Around this time, Captain William Easby was constructing the four wooden bridges at Duck Lane/ 33rd Street, Frederick/34th Street, and Market House (Bearss 1961: 4-7).

By October 1831, the Greene/29th Street Bridge, which allowed drivers and mules to regain the towpath on the river side of the canal east of Greene/29th Street, was completed at a cost of $2,389.60. The Washington/30th Street Bridge was completed at a cost of $2,358.59, and the Thomas Jefferson Street Bridge was completed at a cost of $2,359. The wooden Frederick/34th Street Bridge, which allowed drivers and mules to transfer from the towpath on the river side of the canal west of Frederick Street to the berm side of the canal between Frederick and Greene Streets, and the two Market House Bridges were completed by Easby in October 1831. Chief Engineer Thomas F. Purcell determined that Easby was due $2,266 for the construction of the Market House Bridges. The completion of the wooden Duck Lane/33rd Street Bridge was postponed due to delays in the construction of the abutments. The High Street/Wisconsin Avenue Bridge was also not completed. By June 5, 1831, C&O Canal Chief Engineer Purcell reported to the C&O Canal Board that the Duck Lane Bridge was open to traffic (Bearss 1961: 6-7). The High Street /Wisconsin Avenue Bridge, which was “to be 54 feet” in length, was noted as under construction in Colonels John J. Abert and James Kearney of the United States Board of Engineers June 13, 1831 report. According to the inscription on the Keystone of the bridge, the High Street /Wisconsin Avenue Bridge was completed in 1831 sometime after their visit to the Georgetown Level. According to C&O Canal Company ledgers, the bridge was completed at a cost of $700 (Bearss 1961: 6-8).

In May 1833, William Spaulding was awarded to contract to paint the two Market House Bridges and Georgetown’s two other wooden bridges (Bearss 1961: 9). By May 27, 1837, Superintendent Young of the Georgetown Division as unsafe noted the two wooden Market House bridges. The Canal Board directed Young to repair and prepare plans for new bridges. However, only temporary repairs were made as the majority of the C&O Canal funds was being used to complete the canal to Cumberland, Maryland. By 1837 the Duck Lane/ 33rd Street and Frederick/34th Street Bridges were in a state of disrepair due to heavy use.

Chief Engineer Fisk furthermore reported that they would need to be replaced every six years. For the reconstruction of the Duck Lane/ 33rd Street and Frederick/34th Street Bridges bids were invited. On June 10th, 1837, C&O Canal Co. Clerk Ingle opened and abstracted the

proposals. Noah Drummond, the lowest bidder at $650, was originally awarded the contract. However, K. Lambell was ultimately awarded the contract because Drummond was unable to obtain the needed lumber for sills and rails. Further research is needed to determine when construction was completed (Bearss 1961: 10).

On May 22, 1839, Superintendent Young of the Georgetown Division reported that the two wooden Market House Bridges were in "a decayed and dangerous condition" and that the western bridge was impassible to heavy wagons. The bridges were then "shored and propped to prevent a complete collapse" (Bearss 1961: 11). In the same report, Young proposed that the portion of the Market House above the canal be raised two feet to accommodate larger boats. The C&O Canal Board directed Young to proceed with this plan and Captain Easby developed a proposal for the rebuilding of the two Market House Bridges. This report was submitted to the Board on November 8, 1839 and proposed that the bridges be no, "less than 9 feet from the water surface to the bridge." This plan would raise the bridges to a "sufficient height without altering the grade of the street" (Bearss 1961: 12). By December 7, 1839, Easby's proposal for the bridge east of the Market was accepted at a cost of $1,420. The bridge west of the Market House was closed due a shortage of liquid assets (Bearss 1961:12).

On January 12, 1841, the bridge east of the Market House was destroyed in a flood. The canal company was unable to finance its repair. It was in July 1843 the Georgetown Board of Aldermen sought a resolution with the canal company and proposed that the city finance the rebuilding of the bridge west of the Market House if they were repaid once the canal company's financial position warranted it. The canal company did not respond to the proposal until February 15, 1844. In their response they wrote that they were willing to accept the proposal provided that "(a) [Chief Engineer] Fisk's plans and specifications were followed; (b) the cost [did] not to exceed $895; and (c) the corporation [credited] the [canal] Company with $242.70 for interest due on its stock and to abandon its claim for $52.90." Furthermore, the city was to "accept Company bonds, payable in six years from the completion of the bridge with interest" and allow for the raising of the portion of the Market building above the canal to a height corresponding with the height of the bridge. By August 1844, the center truss of the bridge east of the Market House was shifted and the grade of the approaches was reduced. This work was done by day labor rather than contract. It was on January 6th, 1845 that the Georgetown Board of Aldermen authorized the Mayor of Georgetown to place an ad for bids for the construction of the bridge to the west of the Market House. The proposal of Matthias Duffy was accepted on February 15, 1845 under the condition that the construction cost did not exceed
$895. By April 1845, Georgetown Mayor Cox reported to the C&O Canal Board that the floor of the Market House above the canal had been "sufficiently elevated to avoid any obstruction to navigation" and the bridge was completed by December 20th, 1845 (Bearss 1961: 13-14).

In 1845, Chief Engineer Fisk and Georgetown Mayor Addison reported that the Duck Lane/33rd Street and Frederick/34th Street Bridges were in need of repair. The C&O Canal Co. took no action and the Duck Lane/33rd Street Bridge was closed to vehicular traffic the

following year in 1846. On August 24, 1846, Georgetown Mayor Addison wrote to C&O Canal Co. President Coale that it was “a matter of surprise that [the Frederick Street and Duck Lane Bridges] had not long since given away” (Bearss 1961: 14). Coale then advised Chief Engineer Fisk to take corrective action and the Frederick/34th Street Bridge was dismantled. However, no further action was taken by Georgetown Superintendent Elgin to erect a new one. This angered many Georgetown residents as the Frederick/34th Street Bridge was used as a pedestrian footbridge. On January 1, 1847, John Lambie replaced Superintendent Elgin and on April 20, 1847, he asked C&O Canal Co. President Coale for $200 to purchase the lumber needed for rebuilding the Duck Lane/33rd Street and Frederick/34th Street Bridges. This request was approved and by September 15, 1847, the Duck Lane/33rd Street had been rebuilt. The Frederick/34th Street Bridge was completed by June 30, 1847 (Bearss 1961: 15).

In 1849, prior to the completion of the canal, many Georgetown businesses and civic leaders were concerned that the Georgetown bridges were “entirely too low.” This is because even “with less than 5 feet [of] water in the level above Lock No. 4, there [were] boats on the Canal, that [could not], when unloaded, pass under some of the bridges in Georgetown” (Bearss 1961: 17). On October 29, 1849, Chief Engineer Fisk wrote to Georgetown’s Mayor Addison proposing the raising of the bridges. This letter instigated Georgetown’s Mayor Walter Lenox and the Georgetown Board of Aldermen to petition the C&O Canal Board on May 1, 1850 for the raising of Georgetown’s bridges. By June 2, 1851, the C&O Canal Board had instructed Chief Engineer Fisk to submit plans and estimates. On March 30, 1852, Fisk submitted plans to the C&O Canal Board and proposed raising the bridges east of Congress Street to provide a clearance of 10 1/2-feet while to the bridges west of Congress Street be raised to have a clearance of 12-feet. The Market House Bridges were to be raised to an elevation of 12-feet and the portion of the Market House above the canal was to be raised 2-feet as it was only 10-feet above the water surface. However, the raising of Georgetown’s bridges was delayed because Georgetown and Washington had trouble obtaining the required funds from Congress (Bearss 1961: 19).

By July 29, 1852, the bridges were not raised and the bridge east of the Market House was closed to traffic because it was in an “unsafe” condition. The Georgetown Board of Aldermen was willing to fund the repair of the bridge if they were reimbursed and the bridge was rebuilt “on such [a] plan and at such [an] elevation” as Fisk proposed (Bearss 1961: 21). The bridge was rebuilt though additional research is needed to determine the exact specifications. By November 1857, the bridge west of the Market House needed to be rebuilt. Again, the Georgetown Board of Aldermen agreed to advance the money. They also agreed to the raising of the bridge two-feet higher than its former height to facilitate trade in Georgetown. Unfortunately, it is unclear if the structure was ever raised (Bearss 1961: 21-23).

In 1862, Congress drafted a bill (House Resolution No. 54) that allocated $13,000 for the, “reconstructing the bridges and market-house in Georgetown,” because they recognized that a convenient outlet was needed, “in place of that which has been interrupted by the occupation of

the [Alexandria] aqueduct." On April 10, 1865, the Georgetown Board of Aldermen had resolved:

"That the bridge next west of the Market House may be raised by the C&O Canal Company one foot five inches, at its highest point above its present elevation; and that the grade of the Street may be changed as to suit the increased elevation of the bridge--- And also that the Bridge east of the Market House may be rebuilt at a clear height above the water of eleven feet, and the grade of the street accommodate to that elevation, provided that the whole work be done under the supervision of the Surveyor of the Town…and at the expense of said Canal Company" (Resolution of the Board of Aldermen and Common Council, Lts. Recd, C&O Co. April 1865).

C.C. Carman was first contracted for the raising and repair of the two Market House bridges at a cost of $1,700. By July 12, 1865, the streets were raised west of the Market House and by early fall the streets and bridges were raised to the east and west of the Market House (Bearss 1961: 23-24). On June 26, 1866, satisfied with the work on the Market House Bridges, the Georgetown Board of Aldermen passed an ordinance authorizing the C&O Canal Company "to substitute permanent Iron Bridges in lieu of the present Stone Bridges over the Canal at Congress, Jefferson, Washington & Greene Streets" (Bearss 1961: 24). A week later this ordinance was amended to permit the canal company to ""substitute Draw or Pivot Bridges…across the Canal at Washington and Jefferson Streets, for the present Stone Bridges" (Bearss 1961: 24). By August 1866, Dewalt & Co. was contracted to raise and construct an iron superstructure on the existing stone abutments for $22,000 with an additional $9,000 being drawn from company funds.

Dewalt & Co. began work immediately and by early 1867 the Greene/29th Street, Washington/30th Street, Congress/31st Street, and Thomas Jefferson Street Bridges were complete with the stone abutments retained. On April 4, 1867, the Board sought a contract for their painting. However, it should be noted that the Duck Lane/ 33rd Street and Frederick/34th Street Bridges were not raised. High Street/Wisconsin Avenue Bridge was also not raised, as it had a sufficient elevation to accommodate heavy carrying canal boats (Bearss 1961: 24-25).

The Market House Bridges "plagued" the canal company with their high maintenance costs. In December 1870, the Superintendent of the Georgetown Division reported that the "bridges above and below the Market House" needed repairs. By 1871, Chief Engineer Hutton informed C&O Canal Company President James C. Clarke that the Market House Bridges had been replaced with steel bridges. In the 1890, the wooden Duck Lane/ 33rd Street Bridge was rebuilt and replaced with steel spans while the iron bridges were re-floored approximately every 15 years. At the time of the May 1889 flood, the four iron bridges (Greene/29th Street, Washington/30th Street, Thomas Jefferson, and Congress/31st Street), the 1831 stone High Street/Wisconsin Avenue Bridge, and three wooden bridges (the eastern Market House Bridge, Duck Lane/33rd Street, and Frederick/34th Street) were documented as extant. The western Market House Bridge is not indicated in an 1889 map. In a photograph (DC Historical

Society, General Photograph Collection, CHS 16534; H 029) dated between 1870 and 1910 the Washington/30th Street Bridge is recorded. The bridge had a simple span superstructure though the materials are unclear. In 1870 and 1890, the 33rd Street and Potomac (eastern Market House Bridge) Street Bridges were replaced with steel, respectively (NR Update 2015: 8,164).

In the early 1900s, the Greene/29th Street Bridge was replaced with concrete spans. A 1909 photograph documents these changes as a simple span bridge is captured. Two piers with a simple rail on top of the bridge deck superstructure supported this bridge. The original stone abutments at both ends supported the superstructure. In a turn of the century photograph, only the eastern Market House Bridge, at modern day Potomac Street, is documented and it is a simple span steel bridge. By a ca. 1920-1950 Library of Congress photograph, the steel Potomac Street Bridge had been replaced by a simple span bridge. This bridge connected an elevated terrace on the berm side of the canal with an elevated stair platform on the river side of the canal. The structure of the bridge consisted of a simple deck of indiscernible material defined by a rail. In a ca. 1920-1920 Library of Congress photograph, the aforementioned Greene/29th Street Bridge is still present. There is also a 1920 photograph of the stone High Street/Wisconsin Avenue Bridge with iron rails. In 1924, the superstructure of the Congress Street/31st Street Bridge was replaced with concrete spans (Bearss 1961: 25; NR Update 2015: 8, 164). This bridge is documented in a 1920s photograph looking east. The bridge is a simple span bridge with a super structure of a simple horizontal deck. In the center of the bridge span, a complex “V” braced support carries the structural fences from the deck to canal prism. By 1935, the superstructure of the Greene/29th Street Bridge had replaced, however, the materials are unclear. This can be seen in a 1935 Library of Congress photograph of the bridge. There is also is little documentary or photographic evidence for the Thomas Jefferson Street Bridge. The earliest is a 1967 Library of Congress photograph that shows a simple span bridge supported by the original 1831 stone abutments.

Existing Condition
In the following section, the Georgetown bridges are discussed individually.

Greene/29th Street Bridge
The Greene/29th Street Bridge is oriented north south, following the urban street pattern of Georgetown, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of 29th Street traffic over the canal and is located at the western edge of Boat Basin No.1. The 29th Street Bridge structure consists of a single continuous span supported by an abutment on the north and south sides of the canal. The superstructure of the bridge deck is lower than the defined edges of the overall structure. The bridge superstructure is made from reinforced concrete. The width of the bridge can accommodate a single lane of traffic, with a brick sidewalk on the western edge of the bridge providing pedestrian access. A steel rail system, consisting of eleven post and four rails defines the edge of the feature. The rails are evenly spaced following the form of the bridge. The northern and southern portions of the rails are curved in order to accommodate the meeting of the towpath and the Georgetown

sidewalk. The post of the rail extends below the deck of the bridge on the exterior of the structure.

In 2009, bracing was temporarily added to the structure in order to better support a water main that was crossing the underside of the bridge. According to the submitted compliance statement, this was to be more permanently addressed when additional work was completed on the bridge (PEPC 2007: 17660). In 2012, the bridge superstructure was completely replaced as a part of the DDOT's Operation: Remove, Restore, and Replace Georgetown's C&O Canal Bridges. The undertaking was complete by the end of 2012 (WE love DC.com).

Washington/30th Street Bridge

The Washington /30th Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of 30th Street traffic and is located at the western edge of Boat Basin No. 2 and Lock No. 33. The 30th Street Bridge consists of a single span supported at either end of the superstructure decking. The deck of the bridge superstructure is sunken in relation to the edges of the defined walkway. The span is an example of a reinforced concrete structural system. The modern structure rests atop the historic stone bridge abutments that are remnants from the era of original construction. The overall width of the structure can support one lane of vehicular traffic with flanking brick sidewalks on the eastern and western edges of the structure accommodating pedestrian traffic. A steel rail system serves as the border to the canal and extends beyond the decking structure of the bridge on the southern portion of the feature. The post of the rail terminates inside the concrete of the walkway.

The 30th Street Bridge was the first of the three bridges to be replaced in the DDOT's Operation: Remove, Restore and Replace Georgetown's C&O Canal Bridges. The effort replaced the superstructure of the bridge in order to accommodate vehicular and pedestrian traffic in a manner keeping with current transportation standards. Work began in August 2009 and was completed in July 2010 (WE Love DC).

Thomas Jefferson Street Bridge

The Thomas Jefferson Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of Jefferson Street traffic over the canal and is located at the western edge of Boat Basin Three and Lock 4. The structure of the Jefferson Street Bridge consists of a steel span supporting a concrete deck. The modern structure rests atop the historic stone bridge abutments that are remnants from the era of original construction. The structure is a reinforced concrete bridge. The overall width of the bridge can accommodate one lane of vehicular traffic. Concrete lined brick sidewalks on the eastern and western edges of the structure accommodate pedestrian traffic. A steel rail system serves as the border to the canal and extends beyond the structure of the bridge on the southern portion of the feature. The post of the rail terminate inside the concrete of the walkway. The steel is a similar red matching the color palette of the other bridges.

In 2011, the historic bridge and deck was demolished by the DDOT and was reconstructed into the present configuration of the bridge structure. The project was responsible for the rebuilding of the road on either side of the canal and the sidewalk system as well (The Georgetowner Feb 9th 2011).

Congress/31st Street Bridge
The Congress Street Bridge/31st Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of 31st Street traffic and is over the canal prism beyond the Lock No. 4 structure. The composition of the bridge consists of a continuous single span of steel, with a perpendicular support structure at the center point. The support structure consists of five evenly spaced posted connected by "V" brace framing. A series of "x" bracing serve as the footing for the support. The support structure continues into the structure of the canal prism. This is the only example within the boundaries of the cultural landscape study area of a structural intrusion into canal prism.

Regarding the bridge deck, a steel rail system consisting of posts and four evenly spaces rails serve as the buffer between vehicular and pedestrian traffic and the canal. The posts terminate into the decking. The overall width of the bridge deck can accommodate two lanes of vehicular traffic and two pedestrian sidewalks on either edge of the structure.

In 2017, during the time of the completion of the Cultural Landscape Inventory, The District of Columbia's DDOT formulated a proposal to replace and modernize the 31st Street Bridge. The proposed replacement of the structure would cause the structure and appearance to conform to the other vehicular bridges in Georgetown. The iron support pier would be removed from the site, conserved, and replaced to serve as a tangible and visual link to the period of significance of the canal. Subsequent evaluations of this CLI must note whether this change has occurred (NPS PEPC 2017: 70373).

High Street/Wisconsin Avenue Bridge
The High Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of pedestrian traffic and vehicular traffic at Wisconsin Avenue. The bridge is approximately 20 feet over the canal and spans 54 feet. The superstructure of the bridge deck is lower than the elevated sidewalks. The stone bridge was constructed in 1831 from finished Aquia Creek. Two intact inscribed keystones are on both faces of the bridge. A rail finial fence serves as the buffer between the canal and the traffic. The width of the bridge can accommodate two lanes of vehicular traffic flanked with two brick pedestrian sidewalks.

Potomac Street Bridge
The Potomac Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of pedestrian traffic of Potomac Street and is located on the canal prism west of the Wisconsin Avenue Bridge.

Pedestrian access occurs from a terrace plaza and stairs from the north and a low stone abutment and stairs from the south. The truss bridge is approximately 7 feet wide with a span of approximately 50 feet. The structure carries a wood deck. A secondary handrail separates pedestrians from the main truss superstructure. The bridge is painted red to match the other bridges.

In the 2005 Bridge Inspection Report, it is recommended the superstructure be replaced and the south abutment reconstructed due to structural failings (CHOH 412_ D235A). Additional research is needed to determine if this modification has occurred.

Duck Lane/33rd Street Bridge
The Duck Lane/ 33rd Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of pedestrian traffic at 33rd Street and is located on the canal prism west of the Potomac Street Bridge. Access is gained from a terrace plaza and stairs from the north and a low stone abutment and stairs from the south. The abutment on the south consists of a stair on the eastern edge of the structure and a ramp on the western edge of the structure. The ramp slopes from the west and rises east. The truss bridge is approximately 7 feet wide with a span of approximately 50 feet. The structure carries a wood deck. A secondary handrail separates pedestrians from the main truss superstructure. The bridge is painted red to match the other bridges.

In 2003, the bridge was found to be in poor condition, with multiple structural failings including cracks in the support walls, weathering, issues with the decking, and failing members in the trusses. Reconstruction of the structure was approved (CHOH 412_ D236A). The reconstruction occurred in 2005 (CHOH 412_ D236B). Subsequently, the bridge has remained in good condition.

Frederick/34th Street Bridge
The Frederick Street/ 34th Street Bridge is oriented north south, perpendicular to the course of the Chesapeake and Ohio Canal. The bridge serves as the transverse point of pedestrian traffic and is located on the canal prism west of the Wisconsin Avenue Bridge. Access is granted from a terrace ramp from the north side of the canal and a ramp and abutment on the south side of the canal prism. The ramps rise from the west towards the east. The truss bridge is approximately 7 feet wide with a span of approximately 55 feet. The structure carries a wood deck. A secondary handrail separates pedestrians from the main truss superstructure. The bridge is painted red to match the other bridges.

In 1989, the superstructure of the bridge was replaced (CHOH 412_D78F). An evaluation in 2005 determined that routine maintenance including the repair of settlement on the approach ramp, removal of debris, and the cleaning of structural members was necessary (CHOH 412_D78F). In 2006, the superstructure and railing of the bridge received a routine painting (CHOH 412_ D78G). In 2007, a member of the decking exhibited signs of decay. Other planks

similarly exhibited the start of the decay process. A targeted replacement was prescribed for failing deck planks (CHOH 412_ D78G). The matter of deteriorating deck planks continued to plague the structure during the 2011 inspection, with plywood used to replace a missing plank on the northern portion of the bridge. The matter was addressed (CHOH 412_ D78I). Additional issues with the bridge decking has not been observed at this time.

Analysis

Greene/29th Street Bridge

Davis completed the original stone Greene Street/29th Street Bridge in 1831. By 1866/1867, an iron superstructure replaced the stone deck of the bridge. However, the stone abutments were retained to support the bridge. In 1900, the iron superstructure was replaced with concrete spans. The stone abutments were retained and are extant in a 1920 and 1935 Library of Congress photographs. Further research is needed to determine if the superstructure was replaced before the 2012 DDOT replacement. However, as the superstructure and 1831 stone abutments were removed in 2012 the bridge only has integrity of location.

Washington/30th Street Bridge

The original stone Washington/30th Street Bridge was completed by Davis in 1831. By 1866/1867, the stone bridge was replaced by an iron superstructure. The stone abutments were retained to support the bridge. In the following years, there is little documentary or photographic evidence for the Washington/30th Street Bridge. There is an 1870 to 1910 photograph (DC Historical Society, Cleveland Park, Georgetown, General Photograph Collection, CHS 16534; H 029) looking east that shows a simple span bridge. The superstructure is unclear in the photograph. There is also a 1974 photograph (DC Historical Society, General Architectural Slide Collection, CHS 16534; H 029) looking west that shows a simple span bridge supported by the historic abutments. Further research is needed to determine if the superstructure was replaced before the 2009/2010 DDOT replacement. The Washington/30th Street Bridge has partial integrity of material as the 1831 abutments were retained, while the bridge has integrity of location.

Thomas Jefferson Street Bridge

In 1866/1867, the original stone Thomas Jefferson Street Bridge was replaced by an iron superstructure. The stone abutments were retained and are captured in a 1967 Library of Congress photograph. Further research is needed to determine if the superstructure was replaced before the 2011 DDOT replacement. In 2011, when the superstructure was replaced, the stone abutments were retained. Consequently, the Jefferson Street Bridge retains partial integrity of material, as well as integrity of location.

Congress/31st Street Bridge

The original stone Congress/31st Street Bridge was completed by McCord & Co. in 1831. By 1866/1867, the stone bridge was replaced by an iron superstructure though the stone abutments were retained to support the bridge. In 1924, the superstructure was replaced with a concrete

span and the proposed 2017 removal of the historic pier threatens the integrity of the bridge.

High Street/Wisconsin Avenue Bridge
The stone High Street/Wisconsin Avenue Bridge was completed by Davis in 1831. There are not extant records documenting the repair or replacement of this bridge. As such, the stone High Street/Wisconsin Avenue Bridge retains high integrity.

Potomac Street Bridge
The wooden Potomac Street Bridge was one of the two Market House Bridges constructed by Captain William Easby in 1831. Over the years, it plagued the canal company and was repaired/replaced in 1839, 1844, 1852, and 1865. In 1870, the bridge was replaced with steel spans (Bearrs 1961; NR Update 2015: 8, 164). Further research is needed to determine if modifications occurred in the following years. As such, it is uncertain in the bridge (iron super structure and wooden deck planks) documented in the 2005 Bridge Inspection Report was the historic 1870 bridge. It is also unclear if the proposed modifications (reconstruction of the superstructure and stone abutments) occurred. The integrity of the Potomac Street Bridge is unclear though it retains integrity of location

Duck Lane/33rd Street Bridge
The wooden Duck Lane/33rd Street Bridge constructed by Captain William Easby in 1831. Over the years, the bridge was repaired/replaced in 1837, 1847, and 1880. In 1889, before the great flood, the Duck Lane Bridge was documented as wooden. Further research is needed to determine when the Duck Lane/33rd Street Bridge was replaced with a simple span iron bridge with a wooden deck. This bridge, documented in a 2003 Bridge Inspection report, was replaced with a new truss bridge and wooden deck in 2005. As such, the bridge only retains integrity of location.

Frederick/34th Street Bridge
The wooden Frederick/34th Street Bridge was constructed by Captain William Easby in 1831. This bridge was reconstructed in 1837 and 1847 and documented as extant at the time of the 1889 flood. As the bridge was replaced with a truss bridge and wooden deck in 1989, the Frederick/34th Street Bridge only retains integrity of location.

Character-defining Features:

Feature: Towpath Crossover Bridge Ramp-Ruin

Feature Identification Number: 182229

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12993

LCS Structure Name: Towpath Crossover Bridge Ramp - Ruin

LCS Structure Number: 001.09

Feature: Towpath 0.0 to 29th Street

Feature Identification Number: 182231

Type of Feature Contribution: Non contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46540

LCS Structure Name: Mile 000-001, Towpath

LCS Structure Number: 000.00

Feature: Towpath 29th Street to 30th Street

Feature Identification Number: 182233

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46540

LCS Structure Name: Mile 000-001, Towpath

LCS Structure Number: 000.00

Feature: Towpath 30th Street to Thomas Jefferson Street

Feature Identification Number: 182235

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46540

LCS Structure Name: Mile 000-001, Towpath

LCS Structure Number: 000.00

Feature: Towpath Thomas Jefferson Street to 31st Street

Feature Identification Number: 182237

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46540

LCS Structure Name: Mile 000-001, Towpath

LCS Structure Number: 000.00

Feature: Towpath 31st Street to the end of the Cultural Landscape Boundary

Feature Identification Number: 182239

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46540

LCS Structure Name: Mile 000-001, Towpath

LCS Structure Number: 000.00

Feature: Towpath River-Side 33rd Street to the end of the Cultural Landscape Boundary

Feature Identification Number: 182241

Type of Feature Contribution: Non contributing

Latitude Longitude

0.0000000000

IDLCS Number: 46540

LCS Structure Name: Mile 000-001, Towpath

LCS Structure Number: 000.00

Feature: Greene/29th Street Bridge

Feature Identification Number: 182243

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12659

LCS Structure Name: Green Street Bridge

LCS Structure Number: 000.42

Feature: Towpath Crossover Bridge Ramp-Ruin

Feature Identification Number: 182245

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Washington/30th Street Bridge

Feature Identification Number: 182261

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12662

LCS Structure Name: Washington Street Bridge

LCS Structure Number: 000.49A

Feature: Thomas Jefferson Street Bridge

Feature Identification Number: 182263

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Congress/31st Street Bridge

Feature Identification Number: 182265

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12665

LCS Structure Name: Congress Street Bridge

LCS Structure Number: 000.59

Feature: High Street/Wisconsin Avenue Bridge

Feature Identification Number: 182267

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12667

LCS Structure Name: High Street Bridge

LCS Structure Number: 000.68

Feature: Potomac Street Bridge

Feature Identification Number: 182269

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 12669

LCS Structure Name: Potomac Street Bridge

LCS Structure Number: 000.80

Feature: Duck Lane/33rd Street Bridge

Feature Identification Number: 182271

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Frederick/34th Street Bridge

Feature Identification Number: 182273

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

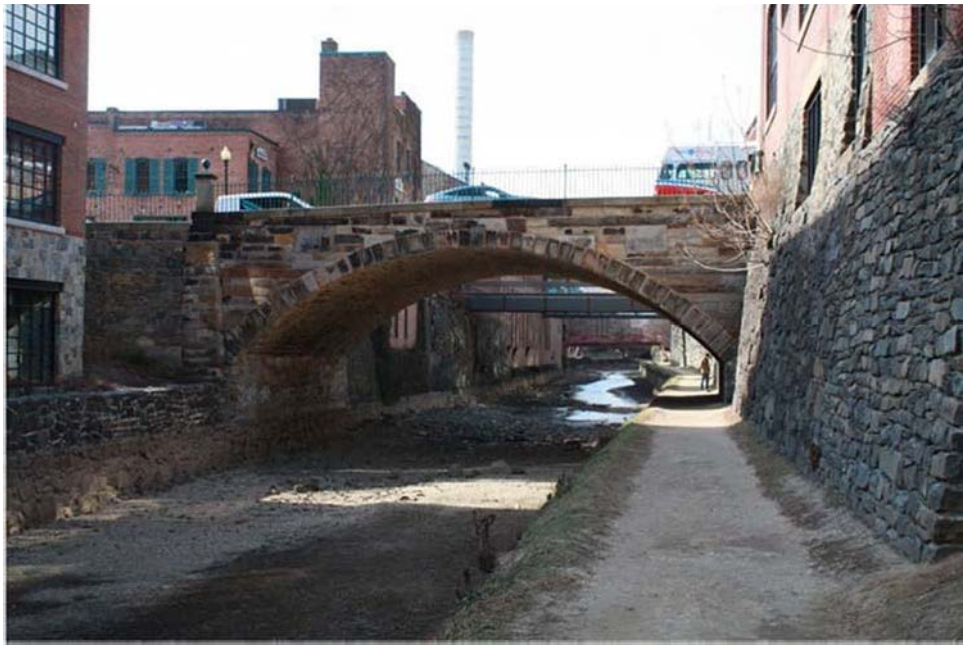
IDLCS Number: 12672

LCS Structure Name: Frederick Street Bridge

LCS Structure Number: 000.84A

Landscape Characteristic Graphics:

The brick towpath on the berm side of the canal east of 29th Street. Historically, the towpath was on the river side of the canal east of Greene/29th Street (NCR CLP 2016).



The stone Wisconsin Avenue Bridge The smoke stack in the background is that of the old Bomford's mill. The towpath is visible on the right side of the image (NCR CLP 2017).

The Potomac Street Bridge. Originally, the bridge was wooden and part of the set of bridge constructed in 1831. (NCR CLP 2017).

River side of the canal looking west at Fish Market Square. The historic retaining wall composed of stack stone with mortar is on the right side of the image (NCR CLP 2017).

31st Street Bridge (NCR CLP 2016).

Small Scale Features

NORTH CANAL PLANT RETAINING WALL

Historical Condition

In 1975, a planting plan was developed for the area south of the International Business Machine Corporation, 1054 31st, on the berm side of the canal. In the plan, a new simple stone retaining wall and steps was proposed. Behind the stone wall, the existing tree of heaven (ailanthus altissima) was to remain and dwarf holly, deciduous shrubs (forsythia), ivy, and numerous other species were proposed. Threes balustrades were also proposed at the 31st Street entrance to the towpath.

Existing Condition

The retaining wall is composed of stone set in mortar with a height not exceeding two feet. The

wall serves as the southern edge of a planting bed separating the ornamental plants from the canal towpath. The planting bed contains rose bushes, river birches, holly, and a tree of heaven. The wall was built by 1986 based on photographic evidence. Further research will be needed to more conclusively determine a construction date. Based on the 1986 photo the structure has not been modified.

Analysis
The planting bed retaining wall has high integrity and maintains the character of its original design.

JUSTICE WILLIAM O. DOUGLAS SCULPTURED BUST
Historical Condition
Justice William O. Douglas led the now-famous seven-day hike of the C&O Canal beginning on March 19th, 1954 in response to a pro-parkway article published on January 3, 1954 in the Washington Post. The purpose of the walk was to show parkway supporters that the canal was, "a refuge, a place of retreat, a long stretch of quiet and peace at the Capital's back door… a place not yet marred by the roar of wheels and the sound of horns…a sanctuary that would be utterly destroyed by a fine two lane highway" (Mackintosh 1991: 68-69). Following the walk, a restudy of the parkway plan was proposed in January 1955. By 1956, the parkway plan had been abandoned and efforts were made to designate the C&O Canal as a National Historical Park (Mackintosh 1991: 74-75). As such, Douglas was a key figure in the designation of the waterway as the C&O Canal National Historical Park.

On March 15, 1977, "in recognition of his long outstanding service as a prominent American conservationist and for is efforts to preserve and protect the canal and towpath for development", President Jimmy Carter signed legislation dedicating the berm canal-side plaza at Lock No. 3 to Douglas. In a semi- circular shaped area in the plaza, a bronze bust of Douglas sculpted by Wendy Ross, a National Park Service employee at Glen Echo, was to be mounted on a granite pedestal. A planting plan surrounding the bust was developed and presented on March 15, 1977. References to Douglas were added on the large wood entrance signs of the park. On May 17, 1977, there was an unveiling ceremony at Lock No. 3, Douglas was present at this ceremony (Mackintosh 1991: 175).

The statuary consists of a bust depicting the likeness of Justice William O. Douglas in copper residing atop a granite column. The inscription on the column reads:

IN RECOGNITION OF JUSTICE WILLIAM O. DOUGLAS FOR HIS CONTRIBUTIONS TOWARDS THE ESTABLISHMENT OF THE CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK NATIONAL PARK SERVICE MAY 17 1977

Existing Condition
The Justice William O. Douglas Sculptured Bust is listed in the most recent National Register Nomination of the Chesapeake and Ohio Canal National Historical Park as a contributing

resource, was removed from the Lock No. 3 Plaza/Mule Yard for the duration of the canal rehabilitation. This small scale feature is currently stored at the National Capital Region's Museum Resource Center and will be cleaned and repositioned following the completion of the rehabilitation project (NPS PEPC 2010: 32862; Email from Lindy Gulick: February 2017).

Analysis
The Justice William O. Douglas Sculptured Bust, added to Lock No. 3 Plaza/Mule Yard in 1977, was removed for the duration of the rehabilitation project.

COMMEMORATIVE OBELISK
Historical Condition
On November 27, 1850, the C&O Canal Board ordered a marble slab or block be placed "in a conspicuous position in the masonry of, or on line of the canal." On the monument, the names of the president, directors, officers, state agents, and the date of completion were to be added. The monument or obelisk was placed along the course of the canal in Georgetown. Additional research is needed to determine the first location of the obelisk. According to an article in the Washington Herald, in 1900, the obelisk was found in the basement of the Hill Mill and was erected at the present location of the northwest corner of the Wisconsin Avenue Bridge (Washington Herald 1920: 4; Unrau 2007: 226).

Inscriptions carved on the four faces read as follows:

Northeast elevation:
CHESAPEAKE & OHIO CANAL/ COMPANY 1850/ JAMES M. COALE/ DIRECTORS/ WILLIAM A.BRADLEY/ HENRY DAINGERFIELD/ WM. COST JOHSON/ JOHN PICKELL/ GEORGE SCHLEY/ SAMULE P. SMITH/ CLERK/ WALTER S. RINGOLD/ TREASURER/ LAWRENCE J. BENGLE

Northwest elevation:
CHESAPEAKE & OHIO CANAL
COMMENCED AT GEORGETOWN JULY 4TH, 1828 CHIEF ENGINEER
BENJAMIN WRIGHT

Southwest elevation:
MARYLAND STATE AGENTS/ SAMUEL SPRIGG/ALLEN B. DAVI, WM. T. GOLDSBOROUGH, TENCH TILGHMAN, JOHN VAN LEAR.

Southeast elevation:
CHESAPEAKE & OHIO CANAL/ COMPLETED TO CUMBERLAND/ OCTR 10TH 1850/ CHIEF
ENGINEER/ CHARLES B. FISK .

Existing Condition

The obelisk currently resides at the northeast corner of the Wisconsin Avenue Bridge, above the canal on level with the present day street. The obelisk occupies a place of prominence in the southeast corner of the Wisconsin Avenue Plaza. A small decorative fence serves as a buffer between viewers and the obelisk.
Some deterioration from weathering was noted during a site visit.

Analysis
The 1850 commemorative obelisk was placed near the Wisconsin Avenue Bridge over the canal to commemorative the completion of the waterway to Cumberland, Maryland during the early 1900s. This monument is extant to- date and has integrity of location.

During the final review of this document, it was determined that the obelisk does not reside on property owned in fee simple by the National Park Service. In fact, the ownership and the maintenance responsibility of the feature itself was called into question. It remains unclear if the obelisk is owned by the National Park Service or by Washington, D.C. The matter is currently being discussed at the Solicitor General's Office. It will be the onus of future versions of this document to capture the outcome of the matter and properly denote the contributing or non-contributing status of the feature.

COMMEMORATIVE OBELISK FENCE
Historical Condition
A 1920s photograph of Wisconsin Avenue is the earliest evidence for a fence surrounding the commemorative obelisk. In this photograph, looking south, the fence is three feet high and consists of wrought iron posts topped with diamond shaped finials. Larger posts serve as the physical anchor points of the fence structure to the brick plaza (DC Historical Society, Joseph E. Bishop Photograph Collection, BI 078A; SP0004).

Existing Condition
The current fence matches the style of fence recorded in a 1920s photograph. The wrought iron fence is currently painted green.

Analysis
Further research is needed to determine if the commemorative obelisk fence dates to 1850 or has been replaced. However, as the current fences matches the fence in a 1920 photograph (Historical Society of Washington DC BI 078A), fence has high integrity. The outcome of the discussion of the obelisk will similarly have an impact on the status of this feature.

CHESAPEAKE AND OHIO CANAL MARKER AT 0.0
Historical Condition
On September 28, 1938, the National Park Service acquired the C&O Canal from the B&O Railroad and by
February 1940, the 23 locks from Georgetown to Violettes Lock were restored by the CCC and WPA as a public works project (NR Update 2015: 8, 203-204). At the time, the administrative

designation of the canal was the “Chesapeake and Ohio Canal Recreational Waterway,” an indication of prioritization of recreational development along the canal. In November 1840, Acting Associate Director Hillory A. Tolson approved the continued use of the “recreational waterway designation” and wrote, “the remaining portion of the canal property will thereafter be designated as a historic site” (Mackintosh 1991: 38-39). This suggested to the historian Sutton Jett and National Park Service Chief Historian Ronald F. Lee that only the unrestored canal above Seneca would be treated as historic. Lee argued that the entire canal should be designated a National Historic Landmark, but it was considered “not square with contemporary practice” to designate a site under the National Capital Parks because it was “a single unit of the system headed by a single superintendent.” This made it so only “a suitable portion of the canal to be determined by existing administrative and historical requirements” could be designated if the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments found it significant (Mackintosh 1991:40).

In October 1941, members of the Advisory Board met in Washington, D.C. to discuss the C&O Canal as a potential National Historic Landmark. By February 1942, the members were polled and it was agreed that the designation of the C&O Canal was favorable. However, a month later President Roosevelt issued a moratorium on the designation of National Historic Landmarks for the duration of the war. As a result, the National Park Service, with the approval of Public Works Secretary Harold L. Ickes, placed an imitation marker at the start of the canal in Georgetown. This marker, which was funded by the D.C. Chapter of the Daughters of the American Revolution, was inscribed with a brief history of the canal and its significance. On June 20, 1942, the plaque was formally accepted in a ceremony at the site. (Mackintosh 1991: 41).

The plaque reads:

NATIONAL HISTORIC MARKER CHESAPEAKE AND OHIO CANAL
ONE OF THE BEST PRESERVED AND LEAST ALTERED OF OLD AMERICAN CANALS, THE CHESAPEAKE AND OHIO GREW FROM WASHINGTON’S VISION OF LINKING THE VALLEYS OF THE EARLY WEST WITH THE EAST BY “TIES OF COMMUNICATION.” THE POTOMAC COMPANY FOSTERED BY WASHINGTON TO IMPROVE NAVIGATION OF THE POTOMAC TRANSFERRED ITS RIGHTS IN 1828 TO THE CHESAPEAKE AND OHIO COMPANY ORGANIZATED TO CONNECT THE OHIO AT PITTSBURGH WITH GEORGETOWN BY A CONTINUOUS CANAL. IN OCTOBER 1850 AFTER185 MILES WERE BUILT THE CONSTRUCTION CEASED AT CUMBERLAND. UNTIL 1924 TRADE CONTINUED ON THE OLD CANAL. TODAY, IT IS A MEMORIAL TO NATIONAL PRGORESS AND THE CANAL ERA. ERECTED 1942 BY DISTRICT OF COLUMBIA D.A.R. NATIONAL PARK SERVICE UNITED STATES DEPARTMENT OF THE INTERIOR.

Existing Condition

The Chesapeake and Ohio Canal National Historical Marker occupies a prominent location bolted to a large rock at the 0.0 mile of the canal. The marker is located east of Lock No. 1 at the beginning of the brick towpath on the berm side of the canal. The copper plaque has a patina from the exposure to the weather.

Analysis
In 1942, an imitation NHL marker was placed at the start of the canal in Georgetown. This plaque was formally accepted in a ceremony at the site on June 20, 1942. This marker retains high integrity, as it is the original 1942 marker.

GEORGETOWN HISTORIC NHL MARKER
Historical Condition
On May 28, 1967, the Georgetown Historic District was designated as a National Historic Landmark. The Georgetown Level of the C&O Canal was included in this designation as it fits within the boundary of the Georgetown Historic District, which is bounded, by Whitehaven St., Rock Creek Park, Potomac River, and the Georgetown University campus. In the nomination, the C&O Canal is referenced as it brought many Irish immigrants to Georgetown in the early years and subsequently changed the urban texture of the town. In 2006, there was an amendment added to the NHL. This amendment added a period of significance that included "the closure of the C&O Canal in 1924, and subsequent end to all port activity."

Existing Condition
The Georgetown Historic District NHL Marker is located in the northeast corner of the Lock No. 3 Plaza/Mule Yard. The marker rests atop a low square concrete pedestal that is supported with the brick base. The inscription on the plaque reads as follows:

GEORGETOWN HISTORIC DISTRICT HAS BEEN DESIGNATED A REGISTERED NATIONAL HISTORIC LANDMARK UNDER THE PROVISIONS OF THE HISTORIC SITES ACT OF AUGUSTS 21, 1935 THIS SITE POSSESSSES EXCEPTIONAL VALUE IN COMMEMORATING AND ILLUSTRATING THE HISTORY OF THE UNITED STATES. U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE 1967

As the plaque remains on site during the rehabilitation projects, the park is making an effort to protect the plaque.

Analysis
On May 28, 1967, the Georgetown Historic District was designated as a National Historic Landmark. It is unclear, given the current documentary evidence, when the marker was placed in the northeast corner of the Lock No. 3 Plaza/Mule Yard. However, it retains high integrity as the market was not moved or altered.

LOCK NO. 1 FENCE AND LOCK NO. 2 BOAT BASIN FENCE

Historical Condition

During the period of canal operations, there is no evidence of a fence at either Lock No. 1 or the Lock 2 Boat Basin. In both a 1909 Library of Congress and 1920 Library of Congress photograph of Lock No. 1, there is no evidence of a fence. There are no extant photos of Lock No. 2 Boat Basin from this period.

However, in the 1949 planting plan, a railing of unknown design is indicated north of both Lock Basin No. 1 and 2. This is the first evidence of the structure. The railings north of Lock Basins No. 1 and 2 are identified as wooden guardrails in the 1950 planting plan. Furthermore, at Lock No. 2 a wooden railing was planned on at the northeast corner of the northern lawn. In a 1980 planting plan, the Lock Basin No. 1 fence is noted as a proposed “rail fence.”

Existing Condition

Lock No. 1 Fence

The Lock No. 1 fence is approximately 105 feet long with a height of three feet. The design of the fence consist of two rails supported by posts. The small-scale feature extends east towards Mile Marker 0.0 from the 29th Street Bridge. The feature consists of posts evenly spaced that support two rails that are bolted to the posts. At this time, the feature is unpainted.

Lock No. 2 Boat Basin Fence

The Lock No. 2 Boat Basin fence is approximately 100 feet with a height of three feet. The fence consists of evenly spaced posts that support two rails. The fence is made of wood painted a reddish brown.

Analysis

Further research is needed to ascertain whether the current fences at Lock Nos. 1 and 2 are the proposed fences in the 1949 planting plan. As such, integrity is currently unknown.

LOCK NO. 4 FENCE

Historical Condition

The earliest evidence for a fence at Lock No. 4 dates to a c. 1920 to 1950 Library of Congress photograph of Lock No. 4 looking west. In this photograph, a simple fence consisting of evenly spaced posts topped with a single rail extends west midway between Thomas Jefferson and 31st Street. This fence is approximately 2 ½ feet in height. In a 1936 Library Congress photograph of Lock No. 4 looking east a similar fence with a continuous rail cap and two rails is documented. However, in the 1948 planting plan a new wooden guardrail is proposed in the same location. This fence, which was to be a wood post and rail fence consisting of two rails and a continuous cap, is not present in a 1967 Library of Congress photograph of Lock No. 4 looking east. Rather, the railing consists of evening spaced rails and a continuous rail cap. The fence appears to be 2 ½ feet in height and painted white. In a 1980 Library of Congress

photograph looking northeast, a new fence is documented. The new fence is a wood post and rail fence consisting of two rails. It is unpainted and about 2 ½ feet in height.

Existing Condition
The extant fence, which extends west midway between Thomas Jefferson and 31st Street, is a wood post and rail fence consisting of two rails. It is painted a reddish brown and the rail is attached to the face of the post.

Analysis
The extant fence is consistent with the design of the fence captured in a 1980 Library of Congress photograph. However, as the design of the Lock No. 4 fence has been altered over the years, the fence only retains integrity of location.

BOLLARDS AND CHAINS AROUND LOCK NO. 3 AND LOCK NO. 3 BOAT BASIN
Historical Condition
In an 1870 to 1910 photograph (DC Historical Society, General Photograph Collection, CHS 16534; H029) of Lock No. 3 looking east there are no fences to the north of the lock or lock basin. There are also no fences in the 1914 photograph of Lock No. 3 and Duvall's Foundry (Georgetown Historic Waterfront 1993: 65). In the 1949 and 1950 planting plans there are also no fences indicated north of Lock Basin No. 3 or

Lock No. 3. However, in a 1969 Library of Congress photograph of Lock No. 3 a wooden bollard and chain fence is documented north of the lock and lock basin. Furthermore, a wooden bollard and chain fence is captured north of the towpath leading west to Jefferson Street. This same fenced is also captured north of Lock Basin No. 3 in a 1974 photograph looking west (DC Historical Society, Cleveland Park, Georgetown, and General Architecture Slide Collection, CPG B429; SP 0125). A wooden bollards and chain fence also line the barge landing north of the lock basin in a 1980 Library of Congress photograph.

Existing Condition
These features were partially removed in accordance to NPS PEPC 2010: 32862 in association with the Lock 3 rehabilitation project. According to the drawings for the project, a new bollard type and configuration will be placed adjacent to Lock No. 3 in order to accommodate visitor loading and unloading from the canal boat tours. The other bollards and chains will be placed at the lock based on the previous designs of the space.

Analysis
A 1969 Library of Congress photograph of Lock No. 3 is the earliest evidence for bollards and chains fences around Lock No. 3 and Lock No. 3 Boat Basin. These fences were not proposed in the 1949 or 1950 planting plans. As such, further research is needed to determine when the fences were added. However, as the fences have been removed, they currently have no integrity.

TIE POSTS
Historic & Existing Condition
There is a wood tie post on the berm side of the canal near the entrance to Lock No. 1. The tie post has a height of approximately a foot. Further research is needed to determine when the tie post was added to the cultural landscape, as it is not evidence in any plans for the canal.

Analysis
The tie post at Lock No. 1 was documented in the 2016 and 2017 site visits. Further research is needed to determine when the post was added.

STONE POST
Historic & Existing Condition
The stone post is approximately 2 ½ feet high and located on the berm side of Lock No. 4, south of the fence. There is a distinct marking on the north face of the stone post at the base of the feature. The age of this feature is undetermined and it is not indicated in the 1939 Existing Condition or later planting plans. Additional research is needed to determine the use and age of this feature.

Analysis
Further research is needed to determine age of this feature.

Character-defining Features:

Feature: North Canal Plant Retaining Wall

Feature Identification Number: 182275

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Feature: Justice William O. Douglas Sculptured Bust

Feature Identification Number: 182277

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

IDLCS Number: 47558

LCS Structure Name: Douglas, Justice William O., Sculptured Bust

LCS Structure Number: 000.45

Feature: Commemorative Obelisk

Feature Identification Number: 182279

Type of Feature Contribution: Undetermined

Latitude Longitude

0.0000000000

IDLCS Number: 12668

LCS Structure Name: Commemorative Obelisk

LCS Structure Number: 000.68A

Feature: Commemorative Obelisk Fence

Feature Identification Number: 182281

Type of Feature Contribution: Undetermined

Latitude Longitude

0.0000000000

Feature: Chesapeake and Ohio Canal Marker at 0.0

Feature Identification Number: 182283

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Georgetown Historic NHL Marker

Feature Identification Number: 182285

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Lock No. 1 Fence

Feature Identification Number: 182287

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Feature: Lock No. 2 Boat Basin Fence

Feature Identification Number: 182289

Type of Feature Contribution: Non contributing – compatible

Latitude Longitude

0.0000000000

Feature: Lock No. 4 Fence

Feature Identification Number: 182291

Type of Feature Contribution: Non contributing

Latitude Longitude

0.0000000000

Feature: Bollards and Chains around Lock No. 3 and Boat Basin No. 3

Feature Identification Number: 182293

Type of Feature Contribution: Non contributing

Latitude Longitude

0.0000000000

Feature: Tie Posts

Feature Identification Number: 182295

Type of Feature Contribution: Undetermined

Latitude Longitude

0.0000000000

Feature: Stone Post

Feature Identification Number: 182297

Type of Feature Contribution: Undetermined

Latitude Longitude

0.0000000000

Landscape Characteristic Graphics:

The circa 1942 NHL marker (NCR CLP 2016).

Commemorative marble obelisk at the northeast corner of the Wisconsin Avenue Bridge. It is uncertain when the fence was placed around the obelisk. However, a fence is captured in the 1920s photograph. (NCR CLP 2017).

Vegetation

Historical Condition

Currently, there are no extant records fully documenting the historic vegetation of the canal prior to its acquisition by the National Park Service in 1938. However, discussion of the vegetation character is informed by a review of historic photographs which offer piecemeal images of the canal. For Lock No. 3, the earliest photograph (DC Historical Society, General Photograph Collection, CHS 16534; H 029) was taken sometime between 1870 and 1910 looking east. This photograph shows two grass plots on the berm and river side of the canal near 30th Street. The tree on the river side of the canal near Lock Basin No. 3 was a tree of heaven (ailanthus altissima). Moving west, there is a photograph (DC Historical Society, William H. Seaman Photograph Collection, SE 077; H080/SP 0030) looking west towards the Wisconsin Avenue Bridge dated sometime between 1885 and 1890. In this photograph, there are deciduous shrubs on the berm side of the canal, north of the towpath. The earliest photograph of Lock No. 1 dates to 1909 and looks west. In this Library of Congress photograph, an unidentifiable tree is captured north of a social trail on the berm side of the canal. Other deciduous bushes are documented on the berm side while wild grass surrounds a structure at the 29th street entrance on the river side of the canal. In a 1920 Library of Congress photograph of Lock No. 1 looking east, the same tree is extant and as is grass on the river and berm side of the canal. There is also a 1920 Library of Congress photograph of the Wisconsin Street Bridge looking east. In the photograph, there are deciduous shrubs on the river side of the canal, while grass is growing on the berm side of the prism. By 1935, the river side of the canal at Lock No. 1 is overgrown with trees of heaven (ailanthus altissima) and sycamore trees (platanus occidentalis) while the grass plots on the river and berm side of the canal west of Jefferson Street were used as makeshift parking lots at Lock No. 4 (Library of Congress). A large, unidentifiable tree can be seen on the berm side of the canal at Lock No. 3 in the 1935 Library of Congress photograph of Lock No. 4. In a 1941 drawing (DC Historical Society, Kiplinger Washington Collection, KC0470.DR.AP.L.F.), 1945 print (DC Historical Society, Kiplinger Washington Collection, KC0701.PR.AP.M.U), and 1920-1950 Library of Congress photograph of Lock No. 4 there are no trees or shrubs on the berm side of the canal.

First regular documentation of vegetation occurred in 1948 with the proposed planting plan for Lock No. 4. Three small-leaved lindens (tilia cordata) were proposed evenly throughout the semi-triangular plot north of Lock No.4, while south of Lock No. 4 the semi-rectangular plot was to be evenly planted with four weeping willows (salix babylonica) and interspersed with fourteen California privets (ligustrum ovalifolium). Another thin semi-triangular plot extended south of the canal where three weeping willows (salix babylonica) were to be evenly planted

and interspersed with ten California privets (ligustrum ovalifolium). Currently, there is no photographic or documentary evidence to corroborate the planting of these tress and shurbs. However, in the semi-triangular plot north of Lock No.4 the western most small- leaved lindens (tilia cordata) are extant. In the semi-rectangular plot south of Lock No. 4, the western most weeping willow (salix babylonica) is now a stump and the weeping willow (salix babylonica) to its east is extant. The western most weeping willow (salix babylonica) in the thin semi-triangular plot south of the canal at Lock No. 4 is also extant.

Drawings indicate that an additional planting rehabilitation was proposed for Locks Nos. 1, 2 and 3 in 1949. As part of this plan, the topography north of Lock No.1 was to be graded making an even surface, grass was to be planted, and various trees not specified in the drawing were planned. To the north of the proposed towpath and south of Lock No. 1 plants of an unknown species were proposed. At Lock No. 2, a tree of an unknown species was planned north of the canal near the entrance of Lock Basin No. 2 while to the south of Lock No. 2 trees of an unknown species were to be planted. One Paw Paw (asimina tribola) was noted as extant south of the canal near the entrance of Lock Basin No. 2. At Lock No. 3, a bituminous towpath led to a small, paved rectilinear parklet with benches. A tree of heaven (ailanthus altissima) was scheduled to be removed from this space. At the 30th Street entrance to the east, a mulberry (morus) is noted as extant. North of the Lock No. 3 barge landing, a tree of an unknown species is planned north of the towpath and a mulberry (morus) is indicated as extant. To the south of Lock No. 3, “grass and planting” is proposed. South of Lock No. 4, plants of an unknown species were planted. Continuing west along the canal, between 31st Street and Wisconsin Avenue, a small plot north of the canal was to be planted and graded. The plant species were not indicated. Further research is needed to determine if the 1949 planting plan was completed.

In 1950, another planting plan was proposed for Locks Nos. 1 through 3 and the section of the Georgetown Level from 31st Street to Wisconsin Avenue. In this plan, 40 symphoria vulgaria and one London planetree (platanus acerifol) were planned north of the towpath at Lock No. 1. To the east, near the Rock Creek Basin, it is unclear if the eight golden-bell (forsythia suspense) indicated are extant. Next to NHL marker a London planetree (platanus acerifol) is proposed. In the lawn south of the towpath, a weeping willow (salix babylonica) is planned to the west, a London planetree (platanus acerifol) is planned at the center of the lawn, and a weeping willow (salix babylonica) is planned at the entrance of Lock No.1. To the south of Lock No. 1, an extant weeping willow (salix babylonica) near the entrance of Lock Basin No. 1 is to be removed while two London planetrees (platanus acerifol) are also to be removed. In their place, unspecified trees and shrubs are proposed in the 1950 planting plan. Further research is needed to determine if the extant trees were added as part of the 1949 planting plan and if and to what extent the 1950 plan was completed.

At Lock No. 2 in the 1950 planting plan, two small-leaved lindens (tilia cordata) were planned in the northern lawn while three London planetrees (platanus acerif), three red maples (acer

rubrum), and three weeping willows (salix babylonica) were to be interspersed throughout the lawn south of Lock No. 2. The Paw Paw (asimina tribola) located near the Lock Basin No. 2 is extant in the planting plan. To-date, one red maple (acer rubrum) is extant. At Lock No. 3, a tree of heaven (ailanthus altissima) was to be removed from the lawn north of the towpath, east of the "sitting place." The extant mulberry trees (morus) in the 1949 plan are documented and five althea (hibiscus syriacus) were to be interspersed throughout the northern lawn. In the lawn south of the towpath, a small-leaved linden (tilia cordata) was to be planted.
Three weeping willows (salix babylonica) and four red maples (acer rubrum) were also to be interspersed throughout the lawn south of the canal. Continuing west of 31st Street, the planting plan proposed that the area north of the canal and towpath be graded, seeded, and planted with eleven trees. Unfortunately, it is unclear if the six althea (hibiscus syriacus) and three princess/fox-glove trees (paulownia) are extant.

Furthermore, eight trees and a variety of shrubs are planned south of the canal west of 31st Street. The species of trees planned are not indicated on the planting plan. However, a tree of heaven (ailanthus altissima) was to be removed. Further research is needed to determine if the trees indicated as extant were added as part of the 1949 planting plan. Further research is needed to ascertain if and to what extent the 1950 planting plan was completed.

To-date, several 1967 Library of Congress photographs of Locks Nos. 3 and 4 are the only sources documenting the historic planting post-1950 planting plan. In the 1967 Library of Congress photograph of Lock No. 3, shrubbery was planted in the lawn north of the canal, south of the towpath. Several unidentifiable trees were planted north of the towpath on the berm side of the canal. On the river side of the canal, a tree of heaven (ailanthus altissima) is documented along with various other unidentifiable trees and shrubs. There are two 1967 Library of Congress photographs of Lock No. 4 with one looking west and one looking north. In the photograph looking north, a small-leaved linden (tilia cordata) is documentd on the berm side of the canal near the lock gates. This tree corresponds with the proposed tree in the 1948 planting plan for Lock No. 4. On the river side of the canal near the lock gates, a tree of heaven (ailanthus altissima) is documented. This tree does not correspond with the 1948 planting plan. In the 1967 Library of Congress photograph looking north, a princess/fox-glove tree (paulownia) is documented on the berm side of the canal south of the brick dwellings. Other flowers and shrubs were also planted to the south of the brick dwellings, but it is unclear if they are the proposed daylilies (hemerocallis liliosphodelus) and hollyhocks (alcea) from the 1948 planting plan. Also, there is a 1968 photograph (DC Historical Society, General Photograph Collection, CHS 16577; H087) of the old Canal Warehouse west of Wisconsin Avenue. In this photograph, there is a paulownia and unidentifiable vine on the berm side of the canal.

In 1975, a planting plan was developed for the area south of modern day Ark Catering at 1054 31st Street. In the plan, a new stone wall and steps was proposed. Behind the stone wall, the existing tree of heaven (ailanthus altissima) was to remain and dwarf holly (ilex), deciduous

shrubs (forsythia), ivy, and numerous other species were proposed. To the west of the stone wall and steps were extant trees of heaven (ailanthus altissima). In a photograph of the completed Canal Square project north of the canal at 31st Street, two trees of heaven (ailanthus altissima) are captured. To the east of 31st Street at Lock No. 4 a tree of heaven (ailanthus altissima) is also present (Luebke 2013:288).

In 1977, a planting plan was developed for the section of the canal between 30th Street and Jefferson Street to commemorate the efforts of Supreme Court Justice Wm Douglas. As part of this plan, brick square tiles were to be laid in an S-shaped curve from 30th Street. To the north and south of this S-shaped curve path there were planting beds. In the northern planting bed, the existing tree of heaven (ailanthus altissima) was to remain while small-leaved lindens (tilia cordata), flowering dogwood (cornus florida), flowering quince (chaenomeles), heller's dwarf jar holly (ilex crenata helleri), and coral bell azaleas (azalea 'coralbell') were proposed. While in the southern planting bed, flowering dogwood (cornus florida), a small-leaved linden (tilia cordata), silver linden (tilia tomentosa), flowering quince (chaenomeles lagenaria), heller's dwarf jar holly (ilex crenata helleri), and coral bell azaleas (azalea 'coralbell') were proposed. A straight path with brick square tiles was to cut through this southern planting bed from 30th Street. To the south of this path, a small-leaved linden (tilia cordata) and various other trees were proposed. Furthermore, a square plot with a small-leaved linden (tilia cordata) was proposed in the towpath between 30th and Jefferson Streets. North of the towpath, near Jefferson Street, the existing mulberry (morus) and tree of heaven (ailanthus altissima) were to remain while autumn clematis (clematis terniflora), crape myrtle (lagerstroemia), and various shrubs were proposed. To the south of Lock No. 3, the two existing red maples (acer rubrum), mulberry (morus), privet (ligustrum ovalifolium), and quince (208anaden oblonga) were to remain while shrubbery was to be added. A 1979 photograph shows that the planting plan was completed though the trees are unidentifiable (Luebke 2013: 344).

In 1980, a planting plan was developed for Lock No. 1 and fragmented sections of the canal between 31st and 34th Streets. At Lock No. 1, the extant weeping willow (salix babylonica) on the berm side of the canal (documented in the 1950 planting plan) had been removed. Also, in place of the proposed London planetree (platanus acerifol) an existing white ash (fraxinus 208anadensi) is documented in the 1980 planting plan on the berm side of the canal. It is possible that the white ash (fraxinus 208anadensi) was planted in 1950 in place of the proposed London planetree (platanus acerifol). Trees of an unspecified species are also documented as extant on the river side of the canal. An additional six red maples (acer rubrum) were proposed. Continuing west, the 1950s silver linden (tilia tomentosa) on the berm side of the canal at 29th Street was extant in the 1980 planting plan. On the river side of the canal at 29th Street a white ash (fraxinus 209anadensi) is documented as extant. Additional white ash (fraxinus 209anadensi) and sycamore (platanus occidentalis) trees are documented on the river side of the canal west of 29th Street. These trees were not proposed in the 1950s plan. Moving west, the weeping willow (salix babylonica) proposed in the 1948 planting plan at the entrance of Lock Basin No. 4 is extant. From 31st Street to Wisconsin Avenue, the trees on the berm side of the canal are documented as extant. Unfortunately, their species names are not

documented in the 1980 plan. Furthermore, from 33rd to 34th Street trees are documented as extant on the berm and river side of the canal. Their species names are also not specified. However, on the river side of the canal arrow wood viburnum (viburnum dentatum), burning bush (euonymus alatus), doublefile viburnum (viburnum plicatum tomentosum 'Mariesii'), eastern redbud (cercis 209anadensis), and flowering dogwood (cornus florida) were proposed. Further research is needed to determine if and to what extent this planting plan was completed. In a 1980 Library of Congress photograph of Lock No. 4, a princess/fox-glove tree (paulownia) is still captured on the berm side of the canal south of the brick dwellings. A tree of heaven (ailanthus altissima) is captured near 31st Street as is a small-leaved linden (tilia cordata) at the Jefferson Street entrance to Lock No.4.

Existing Condition

Presently, there is evidence of remnants planting plans in the Georgetown section of the C&O Canal. At Lock No. 2, on the river side of the canal, there is an extant red maple (acer rubrum) to the east of 30th Street. This red maple (acer rubrum) was one of three planned in the southern lawn at Lock No. 2 in the 1950 planting plan.

At Lock No. 4, on the berm side of the canal, there are two extant small-leaved lindens (tilia cordata) from the 1948 planting. These trees are located near the Thomas Jefferson Street entrance to Lock No. 4. Also, there is an extant weeping willow (salix babylonica) from the 1948 planting plan on the river side of the canal near the entrance to the lock basin. To the west of the weeping willow (salix babylonica) is a tree of heaven (ailanthus altissima). This tree dates from 1950 to 1960 as it is fully grown in 1967 Library of Congress photograph of Lock No. 4.

The extant tree of heaven (ailanthus altissima) west of 31st Street on the berm side of the canal was first rendered in the 1950 planting plan. Three princess/fox-glove trees (paulownia) were also planned on the berm side of the canal west of the tree of heaven (ailanthus altissima) in the 1950 plan. To-date only one paulownia is extant. In the 1975 planting plan the extant dwarf holly to the east of the 1950 tree of heaven (ailanthus altissima) was proposed and the four extant willow birches were documented in two 1984 photographs (National Park Service, Boundary Agreements, 1984). These particular species are identified as exotic varieties; however, the shade provided by the urban canopy trees and the history of these particular species colonizing industrial landscapes add to the character of the cultural landscape.

Analysis

The vegetation of the Georgetown section of the C&O Canal retains varying degrees of integrity, as there are some extant trees that date from the period of significance. These trees include the a red maple (acer rubrum) first proposed in the 1950 planting plan on the berm side of the Lock 2, east of 30th Street, two small-leaved lindens (tilia cordata) proposed in the 1948 planting plan on the berm side of Lock No. 4, west of Thomas Jefferson Street, a weeping willow (salix babylonica) proposed in the 1948 planting plan on the river side of the canal at Lock No. 4, and four willow birches documented in two 1984 photographs (National Park

Service, Boundary Agreements, 1984) on the berm side of the canal between 31st and Wisconsin Avenue. There are also a number of exotic tree varieties (ailanthus altissima and paulownia), or urban canopy trees, that provide shade, date to the period of significance, and add to the character of the cultural landscape.

Character-defining Features:

Feature: 1950 red maple (acer rubrum) on the berm side of Lock No. 2, east of 30th

Feature Identification Number: 182299

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Two 1948 small-leaved lindens (tilia cordata) on the berm side of Lock No. 4, west of Thomas Jefferson Street

Feature Identification Number: 182301

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: 1948 weeping willow (salix babylonica) on the river side of the canal at Lock

Feature Identification Number: 182303

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Four 1970-1990 willow birches on the berm side of the canal between 31st and Wisconsin Avenue

Feature Identification Number: 182305

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: Urban Canopy Trees; i.e. 1950 princess/fox-glove tree (paulownia) on the berm side, of the canal between 31st and Wisconsin Avenue; 1950 tree of heaven (ailanthus altissima) on the berm side of the canal west of 31st; 1950 (ailanthus altissima) trees of h

Feature Identification Number:	182307
Type of Feature Contribution:	Contributing
Latitude	Longitude
0.0000000000	

Topography

The following discussion of the topography of C&O Canal in Georgetown is based on the Potomac River having an elevation of 0 feet. In this case, north of M Street the elevation ranges between 70 to 90 feet, while south of M Street the elevation slopes from Key Bridge to Rock Creek. From Key Bridge to 31st Street, the elevation ranges from 60 to 70 feet and from 31st Street to 29th Street the elevation ranges from 50 to 20 feet east of 31st Street. There is a significance elevation change from the M Street sidewalk to the canal towpath with the elevation falling west from Key Bridge to Rock Creek. From Key Bridge to Thomas Jefferson Street, the elevation is 30 feet, while the elevation falls to 20 feet between Thomas Jefferson Street and 30th Street, and 10 feet between 30th Street and 29th Street. This significant drop in elevation creates a depressed valley space between Wisconsin Avenue and Potomac Street, which is exaggerated by the large-scale developments on the berm and river side of the canal.

Views and Vistas

The views and vistas identified start at the most eastern point of the canal in Georgetown and progress west to the end of the study boundary. The views include glimpses to iconic Georgetown landmarks and general vistas along the course of the constructed waterway. In the following section, the views and vistas discussed are the most iconic and informed in part due to the frequency of historic photographs.

While the canal is an engineered cultural resource, the development of these different vistas in this cultural landscape show little evidence of intentional planning. Rather, the following they appear to have organically developed over time due in part to the evolution of the setting of Georgetown and its relation to the canal.

Historic Condition
View of Lock No. 1 West
The earliest photograph of Lock No. 1 dates from 1909 and is oriented to west. The photograph was captured on the berm side of the canal near the Greene/29th Street Bridge. In this photograph, the Greene/29th Street Bridge was documented. On the berm side of the canal, a social trail was documented though historically the towpath was on the river side of the canal east of 29th Street. On the river side of the canal, a ramshackle structure was recorded at the Greene/29th Street entrance to Lock No. 1. To the west of Greene/29th Street, a two red story brick structure was extant on the river side of the canal and another brick structure was extant on the berm side. The materials and height of the building are unclear as a tree blocks the view. However, it is clear though that both buildings were set back from the canal. In the distance, on the river side of the canal, a tall brick building and a smoke stack were documented in the photograph.

There are also two c. 1920 to 1950 photographs of Lock No. 1 looking west that capture the canal in its industrial state. In the first photograph, taken in the middle of the canal on one of the lock gates, the 1909 bridge was captured as well as the social trail. However, the ramshackle structure had been removed and the canal was bordered by tall grasses. The aforementioned tree continued to block the view of the building west of Greene/29th Street on the berm side of the canal, while the two story red brick building on the river side of the canal had been painted white. On both the berm and river side of the canal, east and west of Greene/29th Street, the buildings were set back from the canal. In the second photograph, taken on the berm side of the canal near the lock gates, the aforementioned white brick building west of Greene/29th Street was no longer white. These 1909 and c. 1920 to 1950 views were open as the buildings were set back from the canal and limited to two and to three-stories in height. However, in a 1935 photograph a four story structure was built up to the canal on the berm side of the canal, east of Greene/29th Street. There was little development on the river side of the canal east of 29th Street as only a wooden shack was present.

View from Lock No. 3 West to Lock No. 4
The view to Thomas Jefferson Street and Lock No. 4 was documented in two 1967 photographs looking west from Lock No. 3. One photograph was taken in the middle of the canal on the lock gate, while one was taken on the river side of the canal at the lock gate. In the photographs, the buildings were two to three-stories in height and set back from the canal creating an open view west. This lack of development was also evidenced on the berm and river side of the canal at Lock No. 3. At Lock No. 3, as the views were open due to the setback of structures from the canal prism. This spatial arrangement allowed for the development of the Lock No. 3 Plaza/Mule Yard.

The view from Lock No. 3 west to Lock No. 4 was altered beginning in the late 1960s. Beginning in 1968, the three-story late-19th century brick berm-side canal warehouse, 1054 31 Street, was preserved and a new 60-foot tall office building was constructed at the rear of to the restored historic warehouse (Georgetown Historic Waterfront 1993: 81-87; Luebke 2013: 291). In 1970, the Foundry Project was proposed and as part of this project the two-story brick mid-19th century Duvall's Foundry, 1055 Thomas Jefferson Street, was to be adapted for commercial and office use. This development would have 400-feet of store frontage and rise to a height of 60-feet (Luebke 2013: 343). In 1976, the building, which was "pulled back from the canal", was completed and a pedestrian place was established on the river side of the canal adjacent to the Foundry (Luebke 2013: 343, 346; Georgetown Historic Waterfront 1993: 81-87).

View from Lock No. 4 East to Lock No. 3
There are two 1935 photographs looking east to Lock No. 3 from Lock No. 4. These photographs were taken on the berm side of the canal with a view of the prism towards the lock system. This particular view is important as it shows the character of Georgetown residential structures in the context of the canal relationship. Furthermore, in these photographs there were two makeshift grass parking lots on the berm and river side of the canal west of

Thomas Jefferson Street. On the berm side of the canal, two to three-story brick buildings were built north of the towpath. Although these buildings were not set back from the canal the view east to Lock No. 3 was open as there were no large scale developments on the berm or river side of the canal east or west of Thomas Jefferson Street. In two 1980 photographs, the buildings on the berm side of the canal west of Thomas Jefferson remained two to three-stories in height.

View to East to Wisconsin Avenue

The Wisconsin Avenue Bridge is an iconic landmark and historic photographs were taken on both the towpath and street grid level. There is an 1890 berm-side, canal level photograph of the Wisconsin Avenue Bridge looking east. The view in this photograph was open as there were few developments on the river and berm side of the canal. This same view was recorded in a c. 1920 to 1950 photograph taken from the river side of the canal west of the Potomac Street Bridge. However, from this location the berm and river side buildings appear to be much larger from the canal as they were built on top of a stone retaining wall.

View west to Key Bridge from 33rd Street

Historically, the view west to Key Bridge was open as there were few developments on the berm and river side of the canal. On the river side of the canal, west 34th Street and 35th Street, mills were established by 1888. These mills are documented in historic maps of the canal. However, on the berm side of the canal small-scale buildings dotted the landscape. By 1907, buildings were developed on the berm side of the canal west of 33rd Street. In the following years, the number of buildings on the berm and river side of the canal from 33rd Street to 34th Street increased creating a more closed off view. The view from 34th Street to Key Bridge remained open, though there were small developments on the river side of the canal.

View east from 34th Street Bridge to Fish Market Square

There is an 1890 Library of Congress photograph looking east taken from the 34th Street Bridge. In this photograph, unloading docks are documented on the river side of the canal east of 34th Street as well as two smoke stacks. The smoke stack to the east was that at Bomfords Mill, the later Wilkin's Rogers Milling Co. On the berm side of the canal, the buildings were set back from the canal and range from two to three-stories in height. Consequently, the view east from 34th Street was open and industrial in character.

Existing Condition

View of Lock No. 1 West

The Four Seasons hotel was built on the berm side of the canal, east of 29th Street, at a height of 60-feet. This development is set back from the park boundary by thirty feet per an agreement with the National Park Service. In the space between the hotel and canal, the Four Seasons constructed a brick towpath leading to the 29th Street crossing. On the river side of the canal, east of 29th Street, opposite the hotel, the West Heating Plant dominates the canal prism to a similar height. This creates a more enclosed visual and physical constraint on the

view. This alters the historic view of west of Lock No. 1.

View from Lock No. 3 West to Lock No. 4
At Lock No. 3, the buildings are set back from the canal. On the river side of the canal, a plaza is located north of the Foundry building, while the Lock No. 3 Plaza/Mule Yard occupies the berm side of the canal. At the time of the 2017 CLI, Lock No. 3 is under renovation and the Mule Yard is being used as a staging area. Although the two-story brick Foundry building was retained, the multi story development adjacent to the Foundry, extending to Thomas Jefferson Street, altered the historic views and vistas creating a more closed-off feel. However, the view from Lock No. 3 to Thomas Jefferson Street and Lock No. 4 is visually open in character as there are two to three-story brick buildings on both the berm and river side of the canal.

View from Lock No. 4 East to Lock No. 3
At Lock No. 4, the buildings on the berm and river side of the canal are two to three-stories in height. However, the Foundry development at Lock No. 3, east of Thomas Jefferson Street, rises to 60-feet. This developed altered the historic views and vistas because it creates an uneven, though not a complete “canyon-like”, view from Lock No. 4 to Lock No. 3.

View to East Wisconsin Avenue
The historic view between Potomac Street and Wisconsin Avenue was altered by 80-foot tall developments built on the berm and river side of the canal in the 1970s. These buildings exaggerated the “canyon-like” view east to Wisconsin Avenue, especially on the berm side were the developments appear to be much larger from the towpath level as they are built on top of a retaining wall. However, the focus of the view, the Wisconsin Avenue, remains the focus of this view.

View west to Key Bridge from 33rd Street
The view from 33rd Street to Key Bridge has not been altered. The Key Bridge serves as the visual bookend of the cultural landscape 33rd Street. However, it should be noted that vegetation is encroaching upon this particular view.

View east from 34th Street Bridge to Fish Market Square
When looking from the 34th Street Bridge to Fish Market Square, the large retaining wall is visible on the berm side of the canal. On top of the retaining wall and directly adjacent, two and three story buildings have been constructed overlooking the canal prism. On the river side of the canal, three to five-story brick buildings are present adjacent to the towpath. The construction of the two sides of the canal have created a more narrow, focused view towards the Fish Market Square, which is different from the historic open, industrial view. Harkening back to the industrial heritage of the waterway, there is one extant smoke stack to the east of the Fish Market Square at Bomford’s Mill/Wilkin’s Rogers MillingCo.

Analysis
The views and vistas along the canal have been altered over the years due to encroachment on

the canal's right-of-way and large-scale developments. In particular, the view of Lock No. 1 west retains little integrity as an constricted and enclosed setting has developed around the feature beginning in the mid to late 1940s. Furthermore, the "canyon-like" view east to Wisconsin Avenue has expanded since the 1970s due to the additional construction. The view east of the 34th Street Bridge was altered as buildings four to six-stories tall were constructed in the previously open space. However, the view from Lock No. 3 west to Lock No. 4 remains open. The view from Lock No. 4 east to Lock No. 3 retains partial integrity as the Foundry development created an uneven, though not completely contained view surrounding the canal. The view from 33rd Street to Key Bridge has not been altered and retains integrity.

Character-defining Features:

Feature: View of Lock No. 1 West

Feature Identification Number: 182309

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: View from Lock No. 3 West to Lock No. 4

Feature Identification Number: 182311

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: View from Lock No. 4 East to Lock No. 3

Feature Identification Number: 182313

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: View East to Wisconsin Avenue

Feature Identification Number: 182315

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Feature: View west to Key Bridge from 33rd Street

Feature Identification Number: 182317

Type of Feature Contribution: Contributing

Latitude Longitude

0.0000000000

Landscape Characteristic Graphics:

This view west to Potomac Street illustrates how construction has encroached on the canal on both the river and berm side of the canal between 33rd and 34th Street. (NCR CLP 2017).

The views along the canal west to the Key Bridge. (NCR CLP 2017).

Condition

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 09/30/2017

Condition Assessment Explanatory Narrative:

A Condition Assessment of Fair indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the inventory unit to degrade to a poor condition.

The Georgetown Area of the Chesapeake and Ohio Canal is currently listed as Fair condition. This is due to the current rehabilitation efforts at Lock 3 and Lock 4, the use of the Lock 3 plaza/ Mule Yard as a construction staging site, the removal of certain landscape features, such as the Justice Douglas bust, and the dewatered state of the canal at the time of the writing of the original report. Other issues have been highlighted in the following impacts discussion. When the rehabilitation projects conclude, including the likely implementation of the Canal Master Plan, the cultural landscape will be re-evaluated.

Impacts

Type of Impact: Adjacent Lands

External or Internal: External

Impact Description: The encroachments beginning in the 1890s, as well as development of adjacent lands beginning in the 1970s, negatively impacted the historic spatial organization of the canal in the Georgetown section. These modern 60 to 80-foot buildings exaggerate the historic enclosed feeling between Wisconsin Avenue and 33rd Street. Additionally, these developments have led to the destabilization of the canal walls and the $2.7 rehabilitation of the canal west of Wisconsin Avenue in 1978 (Shaffer 1997: 97-98; Mackintosh 1991: 162).

Type of Impact: Vegetation/Invasive Plants

External or Internal: Internal

Impact Description: The canal prism as of the 2017 CLI is unwatered due to the rehabilitation of Lock No. 3 and Lock No. 4 (NPS PEPC 2010: 32862). There is vegetation growing along portions of the wall and vegetation is noted in the prism bed. The documented

vegetation includes tree of heaven (ailanthus altissima), aquatic grasses, and moss. Some of these deciduous trees are native to the area and are invasive plants.

Type of Impact: Vegetation/Invasive Plants

External or Internal: External

Impact Description: There is vegetation is growing along portions of the canal prism, causing structural impacts. It is recommended that based on the success of previous volunteer efforts that additional canal wall cleanings occur.

Type of Impact: Flooding

External or Internal: External

Impact Description: Since the opening of the canal in the Georgetown section in 1831 flooding has destroyed the canal. Under the C&O Canal Company, B&O receivership, and National Park Service the canal has undergone numerous rehabilitation efforts. As the Potomac River continues to flood, it is probable that flooding will continue to impact the landscape. However, it is unclear how and to what extant these impacts will shape the site.

Type of Impact: Impending Development

External or Internal: Both Internal and External

Impact Description: At the time of the 2017 CLI, the canal in Georgetown is unwatered for the rehabilitation of Lock Nos. 3 and 4 (NPS PEPC 2010: 32862). The National Park Service, Georgetown BID, Georgetown Heritage, and other parties are planning revitalize the canal for recreational and interpretive use. James Corner Field Operations, the architects of the New York High Line, have been selected to transform the historic canal. Future CLIs will comment on the nature of this work.

Furthermore, in 2017, during the time of the completion of the Cultural Landscape Inventory, the District of Columbia's Department of Transportation formulated a proposal to replace and modernize the 31st Street Bridge. The proposed replacement of the structure would cause the structure and appearance to conform to the other vehicular bridges in Georgetown. However, the iron support pier would be removed from the site, conserved, and replaced to serve as a tangible and visual link to the period of significance of the canal. Subsequent evaluations of this CLI

must note whether this change has occurred (NPS PEPC 2017: 70373).

Type of Impact: Vandalism/Theft/Arson

External or Internal: External

Impact Description: In a 2017 site visit, the Hydraulic Generator Plant was documented as in "poor" condition. It was further noted that graffiti was presented on the structure and needed to be removed from the structure as well as the Alexandria Aqueduct (NPS LCS 2017).

Treatment

Treatment

Approved Treatment: Undetermined

Bibliography and Supplemental Information

Bibliography

Citation Author:	Babin, Patti
Citation Title:	Cultural Resource Survey: West Heating Plant Parcel Washington, D.C.
Year of Publication:	2012
Citation Publisher:	Completed by Louis Berger Group for GSA
Source Name:	Other
Citation Author:	Barnhart, Michael et. Others
Citation Title:	Georgetown Boundaries and Agreements
Year of Publication:	1984
Citation Publisher:	National Park Service
Citation Author:	Assembled by William Bauman
Citation Title:	Compilations of Canal Trade Articles form The NEWS, A Frederick, Maryland newspaper AND The Morning Herald, A Hagerstown, Maryland newspaper 1924
Year of Publication:	2016
Citation Publisher:	CHOH Archives
Citation Author:	Bearrs, Edwin C.
Citation Title:	Chesapeake and Ohio Canal: The Bridges
Year of Publication:	1961
Citation Publisher:	National Park Service
Citation Author:	Bedell, John; Stuart Fidel and Jason Shellhammer
Citation Title:	A Path Through the Mountains: The Archeology and History of the Chesapeake and Ohio Canal National Historical Park
Year of Publication:	2011
Citation Publisher:	National Park Service

Citation Author:	Burns, Albert S.
Citation Title:	LOOKING EAST FROM THIRTY-FIRST STREET BRIDGE LOCK #4- Chesapeake and Ohio Canal, Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC
Year of Publication:	1935
Citation Publisher:	Library of Congress
Source Name:	HABS
Citation Location:	HABS DC-147

Citation Author:	Carson, Cary & Carl R. Loundsbury (eds.)
Citation Title:	The Chesapeake House: Architectural Investigation by Colonial Williamsburg
Year of Publication:	2013
Citation Publisher:	The Colonial Williamsburg Foundation

Citation Author:	Eisenman, George
Citation Title:	LOOKING WEST TOWARD TWENTY-NINTH STREET LOCK #1-Chespeake and Ohio Canal, Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC
Year of Publication:	1935
Citation Publisher:	Library of Congress
Source Name:	HABS
Citation Location:	HABS DC-147

Citation Author:	Eisenman, George
Citation Title:	Lock #3-Chespeake and Ohio Canal, Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC
Year of Publication:	1967
Citation Publisher:	Library of Congress

Citation Author:	Eisenman, George
Citation Title:	LOCK #3, WEST GATE DETAIL- Chesapeake and Ohio Canal, Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC
Year of Publication:	1967
Citation Publisher:	Library of Congress
Citation Author:	Eisenman, George
Citation Title:	GATES OF LOCK #3 AND BASIN- Chesapeake and Ohio Canal, Georgetown Section, East & West parallel to M Street Northwest, Washington, District of Columbia, DC
Year of Publication:	1967
Citation Publisher:	Library of Congress
Citation Author:	Evans, Francis T.
Citation Title:	Roads, Railways, and Canals: Technical Choices in 19th Century Britain
Year of Publication:	1981
Citation Publisher:	Technology and Culture
Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 33rd Street Bridge
Year of Publication:	2003
Citation Publisher:	US Department of Transportation
Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 33rd Street Bridge
Year of Publication:	2005
Citation Publisher:	US Department of Transportation
Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 33rd Street Bridge
Year of Publication:	2007
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 33rd Street Bridge
Year of Publication:	2009
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 33rd Street Bridge
Year of Publication:	2011
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 34th Street Bridge
Year of Publication:	2005
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 34th Street Bridge
Year of Publication:	2007
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 34th Street Bridge
Year of Publication:	2009
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: 34th Street Bridge
Year of Publication:	2011
Citation Publisher:	US Department of Transportation

Citation Author:	Federal Highway Administration
Citation Title:	Bridge Inspection: Potomac Street Bridge
Year of Publication:	2005
Citation Publisher:	US Department of Transportation
Citation Author:	Franklin, William
Citation Title:	The Tidewater End of the Chesapeake and Ohio Canal
Year of Publication:	1986
Citation Publisher:	Maryland Historical Magazine
Citation Author:	Historic American Building Survey
Citation Title:	Duvall Foundry Survey
Year of Publication:	1947
Citation Publisher:	Library of Congress
Source Name:	HABS
Citation Author:	Heritage USA
Citation Title:	Historic Waterways, Canals, Wharves and Port Study Washington D.C.
Year of Publication:	1999
Citation Publisher:	Heritage USA
Citation Author:	High, Mike
Citation Title:	The C&O Canal Companion
Year of Publication:	1997
Citation Publisher:	Johns Hopkins University Press
Citation Author:	Highsmith, Carol M.
Citation Title:	Tourist barge on the old C&O Canal in the Georgetown section of Washington, D.C.
Year of Publication:	1980
Citation Publisher:	Library of Congress

Citation Author:	Horydczak, Theodor
Citation Title:	Chesapeake and Ohio Canal (C&O Canal) in Georgetown. C&O Canal View II
Year of Publication:	1920
Citation Publisher:	Library of Congress
Citation Author:	Horydczak, Theodor
Citation Title:	Chesapeake and Ohio Canal (C&O Canal) Canal in Georgetown. Path along C&O Canal
Year of Publication:	1920
Citation Publisher:	Library of Congress
Citation Author:	Horydczak, Theodor
Citation Title:	Chesapeake and Ohio Canal (C&O Canal) Canal in Georgetown. C&O Canal View I
Year of Publication:	1920
Citation Publisher:	Library of Congress
Citation Author:	Horydczak, Theodor
Citation Title:	Chesapeake and Ohio (C&O) Canal in Georgetown. View of C&O Canal with bridge
Year of Publication:	1920
Citation Publisher:	Library of Congress
Citation Author:	Horydczak, Theodor
Citation Title:	Chesapeake and Ohio (C&O) canal. Locks in Georgetown
Year of Publication:	1920
Citation Publisher:	Library of Congress
Citation Author:	Kapsch, Robert J.
Citation Title:	The Potomac Canal: George Washington and the Waterway West
Year of Publication:	2007
Citation Publisher:	West Virginia University Press

Citation Author:	Kytle, Elizabeth
Citation Title:	Home on the Canal
Year of Publication:	1983
Citation Publisher:	The Johns Hopkins University Press
Citation Author:	Littlefield, Douglas R.
Citation Title:	The Potomac Company: A Misadventure in Financing an Early American Internal Improvement Project
Year of Publication:	1984
Citation Publisher:	The Business History Review
Citation Author:	Lockman and Associates
Citation Title:	Park Georgetown Plan
Year of Publication:	1977
Citation Publisher:	National Park Service
Citation Author:	Luebke, Thomas E. (ed.)
Citation Title:	Civic Art: A Centennial History of the U.S. Commission of Fine Arts
Year of Publication:	2013
Citation Publisher:	U.S. Commission of Fine Arts
Citation Author:	Luzader, John F.
Citation Title:	The Towpath of the Chesapeake and Ohio Canal
Year of Publication:	1961
Citation Publisher:	National Park Service
Citation Author:	Mackintosh, Barry
Citation Title:	C&O Canal: The Making of a Park
Year of Publication:	1991
Citation Publisher:	National Park Service

Citation Author:	MAECTEC
Citation Title:	Geotechnical Investigation Report
Year of Publication:	2011
Citation Publisher:	National Park Service
Citation Author:	McCarthy, John P.
Citation Title:	Excursion Boats: On the Chesapeake and Ohio Canal
Year of Publication:	2014
Citation Publisher:	CHOH Archives
Citation Author:	Mukerji, Chandra
Citation Title:	The New Rome: Infrastructure and National Identity on the Canal du Midi
Year of Publication:	2009
Citation Publisher:	The University of Chicago Press on behalf of the History of Science Society
Citation Author:	National Historic Landmarks Boundary Review Project
Citation Title:	Georgetown Historic District
Year of Publication:	1967
Citation Publisher:	National Register of Historic Places
Citation Author:	National Park Service
Citation Title:	110.6-362-11 Lock 1 and 2
Year of Publication:	1936
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	130 Passenger Barge from Georgetown to Great Falls
Year of Publication:	1956
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Chesapeake & Ohio Canal National Historic Park District of Columbia/Maryland General Plan
Year of Publication:	1976
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Chesapeake and Ohio Canal National Historical Park: Foundation Document
Year of Publication:	2013
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Project 17660
Year of Publication:	2007
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Project 32862
Year of Publication:	2010
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Project 24599
Year of Publication:	2010
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Project 61528
Year of Publication:	2010
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	C &O Canal from Lock 1 Up
Year of Publication:	1975
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	C&O Market
Year of Publication:	1977
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Canal Docking Facilities Plan
Year of Publication:	1961
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Chesapeake and Ohio Canal National Historical Park Supplementary Listing Record
Year of Publication:	2015
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Project 70373
Year of Publication:	2017
Citation Publisher:	National Park Service
Citation Author:	National Park Service
Citation Title:	Chesapeake & Ohio Canal: A Guide to Chesapeake & Ohio Canal National Historical Park Maryland, District of Columbia, and West Virginia
Year of Publication:	1991
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Existing Conditions: Georgetown Maps 1-4
Year of Publication:	1939
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Georgetown Garden Club Project: C & O Canal
Year of Publication:	1975
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Justice Douglas Bust Planting
Year of Publication:	1977
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Lock 3 Planting Plan
Year of Publication:	1964
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Planting Plan: Georgetown Level
Year of Publication:	1965
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Planting Plan from Lock 1 to the Alexandria Aqueduct
Year of Publication:	1980
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Preservation of the Tidal Lock
Year of Publication:	1980
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Rehabilitate Lift Lock 3
Year of Publication:	2016
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Rehabilitate Lift Lock 4
Year of Publication:	2016
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Rehabilitation of a portion of Georgetown: Lock 4
Year of Publication:	1948
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Rehabilitation of C & O Canal: Georgetown
Year of Publication:	1949
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Rehabilitation of C&O Canal: Georgetown Section
Year of Publication:	1950
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Repairs to Canal Wall
Year of Publication:	1975
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Study of the Foot Bridges
Year of Publication:	1947
Citation Publisher:	National Park Service

Citation Author:	National Park Service
Citation Title:	Side Pont Inlet
Year of Publication:	2017
Citation Publisher:	LCS

Citation Author:	National Park Service
Citation Title:	Boat Basin No. 3
Year of Publication:	2017
Citation Publisher:	LCS

Citation Author:	National Park Service
Citation Title:	Stone Bridge Abutment- 30th Street Bridge/ Lock 3
Year of Publication:	2017
Citation Publisher:	LCS

Citation Author:	National Park Service
Citation Title:	Stone Bridge Abutment- Lock 4
Year of Publication:	2017
Citation Publisher:	LCS

Citation Author:	National Park Service
Citation Title:	Hydraulic Generator Plant
Year of Publication:	2017
Citation Publisher:	LCS

Citation Author:	National Park Service
Citation Title:	1057 Thomas Jefferson Street NW
Year of Publication:	2017
Citation Publisher:	LCS

Citation Author:	Passonneau, Joseph R
Citation Title:	Washington Through Two Centuries: A History in Maps and Images
Year of Publication:	2004
Citation Publisher:	The Monacelli Press, Inc.

Citation Author:	Peck Peck Associates
Citation Title:	Rehabilitate Lift Lock 4 to Improve Resource Conditions
Year of Publication:	2016
Citation Publisher:	National Park Service

Citation Author:	President and Fellows of Harvard College
Citation Title:	Speculation, Transportation, and Tobacco
Year of Publication:	1928
Citation Publisher:	Bulletin of Business Historical Society

Citation Author:	Prince, Carl
Citation Title:	The Great “Riot Year”: Jacksonian Democracy and Patterns of Violence in 1834
Year of Publication:	1985
Citation Publisher:	University of Pennsylvania Press

Citation Author:	Salvatore, Susan Cianci and Stephen Potter
Citation Title:	Chesapeake and Ohio Canal National Historical Park Historic District (Additional Documentation and Boundary Increase)
Year of Publication:	2015
Citation Publisher:	National Park Service
Citation Author:	Sanderlin, Walter S.
Citation Title:	The Vicissitudes of the Chesapeake and Ohio Canal During the Civil War
Year of Publication:	1945
Citation Publisher:	Southern Historical Association; The Journal of Southern History, Wol. 11, No. 1
Citation Author:	Shaffer, Donald R.
Citation Title:	We are Again in the Midst of Trouble": Flooding on the Potomac River and the Struggle for the Sustainability of the Chesapeake and Ohio Canal, 1828-1996
Year of Publication:	1997
Citation Publisher:	National Park Service
Citation Author:	Skamstad, Harold
Citation Title:	The Georgetown Incline Plane
Year of Publication:	1969
Citation Publisher:	John Hopkins Press on behalf of the Society for the History of Technology
Citation Author:	Snyder, Timothy R.
Citation Title:	Trembling in the Balance: The Chesapeake and Ohio Canal During the Civil War
Year of Publication:	2011
Citation Publisher:	Blue Mustang Press

Citation Author:	Taggart, Hugh
Citation Title:	Old Georgetown
Year of Publication:	1908
Citation Publisher:	Records of Columbia Historical Society in Washington
Citation Author:	Unrau, Harlan D.
Citation Title:	Chesapeake and Ohio Canal: Administrative History Study
Year of Publication:	1983
Citation Publisher:	National Park Service
Citation Author:	Unrau, Harlan D.
Citation Title:	Chesapeake and Ohio Canal: The Canal Prism Including Towpath with Canal Berm and River Revetments
Year of Publication:	1974
Citation Publisher:	National Park Service
Citation Author:	Unrau, Harlan D
Citation Title:	Historic Resource Study, Chesapeake & Ohio Canal
Year of Publication:	2007
Citation Publisher:	National Park Service
Citation Author:	Way, Peter
Citation Title:	Evil Humors and Ardent Spirits: The Rough Culture of Canal Construction Laborers
Year of Publication:	1993
Citation Publisher:	The Journal of American History
Citation Author:	Williams, Kimberly
Citation Title:	Georgetown Historic District (amended)
Year of Publication:	2008
Citation Publisher:	National Register

Citation Author:	General Photograph Collection, CHS 16577; H 087
Citation Publisher:	D.C. Historical Society
Source Name:	Other
Citation Title:	General Photograph Collection, CHS 16534; H 029
Citation Publisher:	D.C. Historical Society
Citation Title:	General Photograph Collection, CHS 16522; H 015
Citation Publisher:	D.C. Historical Society
Citation Title:	Georgetown Architecture- The Waterfront
Year of Publication:	1968
Citation Publisher:	The Commission of Fine Arts and The Historic Buildings Survey
Citation Title:	Georgetown Historic Waterfront
Year of Publication:	1993
Citation Publisher:	The Commission of Fine Arts and the Office of Archaeology and Historic Preservat
Citation Title:	Emil A. Press Slide Collection, PR 0089B; SP 0034
Citation Publisher:	D.C. Historical Society
Citation Title:	Cleveland Park, Georgetown, and General Architectural Slide Collection, CPG B356; SP 0125
Citation Publisher:	D.C. Historical Society
Citation Title:	Cleveland Park, Georgetown, and General Architectural Slide Collection, CPG B429; SP 0125
Citation Publisher:	D.C. Historical Society
Citation Title:	Joseph E. Bishop Photograph Collection, BI 078A; SP0004
Citation Publisher:	D.C. Historical Society
Citation Title:	William H. Seaman Photograph Collection, SE 077; H080/SP 0030
Citation Publisher:	D.C. Historical Society
Citation Title:	Kiplinger Washington Collection, KC0701.PR.AP.M.U
Citation Publisher:	D.C. Historical Society
Citation Title:	General Photograph Collection, CHS 16577; H087
Citation Publisher:	D.C. Historical Society

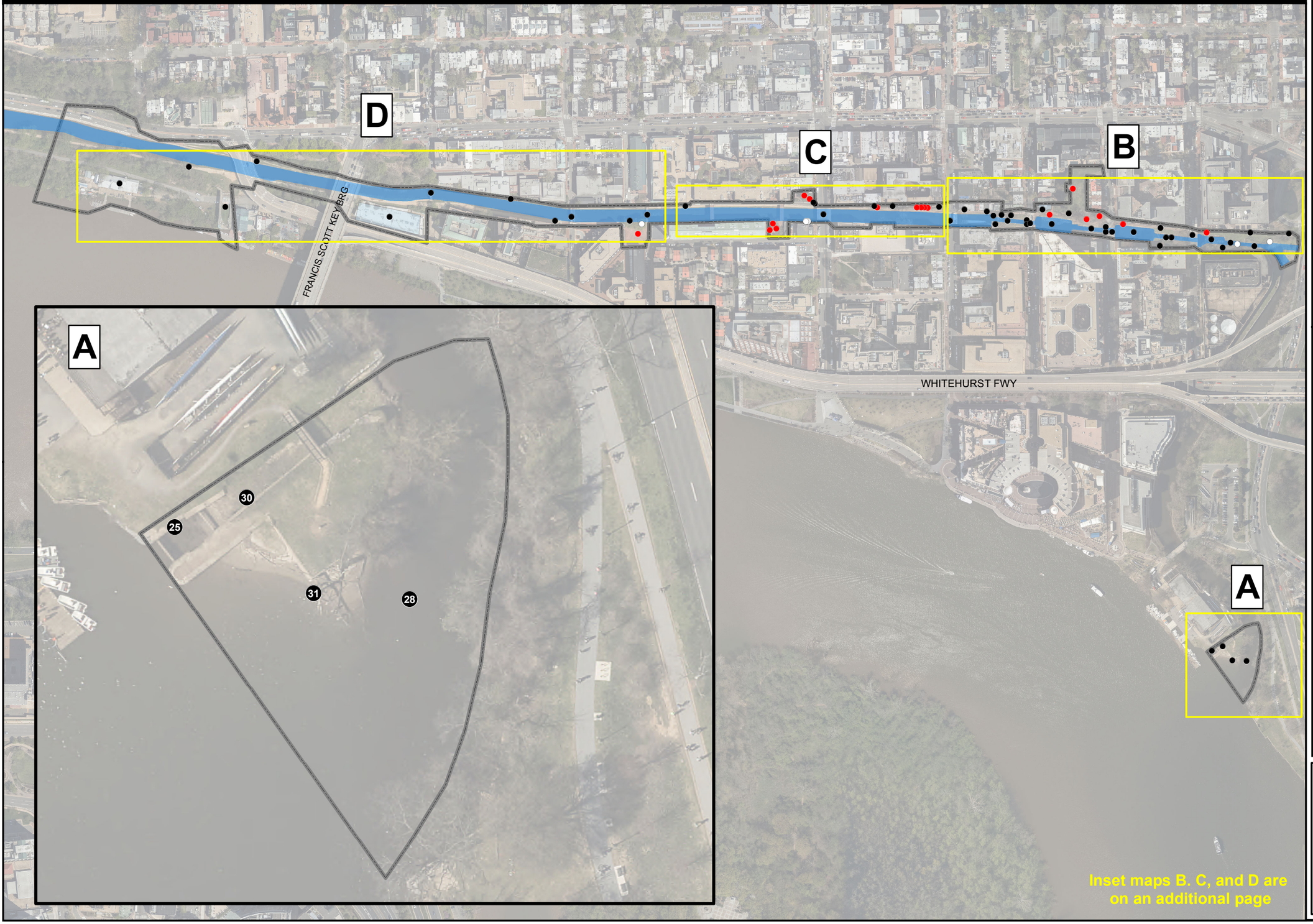
Citation Title:	Kiplinger Washington Collection, KC0470.DR.AP.L.F.
Citation Publisher:	D.C. Historical Society
Citation Title:	C&O Canal and Wisconsin Avenue Bridge, Georgetown, Washington, D.C.
Year of Publication:	1890
Citation Publisher:	Library of Congress
Citation Title:	Memorandum for Mr. Assistant Attorney General Blair Re: The Title to C&O Canal from the District to Point of Rocks
Year of Publication:	1936
Citation Publisher:	Provided by the Chesapeake and Ohio Canal National Historical Park archives
Citation Title:	Chesapeake and Ohio Canal
Year of Publication:	1908
Citation Publisher:	Library of Congress
Citation Title:	Advertisement for the George Washington
Year of Publication:	1932
Citation Publisher:	Columbian Gazette
Citation Title:	Advertisement for the Fashion
Year of Publication:	1854
Citation Publisher:	Evening Star
Citation Title:	Advertisement for the Meigs
Year of Publication:	1856
Citation Publisher:	Evening Star
Citation Title:	Advertisement for the Eliza Hutchins
Year of Publication:	1865
Citation Publisher:	Evening Star
Citation Title:	Advertisement for the Minnesota
Year of Publication:	1867
Citation Publisher:	Evening Star
Citation Title:	Excursions on the General M.C. Meigs
Year of Publication:	1879
Citation Publisher:	Washington National Republican

Citation Title:	Ho! For Great Falls and Cabin John Ridge
Year of Publication:	1888
Citation Publisher:	Washington Critic
Citation Title:	Ho! For Great Falls and Cabin John Ridge
Year of Publication:	1888
Citation Publisher:	Evening Star
Citation Title:	Out on the Raging Canal: Gay Philadelphia lads and Lassies on Pleasure Bent. Sail on the "Mule Yacht"
Year of Publication:	1896
Citation Publisher:	Washington Times
Citation Title:	Excursion and Picnic
Year of Publication:	1900
Citation Publisher:	Evening Star
Citation Title:	Advertisement for the Louise
Year of Publication:	1902
Citation Publisher:	Evening Star
Citation Title:	Pleasure Trip Arranged
Year of Publication:	1903
Citation Publisher:	Washington Times
Citation Title:	Outing of Spanish War Veterans
Year of Publication:	1903
Citation Publisher:	Washington Times
Citation Title:	Advertisement for the Louise
Year of Publication:	1904
Citation Publisher:	Evening Star
Citation Title:	Steamer Being Repaired
Year of Publication:	1910
Citation Publisher:	Washington Herald

Map Appendix

Existing Conditions

Chesapeake and Ohio Canal National Historical Park
Georgetown Area CLI
National Capital Region - Cultural Landscapes Program - Cultural Landscape Inventory - May 2017



Number	Resource Name
1	29th Street Bridge
2	30th Street Bridge
3	31st Street Bridge
4	33rd Street Bridge
5	34th Street Bridge
6	Potomac Street Bridge
7	T. Jefferson Street Bridge
8	Towpath: 0 to 29th Street
9	Towpath: 29th Street to 30th Street
10	Towpath: 30th Street to T. Jefferson Street
11	Towpath: 31st Street to end of boundary
12	Towpath: 33rd Street to end of boundary
13	Towpath: T. Jefferson to 31st Street
14	Wisconsin Street Bridge
15	Boat Basin No.1
16	Boat Basin No.2
17	Boat Basin No.3
18	Canal Prism
19	Dual Water Intake - Wilkins Rogers Milling Co.
20	Intake
21	Lock No.1
22	Lock No.2
23	Lock No.3
24	Lock No.4
25	Mole
26	Pipes
27	PVC Drain
28	Rock Creek Basin
29	Side Pond Inlet at Lock No. 1
30	Tide Lock
31	Waste Gate - Ruins
32	Water Feature
33	Water Intake Ruins
34	1057 T. Jefferson Street
35	30th Street Stone Abutments
36	Alexandria Aqueduct
37	Hydraulic Generator Plant
38	Retaining Wall 1
39	Retaining Wall 2
40	T. Jefferson Street Abutments
41	Towpath Cross Over Bridge Ruin
42	Washington Canoe Club
43	Fish Market Square
44	Grace Street Park
45	Lock No.3/ Mule Yard
46	Wisconsin Avenue Plaza
47	Bollards and chains around Lock No. 3 and Boat Basin
48	Chesapeake and Ohio Canal Marker
49	Commemorative Obelisk
50	Commemorative Obelisk Fence
51	Georgetown Historic District NHL Marker
52	Justice William O. Douglas sculpted bust
53	Lock No. 2 Boat Basin Fence
54	Lock No. 4 Fence
55	Lock No.1 Fence: Fenceline on South side of Brick Path
56	North Canal planting retaining wall
57	Wisconsin Avenue Plaza plantings
58	Fish Market Square Planting
59	Grace Street plantings
60	Princess Tree between 31st Steet and Wisconsin (C)
61	Red Maple berm side of Lock No. 2
62	River birchs
63	Tree of Heaven west of 31st Street
64	Tree of Heavens at 31st Street
65	Two small leaf lindens at Lock No. 4.
66	Weeping Willow Lock No. 4 (C)

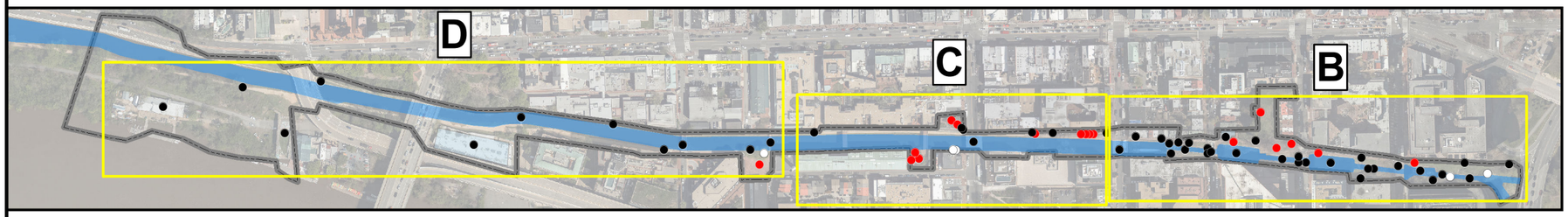
Legend

- Contributing resource
- Non-contributing resource
- Unknown contributing resource
- Cultural Resource District Polygon

Chesapeake and Ohio Canal National Historical Park

Georgetown Area CLI

National Capital Region - Cultural Landscapes Program - Cultural Landscape Inventory - May 2017

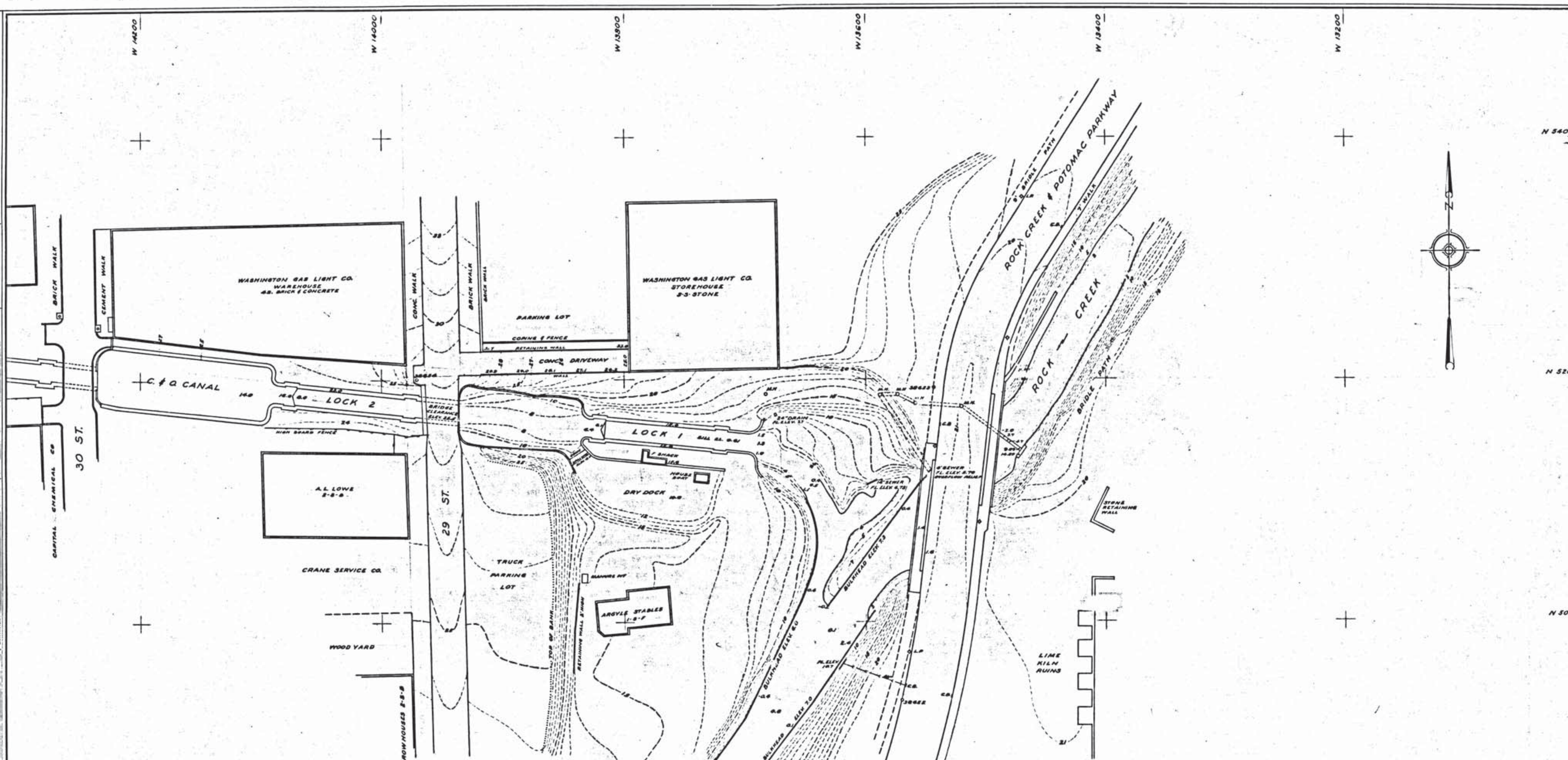


Legend

- Contributing resource
- Non-contributing resource
- Unknown contributing resource
- Cultural Resource District Polygon

Corresponding table is on an additional page

1939 Existing Conditions



REDUCED SIZE REPRODUCTION

1" = 40'0"
SCALE

412/80,626

RECOMMENDED Chief of Planning DATE	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE BRANCH OF PLANNING NATIONAL CAPITAL PARKS	REGION
CONCURRED Superintendent DATE	EXISTING CONDITIONS GEORGETOWN SECTION CHESAPEAKE AND OHIO CANAL	SHEET 1 OF 4 DRAWING NO. N.C.P. 3018-A
APPROVED Director DATE		

for PT. see 91.2-1128114
110.6-43

110.6-14A

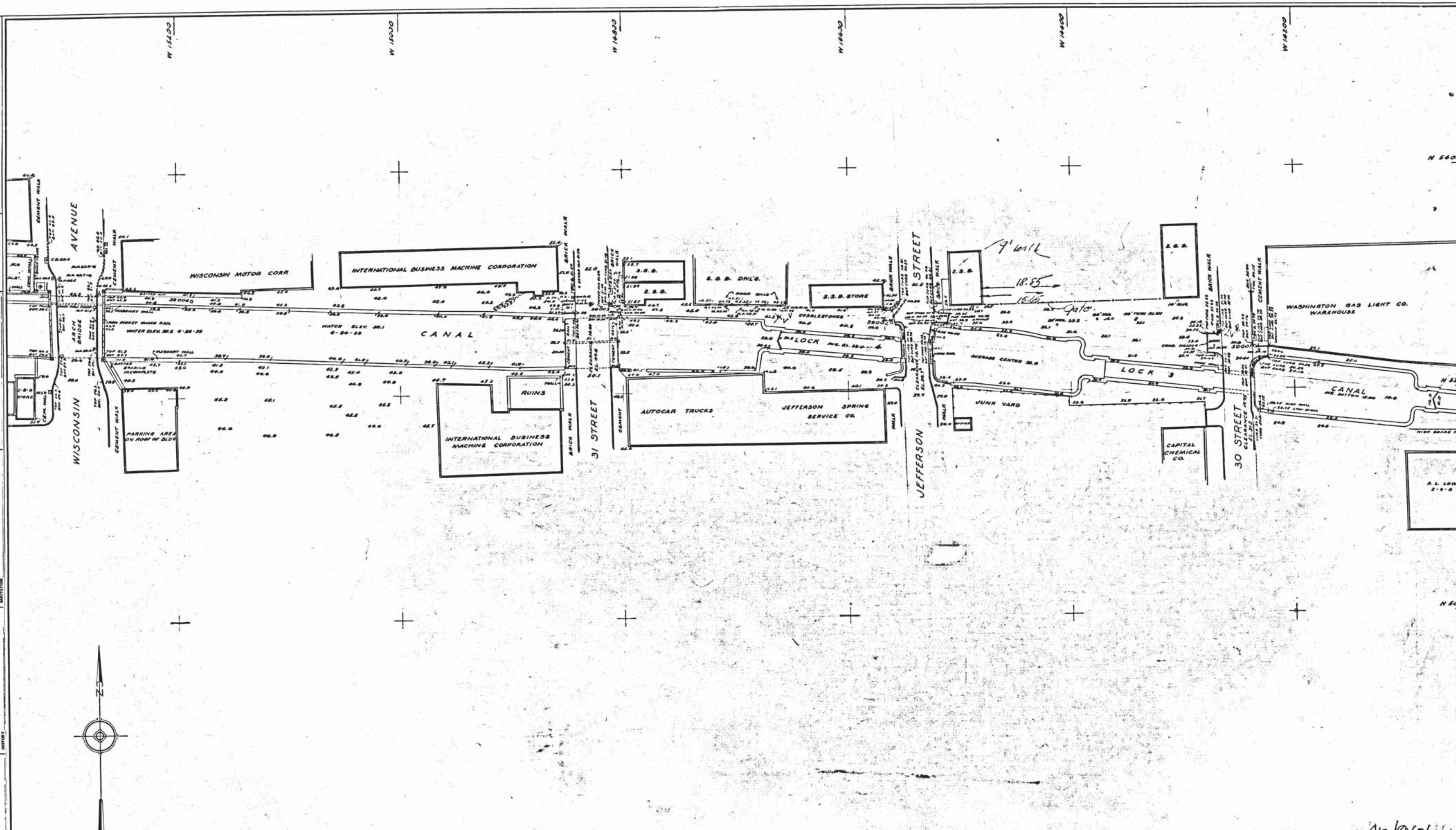
DESIGNED BY
TRACED -C.S.P.
6/2/36

REVIEWED

CLEARED

BASIC DATA

TRIM LINE



SCALE

4/2/80626

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF PLANNING
PREPARED BY
NATIONAL CAPITAL PARKS
OFFICE

EXISTING CONDITIONS
GEORGETOWN SECTION
LOCATION
CHESAPEAKE AND OHIO CANAL
NAME OF PARK OR MONUMENT

RECOMMENDED ______ Chief of Planning DATE ______

CONCURRED ______ Superintendent DATE ______

APPROVED ______ Director DATE ______

REGION

SHEET 2 OF 4

DRAWING NO.
N.C.P.
3014-B

110.6-14B

BASIC DATA

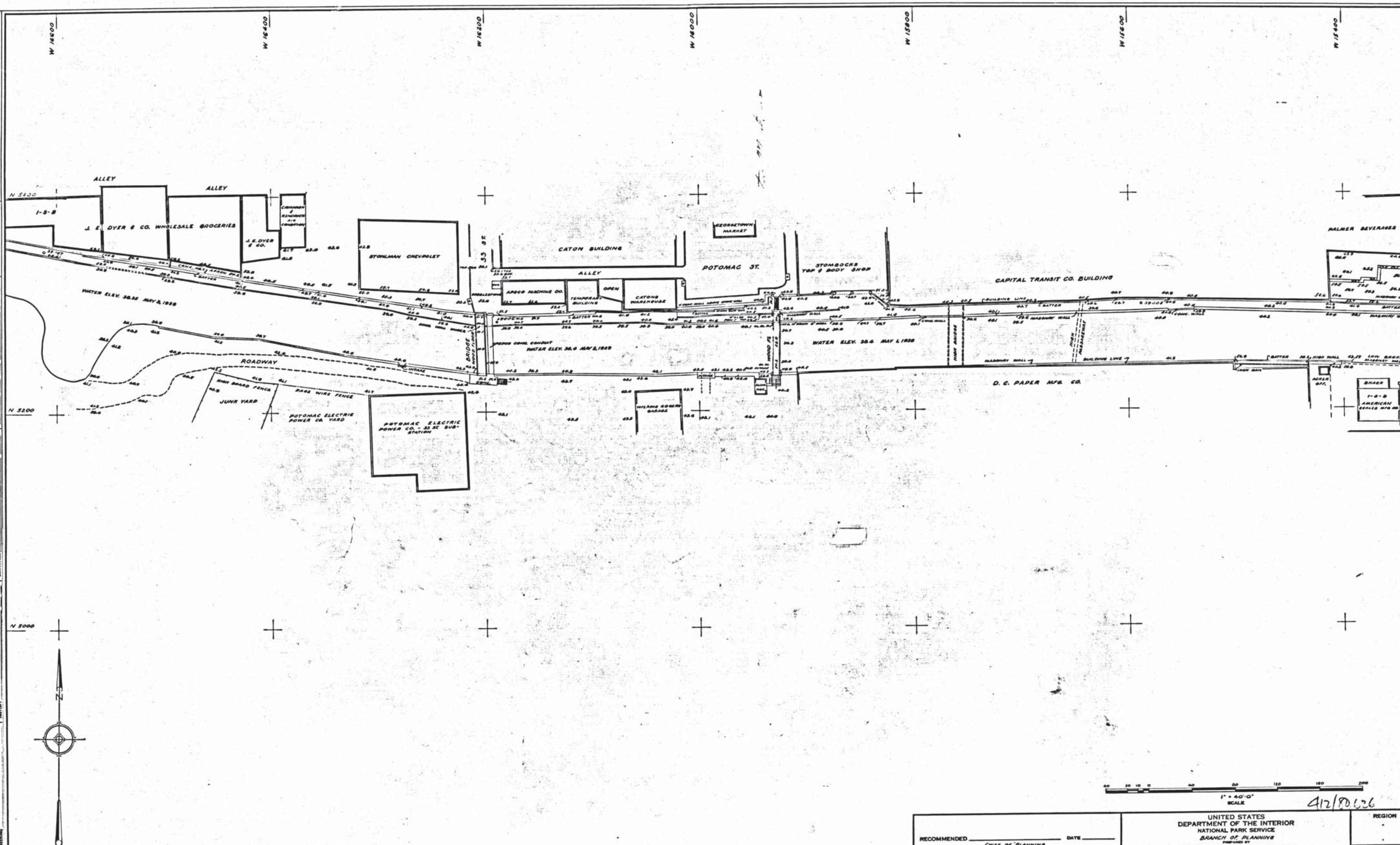
DESIGNED BY | DATE | PLANS AND DESIGN | ENGINEERING

REVIEWED | FORESTRY | HISTORY | RESEARCH AND EDUCATION | SANITATION

CLEARED | RECREATIONAL PLANNING AND STATE COOPERATION | REGIONAL DIRECTOR

TRIM LINE

TRIM LINE



1" = 40'-0"
SCALE

412/80.626

RECOMMENDED ____ CHIEF OF PLANNING	DATE ____	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE BRANCH OF PLANNING PREPARED BY NATIONAL CAPITAL PARKS OFFICE	REGION
			SHEET 3 OF 4
CONCURRED ____ SUPERINTENDENT	DATE ____	EXISTING CONDITIONS NAME OF JOB GEORGETOWN SECTION LOCATION CHESAPEAKE AND OHIO CANAL NAME OF PARK OR MONUMENT	DRAWING NO. N.C.P. 3018-C
APPROVED ____ DIRECTOR	DATE ____		

110.6-14C

BASIC DATA

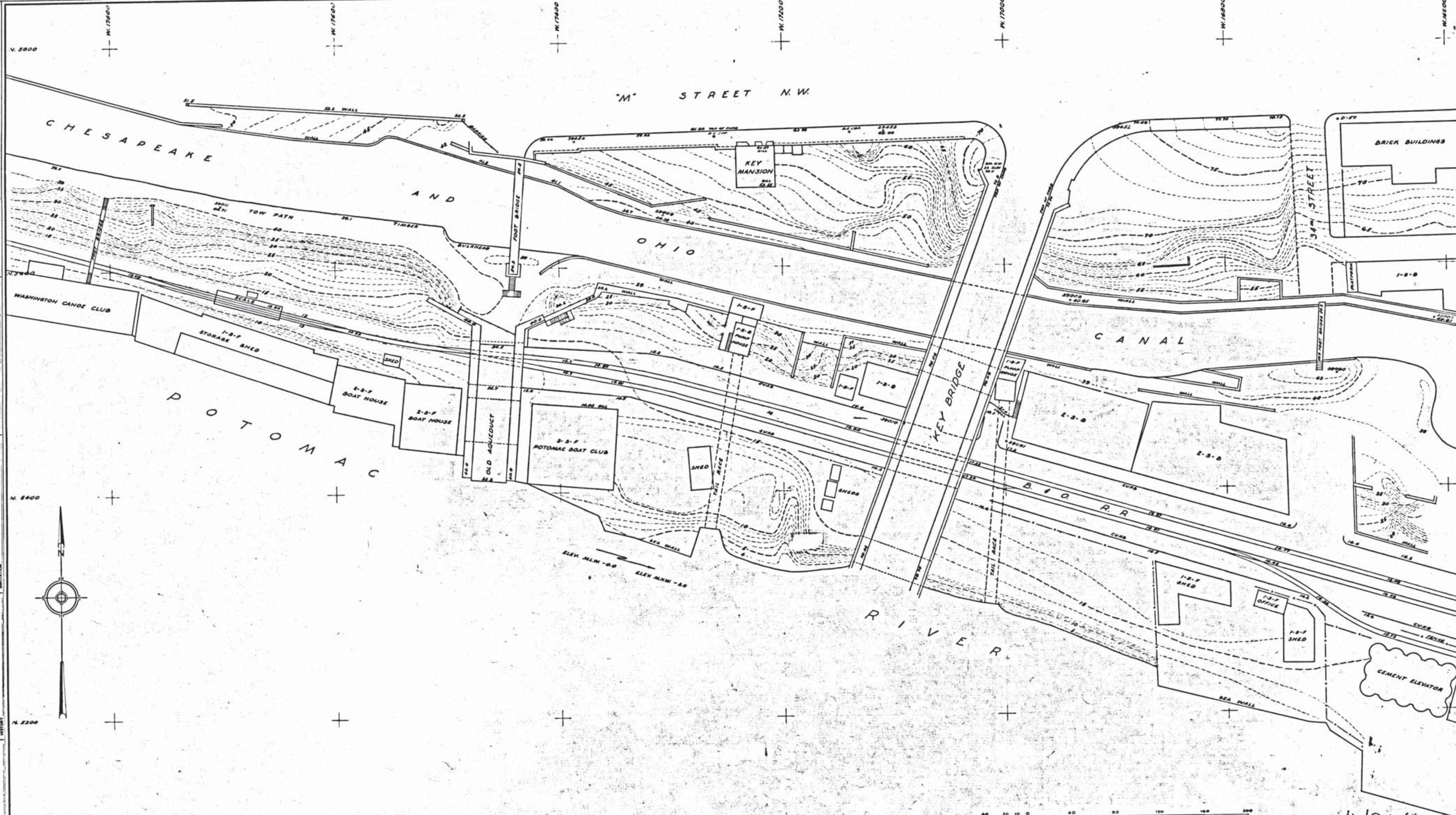
DESIGNED BY	PLANS AND DESIGN	ENGINEERING
TRACED - CSP DATE 6/2/39		

REVIEWED: FORESTRY, HISTORY, RESEARCH AND EDUCATION, SANITATION, RECREATIONAL PLANNING AND STATE COOPERATION

CLEARED: REGIONAL DIRECTOR

TRIM LINE

TRIM LINE



ONE INCH EQUALS FORTY FEET — SCALE 40 20 10 0 40 80 120 160 200

412/80,626

RECOMMENDED ______ DATE ______ CHIEF OF PLANNING	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE BRANCH OF PLANNING PREPARED BY NATIONAL CAPITAL PARKS OFFICE	REGION
CONCURRED ______ DATE ______ SUPERINTENDENT	EXISTING CONDITIONS (NAME OF JOB) GEORGETOWN SECTION (LOCATION) CHESAPEAKE AND OHIO CANAL (NAME OF PARK OR MONUMENT)	SHEET 4 OF 4
APPROVED ______ DATE ______ DIRECTOR		DRAWING NO. N.C.P. 3018-D

BASIC DATA U.S.E. DATUM.

DESIGNED BY
TRACED - CZR
DATE 6/2/38

REVIEWED: PLANS AND DESIGN — ENGINEERING — FORESTRY — HISTORY — RESEARCH AND EDUCATION — SANITATION — RECREATIONAL PLANNING AND STATE COOPERATION

CLEARED: REGIONAL DIRECTOR

110.6-14D

TRIM LINE

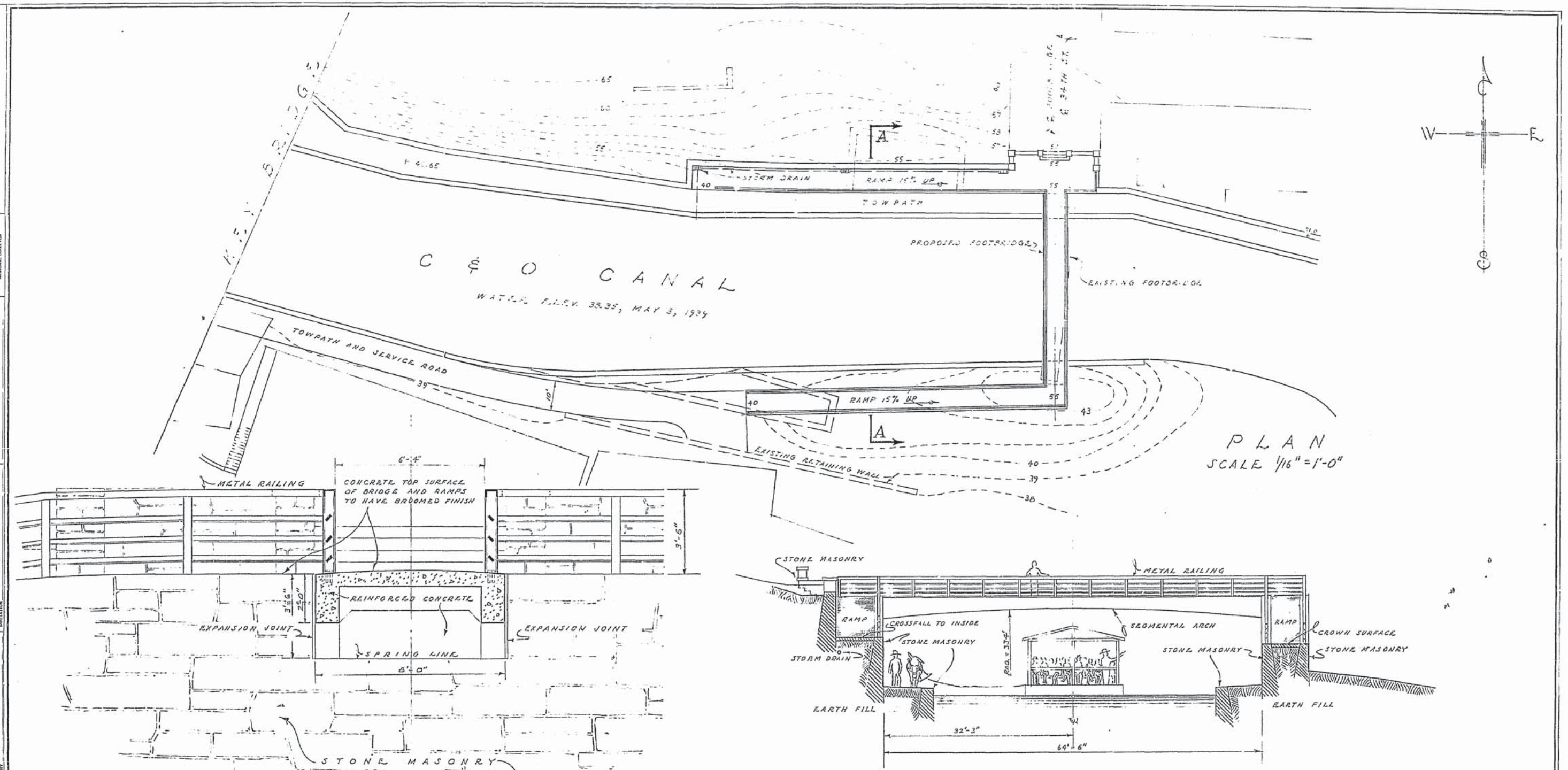
1947 Study of Footbridges

TRIM LINE

CLEARED
REGIONAL DIRECTOR
RECREATIONAL PLANNING AND STATE COOPERATION

REVIEWED
RESEARCH AND EDUCATION
SANITATION
FORESTRY
HISTORY
PLANS AND DESIGN
ENGINEERING

DESIGNED BY
D.J.Q.E.
1-28-47



PLAN
SCALE 1/16" = 1'-0"

TRANSVERSE SECTION
THRU ℄
SCALE 1/2" = 1'-0"

SECTION THRU A-A
SCALE 1/8" = 1'-0"

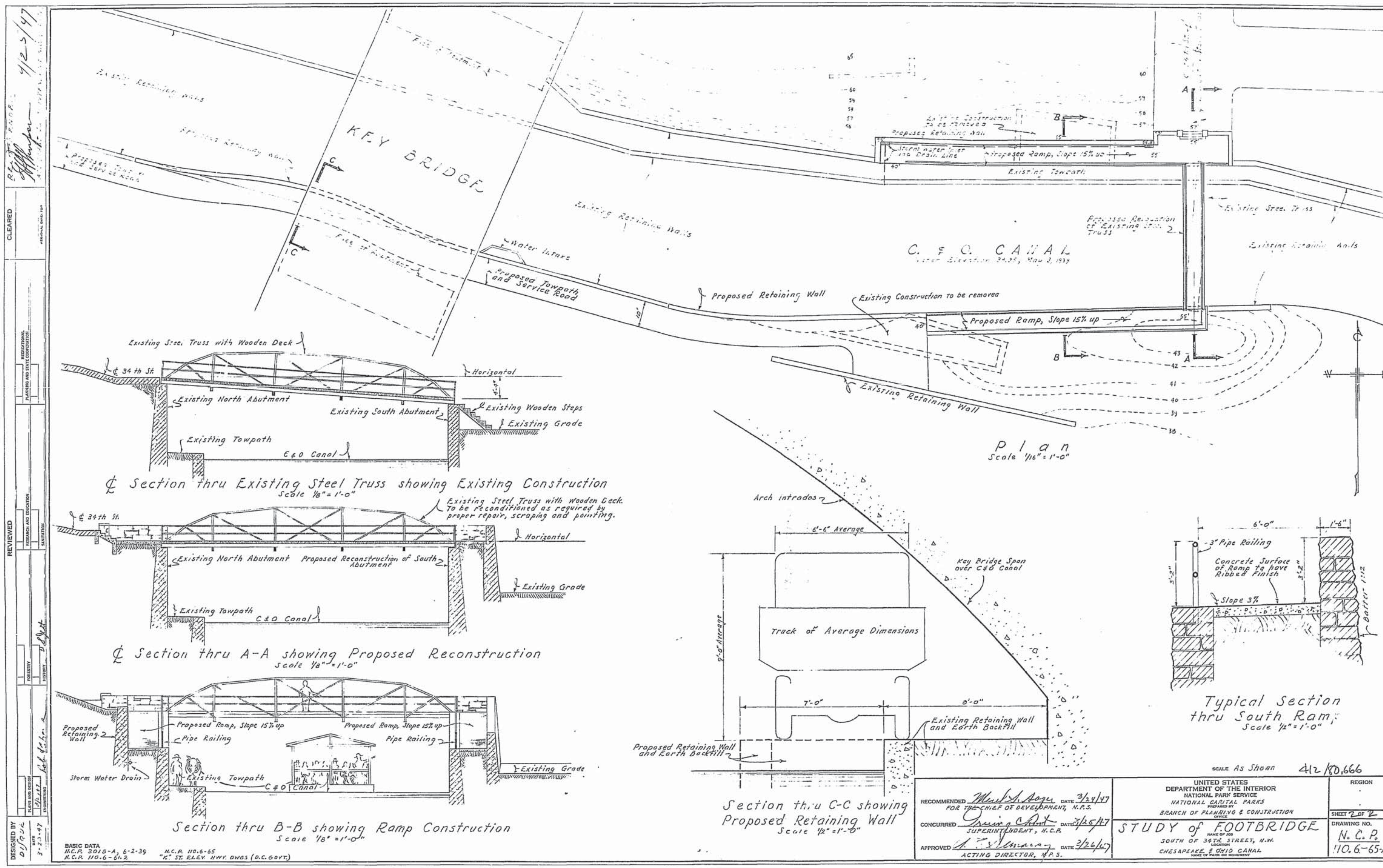
BASIC DATA
N.C.P. 3078-A, 6-21-39
N.C.P. 110.6-61.2

REDUCED SIZE REPRODUCTION

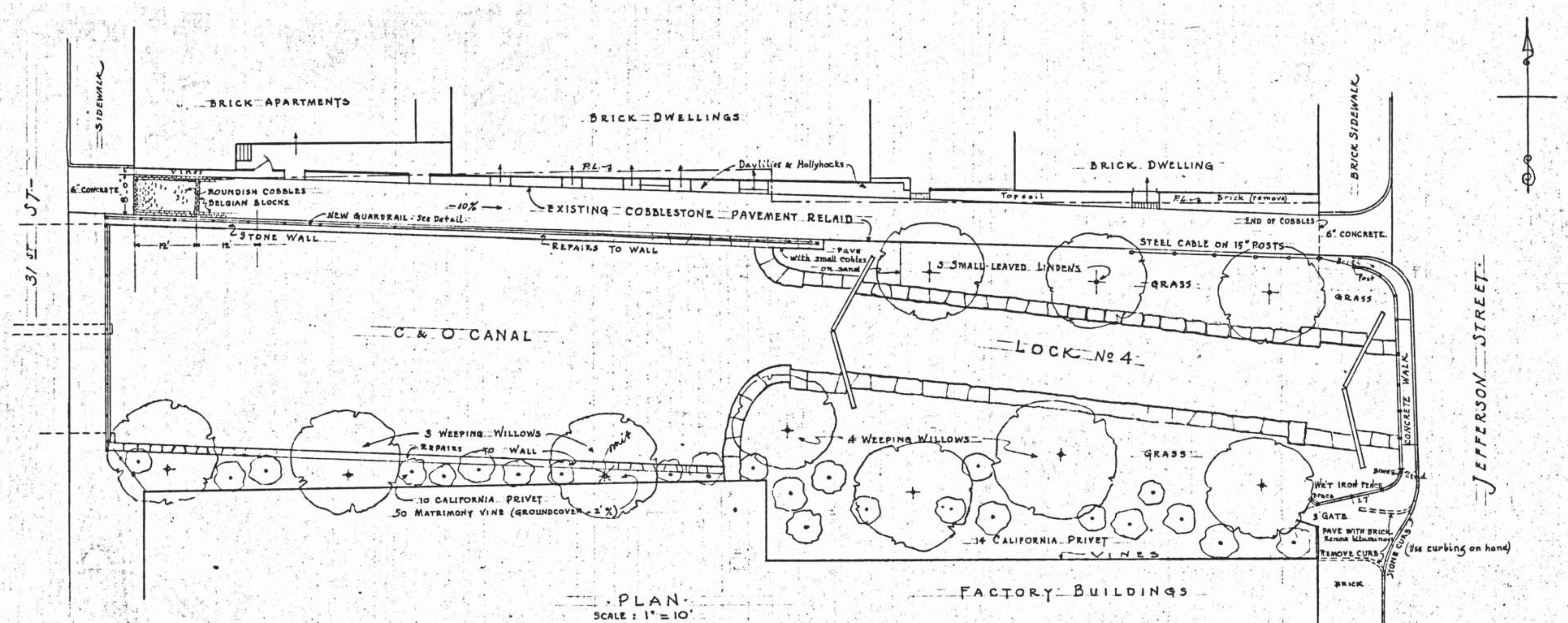
SCALE AS SHOWN 412/80,666

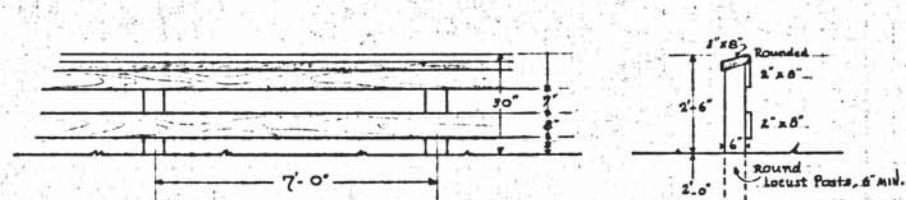
RECOMMENDED _____ DATE _____ CONCURRED _____ DATE _____ APPROVED _____ DATE _____	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE PREPARED BY NATIONAL CAPITAL PARKS OFFICE BRANCH OF PLANNING & CONSTRUCTION	REGION SHEET 1 OF 2
	STUDY of FOOTBRIDGE NAME OF JOB SOUTH OF 34TH STREET, N.W. LOCATION CHESAPEAKE AND OHIO CANAL NAME OF PARK OR MONUMENT	DRAWING NO. N.C.P. 116.6-65

TRIM LINE

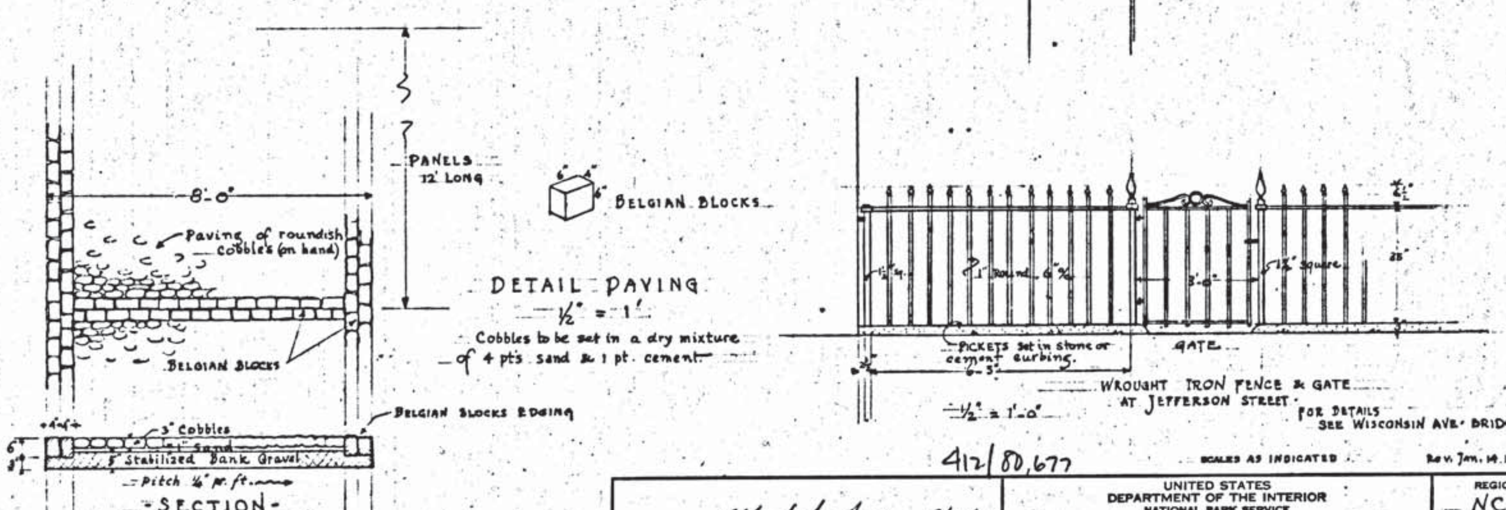

KEY BRIDGE
C. & O. CANAL
Existing Retaining Walls
Proposed Towpath and Service Road
Water Intake
Proposed Retaining Wall
Existing Construction to be removed
Proposed Ramp, Slope 15% up
Existing Towpath
Existing Steel Truss
Existing Retaining Wall
Plan
Scale 1/16" = 1'-0"
Existing Steel Truss with Wooden Deck
℄ 34th St.
Horizontal
Existing North Abutment
Existing South Abutment
Existing Wooden Steps
Existing Grade
C & O Canal
℄ Section thru Existing Steel Truss showing Existing Construction
Scale 1/8" = 1'-0"
Existing Steel Truss with Wooden Deck. To be reconditioned as required by proper repair, scraping and pointing.
Proposed Reconstruction of South Abutment
℄ Section thru A-A showing Proposed Reconstruction
Scale 1/8" = 1'-0"
Proposed Retaining Wall
Pipe Railing
Storm Water Drain
Section thru B-B showing Ramp Construction
Scale 1/8" = 1'-0"
Arch Intrados
6'-6" Average
Key Bridge Span over C&O Canal
Truck of Average Dimensions
9'-0" Average
7'-0"
8'-0"
Existing Retaining Wall and Earth Backfill
Proposed Retaining Wall and Earth Backfill
Section thru C-C showing Proposed Retaining Wall
Scale 1/2" = 1'-0"
6'-0"
1'-6"
3" Pipe Railing
Concrete Surface of Ramp to have Ribbed Finish
Slope 3%
Batter 1:12
Typical Section thru South Ramp
Scale 1/2" = 1'-0"
BASIC DATA
N.C.P. 3018-A, 6-2-39
N.C.P. 110.6-61.2
N.C.P. 110.6-65
"K" ST. ELEV. HWY. DWGS (D.C. GOVT.)
SCALE As Shown
412/80,666
RECOMMENDED FOR THE CHIEF OF DEVELOPMENT, N.P.S. DATE 3/24/47
CONCURRED SUPERINTENDENT, N.C.P. DATE 3/25/47
APPROVED ACTING DIRECTOR, N.P.S. DATE 3/26/47
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
BRANCH OF PLANNING & CONSTRUCTION
STUDY of FOOTBRIDGE
SOUTH OF 34TH. STREET, N.W.
CHESAPEAKE & OHIO CANAL
REGION
SHEET 2 OF 2
DRAWING NO.
N.C.P.
110.6-65-A
DESIGNED BY
DATE 3-21-47
REVIEWED
PLANS AND DESIGN
ENGINEERING
FORESTRY
HISTORY
RESEARCH AND EDUCATION
SANITATION
RECREATIONAL PLANNING AND STATE COOPERATION
CLEARED
4/25/47
TRIM LINE

1948 Lock 4 Planting Plan





WOOD GUARDRAIL
1/2" = 1'-0"



PLANT LIST

BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
Salix babylonica	Babylon Weeping Willow	8-10ft	6
Ligustrum ovalifolium	California Privet	3-4ft	24
Tilia cordata	Littleleaf Linden	2 1/2 in.	3
Lycium halimifolium	Matrimony Vine	18" clumps	50

REDUCED SIZE REPRODUCTION

412/80,677

SCALES AS INDICATED

Rev. Jan. 14, 1949

RECOMMENDED *[signature]* DATE 9/24/48
FOR THE CHIEF OF DEVELOPMENT - NPS

CONCURRED *[signature]* DATE 9/24/48
SUPERINTENDENT NCP

APPROVED *[signature]* DATE 9/24/48
ACTING DIRECTOR NPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PLANNING DIVISION

REHABILITATION OF A PORTION OF THE C. & O. CANAL
BETWEEN JEFFERSON & 31ST STS. GEORGETOWN

REGION NCP
WASHINGTON DC
SHEET 1 OF 1
DRAWING NO. N.C.P. 110.6-79

DESIGNED BY H.E.V.S. DATE April 21, '48

BASIC DATA

REVIEWED: PLANS AND DESIGN; ENGINEERING; FORESTRY; HISTORY; RESEARCH AND EDUCATION; SANITATION; PLANNING AND STATE COOPERATION; RECREATIONAL

CLEARED: REGIONAL DIRECTOR *[signature]* ASST. SUPERINTENDENT NCP

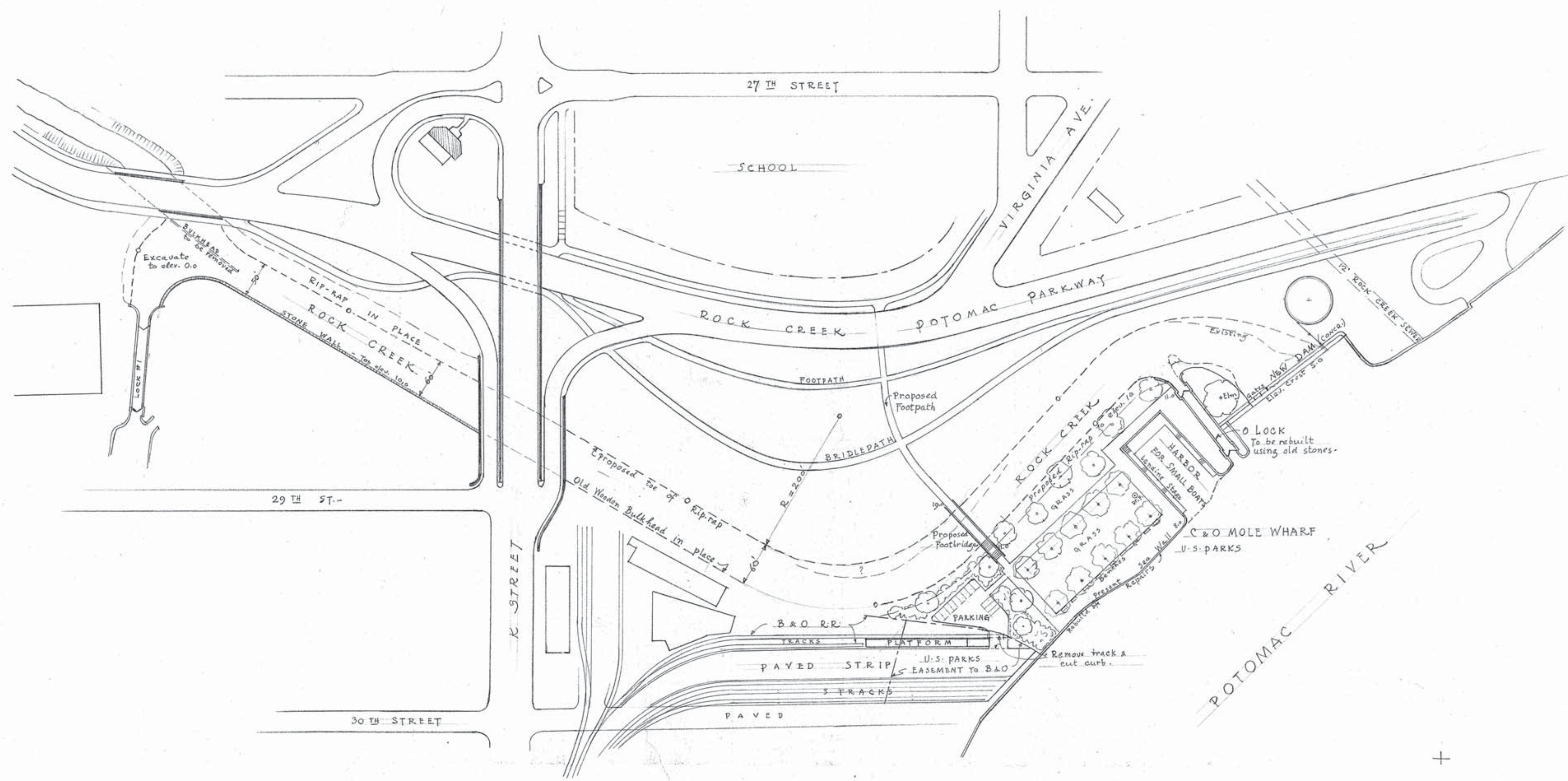
TRIM LINE

3

3 prints

1949 Existing Conditions

TRIM LINE



CLEARED	REGIONAL DIRECTOR
REVIEWED	RECREATIONAL PLANNING AND STATE COOPERATION; RESEARCH AND EDUCATION; SANITATION; FORESTRY; HISTORY; PLANS AND DESIGN; ENGINEERING
DESIGNED BY J.H.E.S.	DATE Sept. 7 - 45

BASIC DATA

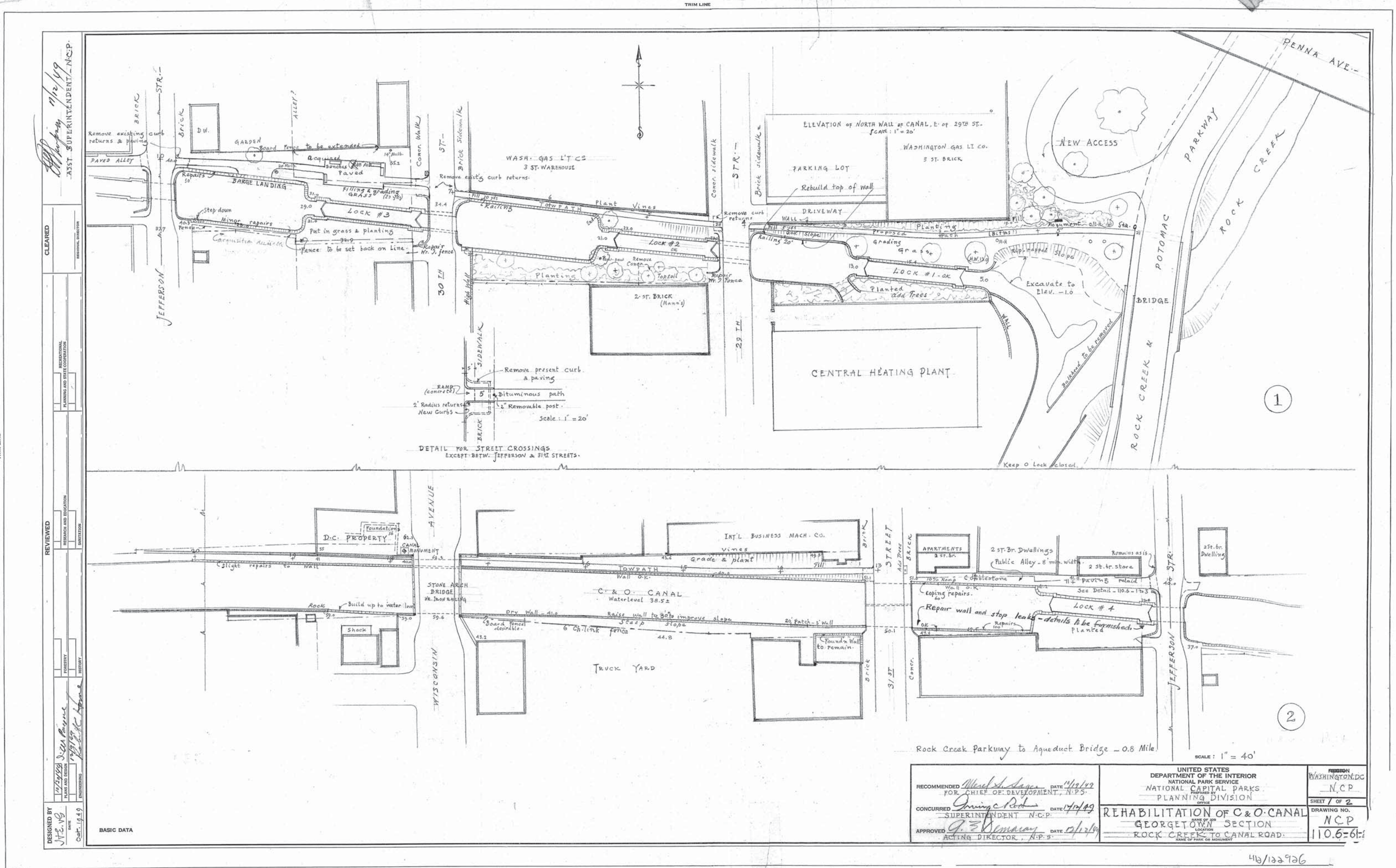
RECOMMENDED ______ DATE ______
CONCURRED ______ DATE ______
APPROVED ______ DATE ______

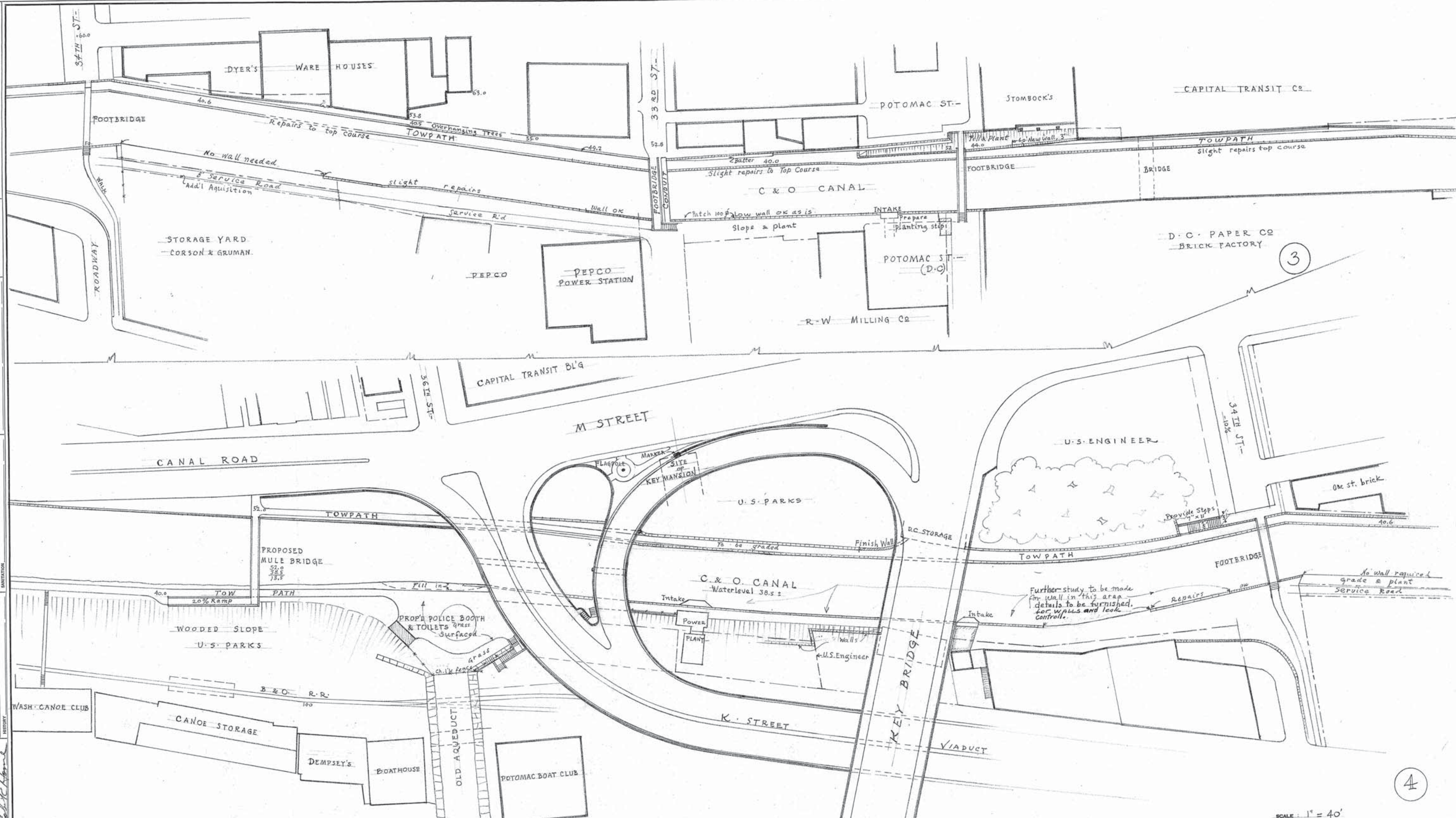
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PREPARED BY
DIVISION OF PLANNING
OFFICE
REHABILITATION C & O CANAL
NAME OF JOB
GEORGETOWN SECTION
LOCATION
WASHINGTON - D.C.
NAME OF PARK OR MONUMENT

REGION
DATE: Sep. 8.
REV.:
SHEET 1 OF 3
DRAWING NO.
N.C.P.
110.6_61.1

412/122976

TRIM LINE


UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PLANNING DIVISION
REHABILITATION OF C & O CANAL
GEORGETOWN SECTION
ROCK CREEK TO CANAL ROAD.
REGION WASHINGTON, D.C.
N.C.P.
SHEET 1 OF 2
DRAWING NO. NCP 110.6-61-
SCALE: 1" = 40'
Rock Creek Parkway to Aqueduct Bridge – 0.8 Mile
RECOMMENDED Merel S. Sager DATE 11/19/49
FOR CHIEF OF DEVELOPMENT, N.P.S.
CONCURRED Irving C. Root DATE 12/12/49
SUPERINTENDENT N.C.P.
APPROVED G. E. Demaray DATE 12/12/49
ACTING DIRECTOR, N.P.S.
DESIGNED BY J.H.E. V.S.
DATE Oct. 1949
BASIC DATA
CLEARED
ASST SUPERINTENDENT – N.C.P. 11/12/49
REVIEWED
PLANS AND DESIGN 10/20/49
ENGINEERING 12/9/49
PENNA AVE.
ROCK CREEK PARKWAY
ROCK CREEK & POTOMAC BRIDGE
NEW ACCESS
ELEVATION OF NORTH WALL OF CANAL, E. OF 29TH ST. SCALE: 1" = 20'
WASHINGTON GAS LT CO. 3 ST. BRICK
PARKING LOT
Rebuild top of wall
DRIVEWAY
Planting
Proposed Path
Grading
Grass
LOCK #1 - OK
Planted add Trees
Rip-rapped slope
Excavate to Elev. -1.0
Bulkhead to be removed
CENTRAL HEATING PLANT
Keep O Lock closed.
29 TH STR.
Remove curb returns
Repair Wr. I. fence
2-ST. BRICK (Mann's)
LOCK #2 OK
Remove Concr.
Topsoil
Planting
TOWPATH
Plant Vines
Railing
WASH. GAS LT CO 3 ST. WAREHOUSE
Remove exist'g curb returns.
Brick sidewalk
Concr. sidewalk
High Wall
30 TH ST.
LOCK #3
Filling & grading GRASS
Acquired
Paved
BARGE LANDING
Step down
Minor repairs
Put in grass & planting
Fence to be set back on Line
Acquisition desired
GARDEN
Board Fence to be extended
ALLEY?
D.W.
Remove existing curb returns & paving
PAVED ALLEY
JEFFERSON STR.
Remove present curb & paving
RAMP (concrete)
Bituminous path
2" Removable post
2' Radius returns
New Curbs
SIDEWALK
BRICK
Scale: 1" = 20'
DETAIL FOR STREET CROSSINGS
EXCEPT BETW. JEFFERSON & 31ST STREETS.
2 St. br. Dwelling
Remains as is
2 st. br. store
2 ST. 3 br. Dwellings
Public Alley - 8' min. width
APARTMENTS 3 st. br.
Cobblestone
10% Ramp
Wall O.K.
Coping repairs.
Paving relaid
See Detail - 110.6 - 1 to 3
LOCK #4
Repair wall and stop leaks - details to be furnished.
Planted
Repairs
31 ST STREET
Add Trees
INT'L BUSINESS MACH. CO.
Vines
Grade & plant
Fill
TOWPATH
Wall O.K.
C & O CANAL
Waterlevel 38.5±
Raise wall to 30" to improve slope
Steep slope
6' Ch-link fence
20' Patch - 3' wall
Found'n Wall to remain.
Dry Wall
Board fence desirable
TRUCK YARD
STONE ARCH BRIDGE
Wr. Iron Railing
WISCONSIN AVENUE
CANAL MONUMENT
D.C. PROPERTY
Foundation
Slight repairs to wall
Rock
Build up to water level
Shack
TRIM LINE


34TH ST.
DYER'S WARE HOUSES
FOOTBRIDGE
Repairs to top course
TOWPATH
Overhanging Trees
No wall needed
8' Service Road
Add'l Aquisition
slight repairs
Service Rd
Wall OK
STORAGE YARD
CORSON & GRUMAN
ROADWAY
PEPCO
PEPCO POWER STATION
33RD ST.
FOOTBRIDGE
CONDUIT
POTOMAC ST.
STOMBOCK'S
CAPITAL TRANSIT CO
Fill & Plant
New Wall
Slight repairs top course
BRIDGE
Batter 40.0
Slight repairs to Top Course
C & O CANAL
Low wall OK as is
Slope & plant
INTAKE
Prepare planting steps
D.C. PAPER CO
BRICK FACTORY
POTOMAC ST. (D.C.)
R-W MILLING CO
3
CAPITAL TRANSIT BL'G
36TH ST.
M STREET
CANAL ROAD
34TH ST.
10%
U.S. ENGINEER
Old st. brick
Provide Steps
FLAGPOLE
MARKER
SITE OF KEY MANSION
U.S. PARKS
TOWPATH
PROPOSED MULE BRIDGE
To be graded
Finish Wall
D.C. STORAGE
FOOTBRIDGE
No wall required
grade & plant
Service road
TOW PATH
20% Ramp
Fill in
C & O CANAL
Waterlevel 38.5±
Intake
Power
PLANT
Walls
U.S. Engineer
Further study to be made for wall in this area details to be furnished for walls and leak controlls.
Repairs
Intake
WOODED SLOPE
U.S. PARKS
PROP'D POLICE BOOTH & TOILETS
Grass Surfaced
Grass
Ch. L. fence
KEY BRIDGE
VIADUCT
K. STREET
B & O R.R.
WASH. CANOE CLUB
CANOE STORAGE
DEMPSEY'S
BOATHOUSE
OLD AQUEDUCT
POTOMAC BOAT CLUB
H.W. 18.2
POTOMAC RIVER
4

SCALE 1" = 40'

RECOMMENDED [illegible] DATE 10/19/49
FOR CHIEF OF DEVELOPMENT - N.P.S.

CONCURRED [illegible] DATE 12/12/49
SUPERINTENDENT - N.C.P.

APPROVED [illegible] DATE 12/12/49
ACTING DIRECTOR - N.P.S.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PREPARED BY
PLANNING DIVISION
OFFICE

REHABILITATION C & O CANAL
NAME OF JOB
GEORGETOWN SECTION
LOCATION
ROCK CREEK PARKWAY TO CANAL ROAD
NAME OF PARK OR MONUMENT

REGION WASHINGTON, D.C.
N.C.P.
SHEET 2 OF 2
DRAWING NO.
N.C.P.
110.6-61

DESIGNED BY [illegible]
DATE Oct. 1949
BASIC DATA

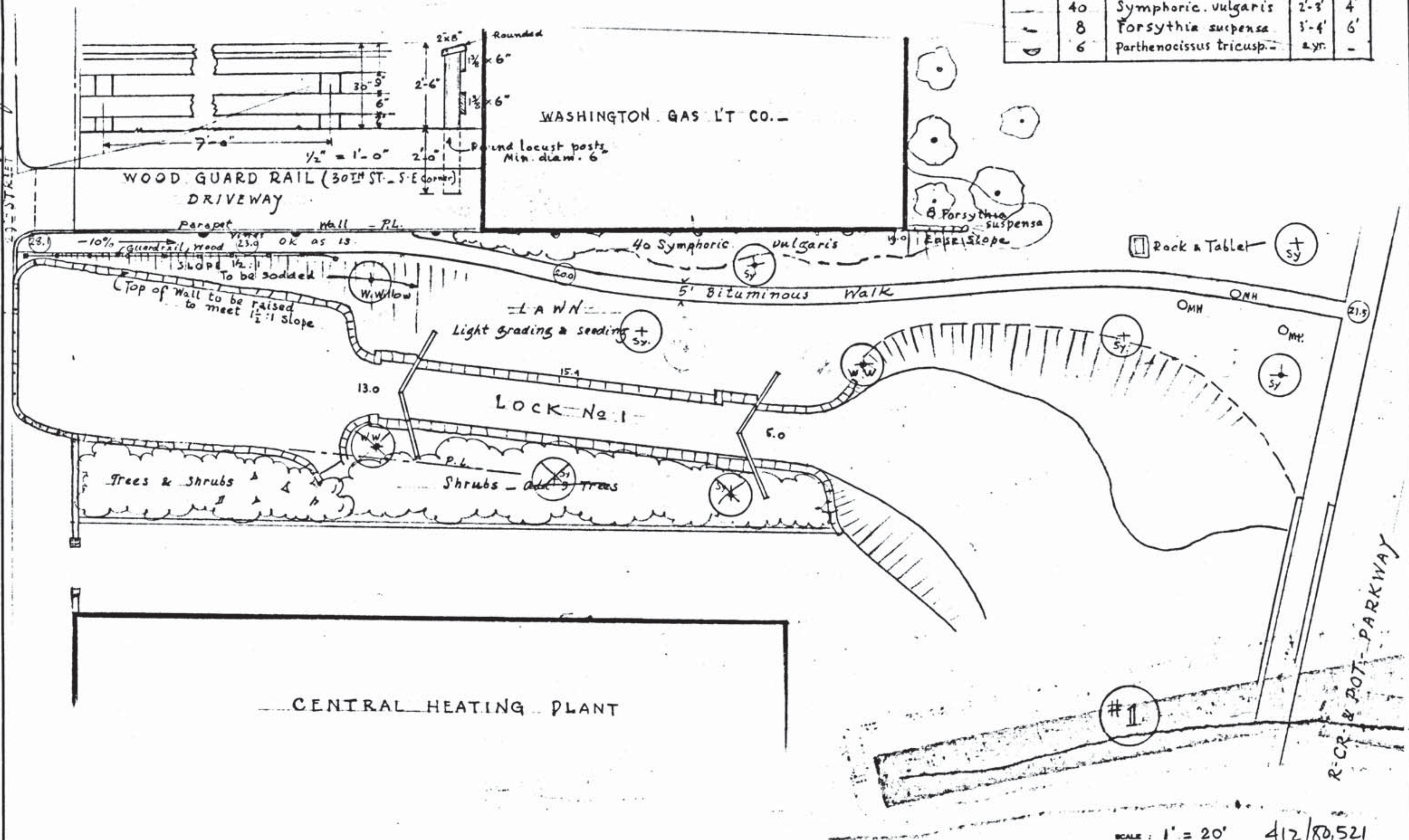
REVIEWED
PLANS AND DESIGN
ENGINEERING
FORESTRY
HISTORY
RESEARCH AND EDUCATION
SANITATION
RECREATIONAL PLANNING AND STATE COOPERATION

CLEARED
REGIONAL DIRECTOR
ASS'T SUPERINTENDENT - N.C.P. 11/12/49

412/122926

5

1950 Planting Plan Proposal for the Georgetown Level



PLANT MATERIAL

PARKWAY TO 29TH STREET

Symbol	Quant.	Name	Size	Dist.
Sy.	5	Platanus acerifol.	2-2 1/2" cal	-
WW	2	Salix pendula	2-2 1/2"	-
—	40	Symphoric. vulgaris	2'-3'	4'
—	8	Forsythia suspensa	3'-4'	6'
▽	6	Parthenocissus tricusp.	2 yr.	-

SCALE: 1" = 20'   412/80,521

RECOMMENDED *Wm. S. Sager* DATE 5/1/50
CHIEF, PLANNING & CONSTRUCTION N.R.S.

CONCURRED *[signature]* DATE 5/1/50
SUPERINTENDENT: NCP

APPROVED *[signature]* DATE 5/1/50
Acting DIRECTOR N.P.S.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PLANNING DIVISION

REHABILITATION GEORGETOWN SECTION
PARKWAY TO 29TH STR.
C & O CANAL — GEORGETOWN SECTION

REGION WASHINGTON
SHEET 1 OF 5
DRAWING NO. NCP 110.6-1121

REDUCED SIZE REPRODUCTION

BASIC DATA

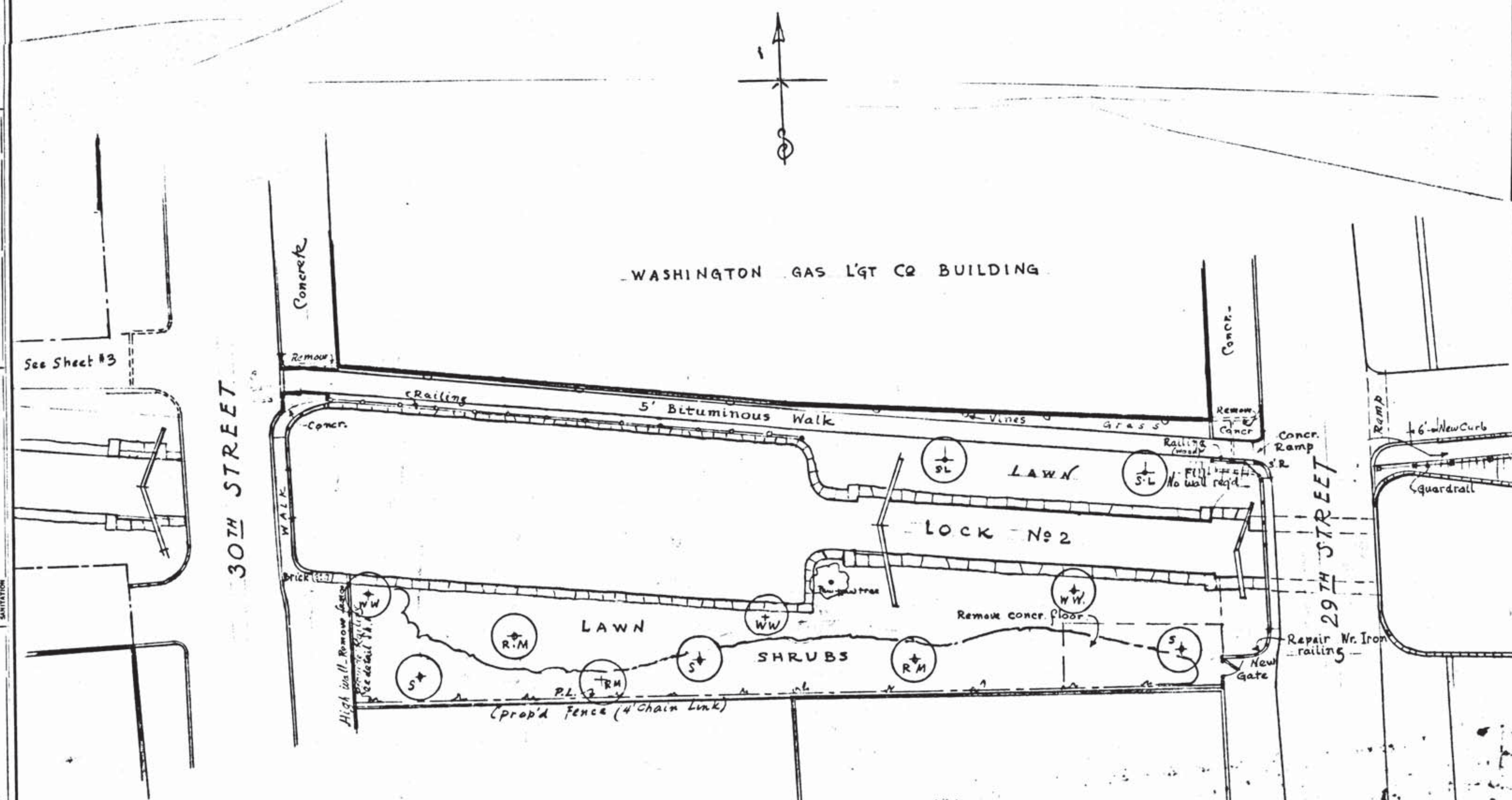
DESIGNED BY HE VS. DATE March 1950

PLANS AND DESIGN | ENGINEERING | FORESTRY | HISTORY | RESEARCH AND EDUCATION | SANITATION | PLANNING AND STATE COOPERATION | RECREATIONAL

REVIEWED

CLEARED 5/1/50

TRIM LINE



PLANT MATERIAL

29TH TO 30TH STREETS

Symbol	Quan't	Name	Size	Dist.
SL	2	2 Tilia tomentosa	2-2½" cal	—
WW	3	Salix alba pendula	2-2½" "	—
S	3	Platanus acerif.	2-2½" "	—
RM	3	Acer rubrum	2-2½" "	—
—	5	" ginnala	4.5'	10'
—	40	Ligustrum ovalif.	3-4'	7'
—	15	Cornus stolonifera	3-4'	5'

SCALE 1" = 20' 412/80.521

RECOMMENDED ______ DATE ______

CONCURRED ______ DATE ______

APPROVED ______ DATE ______

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PREPARED BY
PLANNING OFFICE DIVISION

REHABILITATION GEORGETOWN SECTION
NAME OF JOB
29TH TO 30TH ST'S.
LOCATION
C. & O. CANAL – GEORGETOWN SECTION
NAME OF PARK OR MONUMENT

REGION
WASHINGTON D.C.

SHEET 2 OF _

DRAWING NO.
N.C.P.
110.6 _112 2

BASIC DATA

DESIGNED BY H.V.G.
DATE March 1950

REVIEWED					CLERED
PLANS AND DESIGN	FORESTRY	RESEARCH AND EDUCATION	PLANNING AND STATE COOPERATION	RECREATIONAL	
ENGINEERING	HISTORY	SANITATION			REGIONAL SECTOR

TRIM LINE

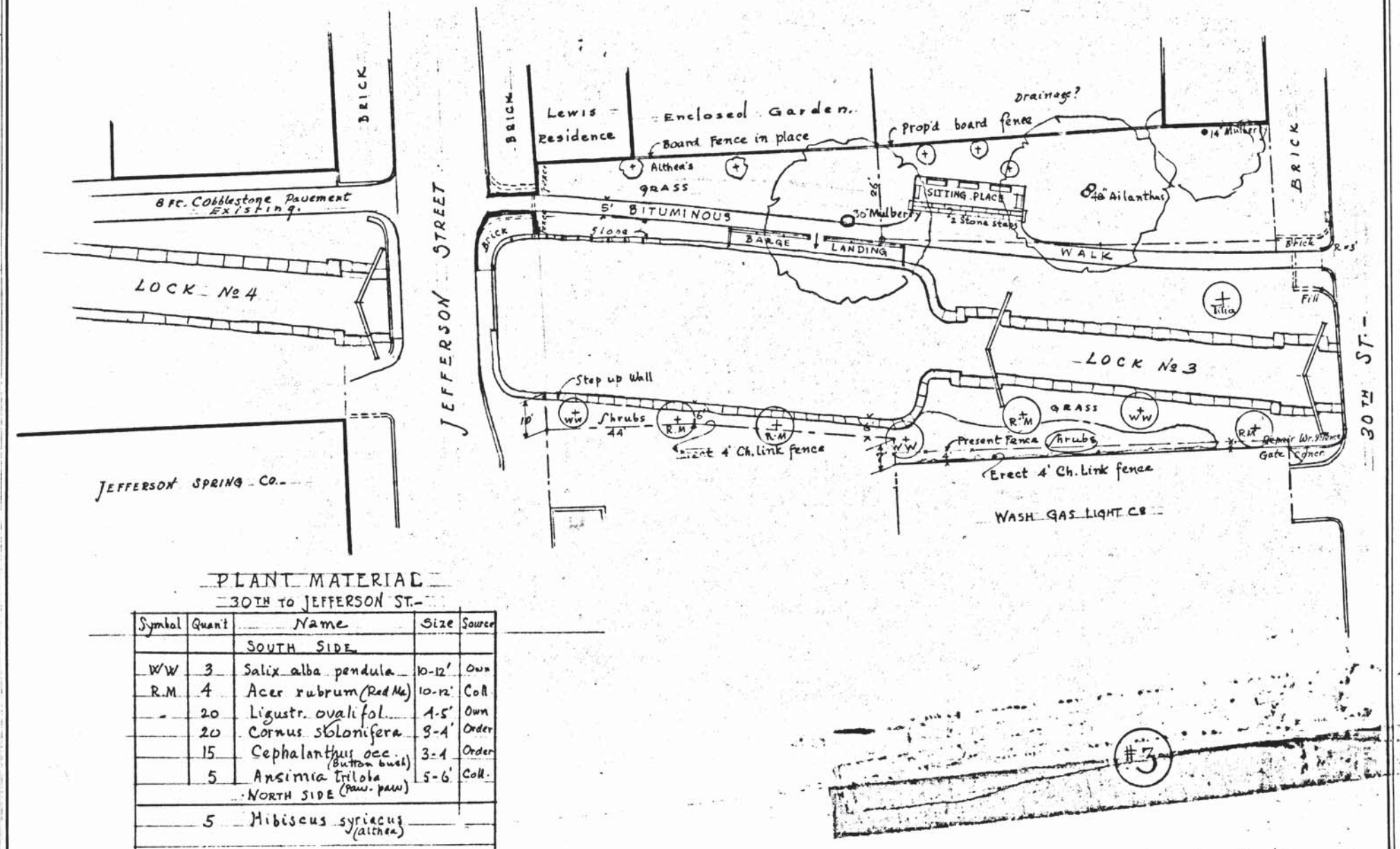
TRIM LINE

CLEARED

REVIEWED

RECREATIONAL
PLANNING AND STATE COORDINATION
REGIONAL DIRECTOR
RESEARCH AND EDUCATION
SANITATION
FORESTRY
HISTORY
PLANS AND DESIGN
ENGINEERING

DESIGNED BY HPW



PLANT MATERIAL
30TH TO JEFFERSON ST.

Symbol	Quan't	Name	Size	Source
		SOUTH SIDE		
WW	3	Salix alba pendula	10-12'	Own
R.M	4	Acer rubrum (Red Ma)	10-12'	Coll.
-	20	Ligustr. ovalifol.	4-5'	Own
	20	Cornus sGlonifera	3-4'	Order
	15	Cephalanthus occ. (Button bush)	3-4	Order
	5	Ansimia Trilola (Paw. paw)	5-6'	Coll.
		NORTH SIDE		
	5	Hibiscus syriacus (althea)		

BASIC DATA

SCALE: 1" = 20' 412/80,521

RECOMMENDED _____ DATE _____
CONCURRED _____ DATE _____
APPROVED _____ DATE _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
PREPARED BY OFFICE
PLANNING DIVISION

REGION WASHINGTON D.C.
SHEET 3 OF 5
DRAWING NO. NCP 110.6-112.3

REHABILITATION GEORGETOWN SECTION
30TH ST. TO JEFFERSON ST.-
C&O CANAL - GEORGETOWN SECTION
NAME OF PARK OR MONUMENT

TRIM LINE

TRIM LINE

CLEARED

RECREATIONAL
PLANNING AND STATE COORDINATION

REGIONAL DIRECTOR

REVIEWED

RESEARCH AND EDUCATION
SANITATION
FORESTRY
HISTORY
PLANS AND DESIGN
ENGINEERING

DESIGNED BY JHB
DATE

BASIC DATA

15' to WISCONSIN AVE.

GRADE
2 SEED
6 Althea
SLOPE
3 Paulownia Trees
Althea
P.L.
BRICK SIDEWALK
R=5'

5' BITUMINOUS WALK

Wall OK

12" Railing

Br.

C & O CANAL

Remove Ailanthus Trees & Shrubs

Raise wall to 3' thru out to remove slope

SLOPE

Pitch wall

CONCRETE

31ST ST.

Gate

Old Foundation to remain.

TRUCK YARD

#5

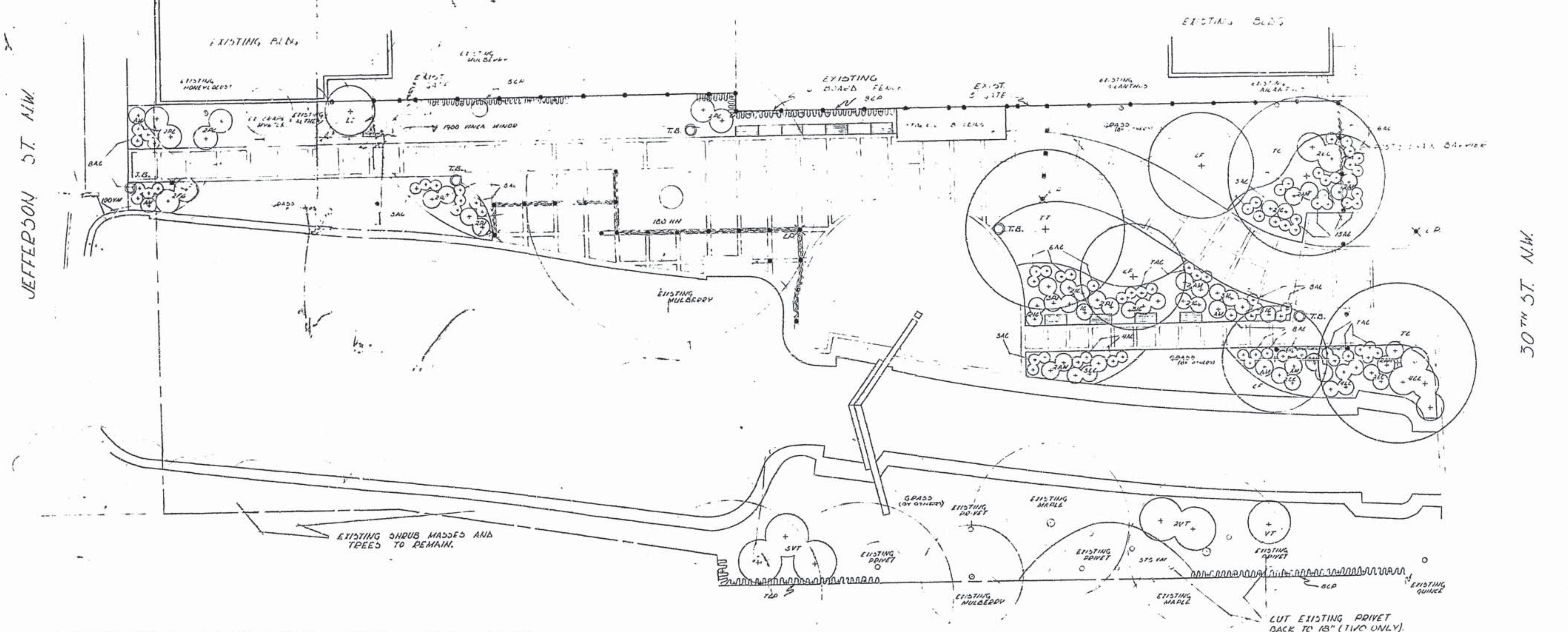
SCALE: 1" = 20'

412/80,521

RECOMMENDED _____ DATE _____	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE NATIONAL CAPITAL PARKS PREPARED BY PLANNING DIVISION OFFICE	REGION WASHINGTON DC
CONCURRED _____ DATE _____		SHEET 5 OF 5
APPROVED _____ DATE _____	REHABILITATION GEORGETOWN SECTION 31ST ST. TO WISCONSIN AVE. NAME OF PARK OR MONUMENT C&O CANAL - GEORGETOWN SECTION LOCATION NAME OF PARK OR MONUMENT	DRAWING NO. N.C.P. 110.6_112.5

TRIM LINE

1964 Lock 3 Planting Plan



PLANT MATERIALS LIST:				
SYMBOL	QUAN.	BOTANICAL NAME	COMMON NAME	REMARKS
TREES				
TC	2	TILIA CORDATA	LITTLELEAF LINDEN	2½-3" CAL., B&B
TT	1	TILIA TOMENTOSA	SILVER LINDEN	2½-3" CAL., B&B
FLOWERING TREES				
CF	3	CORNUS FLORIDA	FLOWERING DOGWOOD	6-8' HT., B&B
LI	1	LAGERSTROEMIA INDICA RUBRA	COMMON RED CRAPEMYRTLE	5-6' HT., B&B
SHRUBS				
AC	80	AZALEA 'CORALBELL'	CORALBELL AZALEA	12-15 SPR, B&B
AM	16	AZALEA MUCRONATUM	SNOW AZALEA	18-24 SPR B&B
CL	6	CHAENOMELES LAGENARIA	FLOWERING QUINCE	3-4' HT, B&B
IC	15	ILEX CRENATA CONVEXA	CONVEXLEAF JAPANESE HOLLY	2-2½' HT, B&B
LC	11	LEUCOTHOE CATESBAEI	DROOPING LEUCOTHOE	12-15" HT B&B
PJ	9	PIERIS JAPONICA	JAPANESE PIERIS	18-24" HT. B&B
PC	8	PYRACANTHA COCCINEA LALANDI	LALAND FIRETHORN	3-4' HT, B&B
VT	6	VIBURNUM TOMENTOSUM MARIESI	MARIES DOUBLEFILE VIBURNUM	2-3' HT, B&B
VINES				
CP	28	CLEMATIS PANICULATA	AUTUMN CLEMATIS	2 YR., 5' OC
GROUND COVERS				
HH	180	HEDERA HELIX	ENGLISH IVY	2½" POTS, 9" OC
VM	2375	VINCA MINOR	COMMON PERIWINKLE	2 YR POTS, 9" OC
BULBS				
NK	400	NARCISSUS 'KING ALFRED' (SCATTERED THROUGH PLANT BEDS AS DIRECTED BY CONTRACTING OFFICER)	KING ALFRED DAFFODIL	TOP SIZE, 1' OC

REMOVE EXISTING SHRUBS AND SEEDLINGS EXCEPT WHERE DESIGNATED.

PLACE 3" WOOD CHIP MULCH IN ALL BEDS EXCEPT THOSE WHERE VM IS PLANTED.

LEGEND

- ⊙ – EXISTING TREES & SHRUBS
- ▭ – EXISTING BENCHES
- ⊙ – PROPOSED TREES & SHRUBS
- ∿∿ – PROPOSED CLEMATIS VINES
- ○ – TRASH BASKET TO BE INSTALLED (ADDED 1/22/76 – D.C.N.)

NOTE: SEE PEDESTRIAN PLAZA – FOUNDRY OFFICE BUILDING (N.C.R. #412/80,023-1-4) FOR NEW DEVELOPMENT ON SOUTH SIDE OF CANAL & JUSTICE WM. O. DOUGLAS BUST SITE PLAN (NCR #412/80,039) FOR REVISED PLANTING.

THIS DRAWING HAS BEEN PREPARED IN COMPLIANCE WITH THE APPROVED DEVELOPMENT PLAN, NCR 110.6-158A, SIGNED BY REGIONAL DIRECTOR, T. SUTTON JETT – 4-30-62

[signature] ACT CHIEF, NCDC — 8/12/64 DATE

ORIENTATION

412/80,499

CONTRACT NO. 2874

REDUCED SIZE REPRODUCTION

GRAPHIC SCALE 10' 0 10' 20'

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE

PLANTING PLAN (TITLE OF DRAWING)
BARGE LANDING – 30TH ST NW (LOCATION WITHIN PARK)
C&O CANAL U.S. RESERVATION 404-C&O (NAME OF PARK)

PREPARED
NEAL — DESIGNED
NEAL — DRAWN
TUPELO — CHECKED
Howland 8-6-64
[signature] 8/10/64
[signature] 8/11/64
[signature] 8/?/64

REGION: NATIONAL CAPITAL
PCP M-206
SHEET 1 OF 1
DRAWING NO. N.C.R. 110.6-169
DATE 7-21-64

BASIC DATA 110.6-165-162

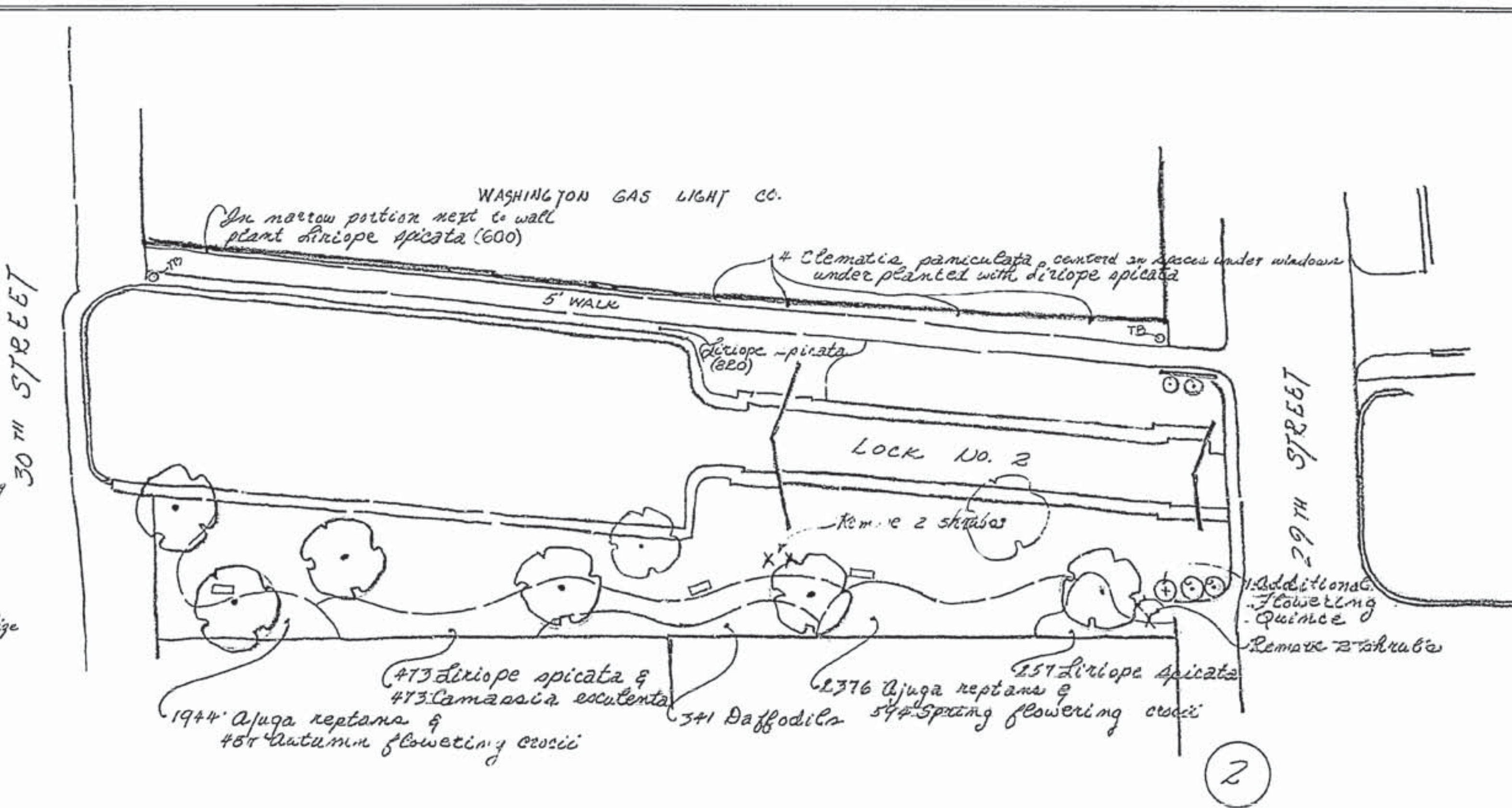
File Copy

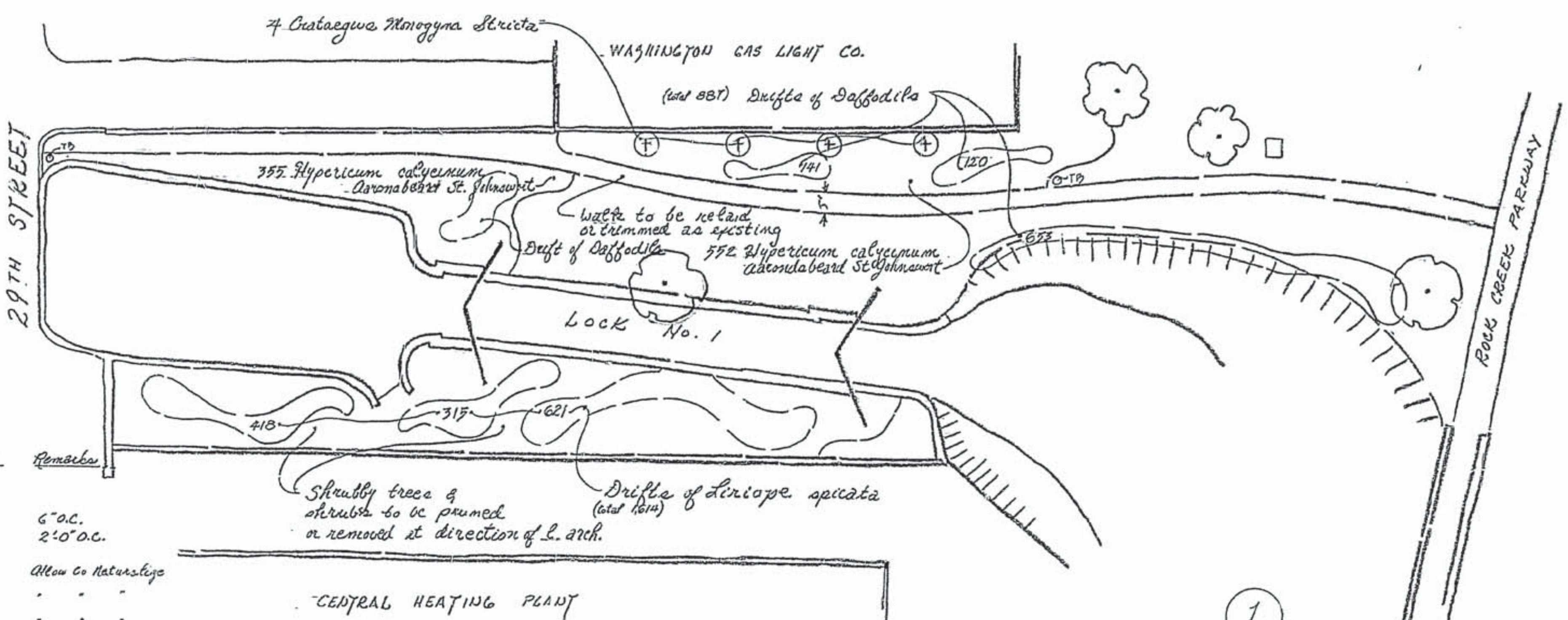
1965 Planting Plan

Master Plant List

Item	Scientific Name	Common Name	Size	Quanity	Remarks
	Trees				
	Crataegus monogyna stricta	Pyramidal Singleseed Hawthorn	8'-10' B&B	4	
	Lagerstroemia indica	Common Pink Crepemyrtle	8'-10' B&B	8	3-5 Stems
	Shrubs				
	Azalea "Coralbells"	Coralbells Azalea	12"-15"	815	2.0' O.C.
	Azalea mucronatum	Snow Azalea	12"-15"	540	2.0' O.C.
	Chaenomeles lagenaria	Japanese Flowering Quince	18"-24"	1	
	Ground Covers				
	Ajuga "Bronze Beauty"	Bronze Beauty Ajuga	2 yr. pots	24,945	
	Hypericum calycinum	Aaronsbeard St. Johnswort	12"-15"	907	
	Liriope spicata	Lilyturf	1 root clump	5,564	Cut back each spring
	Vines				
	Clematis	var: Duchess of Edinburgh (large double white)		4	
	Bulbs				
1	Camassia esculenta	Camassia	top size bulbs	2,787	Allow to Naturalize
2	Colchicum autumnalis	Autumn Flowering Crocus var: Waterlily	" "	487	" " "
3	Daffodil "King Alfred"	King Alfred Daffodil	reg. motherbulbs	7,040	" " "
4	Lycoris squamigera halli	Autumn Flowering Amaryllis	top size bulbs	920	" " "
5	Crocus moesicus	Spring Flowering Crocus var: Golden Yellow	" " "	297	" " "
6	Crocus moesicus	Spring Flowering Crocus var: Joan of Arch	" " "	297	" " "

Note: All bulbs to be planted 1'-0" O.C.±





Plant List (This sheet)

Item	Scientific Name	Common Name	Size	Quan	Remarks
1.	Crataegus monogyna stricta	Pyrimidal Single Hawthorne	8'-10' B&B.	4	
2.	Chaenomeles lagenaria	Japanese Flowering Quince	18"-24"	1	
3.	Ajuga "Bronze Beauty"	Bronze Beauty Ajuga	2 yr. pots	4,320	6" O.C.
4.	Hypericum calycinum	Aaronsbeard St. Johnswort	12"-15"	907	2'-0" O.C.
5.	Clematis paniculata	var: Duchess of Edinburgh (large double white)		4	
6.	Camassia esculenta	Camassia	top size bulbs	473	Allow to Naturalize
7.	Colchicum autumnalis	floreplena Autumn Flowering Crocus var Waterlily	" " "	487	" " "
8.	Crocus moesicus	Spring Flowering Crocus var: Golden Yellow	" " "	297	" " "
9.	Crocus moesicus	Spring Flowering Crocus var: Joan of Arch	" " "	297	" " "
10.	Daffodil "King Alfred"	King Alfred Daffodil	reg. motherbulbs	7,040	" " "
11	Liriope spicata	Lilyturf	1 root clump	3,764	Cut back each spring

Note: All bulbs to be planted 1'-0" O.C.±

BASIC DATA NCP. 110.6-112

TB = TRASH BASKET - NEW STYLE

412/80,501

REDUCED SIZE REPRODUCTION

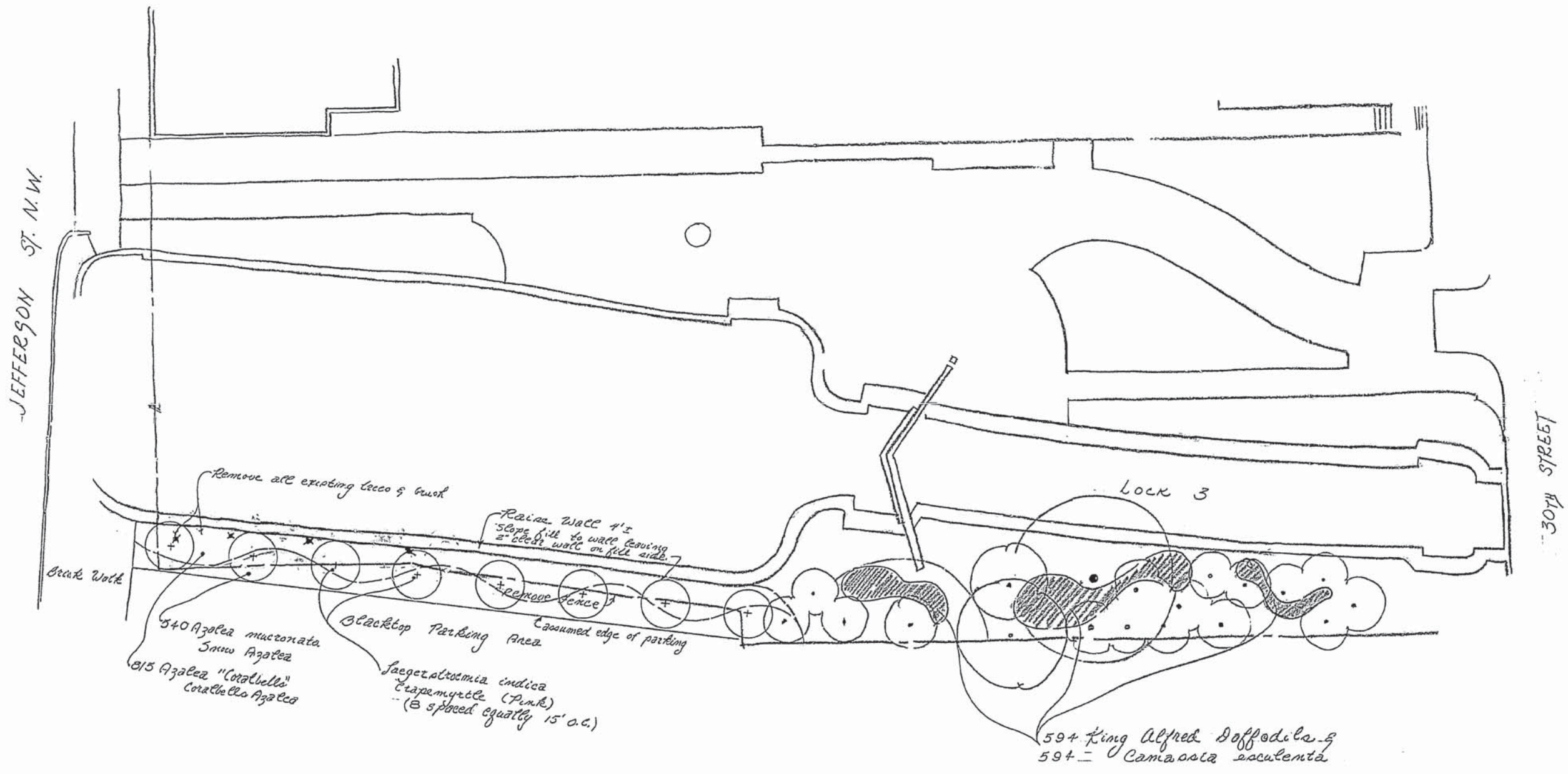
SCALE 1" = 20'

ORIENTATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE

PLANTING PLAN STUDY
C&O CANAL - GEORGETOWN
C&O CANAL - U.S. RESERVATION 404 C&O

PREPARED	SIMONS
DESIGNED	SIMONS GURUS
DRAWN	
CHECKED	
REGION	NATIONAL CAPITAL
	PCP
SHEET	1 OF 3
DRAWING NO.	N.C.P. 110.6-173-1
DATE	2/65



ORIENTATION

Plant List (This sheet)

Item	Scientific Name	Common Name	Size	Quan.	Remarks
1.	Lagerstroemia indica	Common Pink Crapemyrtle	8'-10'	8	3-5 stems
2.	Azalea "Coralbells"	Coralbells Azalea	12"-15"	815	2.0' O.C.
3.	Azalea mucronata	Snow Azalea	12"-15"	540	2.0' O.C.
4	Camassia esculenta	Camassia	Topsize Bulbs	594	Allow to naturalize
5.	Daffodil "King Alfred"	"King Alfred" Daffodil	" "	594	" " "

Note: All bulbs to be planted 1'-0" O.C.±

BASIC DATA

SCALE 1"=10'

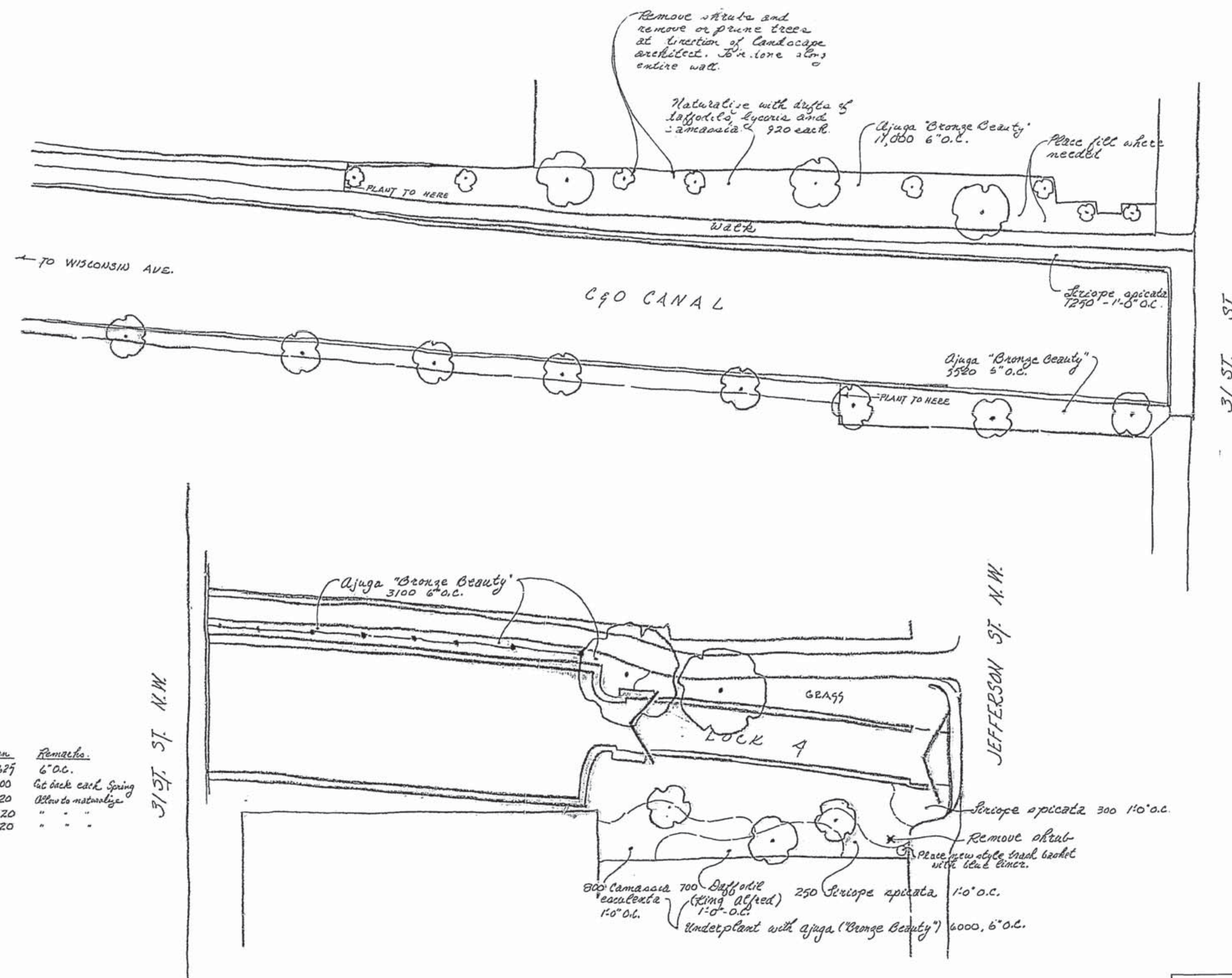
412/80,501

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE

PLANTING PLAN STUDY (TITLE OF DRAWING)
C&O CANAL BARGE LANDING (LOCATION WITHIN PARK)
C&O CANAL-U.S. RESERVATION 404-C&O (NAME OF PARK)

PREPARED SIMONS
DESIGNED SIMONS, LIVEING
DRAWN
CHECKED

REGION NATIONAL CAPITAL
PCP
SHEET 2 OF 3
DRAWING NO. N.C.P. 110.6-173-2
DATE 2/65



Plant List (This sheet)

Item	Scientific Name	Common Name	Size	Quan.	Remarks.
1.	Ajuga "Bronze Beauty"	Bronze Beauty Ajuga	2¼" pots	25,625	6" O.C.
2.	Liriope spicata	Lilyturf	Root clump	1800	Cut back each Spring
3.	Camassia esculenta	Camassia	Bulb	1720	Allow to naturalize
4.	Daffodil "King Alfred"	"King Alfred" Daffodil	Reg. Mother bulbs	1620	" " "
5.	Lycoris squamigera (halli)	Autumn Flowering Amaryllis	top size bulbs	920	" " "

Note: All bulbs to be planted 1'-0" O.C. ±

BASIC DATA

SCALE 1" = 20'

412/80,501

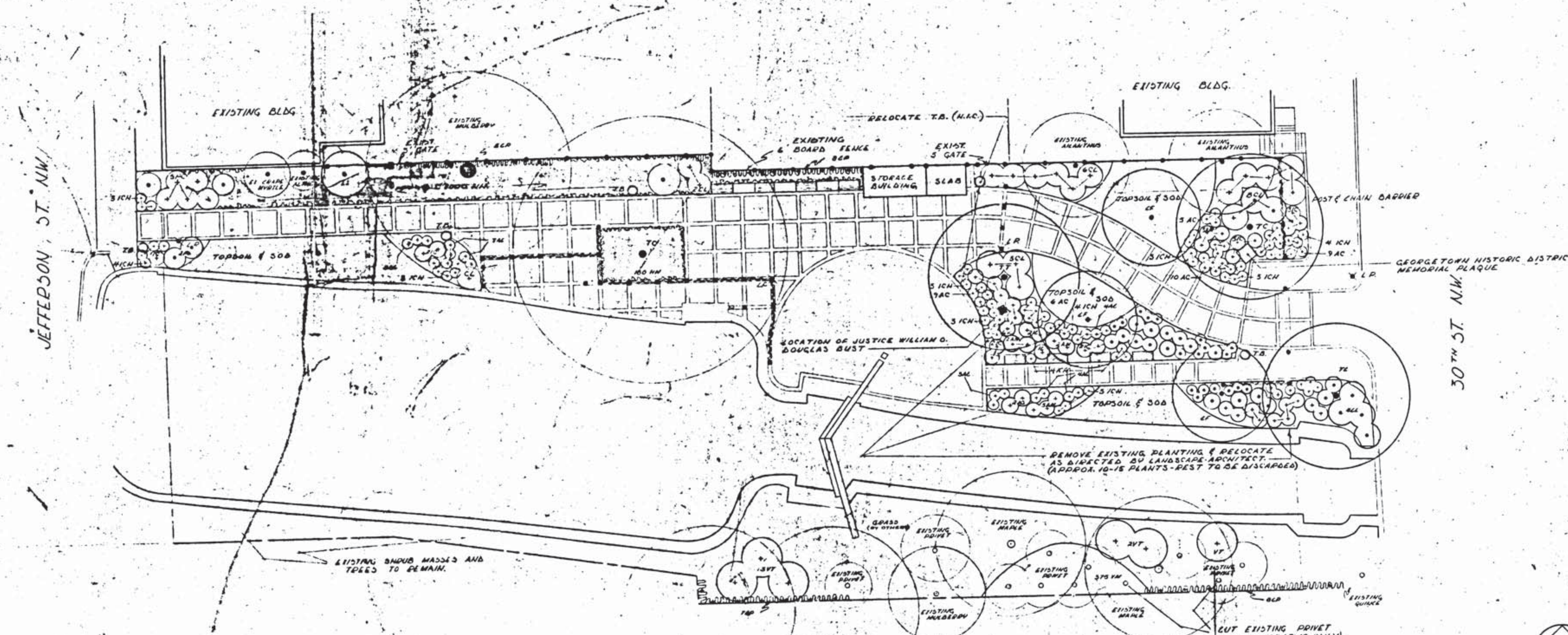
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE

PLANTING PLAN STUDY
TITLE OF DRAWING
C&O CANAL — GEORGETOWN
LOCATION WITHIN PARK
C&O CANAL — U.S. RESERVATION 404 C&O
NAME OF PARK

PREPARED
SIMONS
DESIGNED
SIMONS
DRAWN
CHECKED

REGION
NATIONAL CAPITAL
PCP
SHEET 3 OF 3
DRAWING NO.
N.C.R.
110.6-173-3
DATE 9/65

1977 Douglas Bust Planting Plan



PLANT MATERIALS LIST:

SYMBOL	QUAN.	BOTANICAL NAME	COMMON NAME	REMARKS
TREES----				
TC	3	TILIA CORDATA	LITTLELEAF LINDEN	2½-3" CAL., B&B
TT	1	TILIA TOMENTOSA	SILVER LINDEN	2½-3" CAL., B&B
FLOWERING TREES----				
CF	3	CORNUS FLORIDA	FLOWERING DOGWOOD	6-8' HT., B&B
LI	1	LAGERSTROEMIA INDICA RUBRA	COMMON RED CRAPEMYRTLE	5-6' HT., B&B
SHRUBS----				
AC	60	AZALEA "CORALBELL"	CORALBELL AZALEA	12-15" SPR. B&B
AM	10	AZALEA MUCRONATUM	SNOW AZALEA	18-24" SPR. B&B
CL	24	CHAENOMELES LAGENARIA	FLOWERING QUINCE	3-4' HT., B&B
IC	24	ILEX CRENATA CONVEXA	CONVEXLEAF JAPANESE HOLLY	2-2½', B&B
ICH	37	ILEX CRENATA HELLERI	HELLER'S DWARF JAP. HOLLY	15-18", B&B
PC	10	PYRACANTHA COCCINEA LALANDI	LALAND FIRETHORN	3-4' HT., B&B
VT	6	VIBURNUM TOMENTOSUM MARIESI	MARIES DOUBLEFILE VIBURNUM	2-3' HT., B&B
VINES----				
CP	28	CLEMATIS PANICULATA	AUTUMN CLEMATIS	2 YR., 5" CC.
GROUND COVERS----				
HH	1000	HEDERA HELIX	ENGLISH IVY	" POTS, " OC.
BULBS----				
NK	400	NARCISSUS 'KING ALFRED' (SCATTERED THROUGH PLANT BEDS AS DIRECTED BY CONTRACTING OFFICER)	KING ALFRED DAFFODIL	TOP SIZE, 1' OC.

(PLANTINGS REVISED 3/15/77 D.L.N.)

BASIC DATA 110 6-165-1&2 NOTE: NOT ALL MATERIALS SHOWN ON LIST ARE TO BE REPLANTED OR REPLACED. SEE BID SCHEDULE FOR ITEMIZATION. EXACT LOCATIONS SHALL BE AS DETERMINED ON SITE BY LANDSCAPE ARCHITECT.

LEGEND

- ⊙ - EXISTING TREES & SHRUBS TO REMAIN
- ▬ - EXISTING BENCHES
- ⊙ - PROPOSED TREES & SHRUBS
- ᴧᴧᴧ - CLEMATIS VINES
- ○ - TRASH BASKETS (ADDED 1-22-78 D.L.N.)

REDUCED SIZE REPRODUCTION

GRAPHIC SCALE

NOTE: SEE PEDESTRIAN PLAZA - FOUNDRY OFFICE BUILDING (NCP #412/80,023-1-4) FOR NEW DEVELOPMENT ON SOUTH SIDE OF CANAL WHICH HAS ALREADY BEEN COMPLETED.

THIS DRAWING HAS BEEN PREPARED IN COMPLIANCE WITH THE APPROVED DEVELOPMENT PLAN, NCP 110 6-158A, SIGNED BY REGIONAL DIRECTOR, T. SUTTON JETT - 4-30-62

[signature] 8/12/64
ACT CHIEF, NCDC DATE

ORIENTATION

PREPARED	
NEAL	DESIGNED
NEAL	DRAWN
TUFELLO	CHECKED
[signature]	5-6-64
[signature]	7/4/64
[signature]	8/11/64
[signature]	3/…/…

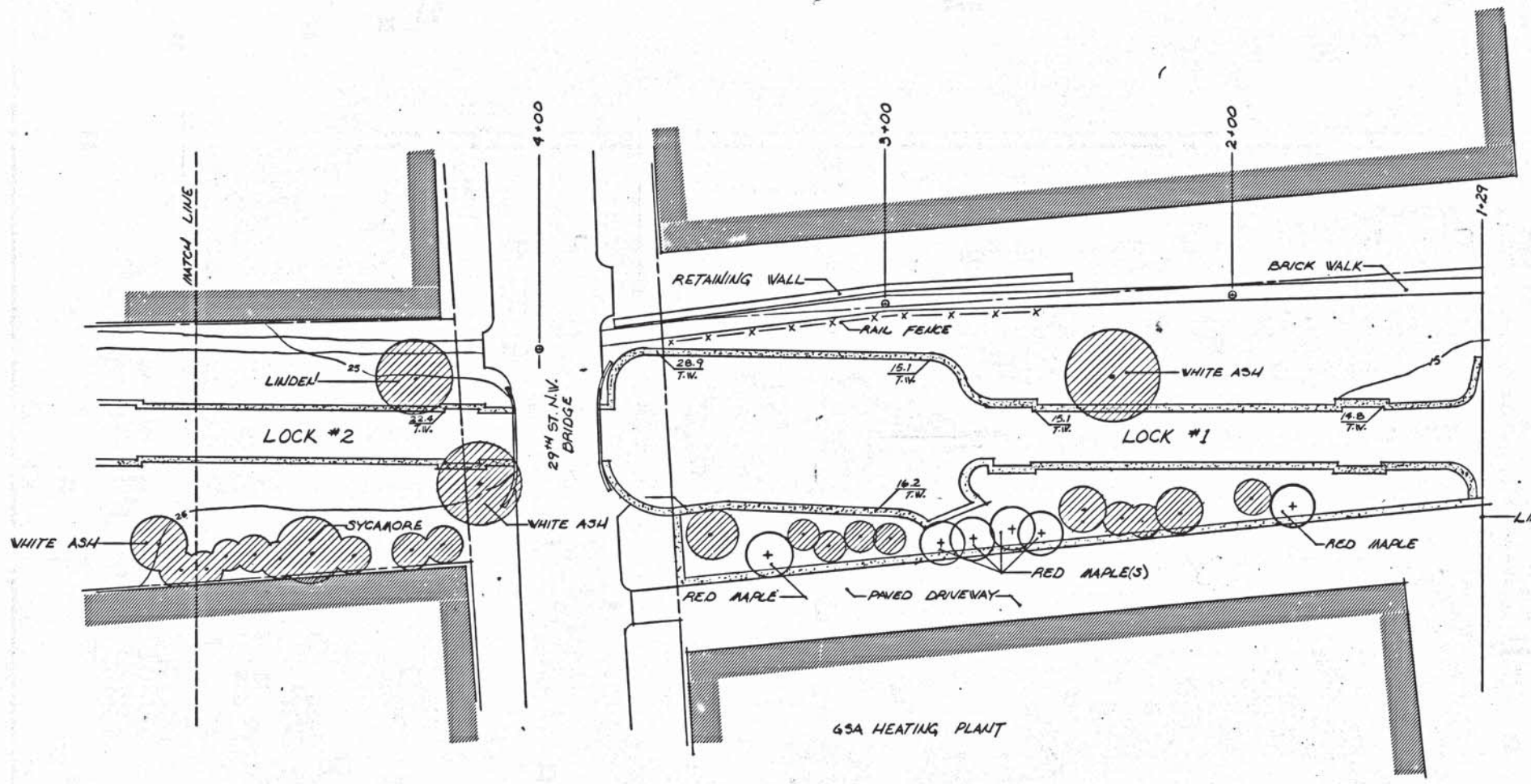
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE

JUSTICE W.O. DOUGLAS BUST PLANTING PLAN
C&O CANAL BARGE LANDING - 30TH & JEFF. ST. N.W.
C&O CANAL NATIONAL HISTORICAL PARK

REGION NATIONAL CAPITAL
PCP
SHEET 1 OF 1
DRAWING NO. N.C.R. 412/80,040
DATE 3/15/77

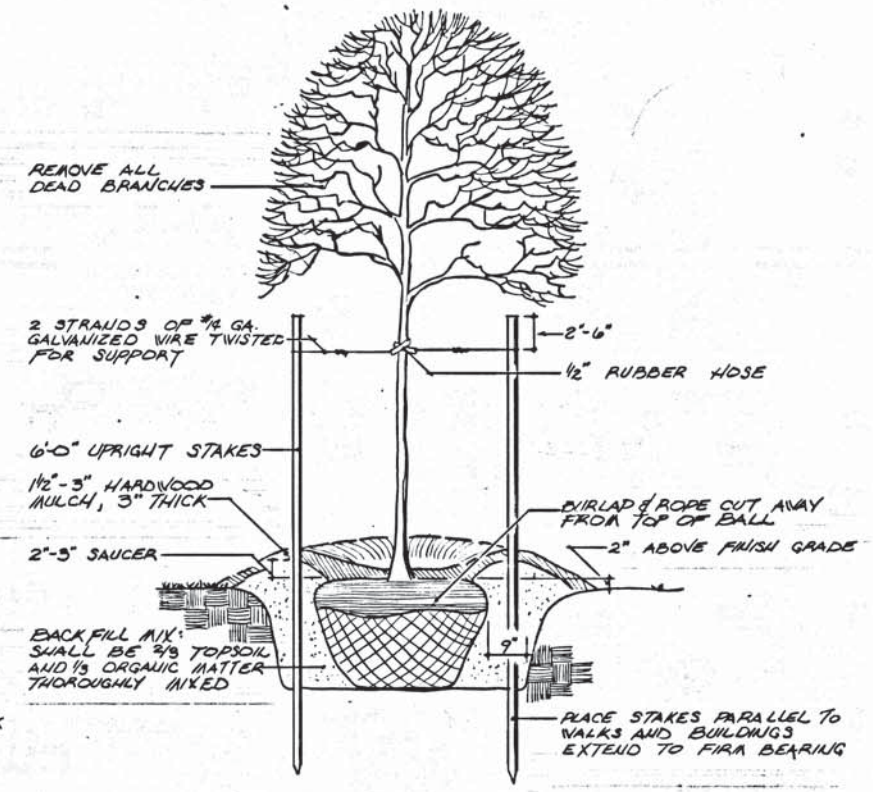
NCP 110.6-206 12

1980 Planting Plan Proposal for the Georgetown Level



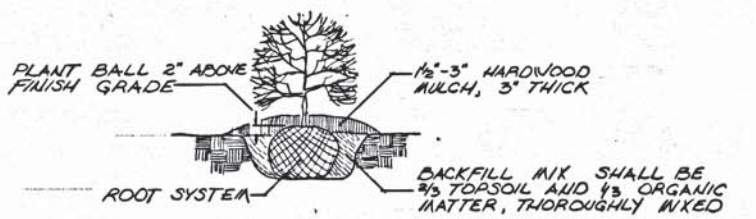
C&O CANAL - PLANTING PLAN

SCALE 1" = 20'-0"



TREE PLANTING

NO SCALE



SHRUB PLANTING

NO SCALE

NOTES

- CONTRACTING OFFICER TO STAKE PLANT LOCATIONS
-
- SEED ALL DISTURBED AREAS
- SEED SPECIFICATION:
  - 5 lbs. PER 1000 SQ. FT.
  - 60% PENNLAWN RED FESCUE
  - 10% MERIAN KENTUCKY BLUEGRASS
  - 15% GLADE KENTUCKY BLUEGRASS
  - 15% ADELPHI KENTUCKY BLUEGRASS
- ALL SEED SHALL BE CERTIFIED
- MULCH SHALL BE 1" STRAW; NO TAC SHALL BE USED

Notes Revised 3/20/81 D.H.H.

PLANT LIST AND SPECIFICATIONS

QUAN.	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS
6	RED MAPLE	ACER RUBRUM	2-2½" B&B FULL

EXISTING TREES TO REMAIN

NEW RED MAPLES

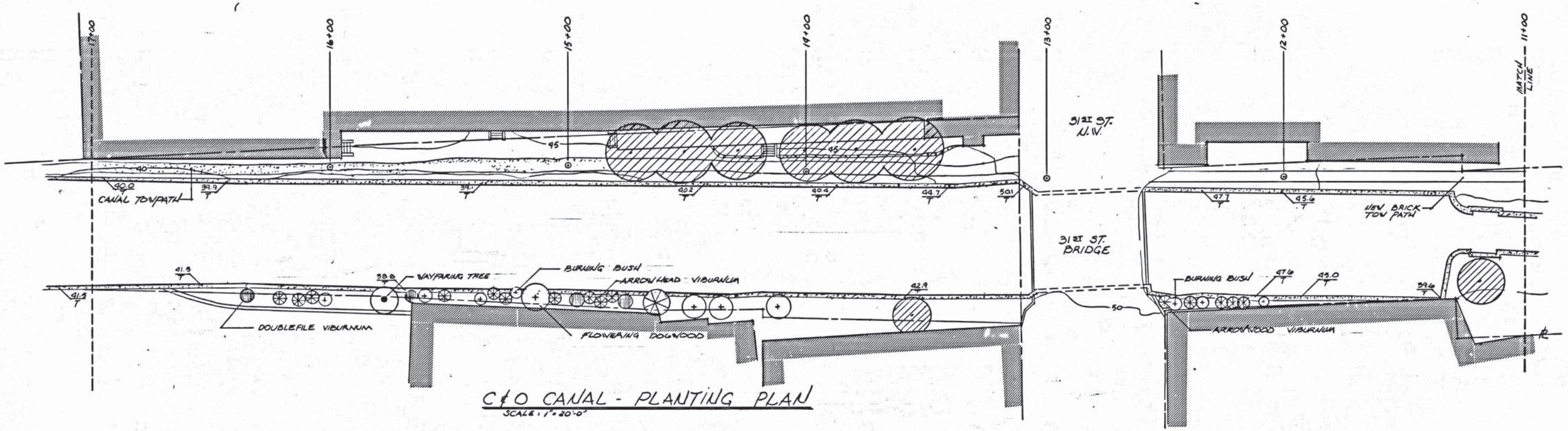
110.6-225

REDUCED SIZE REPRODUCTION

BASIC DATA

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE DENVER SERVICE CENTER	PREPARED LAUN DESIGNED D.D.B. DRAWN LAD CHECKED 7/21/80 DATE	TITLE OF DRAWING: PLANTING PLAN LOCATION WITHIN PARK: LOCK 1 TO ALEXANDRIA AQUEDUCT NAME OF PARK: CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK N.C.R. (WASHINGTON, DC) REGION COUNTY STATE	DRAWING NO. 912 80,225 PKG. NO. SHEET 1 OF 3

GPO-1974-678-711



C & O CANAL - PLANTING PLAN

SCALE: 1" = 20'-0"

NOTES

Revised 5/20/81 D.HH , See Sheet 1 of 3

PLANT LIST AND SPECIFICATIONS

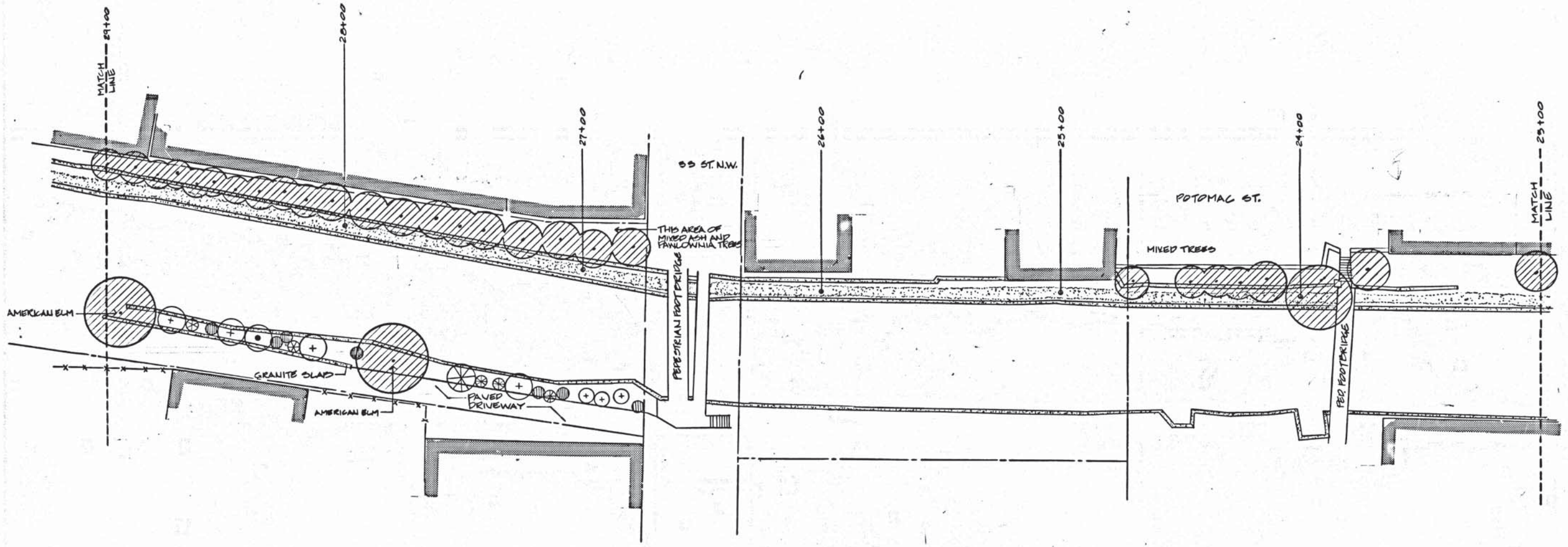
SYM.	QUAN.	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS
	15	ARROWWOOD VIBURNUM	VIBURNUM DENTATUM	3-4' B&B
	7	BURNING BUSH	EUONYMUS ALATUS	24"-30" B&B
	4	DOUBLEFILE VIBURNUM	VIBURNUM PLICATUM MARIESI	3-4' B&B
	1	WAYFARING TREE	VIBURNUM LANTANA	3-4' B&B
	1	EASTERN REDBUD	CERCIS CANADENSIS	6-8' B&B FULL
	4	FLOWERING DOGWOOD	CORNUS FLORIDA	6-8' B&B FULL

110 G-225

PREPARED	DRAWING NO.
LAD IV	C/2
DESIGNED	8G225
BALLARD	PCIP PKG.
DRAWN	SHEET
LAD IV	2
CHECKED	OF 3
7/21/80	
DATE	

REDUCED SIZE REPRODUCTION

GPO: 1977 777-369



NOTES

Revised 5/20/81 DHH See Sheet 1 of 3

SYM.	QUAN.	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS
	5	ARROWWOOD VIBURNUM	VIBURNUM DENTATUM	3-4' B&B
	3	BURNING BUSH	EUONYMUS ALATUS	24"-30" B&B
	7	DOUBLEFILE VIBURNUM	VIBURNUM PLICATUM MARIESI	3-4' B&B
	1	WAYFARING TREE	VIBURNUM LANTANA	3-4' B&B
	1	EASTERN REDBUD	CERCIS CANADENSIS	6-8' B&B FULL
	4	FLOWERING DOGWOOD	CORNUS FLORIDA	6-8' B&B FULL

PLANTING PLAN - C&O CANAL

STA. 23+00 - 29+00

N

110.G-225

PREPARED	DRAWING NO.
DESIGNED	412
DRAWN	86225
CHECKED	PCIP PKG. / SHEET 3
DATE 7-22-80	OF 3

REDUCED SIZE REPRODUCTION

Feature List by Block

Feature Name	Feature Type	Feature Contribution	Block	West Street	East Street
Lock No. 1	Constructed Water Features	Contributing	A	29th	RCPP
Boat Basin No. 1	Constructed Water Features	Contributing	A	29th	RCPP
Side Pond Inlet Entrance Gate (Lock No. 1)	Constructed Water Features	Contributing	A	29th	RCPP
Towpath 0.0 to 29th Street	Circulation	Non-Contributing	A	29th	RCPP
Chesapeake and Ohio Canal Market at 0.0	Small Scale Features	Contributing	A	29th	RCPP
Lock No. 1 Fence	Small Scale Features	Non-Contributing Compatible	A	29th	RCPP
View of Lock No. 1 West	Views and Vistas	Contributing	A	29th	RCPP
Towpath 29th Street to 30th Street	Circulation	Contributing	B	30th	29th
Greene/29th Street Bridge	Circulation	Contributing	B	30th	29th
Lock No. 2 Boat Basin Fence	Small Scale Features	Non-Contributing Compatible	B	30th	29th
1950 red maple (acer rubrum) on the berm side of Lock No. 2, east of 30th	Vegetation	Contributing	B	30th	29th
Lock No. 2	Constructed Water Features	Contributing	B	30th	29th
Boat Basin No. 2	Constructed Water Features	Contributing	B	30th	29th
Lock No. 3 Plaza/Mule Yard	Spatial Organization	Non-Contributing	C	Thomas Jefferson	30th
Lock No. 3	Constructed Water Features	Contributing	C	Thomas Jefferson	30th
Boat Basin No. 3	Constructed Water Features	Contributing	C	Thomas Jefferson	30th
Washington/30th Street Bridge Stone Abutments	Buildings and Structures	Contributing	C	Thomas Jefferson	30th
1057 Thomas Jefferson Street NW (Former CHOH Visitor Center)	Buildings and Structures	Contributing	C	Thomas Jefferson	30th
Towpath 30th Street to Thomas Jefferson Street	Circulation	Contributing	C	Thomas Jefferson	30th
Washington/30th Street Bridge	Circulation	Contributing	C	Thomas Jefferson	30th
Justice William O. Douglas Sculptured Bust	Small Scale Features	Contributing	C	Thomas Jefferson	30th
Georgetown Historic NHL Marker	Small Scale Features	Contributing	C	Thomas Jefferson	30th
Bollards and Chains around Lock No. 3 and Boat Basin No.	Small Scale Features	Non-Contributing	C	Thomas Jefferson	30th
View from Lock No. 3 West to Lock No. 4	Views and Vistas	Contributing	C	Thomas Jefferson	30th
Lock No. 4	Constructed Water Features	Contributing	D	31st	Thomas Jefferson
Thomas Jefferson Street Bridge Stone Abutments	Buildings and Structures	Contributing	D	31st	Thomas Jefferson
Towpath Thomas Jefferson Street to 31st Street	Circulation	Contributing	D	31st	Thomas Jefferson
Thomas Jefferson Street Bridge	Circulation	Contributing	D	31st	Thomas Jefferson
Lock No. 4 Fence	Small Scale Features	Non-Contributing	D	31st	Thomas Jefferson
Tie Posts	Small Scale Features	Undetermined	D	31st	Thomas Jefferson
Stone Post	Small Scale Features	Undermined	D	31st	Thomas Jefferson
Two 1948 small-leaved lindens (tilia cordata) on the berm side of Lock No. 4, west of Thomas Jefferson Street	Vegetation	Contributing	D	31st	Thomas Jefferson
1948 weeping willow (salix babylonica) on the river side of the canal at Lock	Vegetation	Contributing	D	31st	Thomas Jefferson
View from Lock No. 4 East to Lock No. 3	Views and Vistas	Contributing	D	31st	Thomas Jefferson
Retaining Wall 0.59-.61	Buildings and Structures	Contributing	E	Wisconsin	31st
Congress/31st Street Bridge	Circulation	Contributing	E	Wisconsin	31st
North Canal Plant Retaining Wall	Small Scale Features	Non-Contributing Compatible	E	Wisconsin	31st

Four 1970-1990 willow birches on the berm side of the canal between 31st and Wisconsin Avenue	Vegetation	Contributing	E	Wisconsin	31st
View East to Wisconsin Avenue	Views and Vistas	Contributing	E	Wisconsin	31st
Wisconsin Avenue Plaza	Spatial Organization	Non-Contributing	F	33rd	Wisconsin
Grace Street Park	Spatial Organization	Non-Contributing	F	33rd	Wisconsin
Pipes	Constructed Water Features	Undetermined	F	33rd	Wisconsin
High Street/Wisconsin Avenue Bridge	Circulation	Contributing	F	33rd	Wisconsin
Potomac Street Bridge	Circulation	Contributing	F	33rd	Wisconsin
Commemorative Obelisk	Small Scale Features	Undetermined	F	33rd	Wisconsin
Commemorative Obelisk Fence	Small Scale Features	Undetermined	F	33rd	Wisconsin
Fish Market Square	Spatial Organization	Non-Contributing	G	34th	33rd
Wilkins Rogers Milling Co. Intake-Ruins	Constructed Water Features	Contributing	G	34th	33rd
Wilkins Rogers Milling Co. Dual Water Intake	Constructed Water Features	Contributing	G	34th	33rd
Duck Lane/33rd Street Bridge	Circulation	Contributing	G	34th	33rd
View west to Key Bridge from 33rd Street	Views and Vistas	Contributing	G	34th	33rd
Hydraulic Generator Plant	Buildings and Structures	Contributing	H	Key Bridge	34th
Frederick/34th Street Bridge	Circulation	Contributing	H	Key Bridge	34th
Alexandria Aqueduct	Buildings and Structures	Contributing	I	White Hurst Freeway	Key Bridge
Towpath Crossover Bridge Ramp-Ruin	Circulation	Contributing	I	Western Boundary	White Hurst Freeway
Land Use- Recreation	Land Use	Contributing	A, B, C, D, E, F, G, H, I	Western Boundary	RCPP
Land Use- Commemoration	Land Use	Contributing	A, C, F	Western Boundary	RCPP
Land Use- Interpretation	Land Use	Contributing	A, B, C, D, E, F, G, H, I	Western Boundary	RCPP
Relationship of the Canal to the Urban Context	Spatial Organization	Contributing	A, B, C, D, E, F, G, H, I	Western Boundary	RCPP
Canal Prism	Constructed Water Features	Contributing	A, B, C, D, E, F, G, H, I	Western Boundary	RCPP
Retaining Wall 0.67-1.07	Buildings and Structures	Contributing	E, F, G, H, I	White Hurst Freeway	31st
Towpath 31st Street to the end of the Cultural Landscape Boundary	Circulation	Contributing	E, F, G, H, I	Western Boundary	31st
Towpath River-Side 33rd Street to the end of the Cultural Landscape Boundary	Circulation	Non-Contributing	F, G, H, I	Western Boundary	33rd Street
Urban Canopy Trees; i.e. 1950 princess/fox- glove tree (paulownia) on the berm side, of the canal between 31st and Wisconsin Avenue; 1950 tree of heaven (ailanthus altissima) on the berm side of the canal west of 31st; 1950 (ailanthus altissima) trees of heaven on the berm side of the canal, east of 31st Street	Vegetation	Contributing	D, E	Wisconsin	Thomas Jefferson


Block A
29th Street NW
Block B
30th Street NW
Block C
Thomas Jefferson Street NW


Thomas Jefferson Street NW
Block D
31st Street NW
Block E
Wisconsin Avenue NW
Block F


Block H
Block G
Block F
33rd Street NW
Potomac Street NW


34th Street NW
Block H
Key Bridge
Whitehurst Freeway
Block I